

Altova RecordsManager

User & Reference Manual

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1 Altova RecordsManager

Altova RecordsManager™ (also written as Altova RecordsManager or, in short as, RecordsManager) makes it possible to build business database solutions in record time using a powerful visual design interface. You can switch between [admin mode](#)²⁴ (for designing the database) and [user mode](#)²⁰⁶ (for entering and using the records of the database). RecordsManager accelerates the creation of database driven apps by removing the need for backend development and manual coding. Its visual design paradigm lets you focus on the business objects you need to model so you can get your app in users' hands quickly. The flexibility of RecordsManager thus enables you to create a wide range of databases, from simple book collections to more complex contract management systems.



Altova RecordsManager provides the following broad features:

- Centralized data management
- Unlimited, secure data storage
- Links between related data tables
- Granular role and group-based permissions to control access to confidential information
- Automatic reminders for important dates and deadlines
- Search tools to find documents and details instantly
- Printable reports
- Full audit log and change tracking
- Options to customize the app as little or as much as required
- Customize the database, forms, fields, reports, and more
- Select from different themes to configure your display colors and fonts
- Database restore checkpoints

This documentation

This documentation is divided into the following parts:

- [General Information](#)⁷, which provides an overview of how RecordsManager works.
- [System Administration](#)²⁴, which describes how you can design databases and define other administrative features of your RecordsManager app.
- [System Use](#)²⁰⁶, which describes how to use RecordsManager databases.

Last updated: 22 January 2024

2 General Information

This section contains general information about Altova RecordsManager, as listed below. We recommend that you read through it before you start your RecordsManager work. It will help you to get a broad understanding of how the RecordsManager system works.

- [RecordsManager and MobileTogether](#)⁸ explains how RecordsManager works together with [Altova MobileTogether](#).
- [Getting Started](#)⁹ provides a broad practical outline of how to get started with system configuration and system use.
- [Roles in RecordsManager](#)¹² describes the different kinds of roles that are used in the system.
- [How the App's Data Is Structured](#)¹³ describes how the RecordsManager data is structured and how relationships between data components are built.
- [How Data Is Stored](#)¹⁶ explains how a network of data relationships is built up in the system from separate individual records.
- [Color Themes](#)¹⁸ provides an overview of how a default color theme can be set by the system administrator and a new theme selected by a user.
- [Audits and Change Tracking](#)²³ summarizes the change tracking system.

2.1 RecordsManager and MobileTogether

Altova RecordsManager can be accessed in one of the following ways:

In MobileTogether Designer

A RecordsManager package (.mtp file) is installed with [Altova MobileTogether Designer](#) (available free of cost). You can start MobileTogether Designer, open the RecordsManager package, simulate it, and start working with RecordsManager as described in this documentation. This means that you can configure the RecordsManager system as an [administrator](#)²⁴ and enter data as a [user](#)²⁰⁶. After you have completed the configuration, you can either deploy RecordsManager as a solution to a [MobileTogether Server](#) (license required) so that other users can access it, or you can generate it as an AppStore App that users can download to their devices and use there. The RecordsManager AppStore App will connect to your RecordsManager solution on a [MobileTogether Server](#).

As a solution via MobileTogether Server

If RecordsManager has been deployed as a solution to a MobileTogether Server, administrators and users can connect to RecordsManager and work with it as described in this documentation. Modifications to the configuration or the data are saved directly to the RecordsManager database. So the solution does not need to be redeployed after a change to the configuration. records.

As an AppStore App

If RecordsManager has been created as an AppStore App, then administrators and users can download the RecordsManager app and work with it as described in this documentation. The app connects to the corresponding RecordsManager solution on a MobileTogether Server, so configuration or data changes are saved directly to the RecordsManager database.

2.2 Getting Started with RecordsManager

On logging in to RecordsManager with your user name and password, you are presented with the Start Page of Altova RecordsManager (*screenshot below*). The initial login and password are, respectively, `root` and `root`.

- If you have been granted the *Admin* role, then the button **Configure RecordsManager** will be available. You can click this button to go to the [Configuration Page](#)²⁴, from where you can access various system administration tasks.
- If you have not been granted the *Admin* role, then the **Configure RecordsManager** button will not be available and you will not be able design databases or configure RecordsManager. The Start Page will display only the databases to which you have been granted viewing or editing access.

Configure RecordsManager Load sample database Refine structure with AI help

Home **ALTOVA**

Welcome System Administrator! 🏠 ⚙️ ?

Contract Database

Contracts
20 records available

Company Database

Company Groups 4 records available	Departments 21 records available
Companies 22 records available	Persons 19 records available

Contract reminders

Past Due (4)

- 🕒 ⏸️ Reminder **Renewal** "C2020/3119 Chestnut Telecom License Agreeemer"
- 🕒 ⏸️ Reminder **Renewal** "C2020/3122 Office Cleaning Contract"
- 🕒 ⏸️ Reminder **Renewal** "C2020/3121 Doodle Online Advertising"
- 🕒 ⏸️ Reminder **Renewal** "C2020/3114 Deciduous Lease"

Getting started with system administration

When you start Altova RecordsManager for the first time, it will contain starter contract data that is organized in a simple structure. The starter data enables you explore how RecordsManager's data is organized and how the data can be used. You can use the starter data to become familiar with the system. Once you are ready, you can delete the sample data and modify the data hierarchy to suit your requirements. While trying out RecordsManager, any changes that you make will be implemented immediately and be available to users immediately. As a result, you can start your records management work (both administration and data entry) as soon as you want.

For information about getting started with system administration, go to the topic [Quick Start: System Administration](#)²⁶.

Getting started with system use

For information about getting started with system use, go to the topic [Quick Start: System Use](#)²⁰⁷.

System administration can be concurrent with system use

You can reconfigure the database, add new forms, change settings, and carry out other administration tasks even after users have started working with the system. Any admin changes you make will be reflected on the user side as soon as the user interacts with the system.

2.3 Roles in RecordsManager

Each RecordsManager user is given one or more roles. These roles define what a user is allowed and not allowed to do. For example, custom roles such as *Legal* or *Personnel* can be created that correspond to specific functions (such as access by the *Personnel* role to personnel-related contracts but not to client or IT contracts). A user can be associated with one or more roles, and would then be authorized to carry out the functions corresponding to those roles.

The roles that are available in RecordsManager fall into three categories: the *Admin* role, the *All Users* role, and custom roles.

Admin

This role is predefined. It provides a user with all available RecordsManager functionality. Users that have this role can:

- modify the RecordsManager system's users and roles
- configure RecordsManager databases and their components
- modify RecordsManager settings
- configure reminder mails
- enter and edit data in all databases

All Users

This role is predefined.

- Users with this role can enter and edit data in RecordsManager databases. They do not have access to admin functions (*see above*). If you need to perform an admin task, contact your RecordsManager system administrator and request an *Admin* role.
- The *All Users* role is given to all users by default. As a result, any user that can access RecordsManager will be given this role and can enter data (unless otherwise restricted by custom roles).

Custom roles

RecordsManager administrators can define custom roles that can be assigned to users, for example, *Legal* or *Personnel* roles.

- A custom role can provide additional access or can restrict access to different data tables of the database
- A custom role can provide access to different functionality within data tables (for example, reading rights and writing rights)

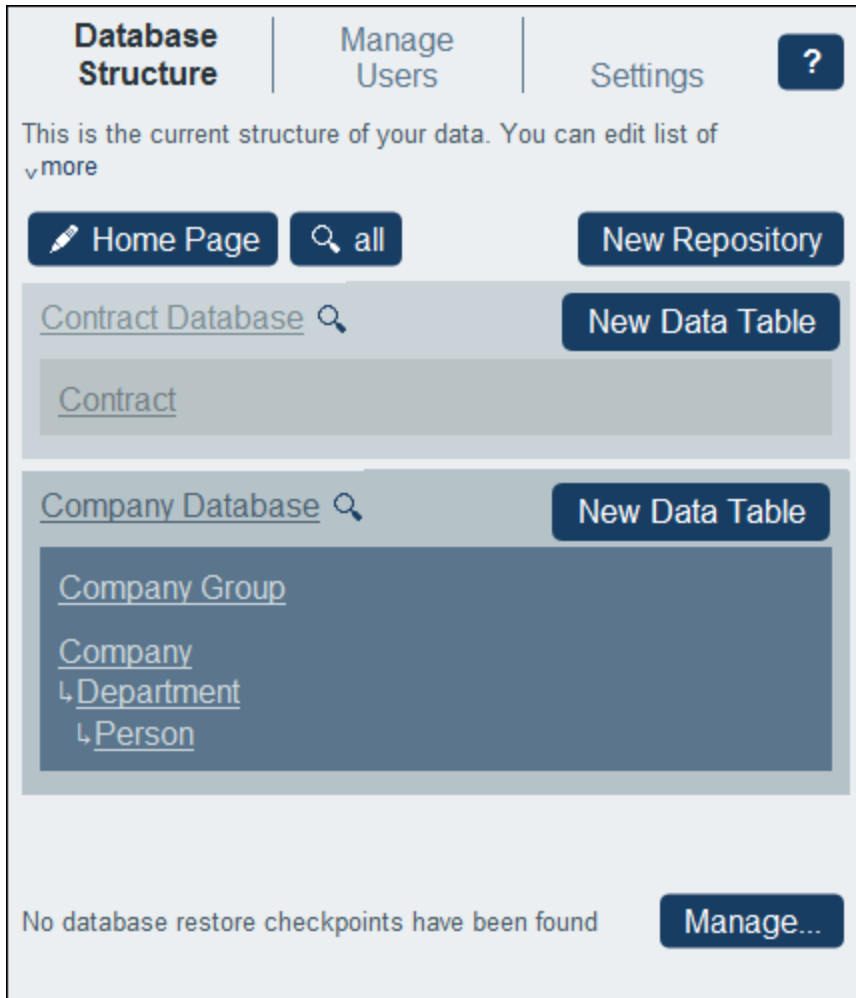
2.4 How the App's Data Is Structured

RecordsManager's data structure is described below in terms of hierarchy and the relationships between data components.

Hierarchy

You can customize RecordsManager's data structure within the following framework:

- At the root level of the app, you can create as many **repositories** as you like. For example, in the structure shown in the screenshot below, there are two repositories: (i) *Contract Database*, (ii) *Company Database*.
- Within each repository, you can add as many **top-level data tables** as you like. In our example database, *Contract Database* has one top-level data table (*Contract*), whereas *Company Database* has two top-level data tables (*Company Group* and *Company*).
- Within a top-level data table (as well as lower level data tables), you can add multiple **child data tables**. You can continue adding child data tables down multiple levels. For example, the *Company* data table has a child data table named *Department*, which in turn has a child data table named *Person*.



The data tables are linked together in relationships, which are described below.

Relationships

When defining the database structure, you will be building relationships between data tables. These relationships will be of importance to the hierarchy and organization of your data, and should therefore be planned well.

There are two types of relationships that can be built between data tables:

- Parent–child relationships
- Loose links

Parent–child relationships

These links between data tables are considered to be strong links since a child is created from a parent and cannot be created without the parent. A parent data table can have multiple child data tables. A child, however, can have only one parent data table. The following consequences of the parent–child relationship should be noted:

- When a parent record is deleted, all child records are also deleted
- When designing forms, the fields of all ancestor data tables will be available for inclusion
- Interdependencies of fields within a hierarchy of strong links are managed automatically
- Child records can be edited within parent forms

Loose links

A second type of relationship is a link that is created between two independent data tables. These loose links enable records to be created independently and without reference to each other. The links are manually created during configuration. A single record can thus have multiple loose links to other records. If one record of a loosely linked pair is deleted, the other record is not affected.

Loose links can be set in the following ways:

- Define the [field of a data table to be of type](#) ⁴⁴ *Link To*. This field provides the anchor of the link to the other data table.
- Child data tables can have the strong relationship to their respective parents [converted to a loose link](#) ¹⁵⁴.

Also see the next topic, [How Data Is Stored](#) ¹⁶.

2.5 How Data Is Stored

Data is stored in multiple data tables, each of which represents one component of information. These data tables can be organized in a hierarchy. For example, your RecordsManager app might have a simple hierarchy that contains two databases named *Contract Database* and *Company Database*, as shown below:

```

Contract Database
|
|--Contract
|
Company Database
|
|--Company
|  |
|  |--Department
|  |  |
|  |  |--Person

```

Records and fields

In each data table, you will enter records. Each record is defined by a number of fields (which are specific to that data table). When you enter a record, what you will be doing is entering values for these fields. You can visualize a data table as follows:

data table-A				
	Field-1	Field-2	Field-3	Field-4
Record-1	Field-1-Value	Field-2-Value	Field-3-Value	Field-4-Value
Record-2	Field-1-Value	Field-2-Value	Field-3-Value	Field-4-Value
Record-3	Field-1-Value	Field-2-Value	Field-3-Value	Field-4-Value

So when you enter data in the RecordsManager app, you will be entering records for the different data tables of the app. For example, you could add new company records, or department records, or person records, or contract records. In this way you build up the data in the RecordsManager database.

Identity fields

In each data table, one or more fields will have been configured (by your system administrator) to be *Identity Fields*. These fields will uniquely identify records. For example, employees would typically have unique ID numbers, so the ID number field can be used to identify records in the *Person* data table. In the case of some data tables, more than one field might be necessary to come closer to uniqueness (for example, a persons's *Name* and *Date of Birth* fields).

Linking records across data tables

During database configuration, your system administrator/s will have built links across the data tables. For example, a parent-child link might have been created between company and department, and another parent-child link between department and person. In this case, when a new record is entered for a child data table, one

of the field values you would need to add would be a value for the parent of this (child) record. For example, when adding a new department record (say the record is for a *Legal* department), you will be prompted for this department's company parent (where you could enter, say, a company named *Altova*). By selecting the parent *Altova*, you have established a link between this *Legal* department and the company *Altova*. In this record, then, you are effectively describing the legal department of Altova.

In a similar way, system administrator/s can build links between data tables that are not directly linked in a vertical hierarchy. For example, a link could be created between a contract record and the contracted company. There is no direct hierarchical connection between the *Contract* data table and the *Company* data table. But if a link has been explicitly configured between the two by a system administrator, then, while entering the contract data, users will be asked to enter the name of the contracted company. Doing so links the current contract not only with the selected company, but also to that company's (hierarchically descendant) departments and persons.

So, although users are entering data record-by-record for different data tables, the RecordsManager app is building a network of connections across records in different data tables. This networked nature of the data enables you to generate reports and charts about your data in multiple data tables—even if these data tables are not linked hierarchically. For example, a database can contain data tables for contracts, companies, departments, and people, and build connections between them through a network of links.

2.6 Color Themes

The RecordsManager user interface can be set to one of the **themes** shown below. Themes can be set at the following levels:

- A default theme for RecordsManager can be set by the system administrator. This theme is applied to the entire RecordsManager app and is set via the [Settings](#)¹⁷⁶ tab of the Configuration Page.
- Individual users can override the default theme of the app with [their own selection](#)²¹³ at any time. This can be done via the *Color Theme* setting on the [Home Page](#)²⁰⁹ or any [Data Table Page](#)²¹¹.
- Additionally, for each repository, users can set variations of the selected theme. Variations are set on [Data Table Pages](#)²¹¹ and apply to the repository in which that data table is located. A system administrator can [set default variations](#)³⁴ in the *Coloring* setting of individual repositories.

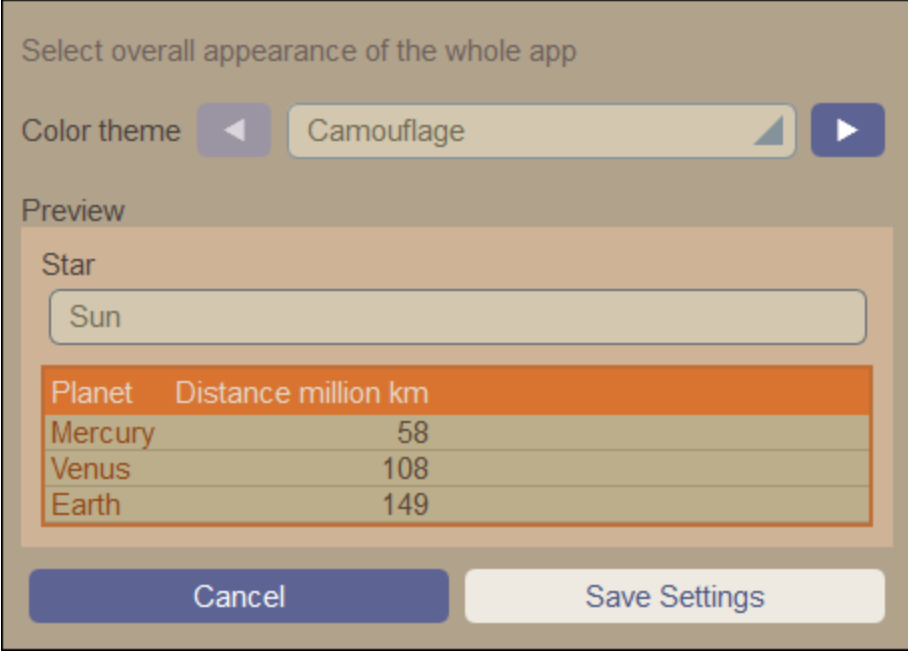
Default theme

The default theme of RecordsManager is set via the the [Settings](#)¹⁷⁷ tab of the Configuration Page.

Theme samples

The screenshots below show samples of the available themes.

Camouflage



Select overall appearance of the whole app

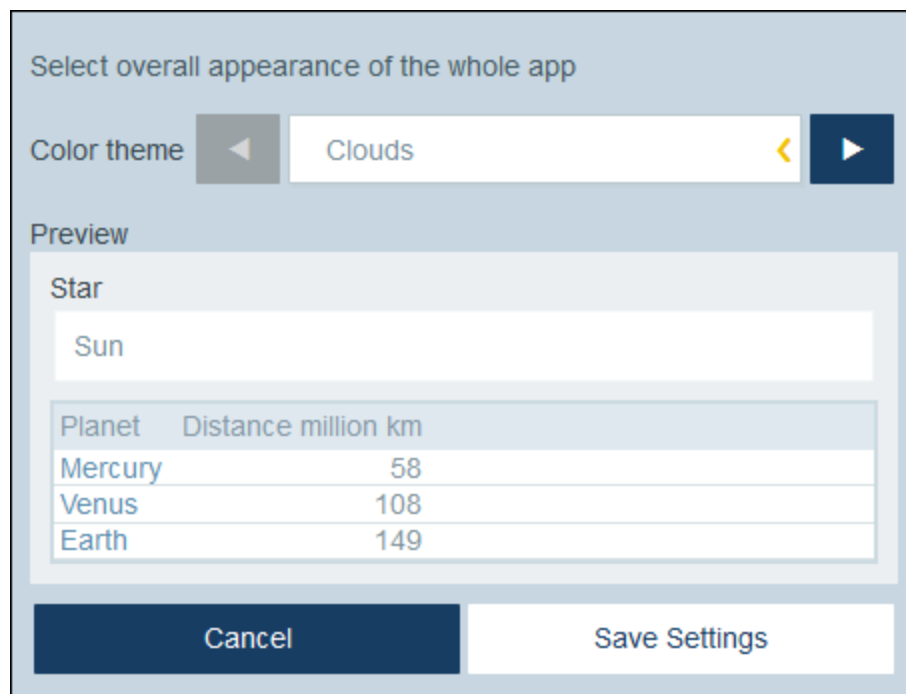
Color theme

Preview

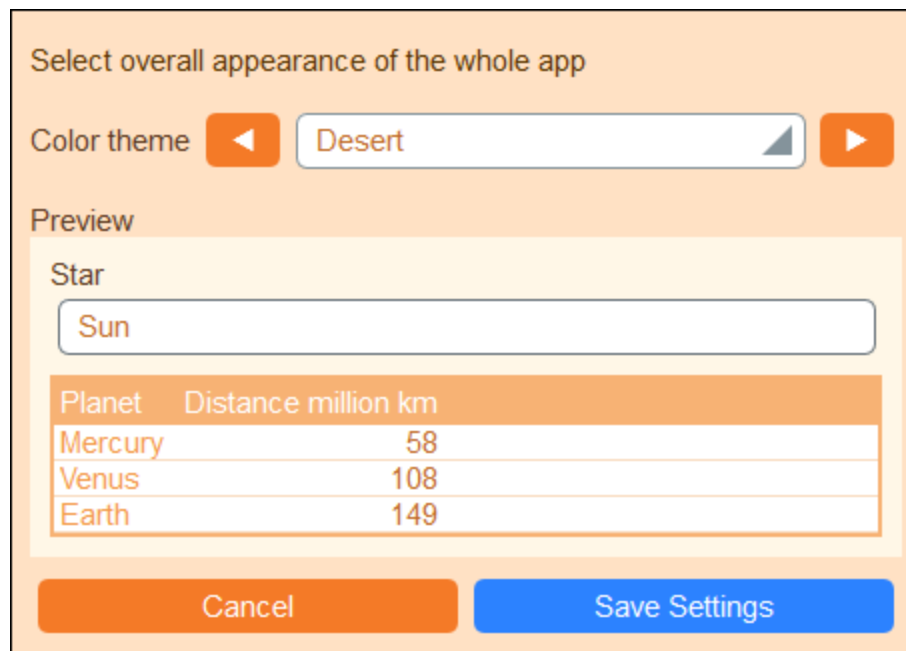
Star

Planet	Distance million km
Mercury	58
Venus	108
Earth	149

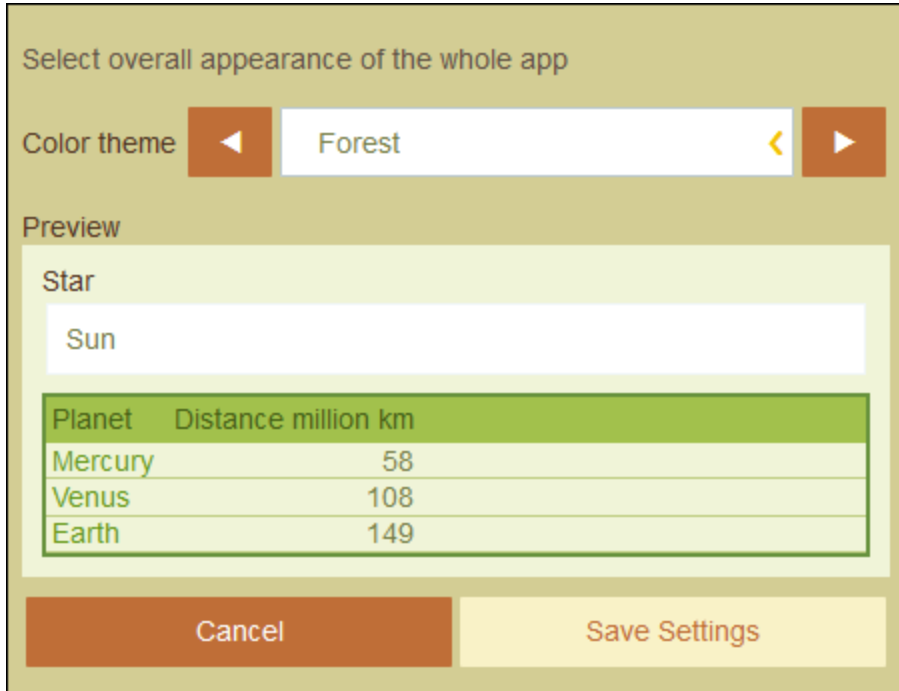
Clouds



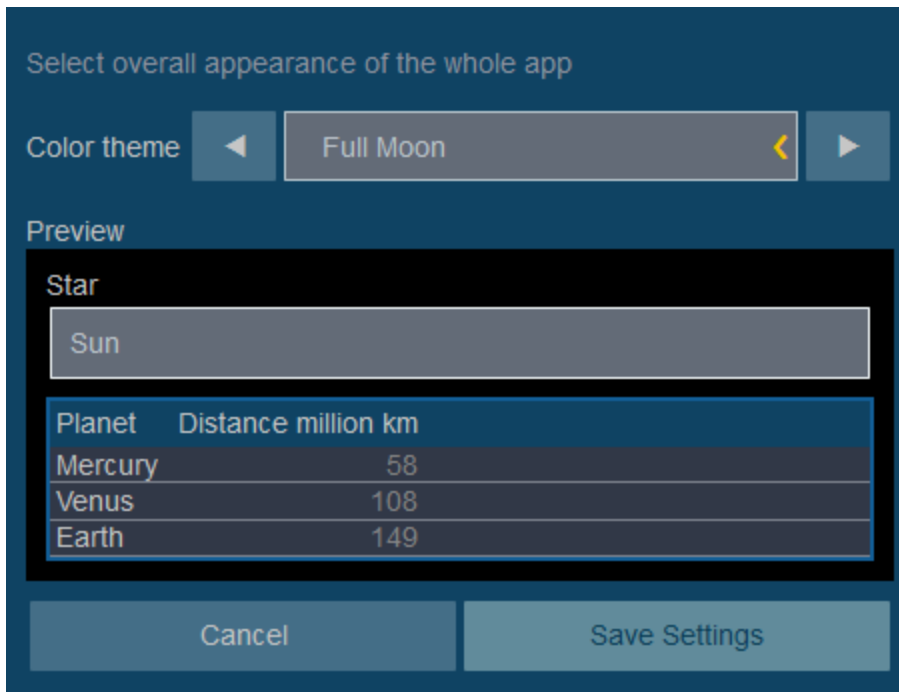
Desert



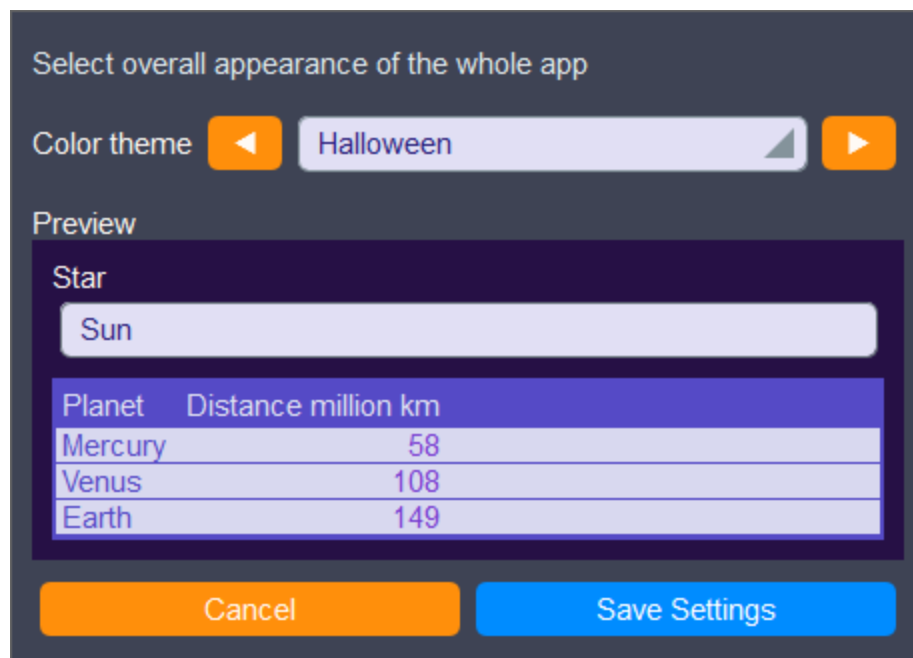
Forest



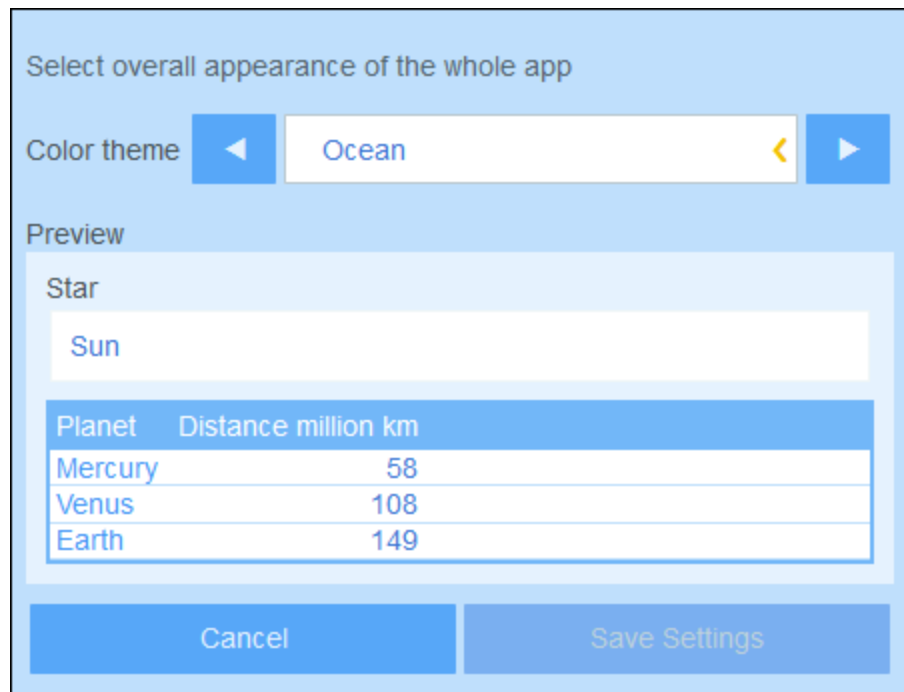
Full Moon



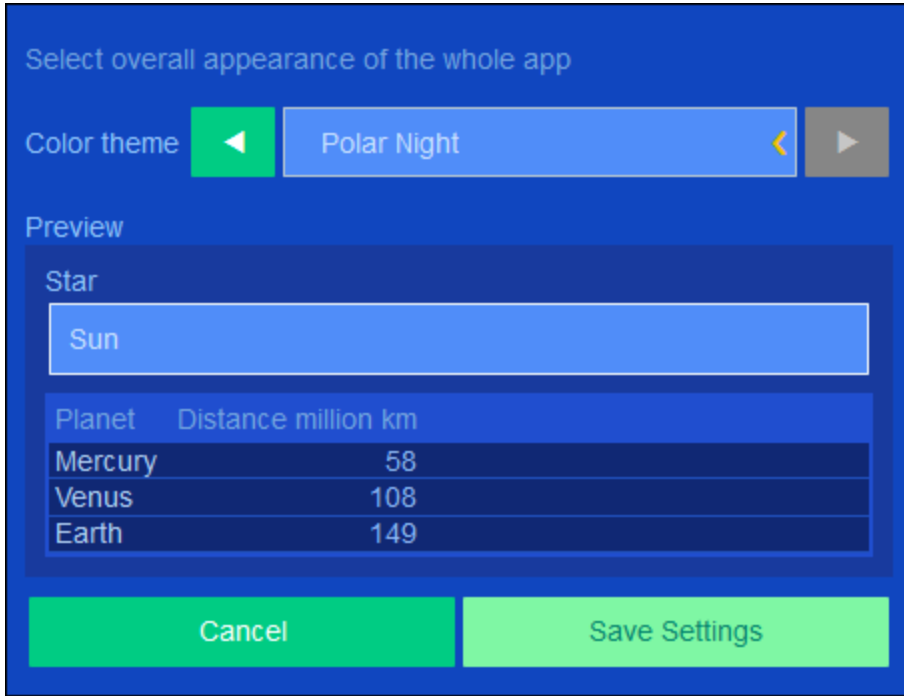
Halloween



Ocean



Polar Night



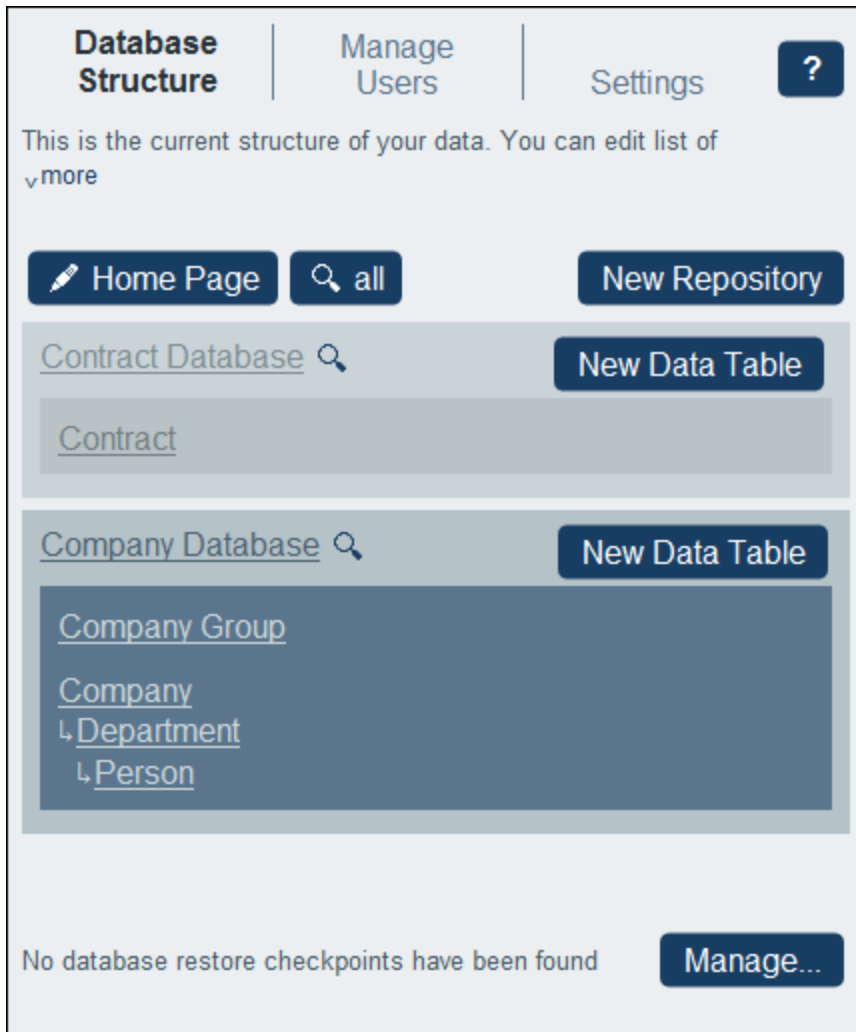
2.7 Audits and Change Tracking

When users edit the data of a data table, they can audit previous changes (see what changes have been made and by whom), track changes, and see a historical view of changes. How to do this is described in the section [System Use | Audits and Change Tracking](#)²²⁷,

This feature is automatically implemented, and system administrators do not need to explicitly switch it on. A system administrator can, however, add images and files to the change tracking system. The setting for this is in the [Image Settings of the app](#)¹⁸⁴.

3 System Administration

The starting point for system administration is the **Configuration Page** (screenshot below). This page is accessed by clicking **Configure RecordsManager** on the [Home Page](#)⁹.



The Configuration Page has three tabs:

- [Database Structure](#)³¹, which displays the RecordsManager data structure and enables you to edit this structure.
- [Manage Users](#)¹⁶⁵ for configuring the users and roles of the system.
- [Settings](#)¹⁷⁶ for a wide range of system settings.

System administration documentation

The *System Administration* part of the documentation describes how an admin can design the database and configure the RecordsManager system. It is separate from the [System Use](#)²⁰⁶ part, which describes how to use the database after it has been set up.

The *System Administration* part has been organized into the following parts:

- [Admin Overview](#) ²⁶, which provides an outline of how to build and configure your system.
- A description of RecordsManager features, organized on the basis of the tabs of the Configuration Page: [Database Structure](#) ³¹, [Manage Users](#) ¹⁶⁵, and [Settings](#) ¹⁷⁶.
- A detailed description of [Reminder Emails](#) ¹⁸⁸.
- A description of the [Database Restore Checkpoints](#) ²⁰⁰ feature, which enables you to restore the database to a previous state.
- A description of how to use [Artificial Intelligence \(AI\) help](#) ²⁰² to modify your database structure.

We recommend that you read the [Admin Overview](#) ²⁶ section in order to understand how the system is to be built and then start your work, while using the rest of the documentation in this part as a reference.

3.1 Admin Overview

This topic lists the main procedures needed to set up a RecordsManager system. The order in which these procedures are listed serve as a rough sequential guideline of how to configure your RecordsManager system. Very often, however, you will need to move back and forth among different procedures.

System administration can be concurrent with system use

You can reconfigure the database, add new forms, change settings, and carry out other administration tasks even after users have started working with the system. Any admin changes you make will be reflected on the user side as soon as the user interacts with the system.

Configure the RecordsManager database and the Home Page

You can start building a database from scratch or you can use RecordsManager's sample database as a starting point. The sample database is available when you first open RecordsManager. You could modify the data structure as little or as much as you like, and change the formatting to suit your preference.

The main procedures for configuring the database structure are:

- ▼ Create repositories and data tables, and set up a hierarchy

The app's data structure is composed of one or more repositories. Each repository will have a hierarchy of data tables. It is within a data table that records relating to that data table are stored. For example, a *Department* data table will contain department records, whereas a *Company* data table and a *Person* data table will contain the records of, respectively, companies and persons. In the data table hierarchy, the *Department* data table could be a child of the *Company* data table and the parent of the *Person* data table. When entering data for *Department* records, for example, the user of the app can choose the company (from all the available companies) to which this department belongs.

When you create data tables and configure the app's data structure, it will be these kinds of relationships and linkages between database components that you will be setting up. As a result, the data structure will provide a network of relationships that enables related data to be listed and reported. For more information about data tables and data structure, see the following topics: [How the App's Data Is Structured](#)¹³, [How Data Is Stored](#)¹⁶, [Repositories](#)³⁴, and [Data Tables](#)³⁷.

- ▼ Configure fields

Since each data table will contain records of a single type (say, of a Department), you must configure the fields of data table so that these suitably define the records of the data table. For example, a *Person* data table (in which *Person* records are stored) can be defined to have fields such as: *FirstName*, *LastName*, *Email*. You can specify various aspects of each field, such as datatype or an entry list from which the user can choose a value (useful, for example, when selecting a US state). You can also configure validation rules for individual fields and for records as a whole; this would warn users about possible errors in data entry. See the section [Fields](#)⁴¹ for details.

- ▼ Configure data entry forms and other forms

[Data entry forms](#)⁷² are the forms in which users will enter the record data. So you must design these for each data table so that record data can be entered into the respective data tables. Each

time a user clicks the button to enter a new record for a data table, the appropriate data entry form will be displayed. that what the user will interact with. Other types of forms also serve important purposes: [list forms](#)⁶⁴ (to display record data in a custom format), [report forms](#)¹³⁰ (to show reports with tables and/or charts generated from the data), [export forms](#)¹⁴² (to generate XML and CSV outputs from the available data), and [email forms](#)¹⁴⁴ (for email reminders). Each data table has its own set of different forms. One major advantage of using data table-based forms is that access to each type of form can be set separately. As a result, you can design some forms to show data that only some users are authorized to see and/or edit. You can also design other forms that do not show certain data. Reports of the data in a data table are presented by using a report form of that data table. Similarly, other types of forms are used for other types of presentations. The various types of forms are described in the section [Forms](#)⁶¹.

▼ Configure filters

One or more filters can be defined on each data table. A filter restricts the display of records in a data table on the basis of some criterion (or criteria) relevant to that data table. For example, for a *Contracts* data table, you could create a filter that shows only contracts that expire in the current year. Such a filter would be built, for example, by checking the *ExpiryDate* field of records in the data table. After a filter has been created, it can be used during configuration as well as data entry, for example, to restrict lists. See the section [Filters](#)⁵⁰ for information.

▼ Design the Home Page of the user interface

When users log in to the system to either enter data or retrieve information, they see a *Home Page*, which is their entry point into the system. Essentially, the *Home Page* provides access to the various data tables of the system. The [Home Page Form](#)¹⁶⁰ is what an administrator uses to design the *Home Page*. See the section [Home Page Form](#)¹⁶⁰ for information about designing the *Home Page*.

Set up system users and their roles

These procedures determine who will use the RecordsManager system and in what capacity. You should check whether the roles that are defined in the sample dataset suit your requirements. For the beginning, it might be best to use just the two predefined roles, *Admin* and *All Users*. After you become familiar with your data and its structure, the system, and your users, you can develop roles to suit your requirements.

▼ Set up the users of the system

Besides specifying which users can log in to the RecordsManager app and their respective login credentials, you must also define what access rights each user has and the role/s each will play. For example, does a user in the IT Department have access to only technology contracts—or legal contracts as well; or, is a certain user allowed to have an administrator role, which entails access to the app's configuration settings? These access rights are determined by the roles (see *next step*) given to each user. See the sections [Users](#)¹⁶⁶ and [Roles](#)¹⁶⁹ for details.

▼ Define roles and assign them to users

Create different roles according to your organization's needs. For each role, define (i) the data tables to which access is allowed, and (ii) the forms to which access is allowed and, where necessary, the type of access allowed (for example, read/write or read only), (iii) the reports to which access is allowed, (iv) whether export of data is allowed. After roles have been created, give one or more of

these roles to each user (see *previous step*). See the sections [Users](#)¹⁶⁶ and [Roles](#)¹⁶⁹ for detailed information.

Global settings and reminder mails

At an early stage in the development process, you should have a look at what global settings for the app are available and consider how you can best use them. Reminder emails are probably best left to the end of the configuration process, but it would be useful to at least quickly look through the documentation about reminders in order to see what is involved.

▼ Define global settings for the app

The [Settings](#)¹⁷⁶ page provides a number of styling, content-formatting, print formatting, and other settings that can be set for the entire app. We recommend that you go to this page and see what settings are available and how you can use them. The [Image Library](#)¹⁸⁴ setting and [Reminder Email](#)¹⁸⁶ settings should be noted. Also note that, when you configure certain items, such as forms, you can specify local settings and override the global settings that are defined on the [Settings](#)¹⁷⁶ page. You can define global settings at any time: before database configuration, after database configuration, and even after system use has started.

▼ Reminder emails

In systems like a contract management system, it is important to take certain actions before specific dates (say, a contract renewal action before the contract expiry date). The system can automatically send reminder emails to the appropriate person or persons a given number of days before such key dates. See the section [Reminder Mails](#)¹⁸⁸ for information about how to set this up.

Restoring the database to a previous state

You can restore your database to a state it was in at some time in the past. To do this, you must create copies of the database at suitable intervals. Each of these is a checkpoint. You can select any checkpoint to restore the database to the state it was in at the time the checkpoint was created. See [Database Restore Checkpoints](#)²⁰⁰ for information.

Using alternative RecordsManager databases

You can use an alternative RecordsManager database for your RecordsManager system. Create this `.sqlite` database in RecordsManager as outlined above and copy it to the same folder as the original RecordsManager database. On your MobileTogether Server, this folder is named `production_data` and is located in the same folder as the RecordsManager solution.

```
RM solution
production_data
|
|-- RM databases
```

Note that the RecordsManager databases are not in the same folder as the RM solution, but are one level farther in the filepath, inside the `production_data` folder. Also note that the relative path `production_data` in the RecordsManager solution will be resolved relative to the *Server side solution's working directory*, which is defined in the [Settings tab of MobileTogether Server](#).

After you have (i) deployed the RecordsManager solution to MobileTogether Server and (ii) saved the alternative SQLite database/s in the correct folder (see above), you can create a link in MobileTogether Server to start RecordsManager with the alternative DB. Do this as follows:

1. In MobileTogether Server, go to the Workflows tab and locate the original RecordsManager solution in the container where it has been deployed and select its check box (located to the left of the solution's name)
2. Select **Create Link** at the bottom of the page (to create a link to the solution).

Create Link

Name: RecordsManager-GB

Icon:

Description:

Parameters: `sqliteDb=RecordsManager-GB.sqlite`

Parameter list in the form 'in1=val1;in2=val2;in3=val3...' passed to the solution on start.

Container: /public/

/ public

Name

contact

3. Give the link to the alternative solution a name.
4. Give the `sqliteDb` parameter a value that is the name of the alternative database, for example, as in the screenshot above, `RecordsManager-GB.sqlite`.
5. Specify the container in which the link should be saved.
6. Click **Create Link**.

Once the link has been created, users can click it to start RecordsManager with the alternative DB.

Note: If, after a link has been created, you remove the `sqliteDb` parameter or change its value in the dialog above, then you must also remove the solution's persistent data in order to switch to the new DB. You can remove a solution's persistent data in MobileTogether Server by going to the *Workflows* tab and clicking the **Clear** button in the solution's *Persistent data* column.

RecordsManager documentation on the Altova website

After you have set up the database and the users of the database, administrators and users of the system can be directed to the Altova RecordsManager documentation, available at the following Altova website locations:

- Documentation for administrators (includes information about DB configuration, data entry, and system use): <https://www.altova.com/manual/AltovaRecordsManager/altovarmadmin/index.html>
- Documentation for users (includes information about data entry and system use): <https://www.altova.com/manual/AltovaRecordsManager/altovarmuser/index.html>

3.2 Database Structure

This section describes the Database Structure tab of the Configuration Page. This tab provides access to all the forms that are used to define and present the structure of your RecordsManager database.

The app's repositories

The app can contain one or more repositories at the root level, each of which will contain the data tables of RecordsManager. In our sample app (see *screenshot below*), there are two repositories: *Contract Database* and *Company Database*. Within each repository you can build a hierarchical structure of data tables, and you can link data tables across repositories via [loose links](#)¹³.

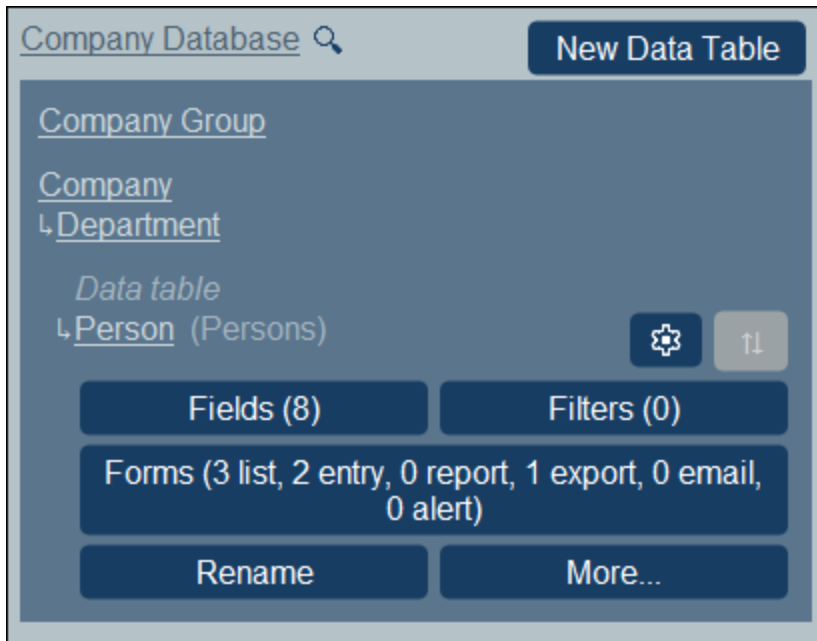
Data tables and hierarchy

A hierarchical structure within a repository is constructed by creating data tables and then defining parent-child relationships between data tables. You can add any number of top-level data tables to a repository. Within each data table (top-level or other level), you can define one or more child data tables. You can use [loose links](#)¹³ to link data tables across the different hierarchies of a data table.

The screenshot shows the 'Database Structure' tab of the configuration page. At the top, there are three main sections: 'Database Structure', 'Manage Users', and 'Settings'. Below these, a message states: 'This is the current structure of your data. You can edit list of [more](#)'. There are three buttons: 'Home Page' (with a pencil icon), 'all' (with a magnifying glass icon), and 'New Repository'. Below this, there are two repository sections. The first is 'Contract Database' with a magnifying glass icon and a 'New Data Table' button. Underneath it is a list containing 'Contract'. The second is 'Company Database' with a magnifying glass icon and a 'New Data Table' button. Underneath it is a list containing 'Company Group', 'Company', '↳ Department', and '↳ Person'. At the bottom, there is a message: 'No database restore checkpoints have been found' and a 'Manage...' button.

For example, in the screenshot above, there are three top-level data tables: *Contract* (in the *Contract Database* repository), and *Company Group* and *Company* (in the *Company Database* repository) Of these three data tables, only the *Company* data table has a child data table (the *Department* data table), which itself has a child data table (the *Person* data table). Note that, while a parent can have multiple child data tables, a child can have only one parent.

Each data table has a set of definitions (shown below for the *Person* data table). The most important of these are: the data table's fields, the forms designed for the data table, and the filters to restrict data selection. These definitions are described in their respective topics: [Data Tables](#) ³⁷, [Fields](#) ⁴¹, [Filters](#) ⁵⁰, and [Forms](#) ⁶¹.



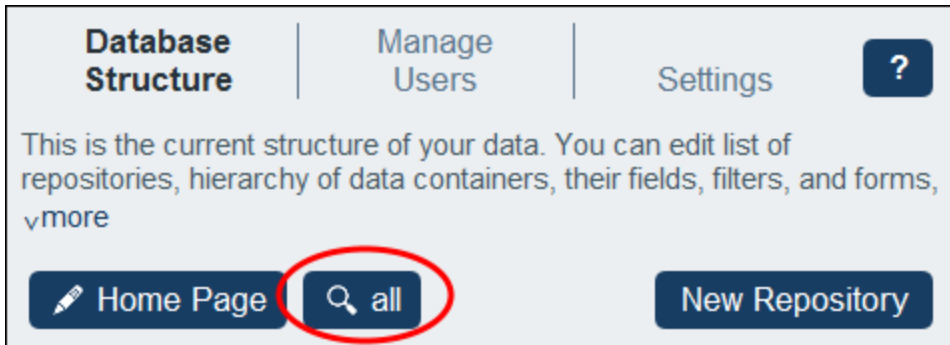
Records

When data is entered, it is entered as a record of a data table. For example, records of all persons are entered as records of the *Person* data table. These records are entered in a (data) entry form of the *Person* data table, which is designed to contain data entry options for fields of the *Person* data table (such as *Name*, *ID*, and *Email*). The *Person* entry form would also contain an option to link the *Person* record to a field value of another data table (for example, to the *Legal* department, where *Legal* is the value of the *Department* data table's *Name* field). In this way, a relationship is built between *Person* records and another data table, say the *Department* data table. It is through these relationships that records in different data tables are linked and the data is available for structuring. For example, it would now be possible to list, say, all the persons in a company's different departments, or all the software contracts that expire in the next quarter.

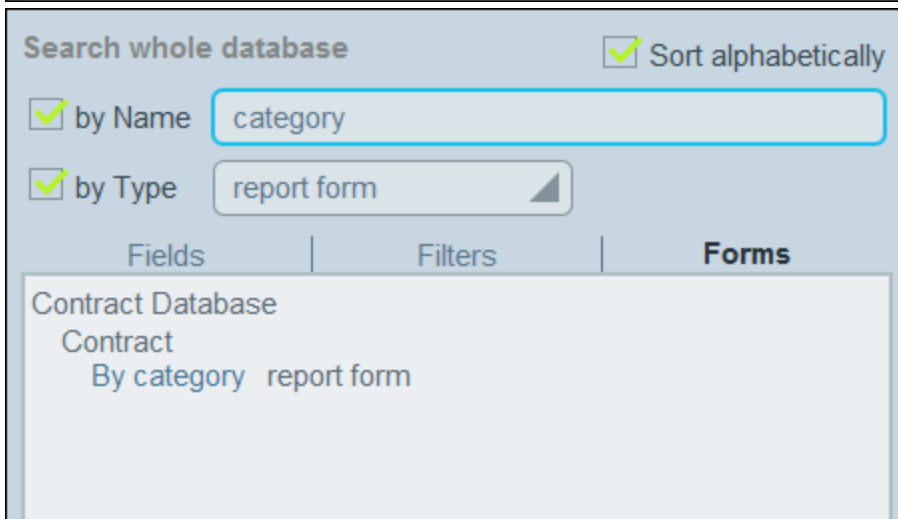
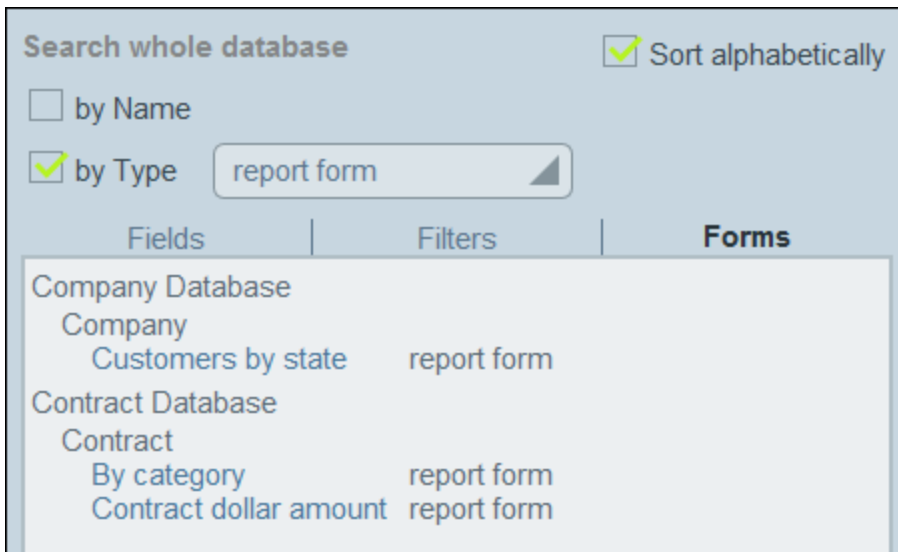
Also see [How the App's Data Is Structured](#) ¹³.

Search the RecordsManager database

The button to search all the repositories of the database is located at the top of the Database Structure tab, near the **Home Page** button. It is circled red in the screenshot below..



When you click this **Search All** button, the *Search Whole Database* form appears (screenshots below), which has as its search scope all the repositories of the RecordsManager database.



The form has tree tabs: *Fields*, *Filters*, and *Forms*. Each shows, respectively, all the fields, filters, or forms in

the search scope. Select the tab you want. To sort the displayed items, select *Sort alphabetically*.

You can now select one or both search criteria:

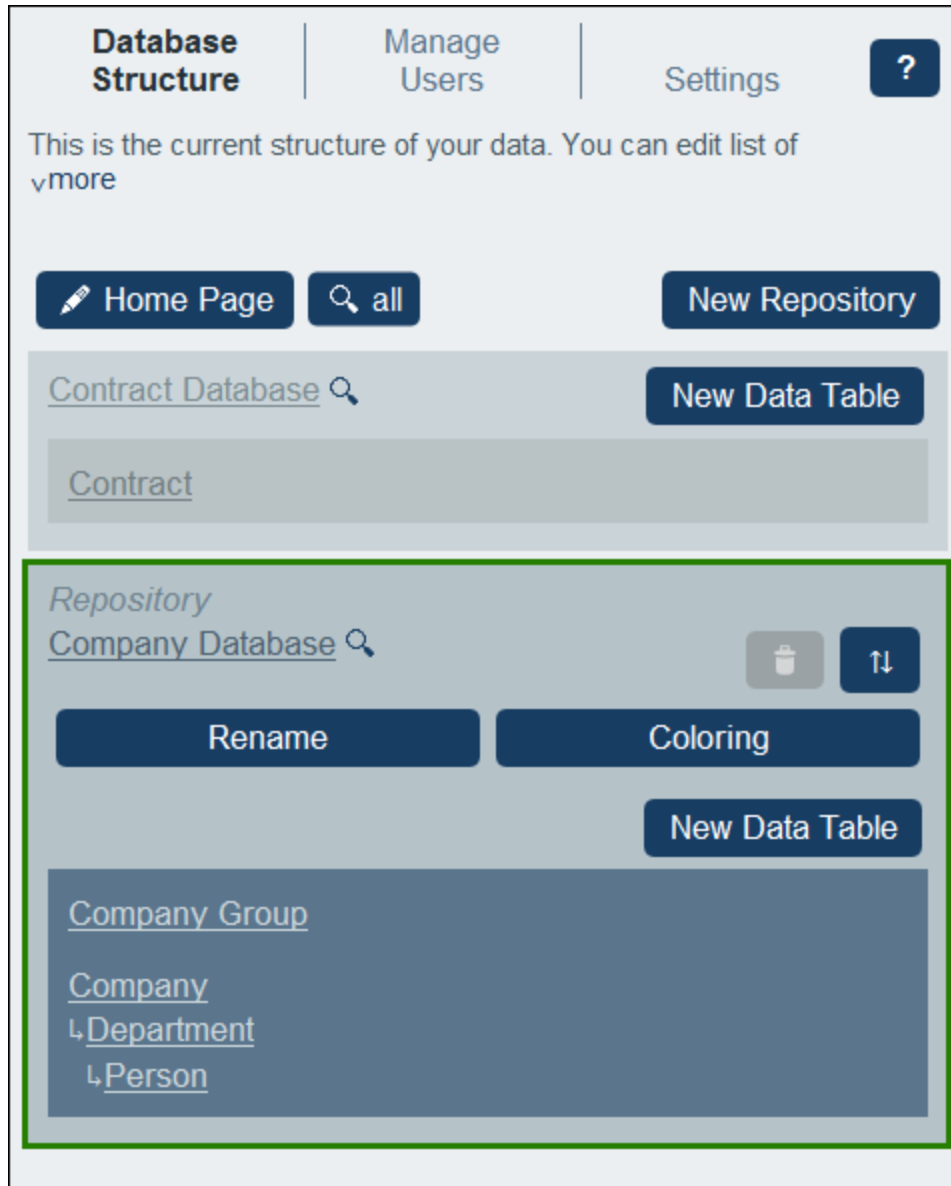
- *By Type*: A combo box appears that enables you to select from the available types. For example, in the *Forms* tab shown in the screenshot above, the [type of form](#)⁶¹ that has been selected to search for is the report form type. The screenshot above left shows all the report forms in the search scope, sorted alphabetically.
- *By Name*: In the entry field for this criterion enter the string to be searched for in the names of fields, filters, or forms. In the screenshot above right, we search for report forms that have the string "category" in its name. Search strings are case-insensitive.

If both criteria are selected, then the search returns an intersection of the results of the two searches,

Note: To return to the Configuration Page, click the **Back** button or click outside the Search Repository form.

3.2.1 Repositories

The app comprises one or more repositories. In the screenshot below there are two repositories: the Contract Database repository and the Company Database repository. To add a new repository to the app, click **New Repository**. To each repository, you can add data tables by clicking the repository's **New Data Table** button.



Edit repository properties

To access the editing controls of a repository, click its name. This expands the repository entry to show its editing controls. In the screenshot above, for example, the *Company Database* repository is shown expanded. Note that only one repository at a time can be expanded.

The following properties of a repository can be edited:

- Click **Rename** to rename the repository.
- Click **Coloring** to set the *default variation* of the repository. Remember that these are variations of the app's *default theme*, which is defined in the [Settings](#)¹⁷⁶ tab of the Configuration Page. Individual users can change the variation of individual repositories..

- Click **Move Up/Down** to move the repository up or down in the displayed list of repositories.
- Click **Delete** to delete the selected repository. Note that a repository can be deleted only after all its data tables have been deleted. For example, the *Company Database* repository in screenshot above has been selected, but cannot be deleted (the Bin icon is disabled) because it contains at least one data table.

Search repositories

Each repository has a **Search** button (magnifying glass) to the right of its name (see screenshot above). When you click one of these **Search** buttons, the *Search Repository* form appears (screenshots below), which has as its search scope that particular repository.

The image shows two screenshots of the 'Search Contract Database' form. Both screenshots have a title bar 'Search Contract Database' and a checked checkbox for 'Sort alphabetically'. The top screenshot has 'by Name' checked with an empty text box and 'by Type' checked with a dropdown menu set to 'report form'. Below the search criteria are three tabs: 'Fields', 'Filters', and 'Forms'. The 'Forms' tab is active, showing a list of results: 'Contract Database' and 'Contract'. Under 'Contract', there are two entries: 'By category report form' and 'Contract dollar amount report form'. The bottom screenshot has 'by Name' checked with a text box containing 'category' and 'by Type' checked with a dropdown menu set to 'report form'. The 'Forms' tab is active, showing a list of results: 'Contract Database' and 'Contract'. Under 'Contract', there is one entry: 'By category report form'.

The form has three tabs: *Fields*, *Filters*, and *Forms*. Each shows, respectively, all the fields, filters, or forms in the search scope. Select the tab you want. To sort the displayed items, select *Sort alphabetically*.

You can now select one or both search criteria:

- *By Type*: A combo box appears that enables you to select from the available types. For example, in the *Forms* tab shown in the screenshot above, the [type of form](#)⁶¹ that has been selected to search for is the report form type. The screenshot above left shows all the report forms in the search scope, sorted alphabetically.
- *By Name*: In the entry field for this criterion enter the string to be searched for in the names of fields, filters, or forms. In the screenshot above right, we search for report forms that have the string "category" in its name. Search strings are case-insensitive.

If both criteria are selected, then the search returns an intersection of the results of the two searches,

Note: To return to the Configuration Page, click the **Back** button or click outside the Search Repository form.

3.2.2 Data Tables

Data tables are the units with which you build the structure of your database. Each data table will contain the records corresponding to that data table. For example, a *Company* data table will contain the records of different companies, while a *Person* data table will contain the records of persons. The records that are entered in a data table are defined by a set of fields, which, you, as system administrator, will configure for the data table.

You can start building a data table hierarchy in a database by first creating a top-level data table in that database. You can then add a child data table to the top-level data table, and then add further descendants. The screenshot below shows the data tables of the two databases of a sample RecordsManager app's starting database.

The screenshot displays the 'Database Structure' management interface. At the top, there are navigation tabs for 'Database Structure', 'Manage Users', and 'Settings'. Below the tabs, a message states: 'This is the current structure of your data. You can edit list of [more](#)'. The interface features several buttons: 'Home Page', 'all', 'New Repository', 'New Data Table', and 'Manage...'. Two database entries are shown: 'Contract Database' and 'Company Database'. The 'Contract Database' entry has a 'New Data Table' button and a list containing 'Contract'. The 'Company Database' entry has a 'New Data Table' button and a list containing 'Company Group', 'Company', '↳ Department', and '↳ Person'. At the bottom, a message states: 'No database restore checkpoints have been found'.

Two types of data table: top-level and descendant level

There are two types of data tables: top-level and descendant level.

Data tables can be added to the database structure in the following ways:

- Top-level data tables are added by clicking the **New Data Table** button of a repository (see *screenshot above*).
- For any data table, a parent or child data table can be added via the data table's [More Operations](#)¹⁵¹ button.

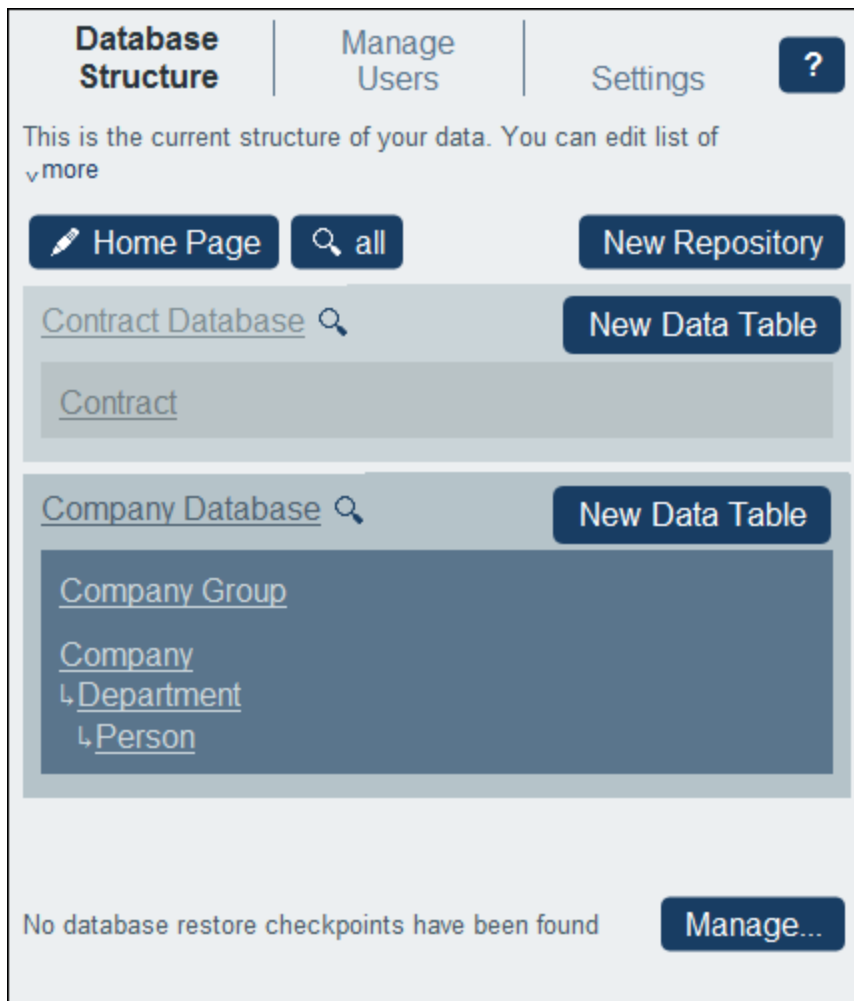
The topic [Create/Edit data Tables](#)³⁸ describes how to create new data tables (both types). The topic [Data Table Actions](#)⁴⁰ describes other data table actions.

3.2.2.1 Create/Edit Data Tables

Add a data table

Add a data table as follows:

- Top-level data tables are added by clicking **New Data Table** (see *screenshot below*) and then [defining the data table's fields and other properties](#)⁴⁰.



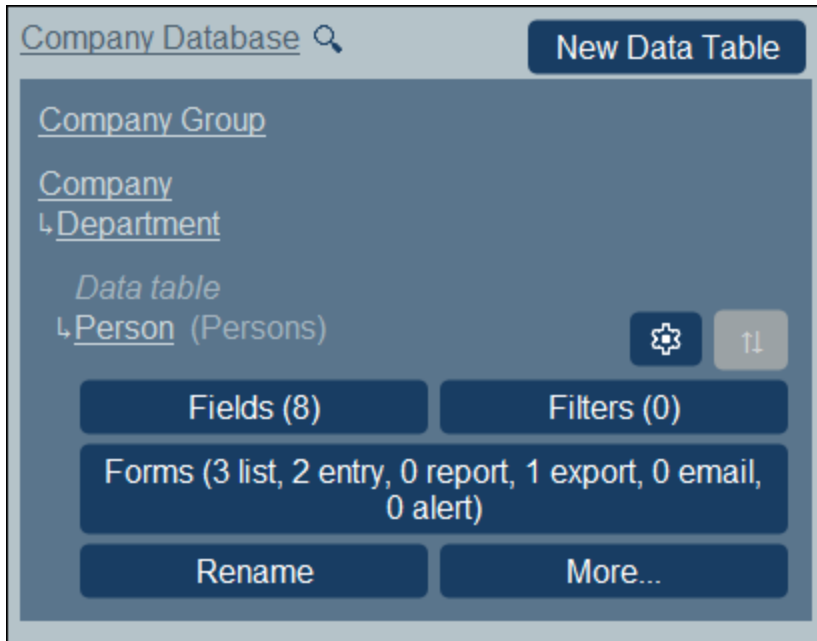
- For any data table, a parent or child data table can be added: (i) Click the data table, (ii) Select **More** (see screenshot below), (iii) Click **Add parent data table** to add a parent data table to data tables that have no parent or **Add child data table** to add a child data table. The addition of a parent or child leads to the creation of a hierarchy of data tables. See [More Operations](#)¹⁵¹ for details.

Note: A top-level data table can also be added by adding a parent data table to an existing top-level data table. Also see the [Parent/Child operation](#)¹⁵¹, which enables you to move a data table to a new hierarchy.

Define/edit a data table's fields

When you add a data table (top-level, parent, or child) you are prompted for the data table's name and the plural form of the name. (The plural is needed for use in text strings of the interface and reports. It provides a method to handle irregular plural forms (such as *children* instead of *childs*). On clicking **Continue**, the *Edit Fields* form appears. This form enables you to [create new fields](#)⁴¹ for the data table, and is described in the section [Fields](#)⁴¹.

The same *Edit Fields* form appears when you click a data table and then its **Fields** button (see screenshot below). You can then click an existing field to edit it. See the section [Fields](#)⁴¹ for a description of how fields are edited.



After you create and save a new field, it is added to the existing fields of the data table. For example, you can see that the *Person* data table in the screenshot above has eight fields. (You can click **Fields** to add a new field or to edit an existing field.) Once a field has been defined for a new data table and saved, the data table is displayed in the [Database Structure tab](#)³⁷ of the [Configuration Page](#)²⁴.

3.2.2.2 Data Tables Properties and Actions

The most essential property of a data table is its set of **fields**. These can be defined at the time [the data table is created](#)³⁸, but can also be edited at any later time. The fields of a data table represent the attributes of that data table and its records. For example, a *Person* data table might have a *Name* field, an *Email* field, and a *Responsibility* field. These fields would then represent the attributes of *Person* records of the *Person* data table. See [Fields](#)⁴¹ for a complete description.



In addition to configuring its fields, you can also configure a data table in the following ways:

- Create filters for the display of the data table's records and use of the data table's fields. See [Filters](#)⁵⁰.
- Create forms that will be used for the entry of data table data, for the generation of reports, and for exporting data to other formats. See [Forms](#)⁶¹.
- Validate individual fields and/or entire records. See [Validation of Fields and Records](#)⁴⁹.
- Rename the data table. See [Data Table Operations](#)¹⁵⁰.
- Add a parent data table and/or children data tables. See [Data Table Operations](#)¹⁵¹.
- Duplicate the data table. See [Data Table Operations](#)¹⁵¹.
- Remove the data table. See [Data Table Operations](#)¹⁵¹.
- Change the type of link to the parent data table (between a parent–child link and a loose link). See [data table Operations](#)¹⁵¹.
- Import data from external XML files. See [Data Table Operations](#)¹⁵¹.

Define the components of a data table as described in the subsections of this section.

Data table icons

All data tables have the following icons.

	Data Table Settings
	Move Up/Down

Data Table Settings

The data table settings form enables you to specify whether the data table should contain one record only or multiple records. By default the option is set to multiple records. The record of a single-record data table must be explicitly added by a system user. Once added, this record can be edited, but not deleted.

Move Up/Down: Changing the order of sibling data tables

If a data table has sibling data tables (that is, there are other data tables at the same level), then the **Move Up/Down** icon on the right is enabled. On clicking it, a screen appears that displays the sibling data tables in a flat list. Drag a data table to move it up or down in the list.

Validation rules for records of the data table

You can specify one or more validation rules for records of the data table. This will ensure that every record must fulfill certain requirements. For example, the record of a person or company can be validated to ensure that at least a telephone number or an email address is entered in the record before it is saved. If validation fails, then either an error or a warning—according to what you decide—is triggered with an appropriate message. In the case of an error, the record is not saved till the error is fixed and validation is successful.

See [Validation of Fields and Records](#)⁴⁹ for information about validation.

3.2.3 Fields

The fields of a data table represent the attributes of that data table and its records. For example, a *Person* data table might have a *Name* field, an *Email* field, and a *Responsibility* field. These fields represent the attributes of *Person* records of the *Person* data table. Within each data table, you can define the fields of that data table. The screenshot below, for example, shows the *Edit Fields* form of a *Person* data table, which displays all the fields of that data table.

The *Edit Fields* form (screenshot below) appears after you start the process to [create a new data table](#)³⁸ or when you click a data table's [Fields](#)³⁸ button. See the [Data Tables](#)³⁸ topic for more information about how to access this form. The *Edit Fields* form provides (i) an overview of the data table's existing fields, (ii) a list of the [data table's identity fields](#)⁴³, and (ii) [validation rules for records of the data table](#)⁴⁹.

Edit Person fields
?

Cancel
Save Changes

Test Entry...
Copy...
New Field...

Name	Properties	Show details
First	text, required	↑↓
Middle	text	↑↓
Last	text, required	↑↓
Title	text	↑↓
Phone	text	↑↓
Fax	text	↑↓
Email	text	↑↓
Notes	multiline text	↑↓
Department	predefined field, required parent link to Department	

Person identity fields
✎ ?

First

Middle

Last

Person validation rules
New Rule... ?

Error: Enter a value for at least one of the fields "Phon..."




In this form, you can manage and configure the data table's fields as follows:

- Add a new field by clicking **New Field**. The *Edit Field* form appears and you can [edit the new field's properties](#) ⁴³.
- [Edit the properties of existing fields](#) ⁴³. Click a field's name to edit its properties.
- You can copy one or more existing fields from any other data table. Click **Copy**, and, in the form that appears, select the fields you want to copy from some other data table. On clicking **OK**, these fields will be copied into the list of the current data table's fields. Click the new field's name to [edit its properties](#) ⁴³.
- Show the field's properties in more detail by checking *Show Details* at top right.
- Change a field's position in the list by moving it to a position above any selected field. To do this, click the **Up/Down Arrows** icon on the right-hand side of the field's listing.
- Remove a field by clicking the **Delete Field** icon on the right-hand side of the field's listing.
- Set one or more fields to uniquely identify records. See [Identity fields of data table records](#) ⁴⁸.

- Set [validation rules for records of the data table](#)⁴⁹. Such rules validate the entire record; they are different than validation rules for individual fields and additional to them. See [Validation rules for fields and records](#)⁴⁹ for details.

Icons of the Edit Fields page

The *Edit Fields* page has the following icons.

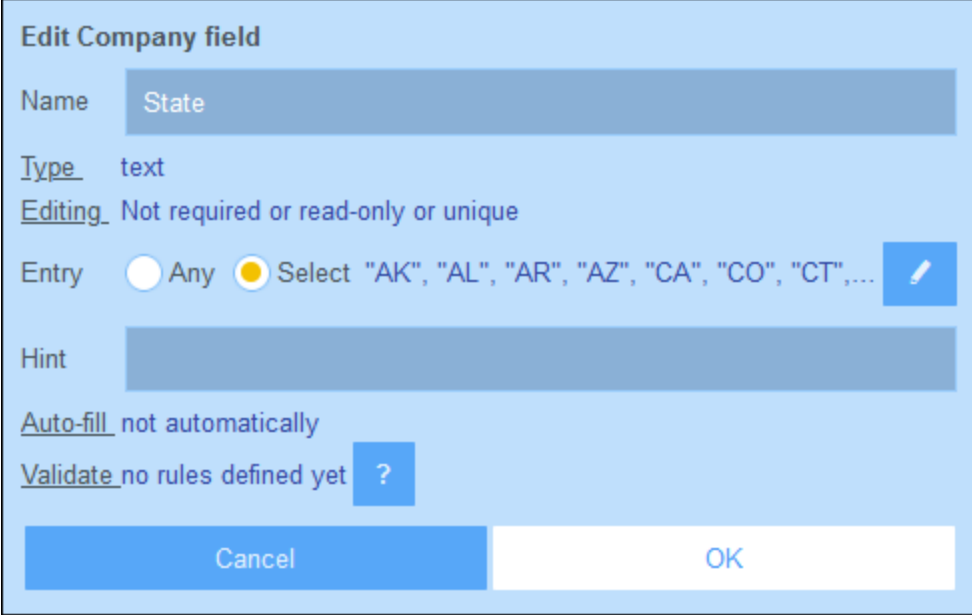
	Delete Field
	Move Up/Down
	Edit

Move Up/Down: Changing the order of field

Moves the current field to a position above the field that you select.

3.2.3.1 Field Properties

In the [Edit Fields form](#)⁴¹, if you click **New Field** or an existing field, the form for editing the properties of that field are shown (*screenshot below*). This form is the same for both new fields and existing fields. Field properties are described below the screenshot.



Name, Hint

Enter the name of the field and, optionally, a hint. The name of the field is a text string that identifies the field. The hint is a text string that will provide users with a hint about what the field is about and/or what kind of value can be entered for the field. For example, the *State* field shown in the screenshot above takes the abbreviation of a US state as its value. The hint could indicate this as follows, for example: *Enter the state abbreviation (NY, AL, etc).*

Type

Select the data type of the field (text, number, date, image, etc). For some fields, such as number and date, you must also additionally select a format. The *Auto-increment number* type is a number field that automatically increments the number (by a value you choose) for every new record. A *Files* type enables users to select a file for the field. An *Images* type enables users to select an image for the field. The following types have special system-related uses:

- *Boolean*: If you want the field to be editable, uncheck the *Read-only* option. If you want the field to always have a value, then check the *Required* option. If the *Required* option is selected, then you might want to also use the field's *Auto-fill* property. For the *Entry* setting, you must enter a value to display on Boolean `true`, and you can optionally enter a value to display for Boolean `false`. If the field is editable, then, in entry forms, the field will automatically be displayed with two radio buttons (for the user to select `true/false`) or with a check box (for selecting `true`; the unselected check box implies `false`).
- *Auto-increment number*: The field will hold an automatically incremented number. For each new record that is added to the current data table, this field will be auto-incremented by the increment you specify. You can choose to order records of the current data table in the context of their respective parent records in the parent data table or irrespective of their parents. This can be understood by considering the following situations. First, if the option to auto-increment within the parent **is not selected**, then each new record will be auto-incremented by the specified increment irrespective of whether the parent record is the same. Second, if the option to auto-increment within the parent **has been selected**, then as each new record is added, it will be ordered within the context of its particular parent record (not within the context of all parent records). Say, for instance, a record named *Legal* of a *Department* data table has been assigned to a record named *Altova* in the parent *Company* data table. This *Legal Department* record will be numbered in the context of its parent *Altova* company—and not in the context of all *Department* records. So, if the *Altova* record of the *Company* data table already has five *Department* records, then this new *Legal* record of the *Department* data table will be auto-incremented to six—even though it might be, say, the 97th record of the *Department* data table. Even if the *Auto-increment number* field is not shown in [List forms](#)⁶⁴, its ordering will determine the ordering of the list—unless some other field has been selected for [initial sorting](#)⁶⁷.
- *Files*: Enables one or more files to be attached to the field. For each file, the following actions are available: (i) view the file in the default file-type editor; (ii) save the file to any file location; (iii) reload the file to the field; (iv) delete the file from the field.
- *Images*: Enables one or more image files to be attached to the field. For each image file, the following actions are available: (i) view the image in the default image editor; (ii) save the image file to any file location; (iii) reload the image file to the field; (iv) delete the image file from the field.
- *Reminders*: Specifies that the field is a reminder field. If a data table contains no reminder field, reminders cannot be set for that data table. See [Reminder Emails](#)¹⁸⁸ for details of how reminders are used.
- *Link to*: Creates a [loose link](#)¹³ to another data table in the system. Choose the data table you want to link to from the field type's combo box. For more information, see [How the App's Data Is Structured](#)¹³, [How Data Is Stored](#)¹⁶, and [Database Structure](#)³¹.
- *User*: Enables the name of a system user to be entered as the field's value. This could be useful, for example, as shown in the screenshot below if you wish to have a field that records who last edited a field. If you want to allow multiple users to be entered in the field, then select the *Multiple* option. If the field is not filled automatically (via the *Auto-fill* option), then it would appear in entry forms as a combo

box with a dropdown list containing the system's users. Note that each User has four properties: Name, Email, Group, and Role. In an entry form, you can choose which properties of the selected user/s to display. Also see [XPath Expressions](#)²⁰⁴ for more information.

Related features: [Summary values](#)¹³⁶, [Grouping records on a date-type field](#)¹³³, [Reminder Emails](#)¹⁸⁸.

Editing

Select whether the field is editable or read-only, and whether the value must be unique. If editing is required, then the field must not be empty: if empty, the record will not be saved. If the field is specified here as read-only, then it is read-only in all [forms](#)⁶¹. To set the field as read-only in some forms only (not in all forms), leave *Read-only* unchecked here and select *Read-only* in individual forms.

Note the following: (I) multiple editing options are allowed; (ii) if *Unique* is selected, then *Required* is automatically also set.

Entry

Specify whether any entry is allowed for the field or whether the user must select from a list of entries. You can provide a list of entries and, optionally, allow users to enter their own values.

To allow users to enter values freely, choose the *Any* option. To specify a predefined list of entry choices, choose the *Select* option and then click the **Edit** icon. A form similar to that shown below appears. You can

enter fixed values as shown in the screenshot below by adding a new row for each item (insert a row above an existing row or append a row to the last row). In the screenshot below, for example, there are three items (*Distributor*, *Reseller*, and *vendor*).

Alternatively, select the Calculation tab to enter an XPath expression that evaluates to a sequence of items. In the screenshot below, we use an XPath expression to generate the same list of items that we obtained by entering the values shown in the screenshot above. The XPath expression is: `'Distributor', 'Reseller', 'Vendor'`.

As a third option, click **Import** to import values from a CSV or XML file, or from the values already entered for this field. The imported values can replace or be appended to the values you added manually (in the rows).

From the list of options with check boxes, select any options you want:

- The multiple-values option enables the user to select more than one value.
- You can also allow users to enter their own values.
- If you have predefined a list of entry choices (and have not allowed users to enter their own values), then, for each filter of the data table, you can define a subset of the predefined list.

Alternatively, you can import the values of the entry list via a CSV file or XML file by clicking **Import** (see *screenshot above*). The CSV file must have a single column (with or without a header), which contains the items of the entry list. The XML file must have a root element and one repeating child element (where each child element contains an item of the entry list):

Auto-fill

Configure one of the following options (see *screenshot below*):

- The value is not filled automatically; users must supply the values
- Values are entered automatically when a record is created or when a record is saved. You can enter a fixed value or you can enter an XPath expression to dynamically calculate the value to enter. To edit the XPath expression, click the option's **Edit** icon (see *note immediately below*).
- Always auto-fill by calculating a value based on other fields of the data table. For example, in the screenshot below, we have calculated the value of the *Email* field by concatenating the values of the *First* field and *Last* field with a string constant: `concat(First, '.', Last, '@altova.com')`. To edit the XPath expression, click the option's **Edit** icon (see *'About editing XPath expressions' below*).

If one of the Auto-fill options has been selected, then whenever a new field is added to the record or any field edited, you will be prompted about whether existing records of the data table should be updated. This is because the auto-filled value might have changed as a result of the added or edited field.

The screenshot shows a dialog box titled "Edit Person field" with the following configuration:

- Name:** Email
- Type:** text
- Editing:** read-only
- Entry:** Any Select
- Hint:** (empty text box)
- Auto-fill:** Choose whether and when to fill this field automatically
 - Do not fill automatically
 - On specific events:
 - When record is created
 - When record is saved
 - Always calculate based on other fields
 - Text box: `concat(First, '.', Last, '@altova.com')`
- Note:** no matter whether an entry form includes this field or not, these calculations will be performed.
- Validate:** no rules defined yet
- Buttons:** Cancel, OK

About editing XPath expressions

The form for editing XPath expressions has three tabs: (i) *Samples* provides a random example of an XPath expression, such as: (a) the concatenation of three values (two values from other fields and a comma separator); or (b) an `exists` function to test whether a field contains some content; (note that the *Samples* tab might not be available in some situations); (ii) *Fields* lists the names of all the record's fields in alphabetical order so that they can be correctly entered in the XPath expression; (iii) *Copy* lists a selection of XPath expressions that contain various useful functions, which you can copy into your expression and modify.

See the section [XPath Expressions](#)²⁰⁴ for more information.

Validate

You can enter one or more predefined or self-defined validation rules. These enable the field value entered by the user to be validated before the record is saved. Note that you can enter multiple validation rules for each field. Additionally, you can set validation rules for the entire record. See [Validation of Fields and Records](#)⁴⁹ for details.

3.2.3.2 Identity Fields

Each record must be uniquely identifiable on the basis of one or more fields. If the values of a particular field are unique (such as an email address or company tax number), then a single field suffices as the identity field of that data table. In some cases, such as a last name, the value of a single field does not by itself ensure uniqueness. In this case, more than one field will be required to achieve a reliable degree of uniqueness (for example: first name + last name + birth date). The certainty of uniqueness does not need to be 100 per cent; a reasonable assurance of uniqueness will suffice. Select as many fields as you think are required to achieve such an assurance. It is up to you determine what will suffice.

To edit the identity fields of a data table, click the **Edit** icon of the Identity Fields section of the [Edit Fields](#)⁴¹ form or click one of the existing identity fields. The *Identity Fields* form (*screenshot below*) appears. It displays the currently selected identity fields as well as a list of the current data table's fields. Add fields individually as identity fields. You can also optionally enforce the uniqueness of all selected fields, either across the entire database or only within the parent data table of the current data table. This would ensure that no two records have the same identity (either within the whole database or the parent data table) by displaying warnings to the user.

Person identity ?

Identity fields:

all

First

Middle

Last

Add fields:

Add all

[Title](#)

[Phone](#)

[Fax](#)

[Email](#)

Enforce uniqueness of selected fields

only within Department

Note: only text (but not multiline), number, date, and time fields can be part of identity. Also no fields with multiple values.

Cancel OK


Click **OK** when you have finished.

3.2.3.3 Validation of Fields and Records

You can create validation rules at two levels: that of the individual field, as well as that of the entire record. The *Validation Rule* form shown in the screenshot below is displayed when you click **New Rule** of the [Edit Fields form](#)⁴¹. The same form is shown for both field validation and record validation.

In the form, enter an XPath expression that returns Boolean `true()` or `false()`. If the expression is invalid XPath, then the invalidity is flagged with an error message in red. If the expression is valid XPath but returns some other value than Boolean `true()` or `false()`, then the rule is considered to be an error but no XPath error is flagged. It is up to you to ensure that the expression returns a Boolean result. See (i) the screenshot below for an example of such an expression, and (ii) the note below about editing XPath expressions.

Validation rule

XPath 

If XPath rule above returns boolean true(), then it is passed, if false(), then it fails and error/warning is triggered. Any other result will be considered as an error in the rule itself.

Failure is an Error a Warning

Please select what will happen if the validation fails. An error will prohibit saving the record. A warning will be shown, but user can skip it.

Error message

The validation rule shown in the screenshot above could be used to validate a record to ensure that at least an email address or a telephone number has been entered for the record. You could add further validation rules at the level of the telephone number field and/or email address fields: for example, to ensure the correct telephone number format and/or email address pattern. Note that a predefined rule to validate email addresses for correct pattern is built-in for field validation.

For each rule, you can specify whether a failed validation is to be considered an error or a warning. In the case of an error, the record will not be saved. You can also enter the text of a suitable error/warning message; this will be displayed if validation fails.

About editing XPath expressions

The form for editing XPath expressions has three tabs: (i) *Samples* provides a random example of an XPath expression, such as: (a) the concatenation of three values (two values from other fields and a comma separator); or (b) an `exists` function to test whether a field contains some content; (note that the *Samples* tab might not be available in some situations); (ii) *Fields* lists the names of all the record's fields in alphabetical order so that they can be correctly entered in the XPath expression; (iii) *Copy* lists a selection of XPath expressions that contain various useful functions, which you can copy into your expression and modify.

See the section [XPath Expressions](#) ²⁰⁴ for more information.

3.2.4 Filters

A set of filters can be defined for each data table. These filters can then be used for one or more of the following purposes:

- To filter data displayed in list forms and report forms
- To limit user access to data
- By users, for detailed searches

Working with filters

The procedure for working with filters is as follows:

1. Plan and create a set of filters for each data table as required.
2. Use filters for the purposes listed above.

Edit Filters page

The *Edit Filters* page (screenshot below) appears when you click a data table's [Filters](#)³¹ button.

It provides an overview of the data table's existing filters. You can click an existing filter to edit it, and you can [add a new filter](#)⁵² by clicking **New Filter**.

Edit Contract filters ?

Cancel **Save Changes**

Filters can be used by users as a quick, much more detailed search. Filters can also be used to limit overall user access to data, to filter data displayed in the list forms, and to pre-select users who will get reminder notifications via alert groups. You can hide filters if you only want to use them for one of the purposes listed above and don't want end users to see them as a search tool. ^{^less}

New Filter...

Active Contracts other than IP	<input type="checkbox"/> hide		
Active IP, Patents, Trademarks	<input type="checkbox"/> hide		
Expiring in 90 days	<input type="checkbox"/> hide		
New contracts with effective dates < 1 month	<input type="checkbox"/> hide		
Review in 60 days	<input type="checkbox"/> hide		

Actions of the Edit Filters page

The *Edit Filter* page has the following icons.

	Copy Filter
	Delete Filter

You can carry out the following actions for individual filters:

Hide filters (from users)

Filters are mostly used by administrators for configuring the system. However, there is one use of filters that involves the user. This is when filters are used by users for searches. If you plan to use a filter for configuration only and to not make it available for user searches, then the filter should be hidden from users. To hide a filter, check the filter's *Hide* check box (see screenshot above).

Copy filters

This *Copy Filter* feature is useful if you want to create a new filter by modifying an existing filter. To copy a filter, click its **Copy** icon (see screenshot above). The copied filter will open in a new [Edit Individual Filter](#)⁵² form. You can give the new filter a new name and edit the conditions of the copied filter.

Delete filters

To delete a filter, click its **Bin** icon (see screenshot above).

3.2.4.1 Create Filters

The *Edit Filters* page (screenshot below) provides an overview of the data table's existing filters. Create a new filter by clicking **New Filter**.

Edit Contract filters ?

Cancel **Save Changes**

Filters can be used by users as a quick, much more detailed search. Filters can also be used to limit overall user access to data, to filter data displayed in the list forms, and to pre-select users who will get reminder notifications via alert groups. You can hide filters if you only want to use them for one of the purposes listed above and don't want end users to see them as a search tool. ^less

New Filter...

Active Contracts other than IP	<input type="checkbox"/> hide		
Active IP, Patents, Trademarks	<input type="checkbox"/> hide		
Expiring in 90 days	<input type="checkbox"/> hide		
New contracts with effective dates < 1 month	<input type="checkbox"/> hide		
Review in 60 days	<input type="checkbox"/> hide		

In the *Edit <data table> Filter* form that appears (screenshot below), give the filter a name. Since filters are presented to users by name (without showing the condition branches you have defined for the filter), you should

select a name that is descriptive enough to indicate what the filter selects. After a filter has been created, it will be displayed on the *Edit Filters* page (*screenshot above*) along with the other filters of the data table. To edit a filter, click its name on the *Edit Filters* page. On doing this, the filter's *Edit <data table> Filter* form appears (*screenshot below*). The editing form is the same as that used for creating the filter. The form's functionality is described below.

After you have completed editing filters, click **Save Changes** in the *Edit Filters* form (*see screenshot above*).

Structure and broad functionality of the form

The *Edit <data table> Filter* form has two broad parts:

- A top part, which contains the filter's name and its main controls (a list of parameter definitions for the filter, the *Review* check box, and buttons to add the condition branches of the filter).

- A bottom part comprising the condition branches, which are framed in green in the screenshot above.

Filter parameters

Filter parameters are parameters that are declared and used in a filter. They can be used in the filter as the values of conditions. If a parameter has been assigned a default value, then that value is used initially when the condition is tested. A user can supply a value to override the default value—thereby modifying the filter. This is the major use of filter parameters: they allow the user to define the filter.

To declare one or more parameters for a filter, check the *Filter parameters* box (see screenshot below). Uncheck this box to delete all parameters and remove their uses in the filter. You can add additional parameters by clicking **Add** (see screenshot below). For each parameter: (i) provide a unique name, (ii) specify its datatype, and (iii) optionally specify a default value.

After declaring a filter's parameters as described above, you can use them in conditions of the filter (see the highlighted selection in the screenshot above). Do this by clicking the **P** icon to the right of the field and selecting one of the filter's parameters from the dropdown list that appears. This means that the value of the parameter will be used in the condition's test. For example, in the second filter condition in the screenshot above, if the *Contracting Department* field contains the value of the *Department* parameter, then the condition evaluates to true. During data entry, users can provide these parameter values. In this way, you can enable users to determine how to filter the records of data tables.

'Review' check box

To see the filter's conditions in a compact form, select the *Review* check box. The condition branches of the filter will then be displayed in a non-editable summarized form with the logical operators that bind them. The

compact presentation is achieved due to the absence of editing controls. Compare the screenshot below (of the Review format) with the screenshot above (of the Editing format).

Edit Contract filter

Expiring in 90 days

Filter parameters ?

Parameter name	Type	Default	Add
Department	text		+ -

Review

Expiry Date less than 90 days in future
and Contracting Department contains @Department

Cancel OK

To go back to the editing format, uncheck the *Review* check box.

Add and define condition branches

The button controls in the form enable you to add condition branches at the top level of the filter. These buttons are located to the right of the *Review* check box (see screenshot below), and will be available in Editing format, that is, when the *Review* check box is not selected.

Review Add condition Add filter Add search-in Add [

How to define the branches of the filter is described in the next section, [Define Condition Branches](#)⁵⁵.

3.2.4.2 Define Condition Branches

The button controls of the form enable you to add condition branches for defining the field selection.

Add condition Add filter Add search-in Add [

The buttons, from left to right, are as follows:

- **Add Condition** adds a condition (see below for details). If the added condition is not the first top-level item, then it is joined to the previous top-level item with a logical **AND** operator. Click the **AND** operator to change it to a logical **OR** operator. Next, select the field on which you wish to place a condition and specify the condition as described below.
- **Add Filter** adds an existing filter (see below for details) as a condition. The ability to add existing filters as conditions enables you to avoid duplicating filters and provides for the modular composability of filters. If the added filter is not the first top-level item, then the new filter is joined to the previous top-

level item with a logical **AND** operator. Click the **AND** operator to change it to a logical **OR** operator. Next, select the [existing filter](#)⁵⁰ that you want to use as an additional condition.

- **Add Search in Other Data Table** (or **Add Condition on Other Data Table**) adds a set of conditions for another data table (ancestor, child, or linked-to data table). This top-level item provides the ability to set conditions for other data tables. If it is not the first top-level item, then it is joined to the previous top-level item with a logical **AND** operator. Click the **AND** operator to change it to a logical **OR** operator. Next, select the data table on which you wish to place conditions and specify the conditions in the usual way as described below. If no ancestor, child, or link-to data tables have been defined, then this button does not appear.
- **Add [** or **Add Bracket** adds a bracket item that enables you to define set of conditions within a bracket. This enables you to more easily structure a hierarchy of conditions. If the bracket item is not the first top-level item, then it is joined to the previous top-level item with a logical **AND** operator. Click the **AND** operator to change it to a logical **OR** operator. You can now add a condition, filter, or sub-bracket and define conditions as described below.

Add the conditions

Create the conditions in one of the following ways:

- Add a new condition by clicking **Add Condition**, then selecting (i) the **field** you want to filter (for example, *Status* in the first condition of the screenshot below) or a direct condition; if you enter a direct condition, you do not need to—and will not be allowed to—define the condition any further, (ii) the **selector** (such as *equal* or *one of* in the screenshot below; see *list of selectors below*), and (iii) the **field value/s** on which to filter (such as *Active* in the screenshot above). The first condition in the screenshot below selects only those records of the data table that have a *Status* field with a value equal to *Active*. The data table's records will therefore be filtered for this condition.

Edit Contract filter

Active Contracts other than IP

Filter parameters ?

Review **Add condition** **Add filter** **Add search-in** **Add [**

◀ Status ▶ **Choose...** equal Active

and

◀ Categories ▶ **Choose...** **Add**

Lease Agreement ⊕ ⊖

Marketing ⊕ ⊖

NDA ⊕ ⊖

Operations ⊕ ⊖

Sales Agreement ⊕ ⊖

Note: field(s) Categories can contain multiple values. The filter is triggered when any of the field values matches the condition above.

Cancel **OK**

- Add multiple conditions so that the filter is a combination of conditions that are all connected by either the logical **AND** operator or the logical **OR** operator. The filter can be composed entirely of new conditions or can be a combination of [existing \(previously created\) filters](#) ⁵⁰ and new conditions. In the screenshot above, the filter is a combination of two new conditions joined by a logical **AND** operator. The operators become available when a second item (new condition or existing filter) is added to the filter. Note that you cannot combine the **AND** and **OR** operators in a single filter (that is, you cannot create **x AND y OR z**). If you want to combine operators, do the following: (i) Create a filter with one logical operator, and save it; (ii) Create a new filter which uses the first (existing) filter and combine it with the other operator and the new condition/s. Such a filter—**(FILTER-2)** in the following—would have a structure something like this: **[FILTER-2 = (FILTER-1 = C1 AND C2 AND C3) OR (C4) OR (C5)]**

Note: Only those records are displayed for which the overall condition returns Boolean `true()`. So, for example: (i) `true() AND false()` returns `false()`, but `true() OR false()` returns `true()`; (ii) `[[true() AND false()]] OR [true()]` returns `true()`.

Direct conditions

Direct conditions do not require you to enter any field or selector values, but directly specify the condition to check. The following are direct conditions, and they are listed along with fields in the first dropdown list and can be selected there.

- *Record is new:* The condition is true when the record being edited is a new record. The condition is false in all other cases.
- *Record exists:* The condition is false when the record being edited is a new record. The condition is true in all other cases.
- *Record is valid:* The condition is true when the record returns no validation errors. Validation warnings are ignored. (Available for form scripts only; not for filters.)
- *Record is invalid:* The condition is true when there are record validation errors. Validation warnings are ignored. (Available for form scripts only; not for filters.)

Selectors

The kinds of selectors that are available depends on the data type of the field that is chosen for filtering. The selectors for the different data types are listed below.

☐ Selectors for Text, Multiline Text, and Link-To fields

The table below lists and describes selectors for Text, Multiline Text, and Link-To fields. In the case of the Link-To field, the name of the Linked Data Table is considered to be text and tested in the same way as text.

<i>contains</i>	Contains the specified text
<i>doesn't contain</i>	Doesn't contain the specified text
<i>equal</i>	Equal to the chosen field value
<i>not equal</i>	Not equal to the chosen field value
<i>one of</i>	One of a set of chosen field values; add a new row for each value
<i>not one of</i>	Not one of a set of chosen field values; add a new row for each value
<i>begins with</i>	Begins with the specified text
<i>begins not</i>	Does not begin with the specified text
<i>ends with</i>	Ends with the specified text
<i>ends not with</i>	Does not end with the specified text
<i>is entered</i>	A value has been entered for the field
<i>is missing</i>	No value has been entered for the field
<i>has changed</i>	The field's value has changed since the last save
<i>has not changed</i>	The field's value has not changed since the last save

☐ Selectors for Date fields

The table below lists and describes selectors for Date fields.

<i>in range</i>	The field's date value lies within the specified range
<i>not in range</i>	The field's date value does not lie within the specified range
<i>past</i>	The field's date value lies in the past. Optionally test whether the date occurred less than or more than a specified number of days ago
<i>future</i>	The field's date value lies in the future. Optionally test whether the date occurs less than or more than a specified number of days into the future
<i>equal</i>	The field's date value is the same as the specified date
<i>not equal</i>	The field's date value is not the same as the specified date
<i>is entered</i>	A value has been entered for the field
<i>is missing</i>	No value has been entered for the field
<i>has changed</i>	The field's value has changed since the last save
<i>has not changed</i>	The field's value has not changed since the last save

☐ *Selectors for Time, Number, and Auto-Increment Number fields*

The table below lists and describes selectors for the Time, Number, and Auto-Increment Number fields.

<i>in range</i>	The field's time value lies within the specified range
<i>not in range</i>	The field's time value does not lie within the specified range
<i>equal</i>	The field's time value is the same as the specified time
<i>not equal</i>	The field's time value is not the same as the specified time
<i>is entered</i>	A value has been entered for the field
<i>is missing</i>	No value has been entered for the field
<i>has changed</i>	The field's value has changed since the last save
<i>has not changed</i>	The field's value has not changed since the last save

☐ *Selectors for Files, Images, and Reminder fields*

The Files, Images, and Reminder fields take the *Contains* selector, which tests whether the field contains the respective item.

☐ *Selectors for User fields*

For fields of type *User* in conditions, you can test whether the value of the field is equal to name of the current user or not equal to the name of the current user. Use, respectively, the selector *Is current user* or *Is not current user*. from the dropdown list.

Filter parameters

If you have declared one or more filter parameters on the filter (see [Create Filters](#)⁵²), then you can enter a parameter name from which to obtain the value to test the condition. Initially, the optional default value of the parameter will be used to test the condition. However, the user can supply the parameter value (via the [Predetermined Values option of data table pages](#)²¹¹), and, in this way, can determine the filter selection. You, as the designer, can decide how the user can customize the filter. For more information, see [Create Filters](#)⁵².

3.2.4.3 Use of Filters

Filters can be used for one or more of the following:

- To filter the records displayed in [list forms](#)⁶⁴ and [report forms](#)¹³⁰
- To limit user access to data
- To [choose user groups for email notifications](#)¹⁹⁰
- By users, for detailed searches

Filter records in list forms and report forms

One major use of filters is to restrict the records that are shown in [list forms](#)⁶⁴ and [report forms](#)¹³⁰. The restriction is done on the basis of the field values of records. For example, a filter named *Active Contracts* could be defined to show only those records where the value of a record's *Expiry Date* field lies in the future.

Limit user access to data

By combining the filters and user access properties of [list forms](#)⁶⁴ and [report forms](#)¹³⁰, different users can be configured to have different access to data. For example, you could do the following:

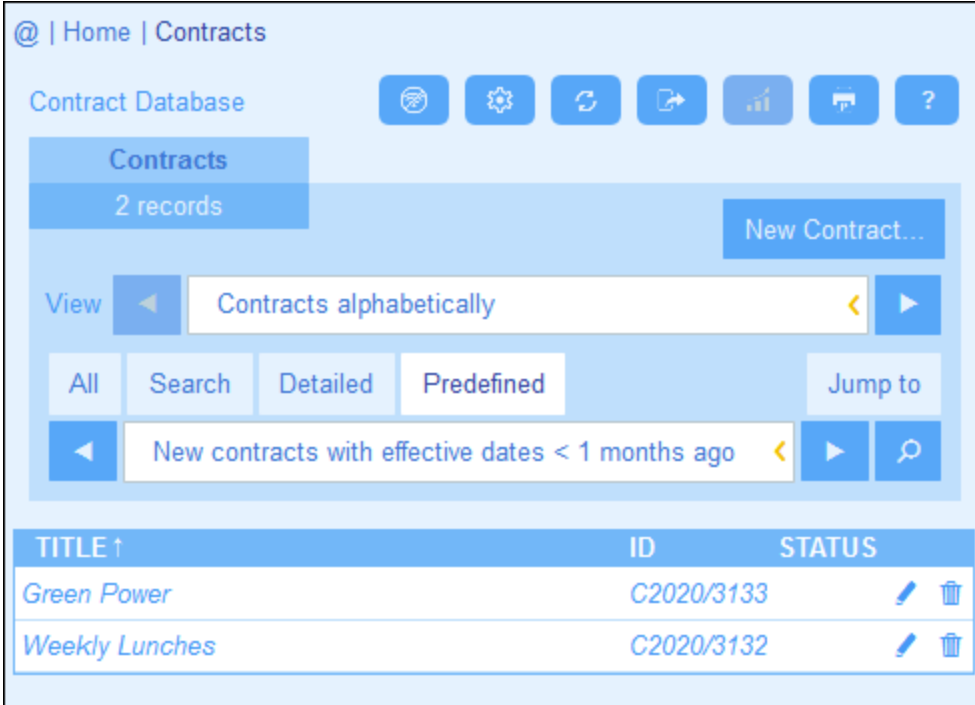
- Set up two filters: (i) one named *Software Contracts* to display only those contracts that have a *Category* field equal to the value *Software*, and (ii) another named *Partner Contracts* to display only those contracts that have a *Category* field equal to the value *Business Partners*.
- For a list form named *Software Contracts*: (i) use the filter named *Software Contracts*; (ii) set access to this form for the IT, Legal, and Accounts roles.
- For a list form named *Partner Contracts*: (i) use the filter named *Partner Contracts*; (ii) set access to this form for the Legal and Accounts roles.

In the example above, users that have been given either the Legal role or Accounts role can view both types of contracts (software and partner). However, users that have been given the IT role can view software contracts but not partner contracts.





Searches by app users

In addition to the configuration uses of filters that are listed above, users of the system can also use filters for searches.

If one or more filters have been defined for a data table, then the **Predefined** button will be available when the records of a data table are displayed using any of the data table's list forms. To return records selected by a filter, the user: (i) clicks **Predefined** (see *screenshot below*), (ii) selects one of the filters in the combo box that appears, (iii) click the **Search** icon at right. All records selected by the filter will be listed.



The screenshot shows a web interface for a database named "Contract Database". The page title is "@ | Home | Contracts". There are several navigation icons at the top: a globe, a gear, a refresh, a share, a bar chart, a printer, and a question mark. Below the title, there is a "Contracts" section with a "2 records" indicator and a "New Contract..." button. A "View" dropdown menu is set to "Contracts alphabetically". Below this, there are tabs for "All", "Search", "Detailed", and "Predefined", along with a "Jump to" button. A search bar contains the text "New contracts with effective dates < 1 months ago". At the bottom, there is a table with the following data:

TITLE ↑	ID	STATUS
Green Power	C2020/3133	 
Weekly Lunches	C2020/3132	 

Also see [System Use | Searches](#)²³⁶.

3.2.5 Forms

The *Edit Forms* page (screenshot below) appears when you click a data table's [Forms](#)³⁷ button (see the [Data Tables](#)³⁸ topic).

Edit Contract forms
?

Cancel
Save Changes

Below are all Contract forms. You can control access to the forms via user Roles.
v more

New List Form...

List Forms

Contracts alphabetically hide

New Entry Form...

Entry Forms

Legal Entry Form hide

New Report Form...

Report Forms

By category

New Export Form...

Export Forms

Standard export form hide

New Email Form...

Email Forms

Simple reminder email form reminder

New Homepage Alert Form...

Homepage Alert Forms

Standard Homepage Alerts reminder

The *Edit Forms* page provides an overview of a data table's currently defined forms and enables you to create new forms.

Types of forms, and their uses

Administrators define forms for various purposes, such as for data entry, reports, and emails. For each data table a separate set of forms is defined that use elements specific to that data table. A data table's forms can then be reused at multiple points in the RecordsManager app.

The following types of forms are available:

- [List Forms](#)⁶⁴: Enables the construction of a list of records. The list can be grouped on a field and it can be filtered. List forms can be used in entry forms and report forms.
- [Entry Forms](#)⁷²: These are the forms that are used to enter the data of a data table. They can be used wherever data for that data table can be entered.
- [Report Forms](#)¹³⁰: Enables the design of reports that can be shown on screen and printed.
- [Export Forms](#)¹⁴²: Design the structure of XML and CSV documents to export to.
- [Email Forms](#)¹⁴⁴: Design the body of emails that are sent as reminders to system users.
- [Homepage Alert Forms](#)¹⁴⁷: Design the display of reminders on the [homepage](#)⁶.

Automatic forms

When you [create a new data table](#)³⁸, important forms (such as a standard list form and a standard entry form) are created automatically on the basis of the data table's structure. The following are the key points about automatic forms.

- They are listed on the *Edit Forms* page with an *auto* sticker.
- They will be automatically changed if fields in the data table are modified (that is, if new fields are added to the data table, or fields are deleted or have their datatype modified).
- If you edit an automatically generated form, the form will not be automatically updated any more if the data table is modified. This will be indicated on the *Edit Forms* page by the disappearance of the form's *auto* sticker.

Working with forms: create new, edit, copy, delete, hide/use, create templates

Create the forms you want by clicking the respective **New Form** button. After a form has been created, it will appear in the *Edit Forms* list (*screenshot above*). You can click a form to edit it. You can also: (i) copy a form (by clicking the **Copy** icon on the right-hand-side of the form) to create a new editable form; (ii) delete a form by clicking its **Bin** icon.

Note the following points:

- For all types of forms, you can set which users can access the form. In this way, you can restrict the viewing and editing of specific records, as well as the ability to view reports and export data.
- Forms have a *Hide* or *Use* option on the *Edit Forms* page (*see screenshot above*). If you hide a form, it will be visible only when the form is used in another form. In all other cases, it will not be available. So the *Hide* option enables you to disable the use of the form without deleting it. For example, if a list form is used in an entry form and is marked as hidden, then it will be visible only in the entry form but will not be available as a list form.
- You can create [template forms](#)⁸⁷ from any entry form. A template is a data entry form with some starting data filled in. The user can modify this starting data in the entry form. See [Entry Forms](#)⁷² for more information.

After you have finished editing a form, make sure to not only save the form (with **Save Form**) but also to click **Save Changes** on the *Edit Forms* page.

3.2.5.1 List Forms

A list form displays the records of a data table in a particular layout. You can define multiple list forms for a single data table. When a user clicks on a data table, the records of the data table are presented in a list form, and the user can choose which one of the available list forms to use.

The screenshot below shows a list form's configuration page. The top part of the page enables you to set properties for the list form, while the bottom part contains the layout of the form. Configuring a list form consists of (i) designing the layout of the form, (ii) defining its content and styles, and (iii) defining the properties of the form.

The screenshot shows the configuration page for a list form titled "Edit Contract list form". The form name is "Contracts by Status" and the access is set to "Admin, All Users, Executive, Legal, Sales". There are "Preview", "Cancel", and "Save Form" buttons. The configuration options include:

- Group by Status
- Filter
- Show Jump to begins with: Status
- Preview on click ?
- Print layout: Portrait Landscape

 A green arrow labeled "Layout of the list form" points to a table below. The table has columns for ID, Title, and Categories. It shows a "Sample group 1" with three rows of "Sample Sample" records, each with a "Sample" category.

ID	Title	Categories
Sample group 1		
	Sample Sample	Sample
	Sample Sample	Sample
	Sample Sample	Sample

You can configure list forms using the following design features and settings:

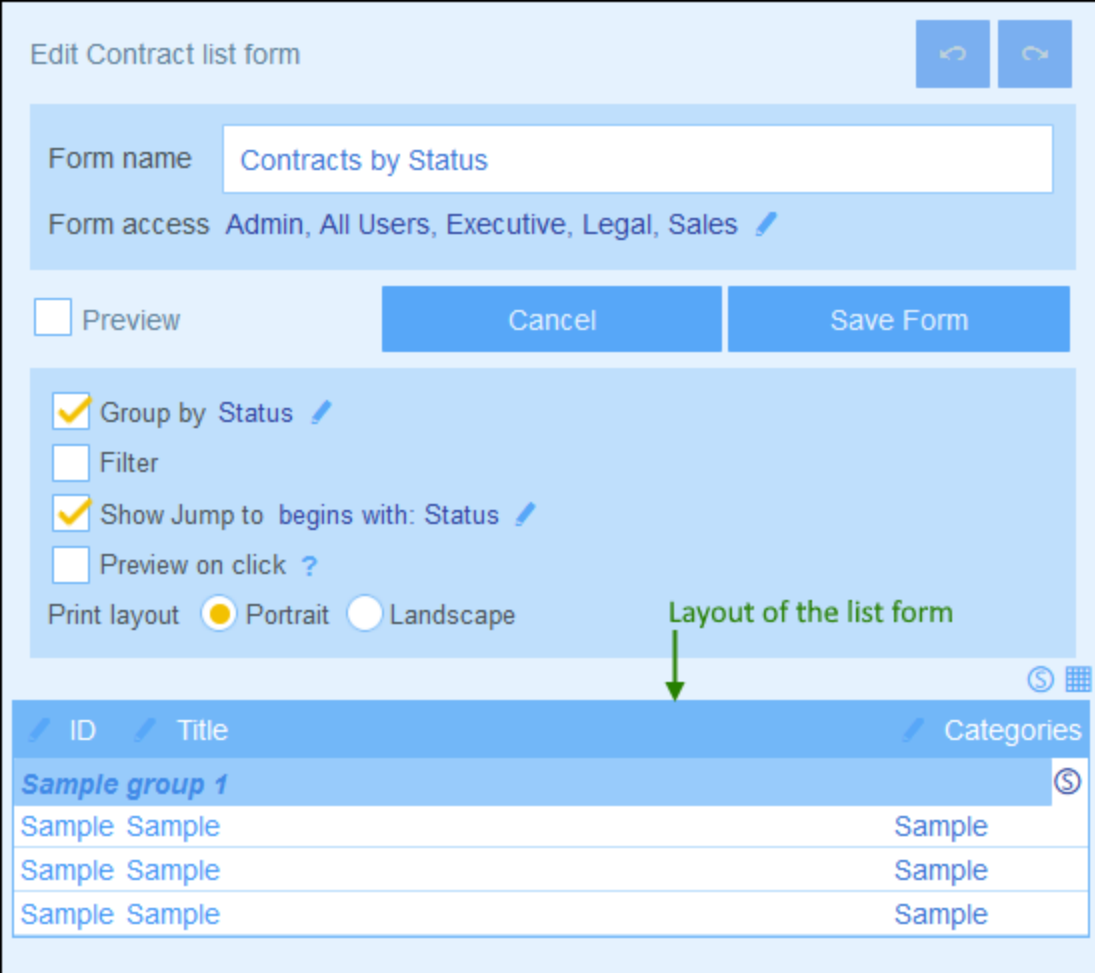
- The [layout](#)⁶⁶ of each list form is defined within a table, which you can structure according to how you want to display the records
- [Select the fields to show](#)⁶⁷ in the columns of the table (or add alternative content)
- Separately [style](#)⁶⁹ the table's header text and its body text
- If you want, you can [group and sub-group records](#)⁷¹ on the basis of fields
- [Filter the records](#)⁷¹ to display by using [predefined filters](#)⁵⁰

- Specify different kinds of [access for different users](#) ⁷¹

After completing your edits, click **Save Form** to finish. See the topics of this section for configuration details.

3.2.5.1.1 Create/Edit a List Form

When you create a new list form (by clicking **New List Form** on the [Edit Forms](#) ⁶¹ page), you are prompted to select the fields (of the current data table) that you want to display in the list form. Subsequently, give the form a suitable name (see *screenshot below*) and edit the form as described in the following topics.



Layout of the list form

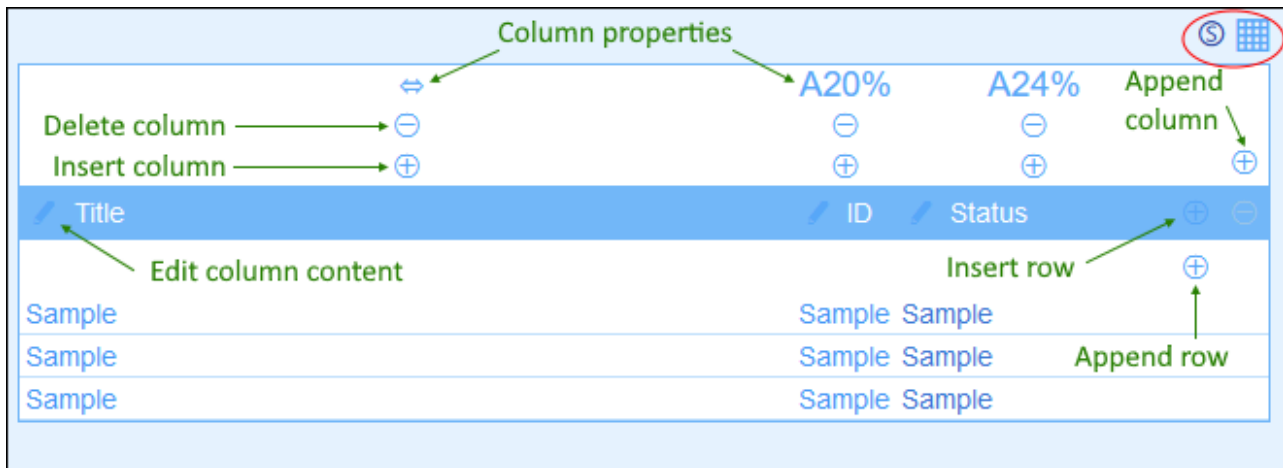
ID	Title	Categories
Sample group 1		
Sample	Sample	Sample
Sample	Sample	Sample
Sample	Sample	Sample

After a form has been saved, it can be edited at any time by clicking its name on the [Edit Forms](#) ⁶¹ page. The list form will be displayed (*screenshot above*) and can be edited.

After completing your edits (for new forms or existing forms), click **Save Form** to finish. This will take you back to the [Edit Forms](#) ⁶¹ page, where you must click **Save Changes** for all changes to be saved to the database.

3.2.5.1.2 List Form Layout and Structure

When the form is open for editing, click the **Table editing** icon (*inside the red ellipse in the screenshot below*). The table will be displayed with its editing entry helpers (*screenshot below*). The table in the list form will contain a header row and multiple body rows for the records of the data table. The only part of the table that you can edit is the table header. The header structure represents both the header and the record. So, for example, if the header is configured to have two rows, then each record will also have two rows. This means that when you design a list form, you simply design the header. (The block of sample rows in the design is a placeholder: the number of rows in this block does not change; the number of columns, however, does.)



You can edit the form's table structure as follows:

- Insert/append columns to left/right of the selected column, and insert/append rows above/below the selected row. Use the respective icons for these operations (*see screenshot above*). New columns can be inserted to the left of the selected column, and new rows can be inserted above the selected row. Note that there is only one *Append Column* icon: to the right of the rightmost column. Similarly, there is only one *Append Row* icon: below the last row.
- Delete rows/columns by using the respective icons.
- Edit the content in a column by using that column's **Edit** icon/s. You can add one of several components to a column. See [List Form Content](#)⁶⁷ for details.
- When you add a row (to the header), the two-row (or x-row) structure will be applied not only to the header but to every record.

Note: After you complete making changes to the table structure and want to exit the table editing mode, click the **Table editing** icon.

Column properties

You can set the following layout properties on individual columns:

- Column width options: (i) Default column width, where all columns are equally sized; (ii) Fixed width as percent; (iii) Auto-size the column width based on content, with an optional maximum width. Auto-sized columns are indicated by an **A** (*see screenshot above*). For columns with fixed widths as percent, and for auto-sized columns with a maximum percent width, the percent width is indicated in the column header (*see screenshot above*).
- Column padding (left and right): Set these with the respective sliders.

3.2.5.1.3 List Form Content

Table content is added column by column. If the table has multiple rows, then, you can add content for each row of each column. The structure that you create for the list form's header is applied to the header and to each record. For example, if the header has three columns, then each record has three columns. The header and records can each be styled separately—as *Labels* and *Values*, respectively (see *screenshot below*).

To select what content goes into each column, click that column's **Edit** icon (see *screenshot in [previous topic](#)*⁶⁶). The content selection form shown below appears. You can select any of the items listed in the tabs as content. Note that the content does not have to be a field.

The screenshot shows a content selection form with the following elements:

- Tabs:** Field (selected), Calc, Text, Image, Linked Rows.
- Field Selection:** A dropdown menu showing 'ID' with a checkmark.
- Options:**
 - Edit label (with a text input field containing 'ID')
 - Initial Sort
 - Edit styles
- Labels Section:**
 - size: slider set to 81%
 - bold
 - place: dropdown menu set to 'Above fields (left)'
 - italic
 - text: dropdown menu set to 'CAPITALS'
- Values Section:**
 - size: slider set to 81%
 - bold
 - align: dropdown menu set to 'default'
 - italic
- Preview:** A text input field showing 'ID' and a sample value 'Sample'.
- Buttons:** 'Remove Field' (dark blue) and 'Change Field' (light blue).

To select a content type, click its tab and enter the selection properties as described below.

Note the following, which is common across a number of content types: The label is the text that appears in the header of the table. The values are the values of fields in the records. You can style the labels of a column separately from its values, and you can see a preview in real time at the bottom (see *screenshot above*). Note

that the styles set here are for the selected column. Styles that you specify for a column will override [styles set for the table](#)⁶⁹.

Field

Select the field to display in this column. You can select not only fields from the current data table but also those from ancestor data tables or [linked-to data tables](#)⁴³. Fields that have already been selected as content in any column are shown with a tick mark (see *screenshot above*). You can edit the label (header) of the column, or hide it.

A column can also be **sorted**. In this case an arrow will appear next to the column's label. Subsidiary sorting can be carried out on two additional columns. This means that within the sorting order returned by the first column, sorting can be carried out on a second column. And within the sorting order produced by those two columns, further sorting can be carried out on a third column. For example, sorting can be carried out on a *Country* column, then a *State* column, and then a *City* column. Consequently, records of *San Francisco* and *Los Angeles* would be located near each other because they would first have been sorted on *USA* and then on *California*. The sorting priority of columns is indicated by the number of arrows in their respective headers. The column with the highest priority has one arrow, and that with the lowest has three arrows. The end user can reverse the order of each column by clicking that column's arrow symbol. In our example, if the order of the *City* column is reversed, then the following happens: the order of *USA* records relative to other countries will not change; the order of *California* records relative to other American states will not change; only the order of cities within states will change.

Select *Edit styles* to override the default styles defined in the [Global Styles](#)¹⁸¹ form.

In the case of fields of certain datatypes, additional options are available:

- For dates fields, you can additionally format the type and set other properties.
- For images fields, you can specify alignment and whether to display all images added to the field or the first image only.
- For user fields, the name of the user will be listed automatically, but you can also list either the email or the user group/s of the user. This additional information will only be listed if the field's definition in the entry form specifies that the additional information (email or group/s) be stored; by default only the user name will be stored.

Calc

Specify an XPath expression to calculate dynamic values for records of the column.

Text

Specify the text to enter. This will be static text that is entered for all records of the column.

Image

Select either an image from the image library, or choose a new image from a file location.

Child Records

Available if the data table has a child. Select the records of child data tables to display in this column, and select which list form of the respective child data table to use. You can also select which filters of the respective child data table to apply. Child data tables, their lists, and their filters are all automatically made available depending on the selections you make. Instead of displaying the child records in a list, you can display an aggregate value for the child records, for example: a sum of the values of all the child records, or an average of the values, or whether at least one record exists, or all the values run together, separated by a separator that you specify.

Linked Records

Select the records of linked data tables to display and select which list form of the respective data table to use. You can also select which filters of the respective linked data table to apply. Linked data tables, their lists, and their filters are all automatically made available depending on the selections you make. Instead of displaying the linked records in a list, you can display an aggregate value for the linked records, for example: a sum of the values of all the linked records, or an average of the values, or whether at least one record exists, or all the values run together, separated by a separator that you specify.

3.2.5.1.4 List Form Styles

You can set styles for the table and for group headers separately. You can also set styles for different columns separately (see *previous section*). To set styles for the table, click the table's **Styles** icon (inside the red ellipse in the screenshot below). To set styles for group headers, click the group header's **Styles** icon (inside the green ellipse in the screenshot below).

Edit Contract list form

Form name

Form access Admin, All Users, Executive, Legal, Sales

Preview

Group by Status

Filter

Show Jump to begins with: Status

Preview on click ?

Print layout Portrait Landscape

Layout of the list form

ID	Title	Categories
Sample group 1		
Sample	Sample	Sample
Sample	Sample	Sample
Sample	Sample	Sample

Table styles

The Styles form for the table looks something like in the screenshot below.

Use styles defined globally Apply globally

Labels

size 100%

bold place

italic text

Values

size 100%

bold align

italic

ID	Title	Categories
Sample group 1		
Sample Sample	Sample Sample	Sample
Sample Sample	Sample Sample	Sample
Sample Sample	Sample Sample	Sample

Note the following points:

- The label is the text that appears in the header of the table. The values are the values of fields in the records. You can set the text properties of each separately, including text placement.
- If you select the *Use styles defined globally* check box at the top of the table, then the [global styles specified in the app's settings](#)¹⁸¹ will be used.
- The **Apply Globally** button applies the current styles to the global settings for all forms and for properties that are specific to list forms. All forms that do not have their own table or field styles will receive the current styles.

Styles of group headers

Click the group header's **Styles** icon to bring up the relevant styling form. Here, you can set the following:

- Text properties of the group header
- Whether the group of records should be shown collapsed or expanded when the list is displayed.

Note: After you have finished making style changes, click **Save Form** and then **Save Changes**.

3.2.5.1.5 List Form Properties

In the *Edit List Form* dialog, the properties of the list form are defined via the settings above the layout part of the design (see screenshot below), and are described below.

Form name: Contracts by Status

Form access: Admin, All Users, Executive, Legal, Sales

Preview

Group by Status

Filter

Show Jump to begins with: Status

Preview on click ?

Print layout: Portrait Landscape

ID	Title	Categories
Sample group 1		
Sample	Sample	Sample
Sample	Sample	Sample
Sample	Sample	Sample

Set access to list forms

The *Form Access* setting enables you to specify which [roles](#)¹⁶⁹—and, therefore, [users](#)¹⁶⁶—may access the form. Note that the *Admin* role has full access to all forms.

Preview

Provides a preview of the form.

Grouping

The records of a list can be grouped on the values of one or more fields, up to a maximum of three. For example, records may be grouped on, say, the *Region* field into US and EU groups. On a second level, they could be grouped into countries, and, on a third (and final) level, into cities.

To set up grouping, check the *Group By* option and select the fields you want to use as grouping criteria. The fields can be text fields, number fields, date fields, and parent links. Multiline fields cannot be used. After grouping has been set up, a new header for groups appears in the layout. Click its **Style** icon to specify its formatting ([see previous topic](#)⁶⁹).

Filtering

A list can be filtered to show only records that meet certain conditions. The filtering is set up by assigning a single filter to the list. To set up a filter, check the *Filter* option and select the filter you want to use from the combo box. Only filters of the current data table will be available. For information about creating and using filters, see the section [Filters](#)⁵⁰.

Show Jump-To

If the *Show Jump-To* option is selected, then a **Jump To** button will be displayed in the list form. On clicking, **Jump To**, the end user can enter a string in the *Jump To* field, following which the display will jump to the first record that matches the string according to the criteria you chose when defining the *Show Jump-To* option of the list form.

On selecting the option, you can select the criteria to be fulfilled by the target records to jump to:

- If the user's text string is the starting string of (i) any field, or (ii) a selected field
- If the user's text string is contained in (i) any field, or (ii) a selected field.

Select the appropriate radio buttons to select the setting you want. To finish, click **OK**.

Preview-on-Click

If the *Preview-on-Click* option has been switched on and the user clicks a record in the list, then the clicked record will be displayed below the list (which is scrollable). If you select this option, then you are prompted to select the [entry form](#)⁷² that will be used to display the record, which the user can edit directly.

Print layout


Select whether the list form, when it is printed by the user, will have a portrait or landscape format.

3.2.5.2 Entry Forms

You can design one or more entry forms for a data table (*see screenshot below*) and specify which users have access to each entry form and under different conditions. An entry form is used to enter the data of a data table's records, one record at a time. When users open a data table for data entry, they can choose one of the forms to which they have access and enter the required data. By creating different forms, each with a different set of users, you can control which users get to enter which items of data or which users may only read data in the different forms.

Edit Department entry form

Form name

Form access Admin (full), All Users (full), Executive (full), Sal... 

Preview

Read-only


Sections


Script on any edit in this form


Script on record save


Print layout Portrait Landscape

Layout of the entry form

 COMPANY

 NAME

 DESCRIPTION

 PERSONS

LAST	FIRST	M	COMPANY	DEPARTMENT
Sample	Sample	Sample	Sample	Sample

Design your entry forms using the following broad steps:

1. Decide what fields you want to include in the form, how the fields will be laid out (in a table structure), [which users will have access](#) ⁷⁶ to the form for viewing only and/or data entry. Alternatively, [the entire form can be read-only](#) ⁷⁶.

2. Decide whether the form should be [divided into sections](#)⁷⁹ for a better overview, and whether sections should appear one section at a time or all together.
3. [Add sections](#)⁷⁹ as required. Alternatively, you can also create a form that has no explicitly demarcated section.
4. If you want to modify the fields of the form when a field is edited, select [Script on any edit](#)⁸⁸ and enter the XPath expression that will modify the fields.
5. You can also select [Script on record save](#)⁸⁸ to add a script that will modify fields and/or send emails when a record is saved.
6. Modify the [structure of the table](#)⁸¹ by adding/deleting rows and columns. Note that you can also add an entire table within a table cell.
7. Within table cells, [add content items](#)⁸³ (such as fields and text) or structural items (such as tables and child-data table rows).
8. [Style individual table contents](#)⁸⁶.
9. Create [templates](#)⁸⁷ from an entry form. Templates are entry forms that are partially filled with data when a new record is created using this template. The user can subsequently modify the data. For each entry form, multiple templates can be created, enabling the user to create a new record using any of these templates.

After a form has been saved, it can be edited at any time by clicking its name on the [Edit Forms](#)⁶¹ page. The entry form will be displayed (*as in the screenshot above*) and can be edited.

After completing your edits (for new forms or existing forms), click **Save Form** to finish. This will take you back to the [Edit Forms](#)⁶¹ page, where you must click **Save Changes** for all changes to be saved to the database.

3.2.5.2.1 Create/Edit an Entry Form

When you create a new entry form (by clicking **New Entry Form** on the [Edit Forms](#)⁶¹ page). You will be prompted to select the fields you want to include for data entry. Each selected field will be created in a row of a table (*see screenshot above*). By default, each field will have a label and a data entry device (such as a data-entry box or combo box). Subsequently, you must give the form a name. Subsequently, you can also edit the design of the form—by changing the structure of the table and modifying what goes into the cells of the table. These operations are described in the following topics.

Edit Department entry form ↶ ↷

Form name
 Form access Admin (full), All Users (full), Executive (full), Sal...

Preview **Cancel** **Save Form**

Read-only
 Sections
 Script on any edit in this form
 Script on record save
 Print layout Portrait Landscape

Layout of the entry form

COMPANY

NAME

DESCRIPTION

PERSONS

LAST	FIRST	M	COMPANY	DEPARTMENT
Sample	Sample	Sample	Sample	Sample

After a form has been saved, it can be edited at any time by clicking its name on the [Edit Forms](#) ⁶¹ page. The entry form will be displayed (*screenshot above*) and can be edited.

After completing your edits (for new forms or existing forms), click **Save Form** to finish. This will take you back to the [Edit Forms](#) ⁶¹ page, where you must click **Save Changes** for all changes to be saved to the database.

3.2.5.2.2 Entry Form Properties

In the *Edit Entry Form* dialog, dialog, the properties of the entry form are defined via the settings above the layout part of the design (see *screenshot below*), and are described below.

Edit Department entry form ↶ ↷

Form name
 Form access Admin (full), All Users (full), Executive (full), Sal...

Preview

Read-only
 Sections
 Script on any edit in this form
 Script on record save
 Print layout Portrait Landscape

Layout of the entry form

COMPANY

Sample

NAME

Sample

DESCRIPTION

Sample

PERSONS

LAST	FIRST	M	COMPANY	DEPARTMENT
<i>Sample</i>	<i>Sample</i>	<i>Sample</i>	<i>Sample</i>	<i>Sample</i>

Set access to entry forms

The *Form Access* setting (near the top of the form) enables you to specify which roles (and thereby users) have full access to the form (read and write access) and which users have read-only access. Note that the *Admin* role has full access to all forms. When you click this setting's **Edit** icon, the *Edit Form Access* form for appears (screenshot below).

Edit form access

Admin	<input checked="" type="checkbox"/>	Full	<input type="checkbox"/>	Read-only
All Users	<input checked="" type="checkbox"/>	Full	<input type="checkbox"/>	Read-only
Executive	<input checked="" type="checkbox"/>	Full	<input type="checkbox"/>	Read-only
Legal	<input checked="" type="checkbox"/>	Full	<input type="checkbox"/>	Read-only
Sales	<input type="checkbox"/>	Full	<input checked="" type="checkbox"/>	Read-only

Additional restrictions

Allow access only if

Read-only access if

The roles of the system are listed, and you can specify whether to grant each role full access, read-only access, or no access. Further, you can (in the lower half of the form) specify a further restriction for each type of access by selecting a filter for that type.

Preview

Provides a preview of the form.

Read-only entry forms

A form can be defined as read-only by checking this option near the top of the form. No template can be defined for a read-only form.

Sections

Select the *Sections* check box to create sections. If the check box is unselected, then the form is displayed as a single page and without sections. See the topic [Sections of an Entry Form](#)⁷⁹ for a description of the Sections feature.

Script on any edit in this form

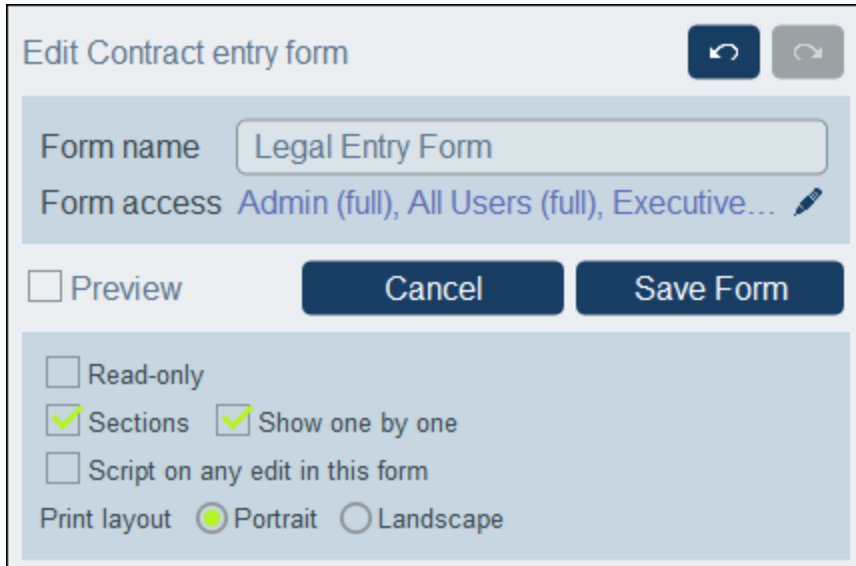
Select this option to If you want to modify the fields of the form when a field is edited. You can then enter the XPath expression that will modify the fields.

Print layout

Select whether the entry form, when it is printed by the user, will have a portrait or landscape format.

3.2.5.2.3 Sections of an Entry Form

To create sections, first check the *Sections* option (see screenshot below). This creates a new section, named *Unnamed Section*, above the first row of the table. If you want to show each section one-by-one (instead of all together on one page), check the *Show One by One* option.



Edit Contract entry form

Form name

Form access Admin (full), All Users (full), Executive...

Preview Cancel Save Form

Read-only

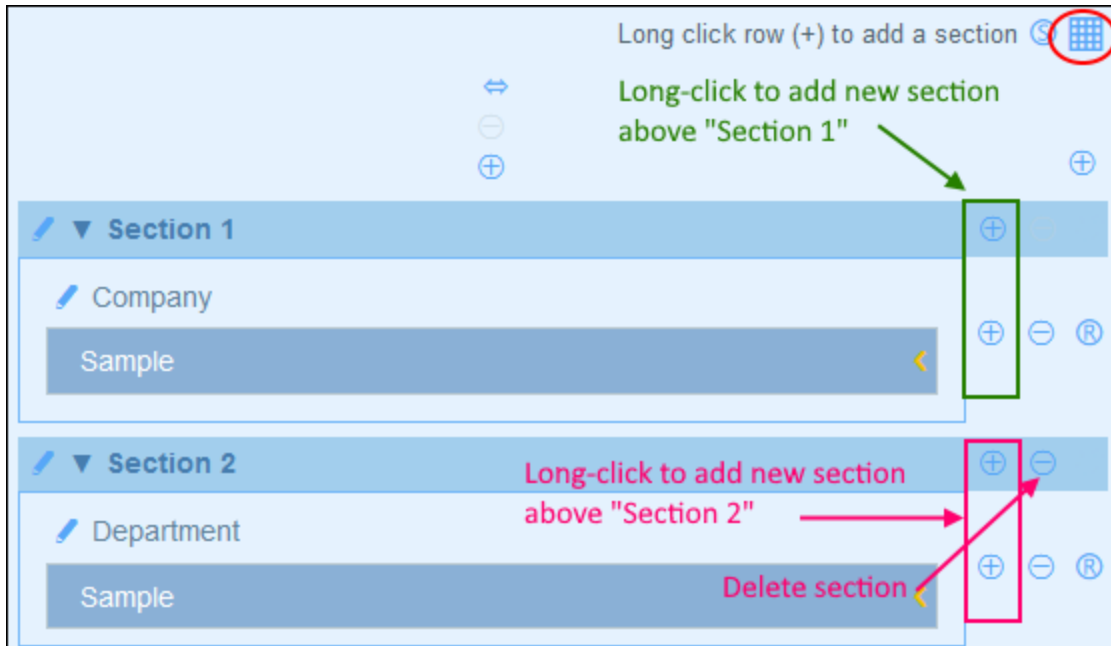
Sections Show one by one

Script on any edit in this form

Print layout Portrait Landscape

To add new sections, first click the **Table editing** icon (circled in red in the screenshot below). The table editing icons appear. To insert a new section above the current row, long-click the **Add Row** icon of either the current section or the current row (see screenshot below). To append a new section at the bottom of the table, long-click the **Add Row** icon of the last row of the table. Note that a simple click adds a row. You need a **long-click to add a section**; so keep the click depressed till a new section appears.

You can delete a section in one of two ways: (i) Click the section's **Delete** icon; but note that the first section cannot be deleted in this way; (ii) Uncheck the *Sections* option (see screenshot below, top left).



Section properties

To access section properties, click the name of the section.

The screenshot below shows the *Section Properties* form of a section in an entry form where all sections are shown together (that is, not one-by-one). The following options can be set separately for each section:

- To show the section name or to hide it (and, in the latter case, also optionally hide the section line).
- Whether to show the section initially open or closed. If a section is closed, the user must open it (by clicking the section's **Expand** icon).
- Access to the section for individual roles. Whether a role has: (i) full (read and write) access; (ii) read-only access; or (iii) no access.

Edit section

Name

Hide name

Initially open

Only if there is data in this section

Or if the record is new

Closed

Always open (user cannot close)

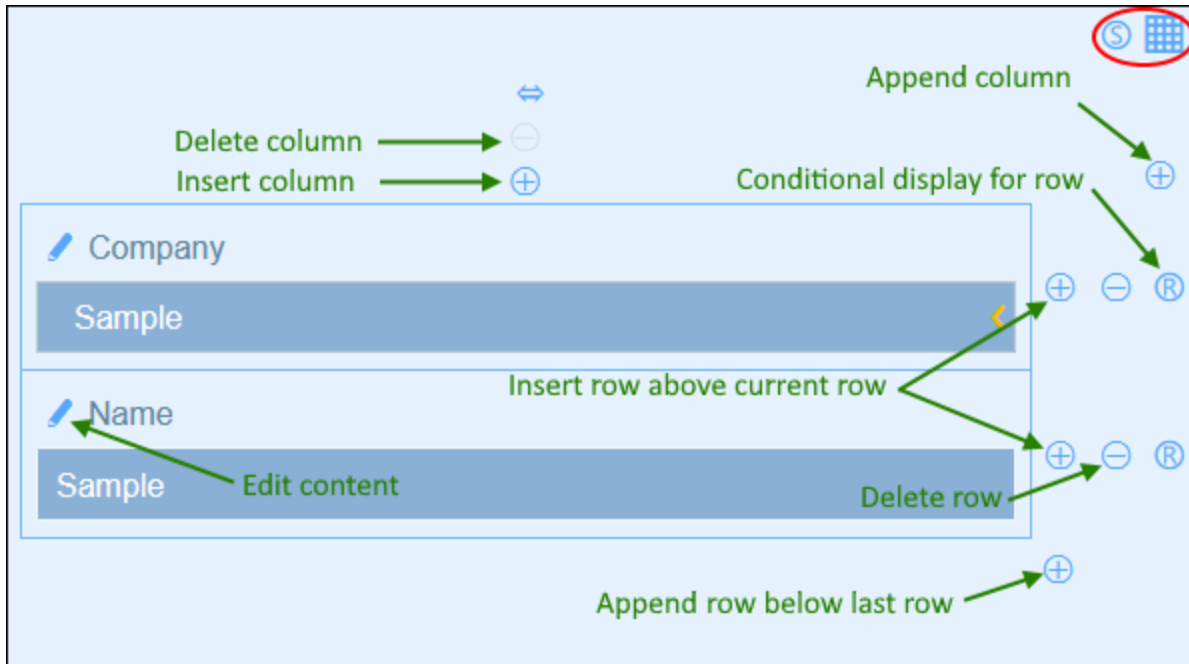
All users can access this section

Edit access

In entry forms where sections are shown one-by-one, a restricted set of properties may be set: (i) the name of the section; and (ii) access rights of different roles.

3.2.5.2.4 Entry Form Layout and Structure

When the form is open for editing, click the **Table editing** icon (*inside the red ellipse in the screenshot below*). The table will be displayed with its editing entry helpers (*see screenshot*). The table contains multiple body rows, each of which contains either a data entry field for one of the data table's fields, or a display item such as text, an image, or a table.



You can edit the form's table structure as follows:

- Insert/append columns to left/right of the selected column, and insert/append rows above/below the selected row. Use the respective icons for these operations (see screenshot above). Note that there is only one *Append Column* icon: to the right of the rightmost column. Similarly, there is only one *Append Row* icon: below the last row.
- Delete rows/columns by using the respective icons.
- Edit the content in a cell by using that column's **Edit** icon. See the topic [Entry Form Content](#)⁸³ for details about adding content.
- Set a condition to determine whether a row should be visible (*Conditional display for row* in screenshot above). For example, you might want to make a row that holds a contract's date visible only if the contract's ID field contains some value. These conditions are defined in an XPath expression that returns either Boolean `true()` or `false()`. If all the rows of a section become hidden, then the section header will also automatically be hidden.

Note: After you complete making changes to the table structure and want to exit the table editing mode, click the **Table editing** icon.

About editing XPath expressions

The form for editing XPath expressions has three tabs: (i) *Samples* provides a random example of an XPath expression, such as: (a) the concatenation of three values (two values from other fields and a comma separator); or (b) an `exists` function to test whether a field contains some content; (note that the *Samples* tab might not be available in some situations); (ii) *Fields* lists the names of all the record's fields in alphabetical order so that they can be correctly entered in the XPath expression; (iii) *Copy* lists a selection of XPath expressions that contain various useful functions, which you can copy into your expression and modify.

See the section [XPath Expressions](#)²⁰⁴ for more information.



Column properties

You can set the following properties on individual columns:

- Column width options: (i) Default column width, where all columns are equally sized; (ii) Fixed width as percent; (iii) Auto-size the column width based on content, with an optional maximum width. Auto-sized columns are indicated by an **a**. For columns with fixed widths as percent, and for auto-sized columns with a maximum percent width, the percent width is indicated in the column header.
- Column padding (left and right): Set these with the respective sliders.

3.2.5.2.5 Entry Form Content

To add or edit the content of a table cell, click the cell's **Edit** icon (see [screenshot of the entry form](#)⁷²). A content-type selection form like that shown below appears. Select the respective tab to add the appropriate content type (see [screenshot](#)). Content is either a data entry device (for a field of the data table), or a display item (such as text, an image, or a list of child records). The different content types are described below.

To select a content type, click its tab and enter the selection properties as described below.

Note the following points, which are common across a number of content types:

- A label is the text that describes a field. A value is the value of a field.

- When you style the labels and values of a cell, only that cell is styled and the cell styles override the [styles of the table](#)⁸⁶. You can see a preview of the cell's styles at the bottom of the tab (see *screenshot below*).

After you finish editing the content of a table cell, click **Change Field** and then **Save Form**.

Note: In the XPath expressions of entry forms you can use locator expressions to select the fields of ancestor records and child records. The expressions would have this form: `<Data TableName>_fields/<FieldName>`. Example: `Person_fields/Email`, where `Person` could be an ancestor record or a child record. Also see [XPath Expressions](#)²⁰⁴ for more information.

Field

Select the field for which data will be entered. You can select fields of the current data table, ancestor data tables, and linked-to data tables. Note, however, that data from linked-to data tables are read-only.

Depending on the field selected, additional settings may be available (*see the top half of the screenshot above*). The name of the selected field will appear as the label of the cell. Settings that are common to all field selections are: (i) edit the label; (ii) option to hide the label; (iii) option to make the field read-only (it cannot be edited); (iv) add a Browser button to the cell that will link to the URL that must be the value of the field; (v) the option to [add a script on field edit](#)⁸⁸; (v) edit styles of the cell; these styles will override the default table styles that are applied to the cell. For fields of type User, the name of the user will be saved automatically as the entry of this field; however, you can additionally add the user's email or user groups/s as part of the entry.

Calc

Specify an XPath expression to generate a value that will be displayed as the value of the cell and specify the type of this value. The type *multiline text* causes text returned by the calculation that is multiline to be shown as such. (The type *text* displays multiline text with no line breaks.) Optionally, you can (i) specify a label for the cell and (ii) add a browser button to the cell; the browser button targets a URL that is created from the value of the field. Note

Text

Specify the text string that you want to display in the cell. This text will be displayed as a label and with the formatting assigned to labels.

Table

Inserts a table with the column and row dimensions that you specify. This table can be structured and styled just like the top-level table, and its cells can each have their own content. If the cell in which you want to add the table already has some content, you can choose between replacing the original content with the table (**Replace <OriginalContent> with Table**) or putting the original content in the first cell of the table (**Put <OriginalContent> into first cell**).

Image

Select either an image from the image library, or choose a new image from a file location. The image will be added to the cell.

Button

Adds a geolocation button or a script button to the cell.

- When users click a geolocation button, geolocation data will be entered in the field/s that you set up via this tab. Geolocation data consists of multiple items, such as Address, City, or Geolocation. Each of these can be stored to different fields of the record.
- When users click a script button, a script is executed. See [Scripts in Entry Forms](#)⁸⁸ for details.

Child Records

Available if the data table has a child. Select which child data tables to display and which list form of the respective data table to use. You can also apply one or more filters of the selected data table. Optionally, child records may also be edited. If the editing option is selected, then you must select one of the data table's entry forms. Child data tables, their list forms, filters, and entry forms are all made available automatically according to context.

Linked Records

Select which of the current data table's linked data tables to display—and which list form of the selected data table to use to display the data of that linked data table. This feature is useful because you can use data from other linked data tables and even edit the data of those linked data tables from the current entry form.

You can also:

- Apply one or more filters of the linked data table to the list.
- Specify that the data in the list is editable. In this case, a combo box will appear, in which you must select one of the linked data table's entry forms to use for editing.
- Allow the user to add linked records to, and delete linked records from, the current data table.

Linked data tables, their list and entry forms, and their filters are made available automatically according to context. Also see [Scripts in Entry Forms](#)⁸⁸ for information about how to updating the current field when a child record is edited.

3.2.5.2.6 Entry Form Styles

You can set styles for each table in the form separately. To set styles for a table, click its **Styles** icon (inside the red ellipse in the screenshot below).

The screenshot shows the 'Edit Department entry form' dialog. At the top right, there are two circular icons. Below them is a 'Form name' field containing 'Standard entry form' and a 'Form access' field with 'Admin (full), All Users (full), Executive...'. There are 'Preview', 'Cancel', and 'Save Form' buttons. A section contains checkboxes for 'Read-only', 'Sections', and 'Script on any edit in this form', along with 'Print layout' options for 'Portrait' (selected) and 'Landscape'. In the bottom right corner, a red circle highlights a 'Styles' icon, which is a grid with a dollar sign.

The *Styles* form for the table looks something like in the screenshot below.

The screenshot shows the 'Styles' form. At the top left is a 'Use styles defined globally' checkbox and an 'Apply globally' button. The 'Labels' section includes a 'size' slider set to 100%, a 'bold' checkbox with a 'place' dropdown set to 'Above fields (left)', and an 'italic' checkbox with a 'text' dropdown set to 'As-is'. The 'Values' section includes another 'size' slider set to 100%, a 'bold' checkbox with an 'align' dropdown set to 'default', and an 'italic' checkbox.

Note the following points:

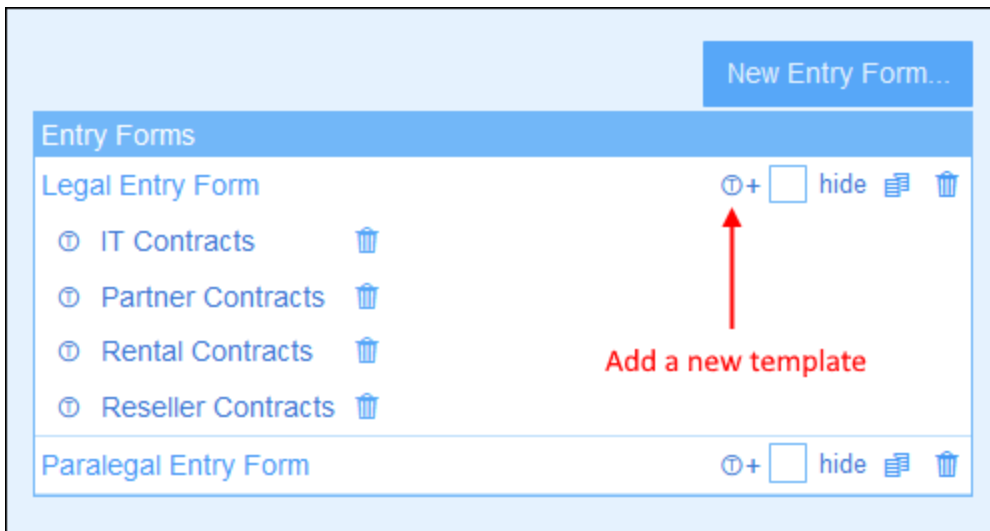
- A label is the text that describes a field. A value is the value of a field. You can set text properties for the label and the value separately, including the text placement.
- If you select the *Use global styles* check box at the top of the table, then the [global styles specified in the app's settings](#)¹⁸¹ will be used.
- The **Apply Globally** button applies the current styles to the global settings for all forms and for properties that are specific to entry forms. As a result, all forms that do not have their own table or field styles will receive the current styles.

Note: After you have finished making style changes, click **Save Form** and then **Save Changes**.

3.2.5.2.7 Templates for Entry Forms

Templates are entry forms in which some data is pre-filled. When users create a new record in a data table, they are offered the possibility of using one of the templates that have been defined for that data table. Templates can therefore help to save time for users if records have repeating data. To take a simple example, in *Department* entry forms, we could fill in a company's name so that the user could skip the *Company* field and continue with the other fields of the *Department* data table.

To create a template, go to the [Edit Forms](#)⁶¹ page and click the **Add Template** icon (see screenshot below).



In the *Edit Template* form that appears, name the template suitably and enter data for the fields you want to fill (see screenshot below).

Edit template for new Department record ↶ ↷

Note: no validation or required fields checks are performed when saving template, because it contains only initial data for new records. But fields which have auto-fill or auto-increment values cannot be edited here and will not be saved as a part of template.

Template name

Script on record create

Cancel
Reset
Save Template

Company

Arbnull, Inc. ⏪

Name

Description

The values that you enter are fixed. If you want to enter dynamically determined values for other fields as a consequence of the current entry, check the *Script* option. In the form that appears, click **Add Command**, select the field you want to update, and enter an XPath expression that calculates the value to enter. For each value you want to calculate, add a new command (via **Add Command**). Once the current value has been entered, the scripts are run and the fields specified in the script's commands are updated.

Click **Save Template** when done. The template will be displayed in the the [Edit Forms](#)⁶¹ page, under the listing of the entry form that was used as the base form for the template (see *the first screenshot of this topic*).

3.2.5.2.8 Scripts in Entry Forms

Scripts in entry forms enable you to update fields of a record and, in some cases, to execute an action such as sending emails. Scripts can be executed in the following situations:

1. *Script on record save*: The script is used to modify other field values of the record and/or to send emails. The entry point for defining the script is a check box near the top of the entry form (framed red in screenshot below).

2. *Script on editing any field of a record:* When **any field** of a record is edited, the script modifies one or more other fields of the modified record. The entry point for defining the script is a check box near the top of the entry form (*framed red in screenshot below*).
3. *Script on editing a specific field:* When a **specific field** of a record is edited, the script modifies one or more other fields of the record.
4. *Script behind buttons:* When a button is clicked, its script can modify field values of the record.
5. *Script when a child record changes:* When a record changes, a script in the parent component can change data in the parent record.
6. *Script on record load or form change by user:* This script is triggered each time a record is loaded or when a record is changed by the user.

The screenshot shows the configuration for the 'Edit Department entry form'. The form name is 'Departments with Persons' and the form access is 'Admin (full)'. There are 'Preview', 'Cancel', and 'Save Form' buttons. Under the 'Script' section, three checkboxes are checked: 'Script on record load or form change by user', 'Script on any edit in this form', and 'Script on record save'. Each checked checkbox has an 'Edit' icon. The 'Script on record load or form change by user' checkbox is highlighted with a red border.

Given below are descriptions of how to create scripts for each of these scenarios.

Creating, removing, and editing scripts

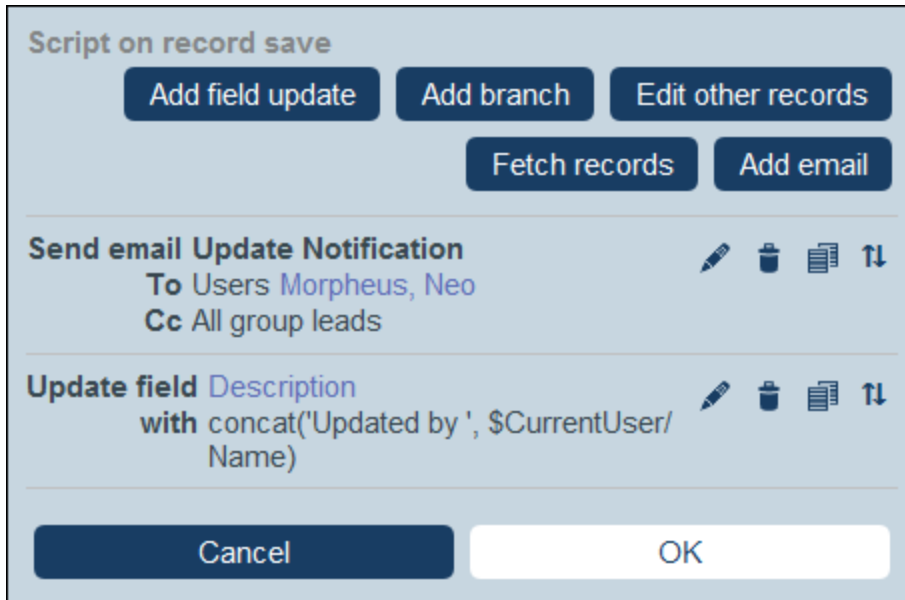
For each type of script listed above, the entry point is a check box. Select the check box to create the script. Deselect the check box to remove the script. After a script has been created, click its **Edit** icon (see *screenshot above*) to modify the script.

Undo actions revert all script actions

If a user chooses to undo an action after a script has been executed, then all the actions of that script are reverted, regardless of whether the actions created, modified, or deleted a record.

The actions of a script

In a script, you can set up one or more actions.



- The kind of actions (for example, updating fields or sending emails) depends on the type of script. For each type of script listed below the available actions are listed.
- In a script, each action is listed below the action that was added previously.
- The actions of the script will be executed in the order in which they are listed.
- The Save action is automatically always added as the last action of the script.
- If you wish to change the execution order, you can reorder the actions by clicking the **Move Up/Down** icon next to the action you want to move (*first icon from the right in screenshot above*). Note that the **Move Up/Down** icon appears on actions only after a second action has been added to the list. The **Move Up/Down** icon does not appear on Save actions because this type of action must always be the last action of the script.
- On clicking the **Move Up/Down** icon, (i) all of that action's icons are replaced by one **x** icon and (ii) all the icons of each of the other actions are replaced by one arrow that points either up or down (see *screenshot below*). Now if you click one of these arrows, the originally selected action (indicated by **x**) will be inserted either above the action whose arrow you have just clicked or below it, according to the direction of the arrow. In the screenshot below, for example, the Send Email action can be moved to either the first or third position in the sequence.

1. Script on saving a record

<i>Defined via:</i>	Check box near top of entry form: <i>Script on Record Save</i>
<i>Script triggered:</i>	When a record is saved
<i>Script actions:</i>	(i) Modifies fields of the record to save; (ii) Sends emails; (iii) Creates ancestor and child records; (iv) Modifies/deletes child records
<i>Mechanisms:</i>	(i) Add field updates; (ii) Add conditions (or branches); (iii) Edit other records (for any data table) or modify/delete child records; (iv) Fetch records; (v) Add emails

In each script of this kind, you can: (i) specify the fields to update and their values (**Add field update**); (ii) set up conditions for the update (**Add branch**); (iii) create child records or records for any data table, or modify and delete child records (**Edit other records**); and (iii) send an email to selected recipients (**Add email**). You can choose each option multiple times. The screenshot below shows the script's form after actions have been added to it for sending emails and for updating a field.

Script on record save

Add field update Add branch Edit other records

Fetch records Add email

Send email Update Notification ✎ 🗑 📄 ↕
 To Users Morpheus, Neo
 Cc All group leads

Update field Description ✎ 🗑 📄 ↕
 with concat('Updated by ', \$CurrentUser/
 Name)

Cancel OK

You can add the following actions to the script.

▼ Add Field Update

On clicking **Add Field Update**, the *Update Field* form appears (screenshot below):

Update field

Description

Fix Value | Calculation

Active

Highlight form field on change ?

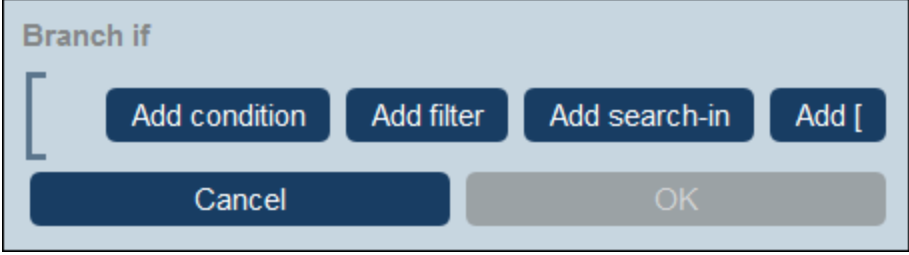
Cancel OK

Here you specify a new value for a field of the record:

- In the combo box of the form, select which field of the current record to update when the action is triggered.
- In the text box of the form, specify the new value of the target field. If you want to use a predetermined value, select *Fix Value* and enter the value. If you want to calculate a value dynamically, select *Calculation* and enter an [XPath expression](#)²⁰⁴.
- Since the update has been committed by the system and not been entered by a user, it is not automatically marked for highlighting in [audits](#)²²⁷. If you want the update to be highlighted in audits, then select the *Highlight* check box.

▼ Add Branch

On clicking **Add Branch**, the *Branch If* form appears (*screenshot below*). It enables you to build a filter to select the field to update.



Use the form's [buttons to add condition branches](#)⁵⁵. The structure of the branch is as follows. Check a set of conditions. For each case (true and false), carry out, as appropriate, any of the actions available for that type of script.

The available actions for each type of script are as follows:

- *Script on record save*: (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records; (iv) Add emails
- *Script on any edit in the form*: (i) Add field update; (ii) Add filter; (*see screenshot below*)
- *Script on field edit*: (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records
- *Script behind buttons*: (i) Add field update; (ii) Add filter; (iii) Save a record; (iv) Add other (ancestor or child) records, or modify/delete child records; (v) Add emails; (vi) Add message
- *Script when a child record changes*: (i) Add field update; (ii) Add filter

Note: In the [parameters of filters](#)⁵², you can use XPath expressions to generate parameter values.

For details about how to use the form's buttons, see [Define Condition Branches](#) ⁵⁵.

▼ Edit Other Records

This option enables you to: (i) create child records or records for any data table, and (ii) modify and delete child records.

On clicking **Edit Other Records**, the *Select data table* form appears (*screenshot below*). Select either (i) the child data table in which you want to create, modify, or delete a record, or (ii) any non-descendant data table in which you want to create a record. Note that (i) you can create records in any data table that is not at a descendant level below child, but (ii) you can modify or delete records of child data tables only.

Select data table

Child data tables

Department

Other data tables

Company Group

Company

Contract

Cancel Continue >

On clicking **Continue**, the *Script* form appears (*screenshot below*). Here you can build a script to (i) create a new record for a child data table; (ii) create a new record for any other DB data table that is not a descendant data table at a level below child; (iii) modify records of a child data table; and (iv) delete records of a child data table. Since you have already selected, in the previous step, the data table of the record/s you want to create, modify, or delete, now select the appropriate tab (*Create, Modify, or Delete*) and build the script for that action.

Script for child Department record(s)

Create | Modify | Delete

A new Department record will be created.
Note: the record will be saved only when user saves the main record.

Use field updates to fill out its fields. Record will be created after all script steps listed here.

Add field update Add branch

Cancel OK

Note the following points:

- When you create a new record in a non-child data table, it is possible that records of the data table create the same new record multiple times. When such duplication is a possibility, a Replace option becomes available. Select it so that the record to be created is created only once.
- When you create a new record or modify an existing record, you can fill or update a field by using the **Add Field Update** action.
- Use the **Add Branch** action to restrict selections with conditions, filters, and searches before adding update actions.
- You can modify all or specific records of a child data table. Specific records can be selected via

conditions, filters, and searches.

- You can specify, when child records are to be modified, that a new record be created if none exists.
- You can delete all or specific records of a child data table. Like with modifications (see *previous point*), specific records can be selected via conditions, filters, and searches.

▼ Fetch Records

On clicking **Fetch Records**, the *Fetch saved records to use for calculations* form appears (screenshot below). The *Fetch Records* script enables you to fetch records from the database and store them in a variable. The data in the variable can then be used to make calculations while editing the current record. For example, while the user edits details of a department, you might want to show the user a list of that department's contracts. You can do this by fetching the records of the *Contract* data table and filtering these to show only the current department's contracts. In the screenshot below, the name of the current department is passed to the *Department* parameter of the filter named *Expiring in 90 days*. Consequently, the Filter returns only those records where the name of the current department is contained in a *Contracting_Party* field of a record.


Fetch saved records to use them for calculations


This allows to fetch saved in the database records into a variable which then can be used for further calculations. More than one record can be fetched - it is highly recommended to use filter and select specific fields to reduce memory consumption! Once fetched, this variable is available throughout the whole editing process of the main record.
Important: the records are loaded from the database in their saved state independently of the currently unsaved editings made by user.

Variable

Data table

Filter

©Department 

Fields 4 field(s) from 2 data table(s) 

How often Fetch once and keep same data until editing of the main record is finished
 Fetch every time when this script command is executed so that always most recent database state is retrieved

In the *Fetch Records* form, you specify what records go into a variable, as follows:

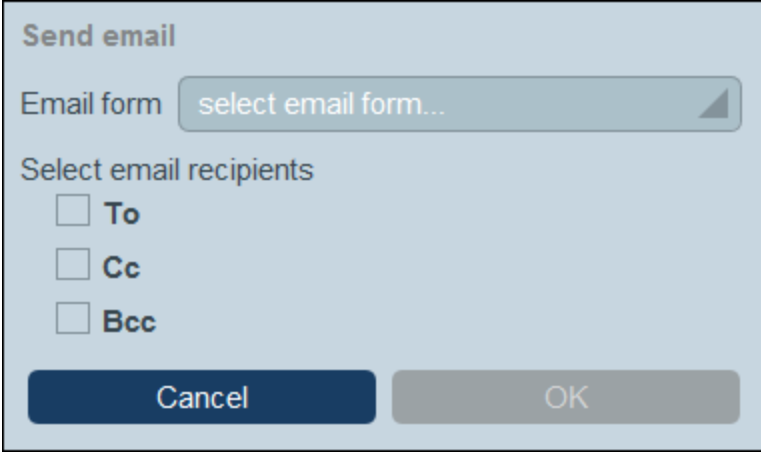
- In the *Variable* combo box, select one of the predefined values to be the name of the variable. This variable name must be unique within the entry form.
- In the *Data table* combo box, select the [data table](#)³⁷ from which you want to load records into the variable.
- In the *Filter* combo box, you can select one of the [data table's filters](#)⁵⁰ to apply to the record selection. A filter will limit the records to load and so reduce memory consumption. If a filter has been declared to have parameters, then each parameter is listed together with an entry field for its value. Here you can enter an XPath expression to generate the value. Alternatively, click the **Edit** button and select from the list of automatically generated context-based expressions. In the screenshot above, the XPath expression is: `$FetchedRecords_A/Name`, which selects the *Name* field contained in the variable `$FetchedRecords_A` (which is another variable defined in the current entry form and contains the fields of the current record).
- In the *Fields* setting, select the fields of the selected records that you want to store in the variable. To reduce memory consumption, select only those fields that you need.

- The *How Often* setting determines when the variable is updated: either once, when the script is first executed and till editing of the record is finished, or every time the script is executed. The second option enables the script to use the latest data in the DB.

▼ Add Email

When creating scripts for actions to be taken (i) on record save and (ii) on button click, you can click **Add Email** to set up the script for emails. to send emails to selected recipients using one of the [Email Forms](#)¹⁴⁴ defined for the current data table.

On clicking **Add Email**, the *Send Email* form appears (*screenshot below*):



The screenshot shows a dialog box titled "Send email". At the top, there is a label "Email form" followed by a dropdown menu containing the text "select email form...". Below this is a section titled "Select email recipients" which contains three checkboxes: "To", "Cc", and "Bcc". At the bottom of the dialog, there are two buttons: "Cancel" and "OK".

The form defines:

- The email form to use. In the dropdown box, select one of the email forms that have been defined for the data table. If none exists, create one as described in the topic [Email Forms](#)¹⁴⁴.
- Select recipients for the *To*, *Cc*, and/or *Bcc* lines of the email by checking the respective box.

Select email recipients

You can select email recipients on the following bases:

- Specific users, by name
- Users from user groups, where there are options regarding which groups and which users in the groups (see screenshot below)
- All group leads

Select users directly and via user groups

Specific users

Morpheus, Neo

Users from user groups

Users from specific user groups

User Groups

Accounts

Alerts Legal & Executives

Legal

Users from all groups of the current user

Restrict to the group leads only

Cancel OK

Note that you can use more than one selection criterion.




2. Script on editing any field of a record

<i>Defined via:</i>	Check box near top of entry form: <i>Script on Any Edit in This Form</i>
<i>Script triggered:</i>	When any field of a record is edited
<i>Script actions:</i>	Modifies fields of the edited record
<i>Mechanisms:</i>	(i) Add field updates; (ii) Add conditions (or branches); (iii) Fetch records

These scripts enable you to: (i) specify the fields to update and their values (**Add field update**) and (ii) set up conditions for the update (**Add branch**). You can choose both options multiple times. If the field that is being edited by the user has its own script (see *Script Type 3 below*), then that script will be executed before this script—which means that if both scripts update the same field, then this script will overwrite any previously updated value of the target field.

Script on any edit event

Add field update Add branch Fetch records

Update field Description   

with concat('Updated by', \$CurrentUser/Name)

Note: if the field being edited has an individual script, it will be executed first, then this script

Cancel OK

You can add the following mechanisms to the script.

▼ Add Field Update

On clicking **Add Field Update**, the *Update Field* form appears (screenshot below):

Update field

Description

Fix Value | Calculation

Active

Highlight form field on change ?

Cancel OK

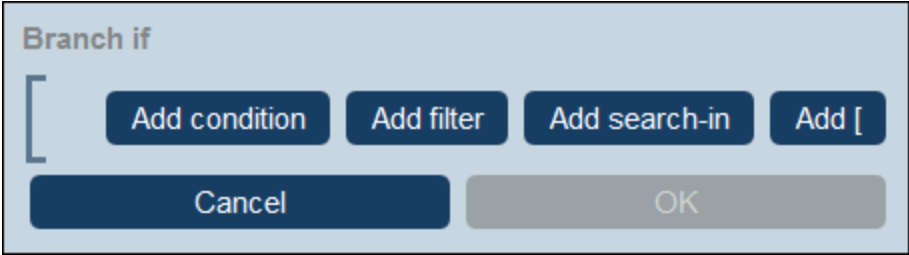
Here you specify a new value for a field of the record:

- In the combo box of the form, select which field of the current record to update when the action is triggered.
- In the text box of the form, specify the new value of the target field. If you want to use a predetermined value, select *Fix Value* and enter the value. If you want to calculate a value dynamically, select *Calculation* and enter an [XPath expression](#)²⁰⁴.
- Since the update has been committed by the system and not been entered by a user, it is not automatically marked for highlighting in [audits](#)²²⁷. If you want the update to be highlighted in audits, then select the *Highlight* check box.

▼ Add Branch

On clicking **Add Branch**, the *Branch If* form appears (screenshot below). It enables you to build a filter to

select the field to update.



Use the form's [buttons to add condition branches](#)⁵⁵. The structure of the branch is as follows. Check a set of conditions. For each case (true and false), carry out, as appropriate, any of the actions available for that type of script.

The available actions for each type of script are as follows:

- *Script on record save*: (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records; (iv) Add emails
- *Script on any edit in the form*: (i) Add field update; (ii) Add filter; (see screenshot below)
- *Script on field edit*: (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records
- *Script behind buttons*: (i) Add field update; (ii) Add filter; (iii) Save a record; (iv) Add other (ancestor or child) records, or modify/delete child records; (v) Add emails; (vi) Add message
- *Script when a child record changes*: (i) Add field update; (ii) Add filter

Note: In the [parameters of filters](#)⁵², you can use XPath expressions to generate parameter values.

For details about how to use the form's buttons, see [Define Condition Branches](#) ⁵⁵.

▼ Fetch Records

On clicking **Fetch Records**, the *Fetch saved records to use for calculations* form appears (screenshot below). The *Fetch Records* script enables you to fetch records from the database and store them in a variable. The data in the variable can then be used to make calculations while editing the current record. For example, while the user edits details of a department, you might want to show the user a list of that department's contracts. You can do this by fetching the records of the *Contract* data table and filtering these to show only the current department's contracts. In the screenshot below, the name of the current department is passed to the *Department* parameter of the filter named *Expiring in 90 days*. Consequently, the Filter returns only those records where the name of the current department is contained in a *Contracting_Party* field of a record.


Fetch saved records to use them for calculations


This allows to fetch saved in the database records into a variable which then can be used for further calculations. More than one record can be fetched - it is highly recommended to use filter and select specific fields to reduce memory consumption! Once fetched, this variable is available throughout the whole editing process of the main record.
Important: the records are loaded from the database in their saved state independently of the currently unsaved editings made by user.

Variable

Data table

Filter

©Department 

Fields 4 field(s) from 2 data table(s) 

How often Fetch once and keep same data until editing of the main record is finished
 Fetch every time when this script command is executed so that always most recent database state is retrieved

In the *Fetch Records* form, you specify what records go into a variable, as follows:

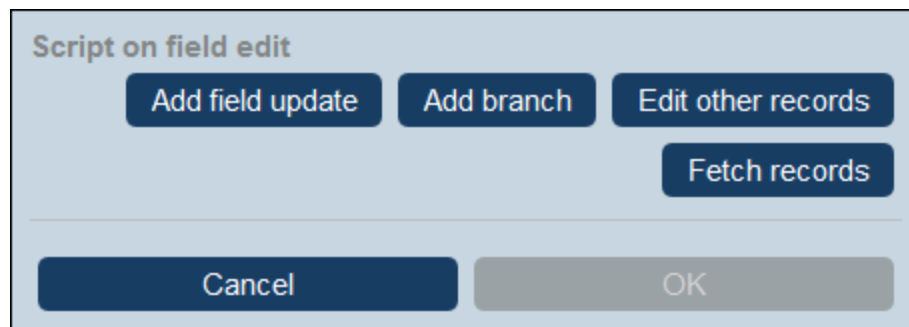
- In the *Variable* combo box, select one of the predefined values to be the name of the variable. This variable name must be unique within the entry form.
- In the *Data table* combo box, select the [data table](#)³⁷ from which you want to load records into the variable.
- In the *Filter* combo box, you can select one of the [data table's filters](#)⁵⁰ to apply to the record selection. A filter will limit the records to load and so reduce memory consumption. If a filter has been declared to have parameters, then each parameter is listed together with an entry field for its value. Here you can enter an XPath expression to generate the value. Alternatively, click the **Edit** button and select from the list of automatically generated context-based expressions. In the screenshot above, the XPath expression is: `$FetchedRecords_A/Name`, which selects the *Name* field contained in the variable `$FetchedRecords_A` (which is another variable defined in the current entry form and contains the fields of the current record).
- In the *Fields* setting, select the fields of the selected records that you want to store in the variable. To reduce memory consumption, select only those fields that you need.

- The *How Often* setting determines when the variable is updated: either once, when the script is first executed and till editing of the record is finished, or every time the script is executed. The second option enables the script to use the latest data in the DB.

3. Script on editing a specific field of a record

<i>Defined where:</i>	As a property of a field ⁸³
<i>Script triggered:</i>	When this specific field is edited
<i>Script actions:</i>	(i) Modifies other fields of the record containing the edited field; (ii) Creates ancestor and child records; (iii) Modifies/deletes child records
<i>Mechanisms:</i>	(i) Add field updates; (ii) Add conditions (or branches); (iii) Add other records (for any data table) or modify/delete child records; (iv) Fetch records

This type of script is defined on a field as one of the field's properties at the time [when the field is created in the entry form](#) ⁸³. the script enables you to: (i) specify the fields to update and their values (**Add field update**); (ii) set up conditions for the update (**Add branch**); and (iii) create child records or records for any data table, or modify and delete child records (**Edit other records**). Any of these options can be chosen multiple times. Note that if another script is defined that will be executed on any edit in the form, then that script would overwrite the update of this script if they both update the same field (see *Script Type 2 above*).



You can add the following mechanisms to the script.

▼ Add Field Update

On clicking **Add Field Update**, the *Update Field* form appears (screenshot below):

Here you specify a new value for a field of the record:

- In the combo box of the form, select which field of the current record to update when the action is triggered.
- In the text box of the form, specify the new value of the target field. If you want to use a predetermined value, select *Fix Value* and enter the value. If you want to calculate a value dynamically, select *Calculation* and enter an [XPath expression](#)²⁰⁴.
- Since the update has been committed by the system and not been entered by a user, it is not automatically marked for highlighting in [audits](#)²²⁷. If you want the update to be highlighted in audits, then select the *Highlight* check box.

▼ Add Branch

On clicking **Add Branch**, the *Branch If* form appears (*screenshot below*). It enables you to build a filter to select the field to update.

Use the form's [buttons to add condition branches](#)⁵⁵. The structure of the branch is as follows. Check a set of conditions. For each case (true and false), carry out, as appropriate, any of the actions available for that type of script.

The available actions for each type of script are as follows:

- *Script on record save*: (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records; (iv) Add emails
- *Script on any edit in the form*: (i) Add field update; (ii) Add filter; (*see screenshot below*)

- *Script on field edit:* (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records
- *Script behind buttons:* (i) Add field update; (ii) Add filter; (iii) Save a record; (iv) Add other (ancestor or child) records, or modify/delete child records; (v) Add emails; (vi) Add message
- *Script when a child record changes:* (i) Add field update; (ii) Add filter

Note: In the [parameters of filters](#) ⁵², you can use XPath expressions to generate parameter values.

For details about how to use the form's buttons, see [Define Condition Branches](#) ⁵⁵.

▼ Edit Other Records

This option enables you to: (i) create child records or records for any data table, and (ii) modify and delete child records.

On clicking **Edit Other Records**, the *Select data table* form appears (*screenshot below*). Select either (i) the child data table in which you want to create, modify, or delete a record, or (ii) any non-descendant data table in which you want to create a record. Note that (i) you can create records in any data table that is not at a descendant level below child, but (ii) you can modify or delete records of child data tables only.

Select data table

Child data tables

Department

Other data tables

Company Group

Company

Contract

Cancel Continue >

On clicking **Continue**, the *Script* form appears (*screenshot below*). Here you can build a script to (i) create a new record for a child data table; (ii) create a new record for any other DB data table that is not a descendant data table at a level below child; (iii) modify records of a child data table; and (iv) delete records of a child data table. Since you have already selected, in the previous step, the data table of the record/s you want to create, modify, or delete, now select the appropriate tab (*Create, Modify, or Delete*) and build the script for that action.

Script for child Department record(s)

Create | Modify | Delete

A new Department record will be created.
Note: the record will be saved only when user saves the main record.

Use field updates to fill out its fields. Record will be created after all script steps listed here.

Add field update Add branch

Cancel OK

Note the following points:

- When you create a new record in a non-child data table, it is possible that records of the data table create the same new record multiple times. When such duplication is a possibility, a Replace option becomes available. Select it so that the record to be created is created only once.
- When you create a new record or modify an existing record, you can fill or update a field by using the **Add Field Update** action.
- Use the **Add Branch** action to restrict selections with conditions, filters, and searches before adding update actions.
- You can modify all or specific records of a child data table. Specific records can be selected via

conditions, filters, and searches.

- You can specify, when child records are to be modified, that a new record be created if one does not exist.
- You can delete all or specific records of a child data table. Like with modifications (see *previous point*), specific records can be selected via conditions, filters, and searches.

▼ Fetch Records

On clicking **Fetch Records**, the *Fetch saved records to use for calculations* form appears (screenshot below). The *Fetch Records* script enables you to fetch records from the database and store them in a variable. The data in the variable can then be used to make calculations while editing the current record. For example, while the user edits details of a department, you might want to show the user a list of that department's contracts. You can do this by fetching the records of the *Contract* data table and filtering these to show only the current department's contracts. In the screenshot below, the name of the current department is passed to the *Department* parameter of the filter named *Expiring in 90 days*. Consequently, the Filter returns only those records where the name of the current department is contained in a *Contracting_Party* field of a record.


Fetch saved records to use them for calculations


This allows to fetch saved in the database records into a variable which then can be used for further calculations. More than one record can be fetched - it is highly recommended to use filter and select specific fields to reduce memory consumption! Once fetched, this variable is available throughout the whole editing process of the main record.
Important: the records are loaded from the database in their saved state independently of the currently unsaved editings made by user.

Variable

Data table

Filter

Department 

Fields 

How often Fetch once and keep same data until editing of the main record is finished

Fetch every time when this script command is executed so that always most recent database state is retrieved

In the *Fetch Records* form, you specify what records go into a variable, as follows:

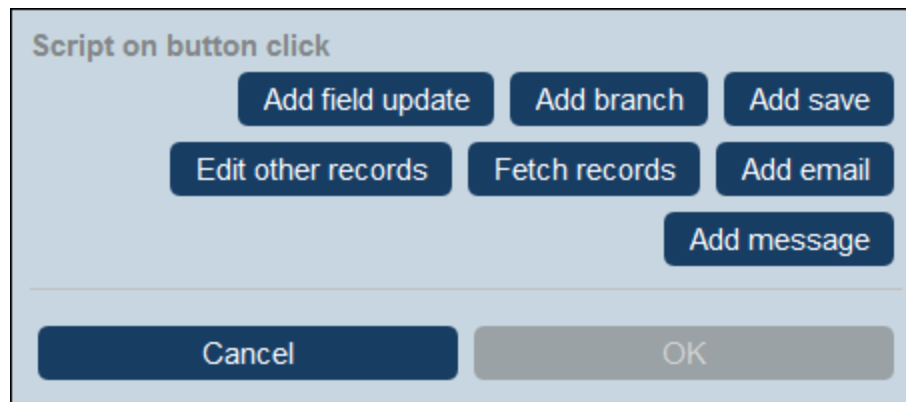
- In the *Variable* combo box, select one of the predefined values to be the name of the variable. This variable name must be unique within the entry form.
- In the *Data table* combo box, select the [data table](#)³⁷ from which you want to load records into the variable.
- In the *Filter* combo box, you can select one of the [data table's filters](#)⁵⁰ to apply to the record selection. A filter will limit the records to load and so reduce memory consumption. If a filter has been declared to have parameters, then each parameter is listed together with an entry field for its value. Here you can enter an XPath expression to generate the value. Alternatively, click the **Edit** button and select from the list of automatically generated context-based expressions. In the screenshot above, the XPath expression is: `$FetchedRecords_A/Name`, which selects the *Name* field contained in the variable `$FetchedRecords_A` (which is another variable defined in the current entry form and contains the fields of the current record).
- In the *Fields* setting, select the fields of the selected records that you want to store in the variable. To reduce memory consumption, select only those fields that you need.

- The *How Often* setting determines when the variable is updated: either once, when the script is first executed and till editing of the record is finished, or every time the script is executed. The second option enables the script to use the latest data in the DB.

4. Script on clicking a button

<i>Defined where:</i>	As a property of a button ⁸³
<i>Script triggered:</i>	When the button is clicked
<i>Script actions:</i>	(i) Modifies fields of the record to save; (ii) Creates ancestor and child records; (iii) Modify/delete child records; (iv) Sends emails; (v) Displays messages
<i>Mechanisms:</i>	(i) Add field updates; (ii) Add conditions (or branches); (iii) Save record; (iv) Add other records (for any data table) or modify/delete child records; (v) Fetch records; (vi) Add emails; (vii) Add message

Scripts of this type are executed when a [button of an entry form](#) ⁸³ is clicked. The script enables you to: (i) specify the fields to update and their values (**Add field update**); (ii) set up conditions for the update (**Add branch**); (iii) save the record (**Save record**); (iv) create ancestor records and child records, or modify and delete child records (**Edit other records**); (v) send an email to selected recipients (**Add email**); and (vi) display a message (**Add message**). Each option, except **Save record**, can be used multiple times.



You can add the following mechanisms to the script:

▼ Add Field Update

On clicking **Add Field Update**, the *Update Field* form appears (*screenshot below*):

Here you specify a new value for a field of the record:

- In the combo box of the form, select which field of the current record to update when the action is triggered.
- In the text box of the form, specify the new value of the target field. If you want to use a predetermined value, select *Fix Value* and enter the value. If you want to calculate a value dynamically, select *Calculation* and enter an [XPath expression](#)²⁰⁴.
- Since the update has been committed by the system and not been entered by a user, it is not automatically marked for highlighting in [audits](#)²²⁷. If you want the update to be highlighted in audits, then select the *Highlight* check box.

▼ Add Branch

On clicking **Add Branch**, the *Branch If* form appears (*screenshot below*). It enables you to build a filter to select the field to update.

Use the form's [buttons to add condition branches](#)⁵⁵. The structure of the branch is as follows. Check a set of conditions. For each case (true and false), carry out, as appropriate, any of the actions available for that type of script.

The available actions for each type of script are as follows:

- *Script on record save*: (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records; (iv) Add emails
- *Script on any edit in the form*: (i) Add field update; (ii) Add filter; (*see screenshot below*)

- *Script on field edit:* (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records
- *Script behind buttons:* (i) Add field update; (ii) Add filter; (iii) Save a record; (iv) Add other (ancestor or child) records, or modify/delete child records; (v) Add emails; (vi) Add message
- *Script when a child record changes:* (i) Add field update; (ii) Add filter

Note: In the [parameters of filters](#) ⁵², you can use XPath expressions to generate parameter values.

For details about how to use the form's buttons, see [Define Condition Branches](#) ⁵⁵.

▼ Add Save

On clicking **Add Save**, the *Save Record* form appears (*screenshot below*). The Save Record action will save the current record after all the actions of the script have been executed. This action is always added as the last action of the script and can be added only once per script.

Save record on the end of the script

And show next record

And show previous record

Go back to the record list after saving

Important: the whole script will be executed fully to the end and only then the record will be saved, provided there are no validation errors.

If this script is applied to a child record, then saving is postponed until the main record is saved.

You can choose what should be done after the record is saved:

- Select *And show next record* or *And show previous record* to go to the next or previous record after the current record has been saved. Only one of these options can be selected.
- Select or deselect *Go back to the record list* to either go back to the list of records or stay in the current record, respectively (see *screenshot*). If either of the other check box options is selected, then the option to go back to the list of records will be effected only if there is no next or previous record.

▼ Edit Other Records

This option enables you to: (i) create child records or records for any data table, and (ii) modify and delete child records.

On clicking **Edit Other Records**, the *Select data table* form appears (*screenshot below*). Select either (i) the child data table in which you want to create, modify, or delete a record, or (ii) any non-descendant data table in which you want to create a record. Note that (i) you can create records in any data table that is not at a descendant level below child, but (ii) you can modify or delete records of child data tables only.

Select data table

Child data tables

Department

Other data tables

Company Group

Company

Contract

Cancel Continue >

On clicking **Continue**, the *Script* form appears (*screenshot below*). Here you can build a script to (i) create a new record for a child data table; (ii) create a new record for any other DB data table that is not a descendant data table at a level below child; (iii) modify records of a child data table; and (iv) delete records of a child data table. Since you have already selected, in the previous step, the data table of the record/s you want to create, modify, or delete, now select the appropriate tab (*Create, Modify, or Delete*) and build the script for that action.

Script for child Department record(s)

Create | Modify | Delete

A new Department record will be created.
Note: the record will be saved only when user saves the main record.

Use field updates to fill out its fields. Record will be created after all script steps listed here.

Add field update Add branch

Cancel OK

Note the following points:

- When you create a new record in a non-child data table, it is possible that records of the data table create the same new record multiple times. When such duplication is a possibility, a Replace option becomes available. Select it so that the record to be created is created only once.
- When you create a new record or modify an existing record, you can fill or update a field by using the **Add Field Update** action.
- Use the **Add Branch** action to restrict selections with conditions, filters, and searches before adding update actions.
- You can modify all or specific records of a child data table. Specific records can be selected via

conditions, filters, and searches.

- You can specify, when child records are to be modified, that a new record be created if none exists.
- You can delete all or specific records of a child data table. Like with modifications (*see previous point*), specific records can be selected via conditions, filters, and searches.

▼ Fetch Records

On clicking **Fetch Records**, the *Fetch saved records to use for calculations* form appears (*screenshot below*). The *Fetch Records* script enables you to fetch records from the database and store them in a variable. The data in the variable can then be used to make calculations while editing the current record. For example, while the user edits details of a department, you might want to show the user a list of that department's contracts. You can do this by fetching the records of the *Contract* data table and filtering these to show only the current department's contracts. In the screenshot below, the name of the current department is passed to the *Department* parameter of the filter named *Expiring in 90 days*. Consequently, the Filter returns only those records where the name of the current department is contained in a *Contracting_Party* field of a record.


Fetch saved records to use them for calculations


This allows to fetch saved in the database records into a variable which then can be used for further calculations. More than one record can be fetched - it is highly recommended to use filter and select specific fields to reduce memory consumption! Once fetched, this variable is available throughout the whole editing process of the main record.
Important: the records are loaded from the database in their saved state independently of the currently unsaved editings made by user.

Variable

Data table

Filter

©Department 

Fields 4 field(s) from 2 data table(s) 

How often Fetch once and keep same data until editing of the main record is finished
 Fetch every time when this script command is executed so that always most recent database state is retrieved

In the *Fetch Records* form, you specify what records go into a variable, as follows:

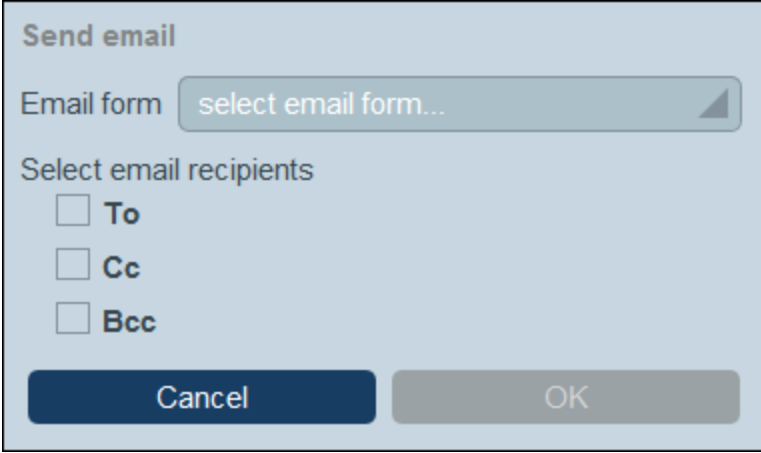
- In the *Variable* combo box, select one of the predefined values to be the name of the variable. This variable name must be unique within the entry form.
- In the *Data table* combo box, select the [data table](#)³⁷ from which you want to load records into the variable.
- In the *Filter* combo box, you can select one of the [data table's filters](#)⁵⁰ to apply to the record selection. A filter will limit the records to load and so reduce memory consumption. If a filter has been declared to have parameters, then each parameter is listed together with an entry field for its value. Here you can enter an XPath expression to generate the value. Alternatively, click the **Edit** button and select from the list of automatically generated context-based expressions. In the screenshot above, the XPath expression is: `$FetchedRecords_A/Name`, which selects the *Name* field contained in the variable `$FetchedRecords_A` (which is another variable defined in the current entry form and contains the fields of the current record).
- In the *Fields* setting, select the fields of the selected records that you want to store in the variable. To reduce memory consumption, select only those fields that you need.

- The *How Often* setting determines when the variable is updated: either once, when the script is first executed and till editing of the record is finished, or every time the script is executed. The second option enables the script to use the latest data in the DB.

▼ Add Email

When creating scripts for actions to be taken (i) on record save and (ii) on button click, you can click **Add Email** to set up the script for emails. to send emails to selected recipients using one of the [Email Forms](#)¹⁴⁴ defined for the current data table.

On clicking **Add Email**, the *Send Email* form appears (screenshot below):



The screenshot shows a dialog box titled "Send email". It contains a dropdown menu for "Email form" with the text "select email form...". Below this is a section titled "Select email recipients" with three checkboxes: "To", "Cc", and "Bcc". At the bottom of the dialog are two buttons: "Cancel" and "OK".

The form defines:

- The email form to use. In the dropdown box, select one of the email forms that have been defined for the data table. If none exists, create one as described in the topic [Email Forms](#)¹⁴⁴.
- Select recipients for the *To*, *Cc*, and/or *Bcc* lines of the email by checking the respective box.

Select email recipients

You can select email recipients on the following bases:

- Specific users, by name
- Users from user groups, where there are options regarding which groups and which users in the groups (see screenshot below)
- All group leads

Select users directly and via user groups

Specific users

Morpheus, Neo

Users from user groups

Users from specific user groups

User Groups

- Accounts
- Alerts Legal & Executives
- Legal

Users from all groups of the current user

Restrict to the group leads only

Cancel OK

Note that you can use more than one selection criterion.

▼ Add Message

You can add a message to the actions that your script carries out. For example, when a button script starts, you can show a message to the user that contains information about what the script is going to do.

On clicking **Add Message**, the *Show Message* form appears (*screenshot below*). You can (i) enter the message directly as text (*Fix Value*) or as an XPath expression (*Calculation*), (ii) select the color of the displayed text (for example, the *Error* color is red), and (iii) either set the message to be shown either immediately when the Add Message action is triggered or when the script ends.

Show message

Fix Value
Calculation

Text

Color Default Error Warning

When immediately on the end of the script

Cancel
OK

5. Script on editing a child record

<i>Defined where:</i>	As a property of the Child Rows entry ⁸³ of a data table (that has a child data table)
<i>Script triggered:</i>	When a child row of the data table is edited
<i>Script actions:</i>	Modifies fields of the record containing the edited child record
<i>Mechanisms:</i>	(i) Add field updates; (ii) Add conditions (or branches); (iii) Fetch records

This kind of script is available in data tables that have child rows. In the entry form of such a data table, you can [add child rows to a table cell of the entry form](#)⁸³. In the definition of Child Rows, select the *Allow editing <Child> records* option (*screenshot below*) and select an entry form of the child data table. You can now define a script of the current data table that will be executed when the child record is edited (*framed red below*).

In this kind of script, you can: (i) specify the fields to update and their values (**Add field update**) and (ii) set up conditions for the update (**Add branch**). Both options can be chosen multiple times.

▼ Add Field Update

On clicking **Add Field Update**, the *Update Field* form appears (screenshot below):

Here you specify a new value for a field of the record:

- In the combo box of the form, select which field of the current record to update when the action is triggered.
- In the text box of the form, specify the new value of the target field. If you want to use a predetermined value, select *Fix Value* and enter the value. If you want to calculate a value dynamically, select *Calculation* and enter an [XPath expression](#)⁽²⁰⁴⁾.

- Since the update has been committed by the system and not been entered by a user, it is not automatically marked for highlighting in [audits](#)²²⁷. If you want the update to be highlighted in audits, then select the *Highlight* check box.

▼ Add Branch

On clicking **Add Branch**, the *Branch If* form appears (*screenshot below*). It enables you to build a filter to select the field to update.

Use the form's [buttons to add condition branches](#)⁵⁵. The structure of the branch is as follows. Check a set of conditions. For each case (true and false), carry out, as appropriate, any of the actions available for that type of script.

The available actions for each type of script are as follows:

- *Script on record save*: (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records; (iv) Add emails
- *Script on any edit in the form*: (i) Add field update; (ii) Add filter; (*see screenshot below*)
- *Script on field edit*: (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records
- *Script behind buttons*: (i) Add field update; (ii) Add filter; (iii) Save a record; (iv) Add other (ancestor or child) records, or modify/delete child records; (v) Add emails; (vi) Add message
- *Script when a child record changes*: (i) Add field update; (ii) Add filter

Note: In the [parameters of filters](#)⁵², you can use XPath expressions to generate parameter values.

The screenshot shows a dialog box for defining condition branches. At the top, there are four buttons: 'Add condition', 'Add filter', 'Add search-in', and 'Add ['. Below these is a dropdown menu with 'Name' selected, followed by a 'contains' operator and a text input field containing 'Altova'. A dashed line separates this from the 'then' section, which has a checked checkbox. In the 'then' section, there are buttons for 'Add field update' and 'Add branch'. Below these, a field update is defined: 'Update field Name with Altova Inc'. At the bottom of the 'then' section, there are icons for editing, deleting, and adding. Below the 'then' section is an unchecked 'else' checkbox. At the very bottom are 'Cancel' and 'OK' buttons.

For details about how to use the form's buttons, see [Define Condition Branches](#) ⁵⁵.

▼ Fetch Records

On clicking **Fetch Records**, the *Fetch saved records to use for calculations* form appears (screenshot below). The *Fetch Records* script enables you to fetch records from the database and store them in a variable. The data in the variable can then be used to make calculations while editing the current record. For example, while the user edits details of a department, you might want to show the user a list of that department's contracts. You can do this by fetching the records of the *Contract* data table and filtering these to show only the current department's contracts. In the screenshot below, the name of the current department is passed to the *Department* parameter of the filter named *Expiring in 90 days*. Consequently, the Filter returns only those records where the name of the current department is contained in a *Contracting_Party* field of a record.


Fetch saved records to use them for calculations


This allows to fetch saved in the database records into a variable which then can be used for further calculations. More than one record can be fetched - it is highly recommended to use filter and select specific fields to reduce memory consumption! Once fetched, this variable is available throughout the whole editing process of the main record.
Important: the records are loaded from the database in their saved state independently of the currently unsaved editings made by user.

Variable

Data table

Filter

Department 

Fields 4 field(s) from 2 data table(s) 

How often Fetch once and keep same data until editing of the main record is finished

Fetch every time when this script command is executed so that always most recent database state is retrieved

In the *Fetch Records* form, you specify what records go into a variable, as follows:

- In the *Variable* combo box, select one of the predefined values to be the name of the variable. This variable name must be unique within the entry form.
- In the *Data table* combo box, select the [data table](#)³⁷ from which you want to load records into the variable.
- In the *Filter* combo box, you can select one of the [data table's filters](#)⁵⁰ to apply to the record selection. A filter will limit the records to load and so reduce memory consumption. If a filter has been declared to have parameters, then each parameter is listed together with an entry field for its value. Here you can enter an XPath expression to generate the value. Alternatively, click the **Edit** button and select from the list of automatically generated context-based expressions. In the screenshot above, the XPath expression is: `$FetchedRecords_A/Name`, which selects the *Name* field contained in the variable `$FetchedRecords_A` (which is another variable defined in the current entry form and contains the fields of the current record).
- In the *Fields* setting, select the fields of the selected records that you want to store in the variable. To reduce memory consumption, select only those fields that you need.

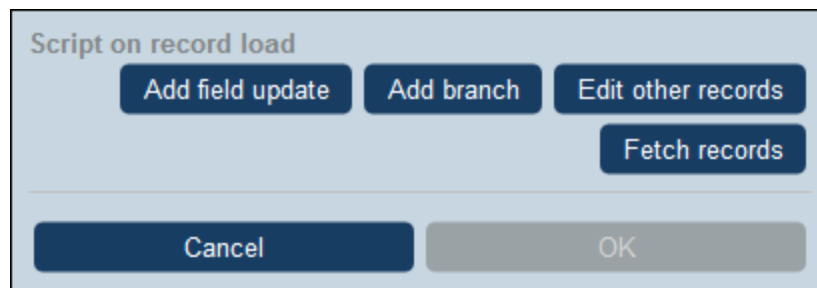
- The *How Often* setting determines when the variable is updated: either once, when the script is first executed and till editing of the record is finished, or every time the script is executed. The second option enables the script to use the latest data in the DB.

6. Script on record load or form change

<i>Defined where:</i>	Check box near top of entry form: <i>Script on Record Load or Form Change</i>
<i>Script triggered:</i>	Each time a record is loaded or the entry form is changed
<i>Script actions:</i>	(i) Updates fields of the record; (ii) adds conditions; (iii) edits other records; (iv) fetches records
<i>Mechanisms:</i>	(i) Add field updates; (ii) Add conditions (or branches); (iii) Edit other records (for any data table) or modify/delete child records; (iv) Fetch records

This type of script is defined for the entry form and it is triggered each time a record is loaded or when the form is changed by the user. The script is also executed for child records, but it is executed only once, when the record is loaded. This means that the script is executed when the record is loaded. It is also executed when a child record is loaded. Returning to a child record will not cause script execution. For this to now happen, the main record will have to be changed.

It is the primary way to prepare data (by using the *Fetch Records* mechanism) for use in the form. Additionally, you can update fields directly a record is loaded (by using **Add field update**). Such updates can also be made conditional (by placing them in a condition added by the **Add branch** mechanism).



You can add the following mechanisms to the script.

▼ Add Field Update

On clicking **Add Field Update**, the *Update Field* form appears (screenshot below):

Here you specify a new value for a field of the record:

- In the combo box of the form, select which field of the current record to update when the action is triggered.
- In the text box of the form, specify the new value of the target field. If you want to use a predetermined value, select *Fix Value* and enter the value. If you want to calculate a value dynamically, select *Calculation* and enter an [XPath expression](#)²⁰⁴.
- Since the update has been committed by the system and not been entered by a user, it is not automatically marked for highlighting in [audits](#)²²⁷. If you want the update to be highlighted in audits, then select the *Highlight* check box.

▼ Add Branch

On clicking **Add Branch**, the *Branch If* form appears (*screenshot below*). It enables you to build a filter to select the field to update.

Use the form's [buttons to add condition branches](#)⁵⁵. The structure of the branch is as follows. Check a set of conditions. For each case (true and false), carry out, as appropriate, any of the actions available for that type of script.

The available actions for each type of script are as follows:

- *Script on record save*: (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records; (iv) Add emails
- *Script on any edit in the form*: (i) Add field update; (ii) Add filter; (*see screenshot below*)

- *Script on field edit:* (i) Add field update; (ii) Add filter; (iii) Add other (ancestor or child) records, or modify/delete child records
- *Script behind buttons:* (i) Add field update; (ii) Add filter; (iii) Save a record; (iv) Add other (ancestor or child) records, or modify/delete child records; (v) Add emails; (vi) Add message
- *Script when a child record changes:* (i) Add field update; (ii) Add filter

Note: In the [parameters of filters](#) ⁵², you can use XPath expressions to generate parameter values.

For details about how to use the form's buttons, see [Define Condition Branches](#) ⁵⁵.

▼ Edit Other Records

This option enables you to: (i) create child records or records for any data table, and (ii) modify and delete child records.

On clicking **Edit Other Records**, the *Select data table* form appears (*screenshot below*). Select either (i) the child data table in which you want to create, modify, or delete a record, or (ii) any non-descendant data table in which you want to create a record. Note that (i) you can create records in any data table that is not at a descendant level below child, but (ii) you can modify or delete records of child data tables only.

Select data table

Child data tables

Department

Other data tables

Company Group

Company

Contract

Cancel Continue >

On clicking **Continue**, the *Script* form appears (*screenshot below*). Here you can build a script to (i) create a new record for a child data table; (ii) create a new record for any other DB data table that is not a descendant data table at a level below child; (iii) modify records of a child data table; and (iv) delete records of a child data table. Since you have already selected, in the previous step, the data table of the record/s you want to create, modify, or delete, now select the appropriate tab (*Create, Modify, or Delete*) and build the script for that action.

Script for child Department record(s)

Create Modify Delete

A new Department record will be created.
Note: the record will be saved only when user saves the main record.

Use field updates to fill out its fields. Record will be created after all script steps listed here.

Add field update Add branch

Cancel OK

Note the following points:

- When you create a new record in a non-child data table, it is possible that records of the data table create the same new record multiple times. When such duplication is a possibility, a Replace option becomes available. Select it so that the record to be created is created only once.
- When you create a new record or modify an existing record, you can fill or update a field by using the **Add Field Update** action.
- Use the **Add Branch** action to restrict selections with conditions, filters, and searches before adding update actions.
- You can modify all or specific records of a child data table. Specific records can be selected via

conditions, filters, and searches.

- You can specify, when child records are to be modified, that a new record be created if none exists.
- You can delete all or specific records of a child data table. Like with modifications (see *previous point*), specific records can be selected via conditions, filters, and searches.

▼ Fetch Records

On clicking **Fetch Records**, the *Fetch saved records to use for calculations* form appears (screenshot below). The *Fetch Records* script enables you to fetch records from the database and store them in a variable. The data in the variable can then be used to make calculations while editing the current record. For example, while the user edits details of a department, you might want to show the user a list of that department's contracts. You can do this by fetching the records of the *Contract* data table and filtering these to show only the current department's contracts. In the screenshot below, the name of the current department is passed to the *Department* parameter of the filter named *Expiring in 90 days*. Consequently, the Filter returns only those records where the name of the current department is contained in a *Contracting_Party* field of a record.


Fetch saved records to use them for calculations


This allows to fetch saved in the database records into a variable which then can be used for further calculations. More than one record can be fetched - it is highly recommended to use filter and select specific fields to reduce memory consumption! Once fetched, this variable is available throughout the whole editing process of the main record.
Important: the records are loaded from the database in their saved state independently of the currently unsaved editings made by user.

Variable

Data table

Filter

©Department 

Fields 4 field(s) from 2 data table(s) 

How often Fetch once and keep same data until editing of the main record is finished
 Fetch every time when this script command is executed so that always most recent database state is retrieved

In the *Fetch Records* form, you specify what records go into a variable, as follows:

- In the *Variable* combo box, select one of the predefined values to be the name of the variable. This variable name must be unique within the entry form.
- In the *Data table* combo box, select the [data table](#)³⁷ from which you want to load records into the variable.
- In the *Filter* combo box, you can select one of the [data table's filters](#)⁵⁰ to apply to the record selection. A filter will limit the records to load and so reduce memory consumption. If a filter has been declared to have parameters, then each parameter is listed together with an entry field for its value. Here you can enter an XPath expression to generate the value. Alternatively, click the **Edit** button and select from the list of automatically generated context-based expressions. In the screenshot above, the XPath expression is: `$FetchedRecords_A/Name`, which selects the *Name* field contained in the variable `$FetchedRecords_A` (which is another variable defined in the current entry form and contains the fields of the current record).
- In the *Fields* setting, select the fields of the selected records that you want to store in the variable. To reduce memory consumption, select only those fields that you need.

- The *How Often* setting determines when the variable is updated: either once, when the script is first executed and till editing of the record is finished, or every time the script is executed. The second option enables the script to use the latest data in the DB.

3.2.5.3 Report Forms

A report form is designed to present a report of records in a specific data table. A report consists of one or both of the following:

- A table, where the columns represent the data table fields and/or [loose links](#)³¹ that were selected for inclusion. Each row of the table holds a record of the data table.
- One or more charts. Each chart plots the values of fields assigned to the Y-Axis against a field assigned to the X-Axis.

You can create multiple report forms for a data table. The report forms of a data table will be available when a user is editing the records of a data table and clicks the [Reports](#)²⁴⁸ button. At this point, if multiple report forms are available for the data table, the user can choose the report form to use. For example, you can create forms with different filters to show different datasets. Or different reports could group records on different criteria. This would enable the user to quickly switch report forms to see, for example, reports of different and specific datasets (such as US companies only, or contracts that will expire in the next three months, or contracts valued above a certain amount).

Edit Contract report form

Form name

Form access Admin, Executive, Legal, Sales ✎

Use this form on other pages

Preview
Cancel
Save Form

Group by Categories ✎

Note: groups in reports are displayed in the first column

Hide records, show only groups

Show limited amount of records

Filter ◀ ▶

Charts Amounts by Category, Contract Amounts ✎

Hide the whole table, show only charts

Print layout Portrait Landscape

ID	Title	Type	Expiry	Description	Category	\$ Amou
Sample	Sample	Sample	May 30, 20	Sample	Sample, Sa	\$1,234
Sample	Sample	Sample	May 30, 20	Sample	Sample, Sa	\$1,234
Sample	Sample	Sample	May 30, 20	Sample	Sample, Sa	\$1,234
Sample group 1						Σ Sum
Overall						Σ Sum

Amounts by Category

Contract Amounts

The screenshot above shows the design page of a report form. The design page has two parts:

- In the upper part, you specify the [properties of the report form](#) ¹³³

- In the lower part, you design the layout of the report form: (i) the [report table](#)¹³⁶, and (ii) the [report charts](#)¹³⁸

How to configure a report form is described in the topics of this section.

3.2.5.3.1 Create/Edit a Report Form

To create a new report form, click **New Report Form** on the [Edit Forms](#)⁶¹ page. You will be prompted to select the fields (of the current data table as well as ancestor data tables) or [loose links](#)³¹ that you want to display in the report. Additionally, if a field of the current data table is of a [Link To](#)⁴³ type and links to another data table, then the fields of the linked-to data table will also be available for selection.

Subsequently, give the form a suitable name (*see screenshot below*) and edit the form as described in the topics that follow.

If the database contains other data tables, then the option *Use this form on other pages* will be available (*see screenshot below*), and you can choose, in the combo box, one or more data tables for which this report form can be used.

Edit Contract report form
↶ ↷

Form name

Form access Admin, Executive, Legal, Sales ✎

Use this form on other pages

Preview
Cancel
Save Form

Group by Categories ✎

Note: groups in reports are displayed in the first column

Hide records, show only groups

Show limited amount of records

Filter ◀ ▶

Charts

Print layout Portrait Landscape

⌚ 📊

ID	Title	Type	Expiry	Description	Category	\$ Amou
Sample	Sample	Sample	May 30, 20.	Sample	Sample, Sa	\$1,234
Sample	Sample	Sample	May 30, 20.	Sample	Sample, Sa	\$1,234
Sample	Sample	Sample	May 30, 20.	Sample	Sample, Sa	\$1,234
Sample group 1						Σ Sum
Overall						Σ Sum

After a form has been saved, it can be edited at any time by clicking its name on the [Edit Forms](#)⁶¹ page. The report form will be displayed (*screenshot above*) and can be edited.

After completing your edits (for new forms or existing forms), click **Save Form** to finish. This will take you back to the [Edit Forms](#)⁶¹ page, where you must click **Save Changes** for all changes to be saved to the database.

3.2.5.3.2 Report Properties

Important properties of the report are set in the top part of the report form's design page (*see screenshot below*). These properties are described below.

Edit Contract report form

Form name:

Form access: Admin, Executive, Legal, Sales

Use this form on other pages

Preview Cancel Save Form

Group by: Categories, Process Status

Note: groups in reports are displayed in the first column

Hide records, show only groups

Show limited amount of records

Filter:

Charts

Print layout: Portrait Landscape

Set access to report forms

The *Form Access* setting (see screenshot above) enables you to specify which [roles](#)¹⁶⁹—and, therefore, [users](#)¹⁶⁶—may access the form. Note that the *Admin* role has full access to all forms.

Grouping of records

The records of the data table can be grouped on a maximum of three fields. For example, you could group a set of contracts on the basis of their status or you could group companies by country.

To group records, click the *Group by* option's **Edit** button (see screenshot above) and then select the fields on which to group (up to a maximum of three fields). The first field you select becomes the first grouping criterion, and so on. In the report, the values of the selected grouping criterion will be shown in the first column of the table. If you have multiple criteria, then the values will be grouped first on the first criterion. Then, within each value of the first criterion, grouping will take place on the second criterion. Next, within each value of the second criterion, grouping will take place on the third criterion. So, it is important to select the grouping criteria (fields) in the order you want them.

For example, the screenshot below shows a report in which grouping is based on the expiry date of contracts, and on two criteria: *Year* is the first criterion, and *Month* is the second criterion. The first value of the first (*Year*) criterion is 2020. Within the set of records for 2020, records are grouped by month. In our case, there are four months (June, August, September, and December), with one record in each month. Records are then grouped by month for the next *Year* value, which is 2021: there are six records for the month of August (and no other month in 2021). Note also the summary values on the right hand side, where the count of records is given for each month and each year. **Summary values** are created on fields, and are described in the next topic, [The Report Table](#)¹³⁶.

Show report By category

For all records For current data

↑ID	Title	Type	Expiry D
C2020/3122	Office Cleaning Contract	Service Con	Jun 08,
			June # 1
C2020/3120	Willow Partners Warehouse Lease Agreement	Lease	Aug 15,
			August # 1
C2020/3121	Doodle Online Advertising	Advertising	Sep 01,
			September # 1
C2020/3119	Chestnut Telecom License Agreement	Vendor Agre	Dec 04,
			December # 1
2020	—————→		# 4
C2020/3126	Twitter Terms of Service	Vendor Agre	Aug 13,
C2020/3127	AWS Policies & Permissions - Identity & Acc	Vendor Agre	Aug 10,
C2020/3128	Facebook Advertising Policies	Vendor Agre	Aug 13,
C2020/3129	Microsoft Advertising Policies	Vendor Agre	Aug 14,
C2020/3130	Dropbox Terms of Service September 24, 2	Vendor Agre	Aug 13,
C2020/3131	Dropbox Business Agreement August 19, 2	Vendor Agre	Aug 13,
			August # 6
2021	—————→		# 6

Note about grouping of Date-type records: If a field is created that has a type of [Date](#)⁴³ (format: **Month Day, year**; for example, **Dec 31, 2020**), then this field will automatically be available for grouping on three criteria: (i) the month part only; (ii) the year part only; (iii) the entire date filed (month, day, and year). This enables you to split the date field into two additional grouping criteria and thus to separately group records on months and years.

Hiding and showing a limited number of records:

- If you select the option to hide records, only the summary lines of groups will be shown. The actual records will be hidden. In the screenshot above, for example, the actual records are shown. The summary lines on the right provide a count of the records.
- If you select the option to show a limited number of records, you can select the number of records to show from the option's combo box. This option is available only if the *Hide Records* option is not selected.

Filtering records

To filter records, select the *Filter* option and then select any one of the filters that have been defined for the current data table (see screenshot above).

3.2.5.3.3 The Report Table

The report table is defined below the [report properties](#) ¹³³. The report table will be displayed as the first part of the report. The columns of this table (see screenshot below) represent the data table fields and/or loose links that were selected for inclusion in the table. Table rows each hold a record of the data table. To edit the structure and content of the table, click the **Table editing** icon (circled in red in the screenshot below)

ID	Title	Type	Expiry Date
Sample	Sample	Sample	Sep 22, 2020
Sample	Sample	Sample	Sep 22, 2020
Sample	Sample	Sample	Sep 22, 2020
Sample group 2 ← Grouping criterion 2		Summary value for Group 2 → # Count	
Sample group 1 ← Grouping criterion 1		Summary value for Group 1 → # Count	
Summary value of all records →			# Count

You can edit table structure and content as follows:

- Insert columns to the left of the selected column. To append a new column to the right of the rightmost column, click the *Append Column* icon (which is situated to the right of the rightmost column).
- To delete a column, click its *Delete* icon.
- To change the field or loose link represented in a column, click the column's **Edit** icon and select the new field or loose link.
- For each column, properties are available that depend on the column's datatype. For example, you can sort the records of the table according to the values of a specific column, or you could hide the label of individual columns.
- For columns of datatype child record or linked record, instead of displaying the records in a list, you can display an aggregate value for the child or linked records. For example, you can display: a sum of the values of all the child records, or an average of the values, or whether at least one record exists, or values of all the records run together, separated by a separator that you specify.
- Number columns can be formatted. There is one important property named *Summary*, which is described in the sub-section named *Summary values* immediately below.
- To set a column's display properties, click its *Width* icon. Column width options are: (i) Default column width, where all columns are equally sized; (ii) Fixed width as percent; (iii) Auto-size the column width based on content, with an optional maximum width. Auto-sized columns are indicated by an **A**. For columns with fixed widths as percent, and for auto-sized columns with a maximum percent width, the percent width is indicated in the column header. Column padding (left and right) is set with the respective sliders.
- F
- To exit the table editing mode, click the **Table editing** icon.

Summary values

It is sometimes useful to have a summary value at the bottom of a column. A summary value applies a calculation to the values of a column and shows the result. For example: the values of a column that is of a number datatype can be summed up, averaged, scanned for a minimum and/or maximum value; or the values of a column that is of a text datatype can be counted to display how many values are in that column. Summary values are shown: (i) for groups, and (ii) for all records (at the end of the report).

To set up the summary values of a column, click the column's **Edit** icon, and select the kind of summary value (*listed below*). The available options depend on the datatype of the respective field (defined in the [field's Type property](#) ⁴⁴).

- **Count:** For all datatypes. Counts the number of values in the column.
- **Sum:** For the number datatype. Sums the values in the column or group.
- **Average:** For the number datatype. Averages the values in the column or group.
- **Minimum:** For the number and string datatype. Scans the values in the column or group for the minimum value. For the string datatype, the minimum value is based on the alphabetical order.
- **Maximum:** For the number and string datatype. Scans the values in the column or group for the maximum value. For the string datatype, the maximum value is based on the alphabetical order.

Note: Summary values can be defined for any and all columns. You can set up more than one summary value for a column if multiple summary values are possible. For example, in the case of a column with numbers, you could show the sum of all values, or the average.

Styles in the report table

To set styles for the table, click its **Styles** icon (*inside the red ellipse in the screenshot above*). The Styles form for the table looks something like in the screenshot below.

The screenshot shows a configuration window for table styles. At the top right, a red circle highlights a 'Styles' icon. Below it, there is a checkbox for 'Use styles defined globally' and an 'Apply globally' button. The window is organized into two main sections: 'Labels' and 'Values'.
 In the 'Labels' section:
 - A 'size' slider is set to 100%.
 - There is a 'bold' checkbox.
 - A 'place' dropdown menu is set to 'Above fields (left)'.
 - There is an 'italic' checkbox.
 - A 'text' dropdown menu is set to 'As-is'.
 In the 'Values' section:
 - A 'size' slider is set to 100%.
 - There is a 'bold' checkbox.
 - An 'align' dropdown menu is set to 'default'.
 - There is an 'italic' checkbox.

Note the following points:

- A label is the column header. Values are the values of the fields of records. You can set text properties for the label and the value separately, including the text placement.
- If you select the *Use global styles* check box at the top of the table, then the [global styles specified in the app's settings](#)¹⁸¹ will be used.
- The **Apply Globally** button applies the current styles to the global setting for all forms. All forms that do not have their own table styles will receive the current styles.
- To exit the styles editing mode, click the **Styles** icon.

Note: After you have finished making structure and style changes to the table, click **Save Form** and then **Save Changes**.


Note: If one or more charts have been created, you can choose to show only charts in the report (and hide the table). See the [Charts topic](#)¹³⁸ for information about this.

3.2.5.3.4 Report Charts

You can generate charts in reports to graphically present data held in the records. The Y-Axis of the chart must be a number. This will be the case if, for the Y-Axis, either of the following is available and chosen: (i) a field having a number value, or (ii) a [summary value](#)¹³⁶ of a grouping value (for example, the count of individual years in the data set: say, 3 instances of the year 2020).

Note: Charts can be created only on the basis of fields that have been included in the report form (that is, on the basis of the columns of the table).



The screenshots below show, at left, a report form in which two charts have been defined, and, at right, the actual report with the charts.


Group by Categories 

Note: groups in reports are displayed in the first column

Hide records, show only groups



Show limited amount of records








Filter  Active Contracts other than IP 

Charts Amounts by Category, Contract Amounts 


Hide the whole table, show only charts

Print layout Portrait Landscape

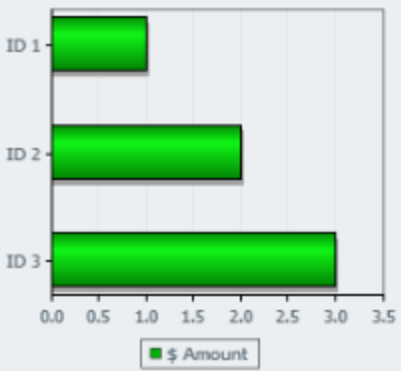
 

 ID	 Title	 Type	 Expiry	 Description	 Category	 \$ Amou
Sample	Sample	Sample	May 30, 20	Sample	Sample, Sa	\$1,234
Sample	Sample	Sample	May 30, 20	Sample	Sample, Sa	\$1,234
Sample	Sample	Sample	May 30, 20	Sample	Sample, Sa	\$1,234
Sample group 1						Σ Sum
Overall						Σ Sum

Amounts by Category



Contract Amounts



■ \$ Amount



Note: After a chart has been created, you will have the option to hide the table and show only the charts. Select the corresponding option to do so (see screenshot above left). (You should not delete the table because its columns provide the dataset from which the charts will be created.)

Creating charts

To create a chart, do the following:

1. In the report form, select the *Charts* option (see screenshot above left). The Edit Charts form appears (screenshot below)
2. If you want to create charts for the report form as a whole, select the Overall tab. If the report data is grouped, you can create charts for the top-level group. Select the *Each <top-level group>* tab to do this. (In the PDF output, each new top-level group will start on a new page.)
3. Click **New Chart**. The *Chart Settings* form appears (see screenshot below).
4. In this form, select the chart type you want (bar chart, line chart, area chart, or pie chart) and give the chart a name. Select the Y-Axis field/s and X-Axis field. For all chart types, except pie charts, you can select multiple fields for the Y-Axis (the Y-Axes combo boxes are outlined in red below). For pie charts you can select only one field for the Y-Axis. Notice, in the screenshot below, that you are not allowed to add new fields for the Y-Axis of the pie chart. You can also specify that the percentage value of pie slices be shown. The fields that are available for Y-Axis selection are number fields, [summary values](#)¹³⁶ of grouping criteria, and the overall summary line value. For both X and Y axes, the fields available for selection are determined automatically on the basis of the datatypes of fields and grouping criteria, if any.

The screenshot shows the 'Edit Charts' dialog box with two tabs: 'Overall' and 'Each Categories'. The 'Overall' tab is active. There are two chart configuration sections, each enclosed in a green border. The first section is for a 'Pie' chart named 'Amounts by Category'. Its Y-axis is 'Categories \$ Amount (Sum)' (highlighted with a red box) and its X-axis is 'Categories'. There is a '3D' checkbox and a 'Show %' checkbox (checked). The second section is for a 'Bar' chart named 'Contract Amounts'. Its Y-axis is '\$ Amount' (highlighted with a red box) and its X-axis is 'ID'. There are '3D' and 'Change orientation' checkboxes. Below the chart sections, there is a 'Replace missing values with' checkbox (checked) and a text input field containing '0'. There are also controls for 'Charts per row' (set to 2) and 'Charts height' (set to 'same as width'). At the bottom are 'Cancel' and 'OK' buttons.

5. If you want to present more than one chart, add new charts by clicking **New Chart** and defining each chart as described in *Step 2* above.
6. If you want, you can replace any missing value in the datasets with a value of your choice.
7. Specify how many charts should be displayed in a single row of the report. For example, in the report shown in the screenshots above, we have specified that two charts are to be shown per row.
8. You can set the chart height in terms of the chart's width (as a percentage of the chart's width). The default value is a chart height equal to the chart width.
9. After you have finished defining your chart, click **OK** and then **Save Form**.

3.2.5.4 Export Forms

An export form (*screenshot below*) specifies what data table-related data (data table fields, linked data tables, and child data tables) to export to XML or CSV. For example, the screenshot below shows an export form of the *Person* data table. The *First*, *Last*, *Title*, *Phone*, and *Email* fields of the *Person* data table have been selected for export, together with the *Person* data table's parent data table, *Department*. After the form has been saved (with **Save Form**) and changes to all forms have been saved (with **Save Changes**⁶¹), the export form is available during data entry of records of this data table (in this case, the *Person* data table). All users who have been authorized to access this form (*see screenshot*) will be able to export the data specified in this form.

XML format

The exported XML file will have a root element named `<Root>`, and `<Root>` will have a child element that has the same name as the current data table (in our example, this is the data table named *Person*). This element will have the child elements that you selected as the fields to export. For example, the export form for a *Person* data table (as shown in the screenshot above) might generate an XML file that looks like this:

`<Root>`

```

<Person>
  <Department>Sales</Department>
  <First>Jim</First>
  <Last>Gridely</Last>
  <Title>Executive</Title>
  <Phone>123456789</Phone>
  <Email>legal.01@redmaple.com</Email>
</Person>
...
<Person>
  <Department>Accounts</Department>
  <First>Jane</First>
  <Last>Locke</Last>
  <Title>Manager</Title>
  <Phone>123789777</Phone>
  <Email>accounts.04@altova.com</Email>
</Person>
</Root>

```

CSV format

The first line of the CSV file will contain the headers of fields. Each subsequent line contains one record, with the values of fields being in the same sequence as the headers. The separator in records is a comma. Note that each record is a flat listing of the rows of the export form. Child records cannot be displayed because of the flat structure of CSV files. Compare with the XML structure above.

```

"Department","First","Last","Title","Phone","Email"
"Sales","Jim","Gridely","Executive","123456789","legal.01@redmaple.com"
...
"Accounts","Jane","Locke","Manager","123789777","accounts.04@altova.com"

```

Note: Among the exported fields in the XML and CSV files, the *Department* parent of the current data table (*Person*) is included. Even though *Department* is not a field of *Person*, it is available to be added as a field in the export form because of its parent link to *Person*. Higher-level ancestors are also available and can be added to the form. Although ancestor information is not direct field-level information of a data table, it could be important, and, as a result, is made available as parent links.

Create an export form

Create a new export form as follows:

1. On the data table's [Edit Forms](#) ⁶¹ page, click **New Export Form**.
2. Add the fields you want to export from this data table, including any parent links, and click **Continue**. (Note that the term *parent links* includes ancestors at a higher level than the direct parent.)
3. Give the export form a suitable name.
4. Specify which roles can access this form. Only users who have been given at least one of the selected roles will be able to export data using this form.
5. Check the *ISO* option if you want data in fields of certain datatypes (date, time, number) to be exported in ISO format.
6. To add a field, click an **Insert** button to insert a row above the current row, or the **Append** button (last button) to add a last row to the table. To delete a field, click the respective row's **Delete** button.
7. To change a field, click the field's **Edit** icon, and make the changes you want.

8. To add child records (for example the *Person* children of *Department*), click the field's **Edit** icon, and (i) select the child data tables to export, and (ii) for each child data table, select which of that child's export forms to use. The child form will be created as a table within the row to which it was added. Note that child data tables cannot be exported to CSV. This is because CSV has a flat structure and cannot reproduce multilevel hierarchies.
9. Click **Save Form**.
10. Click **Save Changes** (on the data table's [Edit Forms](#)⁶¹ page).

Points to note

- An export form exports data related to the current data table (for example, a *Person* data table).
- XML export: The fields of the data table that are selected for export will be exported as XML elements that are children of an element that has the name of the current data table (so, for example, an element named *Person*). *See the XML listing above.*
- CSV export: The fields of the data table that are selected for export will be exported as the columns of a CSV row, where each CSV row corresponds to a record from the database (for example, one *Person* record). *See the CSV listing above.*
- In export forms, it is not only the data table's fields that can be added; parents and higher-level ancestors can also be added. As a result, an exported record can also contain the current data table's parents and higher-level ancestors. *See the listings above.*
- While data from child data tables can be exported to XML files, they cannot be exported to CSV files. This is because of the flat structure of CSV files.

3.2.5.5 Email Forms

An email form (*screenshot below*) automatically generates the body of an email based on the design of the form. The form contains a table within which the design is structured. You can add columns and rows to the table, as well as tables within individual cells of tables. Content is provided by adding, within individual cells, text or one of the data table's fields or loose links. Each field value can be set, via the *Email link* option, to be a hyperlink in the email. The link opens the record for viewing. You can also specify that individual rows of the email form are created only when certain conditions are met. Additionally, each table in the form can be styled separately and access to the form can be restricted to selected roles.

Edit Contract email form

Form name

Preview

Field | Calc | Text

Subject ?

Select forms for use on click ?

Entry Form

List Form ?

Ⓢ Ⓜ ⌘

Sample

Ⓢ ⌘

Sample *Sample*

Sample

Nov 10, 2022 Due today

Sample, Sample


After the form has been saved (with **Save Form**) and changes to all forms have been saved (with [Save Changes](#)⁶¹), the reminder email form is available for use.

Create an email form

Create a new email form as follows:

1. On the data table's [Edit Forms](#)⁶¹ page, click **New Email Form**.
2. Add the fields you want to appear in the content of the email, and click **Continue**. Ancestor links and loose links are also available for inclusion.
3. Give the email form a suitable name.
4. Enter a subject in one of the following ways: (i) In the *Field* tab, a field of the current record or related record (ancestor, child, or linked.to records); (ii) in the *Calc* tab, an XPath expression; (iii) in the *Text* tab, fixed text. The option to specify a subject is not available for [reminder emails](#)¹⁹⁴.
5. The Entry Form combo box specifies the entry form to use for record viewing or editing when an email recipient clicks a link in the email. The List Form combo box specifies the list form to use when the email recipient finishes viewing or editing the record. If the user does not have access rights to these

forms, then the default forms will be used. Also, if no form is specified for either setting, then the default form will be used for that setting.

6. Click the **Table Editing** icon to modify the table structure and content. Click an **Insert** button to insert a row above the current row, or the **Append** button (last button) to add a last row to the table. To delete a row, click the respective row's **Delete** button.
7. Within each cell, you can add one of the following: a field, a calculation to obtain a dynamic result, static text, or a table. You can edit the styles of labels and values of individual cells separately.
8. Select the *Email link* option of at least one field or calculation. The email link will be used to open the record directly from the email. You can switch on email links on multiple fields/calculations. In this case, the values of these fields/calculations will all be links to the record. See below for how to set the URL of the RecordsManager app and other global email settings.
9. For date fields, you can also (i) edit date formats, and (ii) select the *Show Due* option to display the number of days till a contract expires (see [Reminder Emails](#)¹⁸⁸).
10. To change a field, click the field's **Edit** icon, and make the changes you want.
11. Click the **Conditional Display for Row** icon (the  icon that is displayed when table-editing icons are switched on) to set an XPath condition that must be met in order for the row to be displayed. The default setting is to always display the row. See *note about XPath editing below*.
12. Click **Save Form**.
13. Click **Save Changes** (on the data table's [Edit Forms](#)⁶¹ page).
14. Remember to select, on the data table's [Edit Forms](#)⁶¹ page, the *Use* option of the Email form you want to currently use.

About editing XPath expressions

The form for editing XPath expressions has three tabs: (i) *Samples* provides a random example of an XPath expression, such as: (a) the concatenation of three values (two values from other fields and a comma separator); or (b) an `exists` function to test whether a field contains some content; (note that the *Samples* tab might not be available in some situations); (ii) *Fields* lists the names of all the record's fields in alphabetical order so that they can be correctly entered in the XPath expression; (iii) *Copy* lists a selection of XPath expressions that contain various useful functions, which you can copy into your expression and modify.

See the section [XPath Expressions](#)²⁰⁴ for more information.

Formatting

You can set styles for individual tables of the form form by clicking the S icon at the top right of each table. These styles will overwrite the global styles for email forms that are set via [Settings | Email Styles](#)¹⁸³.

RecordsManager URL and sender's email address

Go to [Settings | Other Settings | Emails](#)¹⁸⁶ to set:

- The URL of your RecordsManager app. This will enable the email recipient to click the URL and go to the app. (Also see [Email Forms](#)¹⁴⁴ for information about how to set hyperlinks in an email.)
- The email address of the sender of the reminder email.


Using reminder email forms

You can define more than one email form for a data table, and these will be displayed on the data table's [Edit Forms](#)⁶¹ page. On this page, [choose which Reminder Email form you want to use](#)¹⁹⁴ by checking its *Use* option. You can change your selection at any time. See the section [Reminder Mails](#)¹⁸⁸ for more information about this topic.

3.2.5.6 Homepage Alert Forms

Homepage Alerts are displayed at the bottom of the RecordsManager homepage (*highlighted green in the screenshot below*). As an admin, you can design multiple Homepage Alert forms for each data table and select the one you want to use for that data table. The selected form for each data table will be displayed on the homepage. If no custom form is designed or used, reminders will be displayed in a default RecordsManager form.

Home

Welcome System Administrator!   

Contract Database





Contracts
18 records

Company Database

Company Groups	Departments
5 records	21 records
Companies	Persons
23 records	19 records

Contract reminders

Past Due (4)

		Chestnut Telecom License Agreement	Renewal	Active
		Office Cleaning Contract	Renewal	Active
		Doodle Online Advertising	Renewal	Active
		Deciduous Lease	Renewal	Active

Create a Homepage Alert form

Create a new Homepage Alert form as follows:

1. On the data table's [Edit Forms](#) ⁶¹ page, click **New Homepage Alert Form**.
2. Add the fields that you want to show in the form and click **Continue**. (Note that, in addition to the fields of the current data table, fields of ancestor and linked data tables will also be displayed.) The form will be displayed (*screenshot below*) and you can edit it. For example, you can edit the design of the table, even adding columns for new fields or deleting columns together with the fields they contain. See Points 5 and 6 below for more information.

Edit Contract homepage alert form

Form name

Form access **Admin**

Preview **Cancel** **Save Form**

Filter

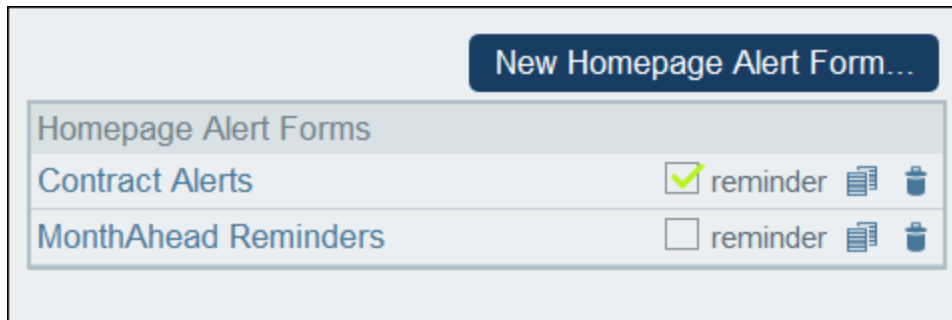
Select forms for use on click ?

Entry Form

List Form ?

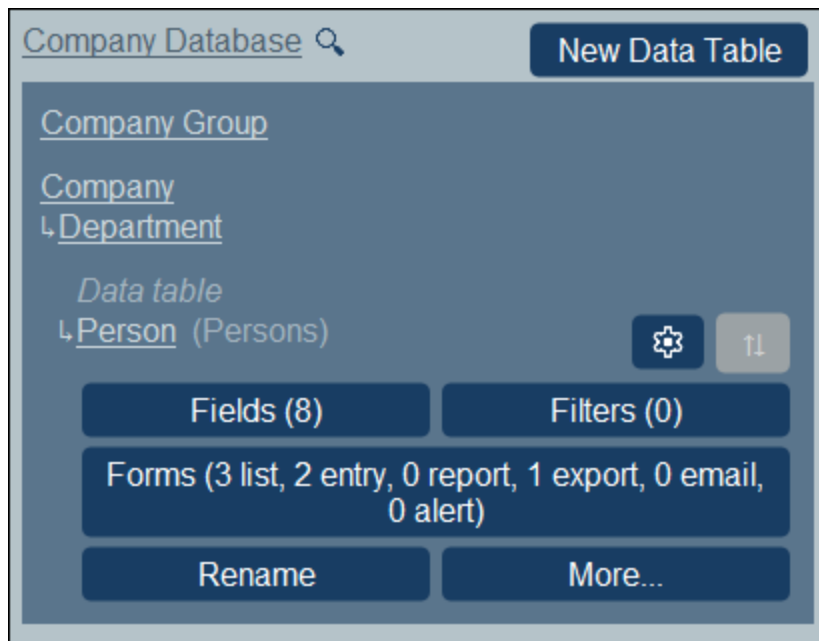
TITLE	REMINDERS	STATUS
Sample	Sample category	Sample
Sample	Sample category	Sample
Sample	Sample category	Sample

3. Give the Homepage Alert form a suitable name.
4. Specify which roles can view and access the reminders displayed via this form on the [Home Page](#)²⁰⁹. Only users who have at least one of the selected roles will be able to see this form on their homepages.
5. The Entry Form combo box specifies the entry form to use for record viewing or editing when a user clicks a row on the homepage. The List Form combo box specifies the list form to use when a user finishes viewing or editing the record. If the user does not have access rights to these forms, then the default forms will be used. Also, if no form is specified for either setting, then the default form will be used for that setting.
6. Click the **Table Editing** icon to modify the table structure and content. Click an **Insert** button to insert a column before the current column, or the **Append** button (last button) to add a last column to the table. To delete a column, click the respective column's **Delete** button. You can also set the widths of individual columns by clicking the respective **Change Width** button.
7. You can edit a column by clicking its **Edit** button. The following edits are possible: (i) change the field associated with the column; (ii) edit and/or hide the label of the column (its header); (iii) whether to allow sorting of the column's entries.
8. Click **Save Form**.
9. Click **Save Changes** (on the data table's [Edit Forms](#)⁶¹ page).
10. Remember to select, on the data table's [Edit Forms](#)⁶¹ page, the *Reminders* option of the Homepage Alerts form you want to currently use (see screenshot below).



3.2.6 Operations on Data Tables

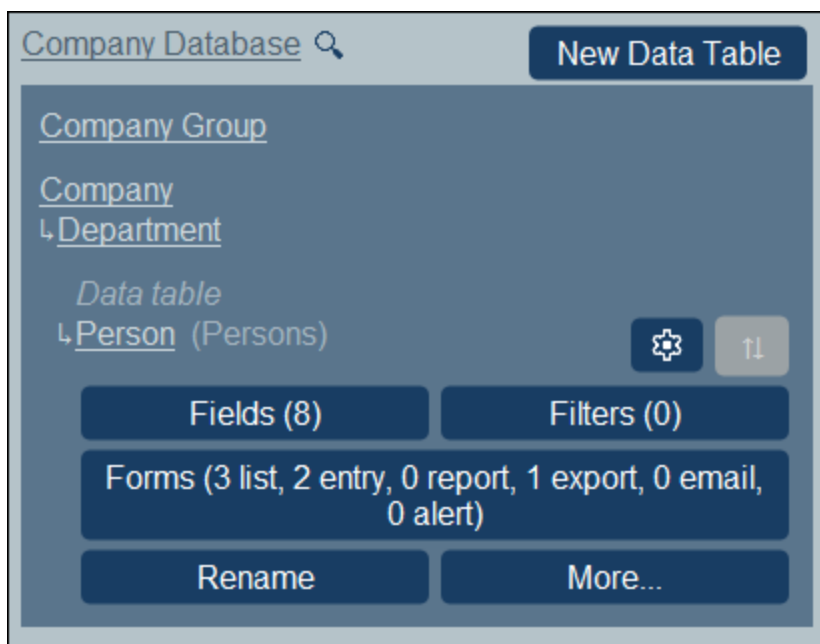
When you expand a data table in the [Database Structure tab](#)³⁷ of the Configuration Page (by clicking its name), a number of operations besides configuring the data table's fields, filters, and forms becomes available (see *screenshot below*). These operations are available via the **Rename** and **More** buttons, and they are described in the topics of this section: [Rename](#)¹⁵⁰ and [More Operations](#)¹⁵¹.



3.2.6.1 Rename

To rename a data table, do the following:

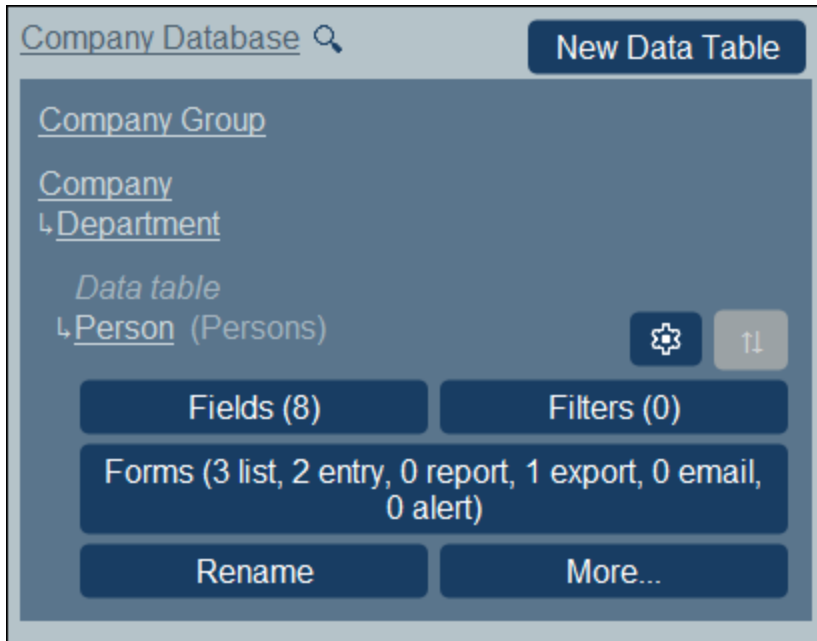
1. In the [Database Structure tab](#)³⁷ of the Configuration Page, expand the data table by clicking its name (see screenshot below).



2. Click **Rename**.
3. In the form that appears, enter the new name. Remember to check the plural form for correctness. The plural form appears in text strings of the interface and in reports.
4. Click **Save Changes** to finish.

3.2.6.2 More Operations

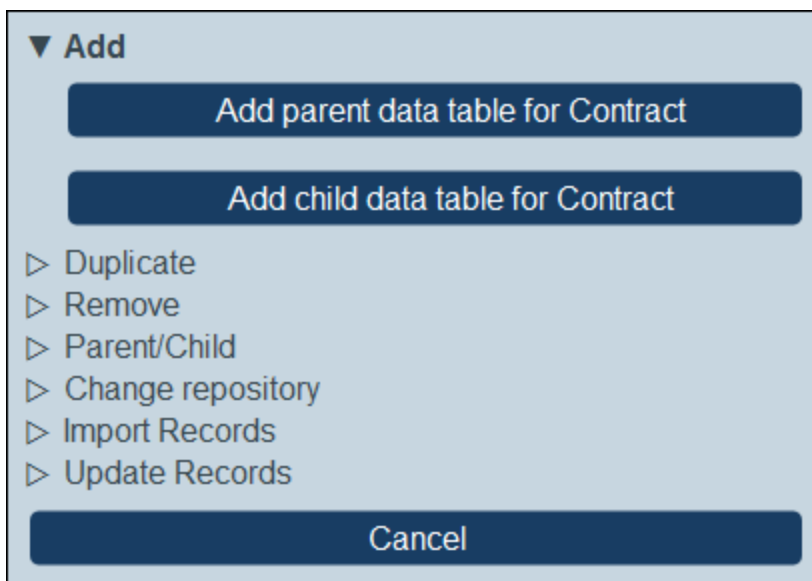
To access the data table operations described in this topic, do the following: In the [Database Structure tab](#)³⁷ of the Configuration Page, expand the data table by clicking its name (see screenshot below).



Then click **More**.

Add (parent/child data table to current data table)

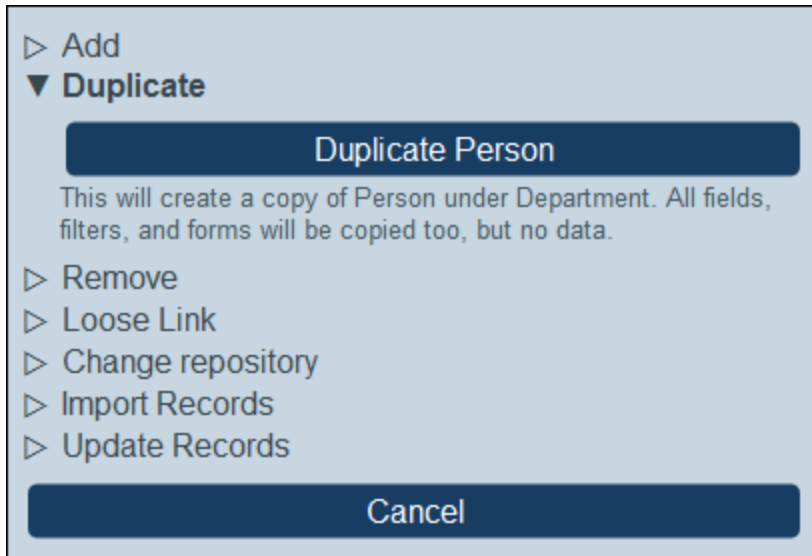
Click **More** (see first screenshot of this topic). Depending on the current data table, you can add a parent data table (with the **Add Parent Data Table** button) and/or a child data table (with the **Add Child Data Table** button); see screenshot below.



The procedure to create the parent or child data table is the same as that for any [new data table](#)³⁷.

Duplicate (current data table)

Click **More** (see first screenshot of this topic). The **Duplicate** operation creates a duplicate of the current data table with all fields, filters, and forms. The duplicate is created as a sibling of the current data table. However, record data will not be copied.

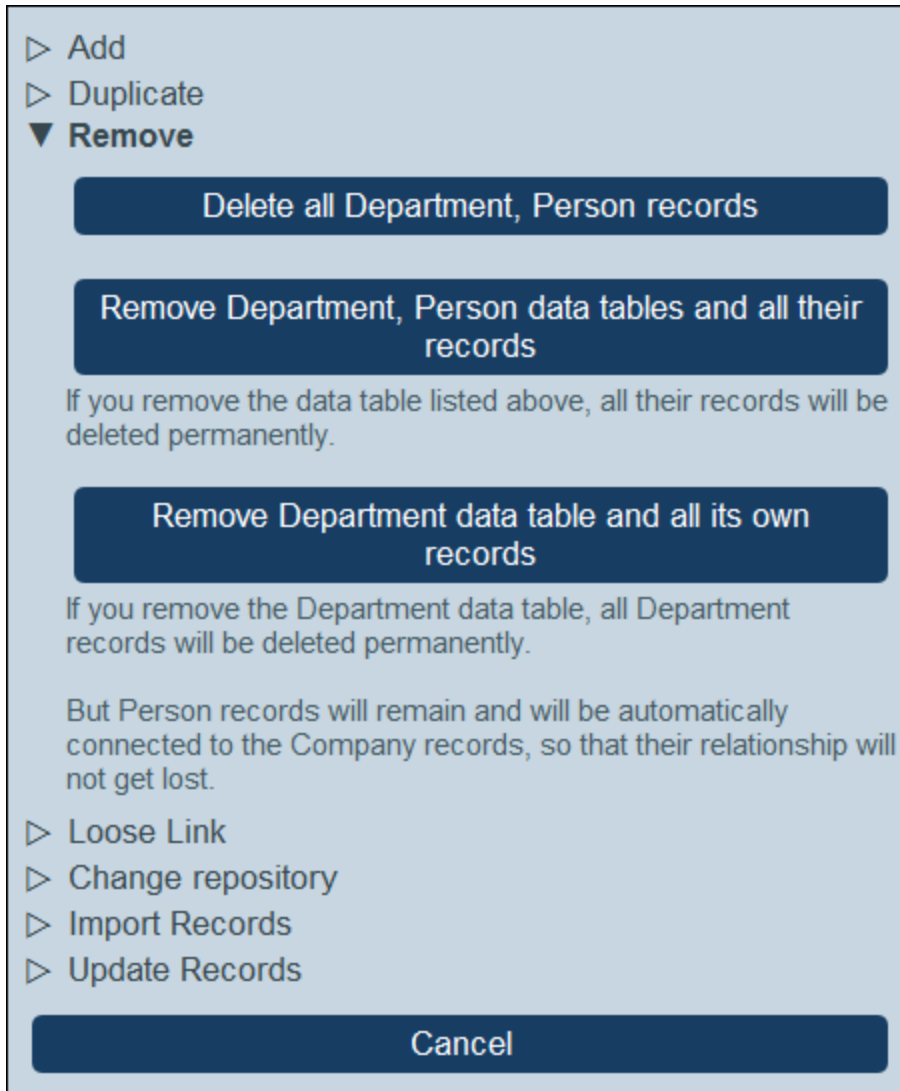


Give the duplicate data table a new name and click **Continue**. You can subsequently edit the newly created data table in the usual way.

Remove (current data table)

Click **More** (see first screenshot of this topic). The **Remove** operation enables you to:

- Delete all the records of the current data table and its descendant data tables.
- Remove the current data table and all its descendant data tables, together with all records in these tables.
- Remove the current data table and all its records. If the data table contains child data tables, these will not be removed, but will be connected to the parent of the current data table.



▷ Add
▷ Duplicate
▼ Remove

Delete all Department, Person records

Remove Department, Person data tables and all their records

If you remove the data table listed above, all their records will be deleted permanently.

Remove Department data table and all its own records

If you remove the Department data table, all Department records will be deleted permanently.

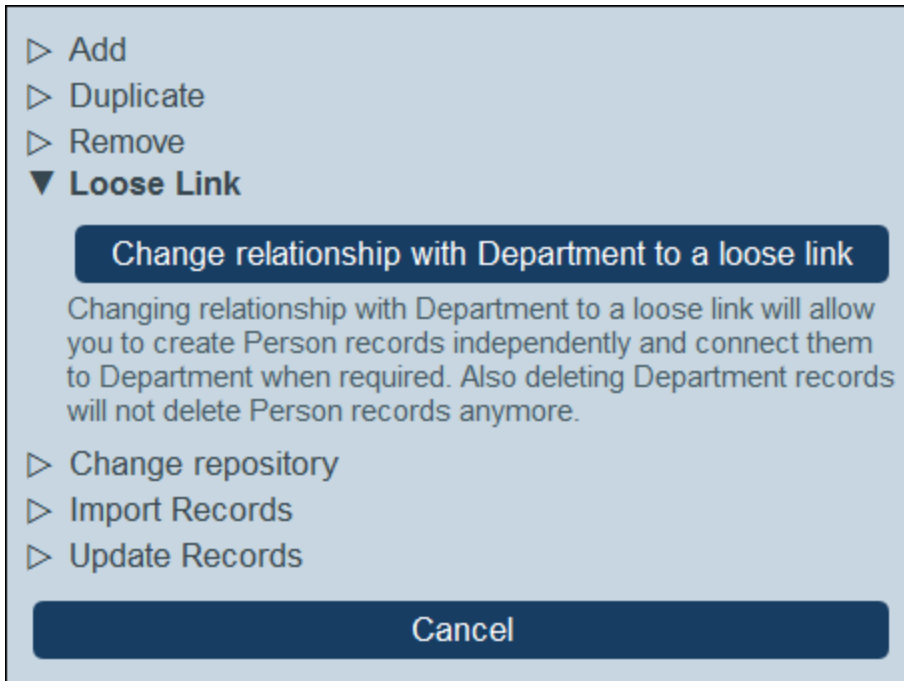
But Person records will remain and will be automatically connected to the Company records, so that their relationship will not get lost.

▷ Loose Link
▷ Change repository
▷ Import Records
▷ Update Records

Cancel

Loose Link

Click **More** (see first screenshot of this topic). The **Loose Link** operation is available for all data tables except top-level data tables. The **Loose Link** operation enables the link to the parent data table to be converted to a loose link (see screenshot below). If the relationship is a loose link, records of this data table will be created independently of the former parent, and will be linked to the former parent only when required, via forms. As an independent, loosely linked child, the records of the data table will not be deleted if records of the parent data table are deleted.



For more information about hierarchies and links between data tables, see the topic [Database Structure](#)³¹.

Parent/Child

Click **More** (see first screenshot of this topic). The **Parent/Child** operation is available for top-level data tables only (see screenshot below). A top-level data table can be converted to a child data table of another top-level data table and moved to the corresponding position in the hierarchy.



For more information about hierarchies and links between data tables, see the topic [Database Structure](#)³¹.

Change Repository

Click **More** (see first screenshot of this topic). The **Change Repository** operation is available for top-level data tables only (see screenshot below). A top-level data table and its descendant data tables can be organized into another existing repository. It will be a sibling of the top-level data table/s of the repository to which it is moved.

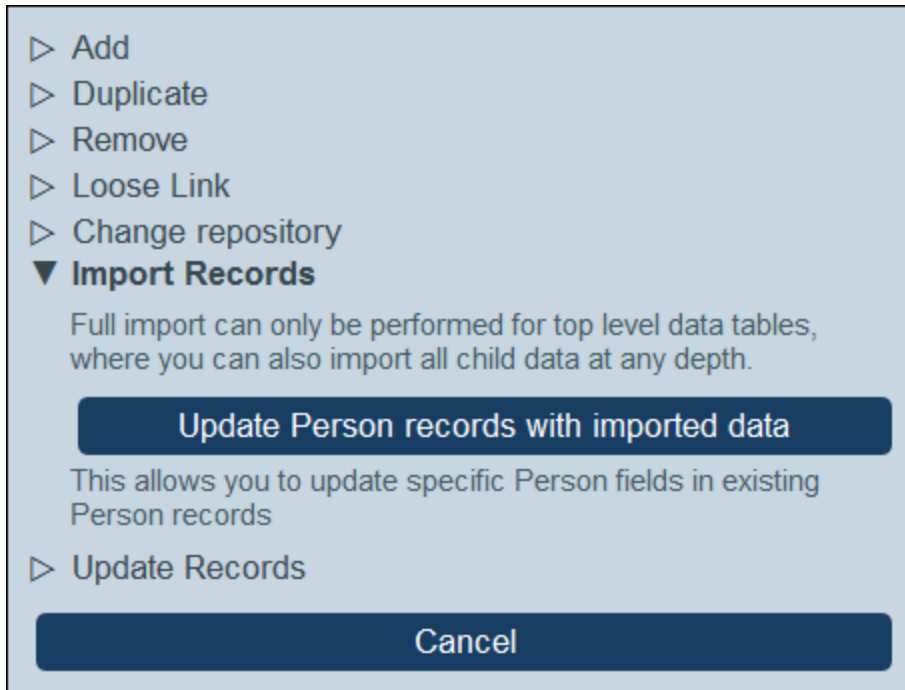


For more information about hierarchies and links between data tables, see the topic [Database Structure](#)³¹.

Import Records

Click **More** (see first screenshot of this topic). The **Import Data** operation enables you to import data from an XML file that has a structure corresponding to that of the current data table's hierarchy. Two types of import are possible:

- Import the records of a top-level data table, including records of its descendant data tables. Click *Import <data table> and child records* to do this.
- Update selected fields of the records of any data table. The records to update are selected on the basis of the field/s you select as the key field/s. Click *Update <data table> records with imported data* to do this.



Import records of top-level data table

After you create a data table, you can import its records and the records of descendant data tables from an XML file. The XML file must have a structure that matches the structure of the data table and its descendants. After you click *Import <data table> and child records*, generate an XML Schema that defines the structure of the XML file by clicking **Save XML Schema**. The schema file will be downloaded to the *Downloads* folder of your client device.

Note the following points about the import:

- If a field has been defined as a required field of a data table, then the element corresponding to this field must be present in the XML file. Otherwise, the import will fail.
- If a field has been defined as an optional field of the data table, then the element corresponding to it is optional in the XML file as well.
- Child elements are optional. This means that you can import a top-level data table only, or the top-level data table plus descendant data tables down to any desired depth.
- Date, time, and number fields must be in ISO format (respectively: 2020-12-31, 18:25:26, and 1234.56).
- File fields are imported from an element named `<Files FileName="" />`, and element content must be base64-encoded. The `FileName` attribute is optional.
- Image fields are imported from an element named `<Images FileName="" />`, and element content must be base64-encoded. The `FileName` attribute is optional.
- Reminder fields cannot be imported.
- Link-to fields are imported from an element named `<Link-to />`. It must contain the identity value of the referenced record. For example, if the record of a certain contract links to a department's *Name* field, then the XML file could have: `<Link-to>Accounts</Link-to>` in order to link this contract to the *Accounts* department.

Update records of a data table with imported data

The records of a data table can be updated with data from an XML file. The XML file must have a root element named `root` that has child elements corresponding to the records of the data table. For example, a data table named `Person` would have multiple `Person` records. The data in these records can be updated with data in an XML file that has a structure something like this. The child elements of the `Person` element in the XML file must correspond to the fields of the `Person` data table.

```
<Root>
  <Person>
    <Department>Sales</Department>
    <First>Jim</First>
    <Last>Gridely</Last>
    <Title>Executive</Title>
    <Phone>123456789</Phone>
    <Email>legal.01@redmaple.com</Email>
  </Person>
  ...
  <Person>
    <Department>Accounts</Department>
    <First>Jane</First>
    <Last>Locke</Last>
    <Title>Manager</Title>
    <Phone>123789777</Phone>
    <Email>accounts.04@altova.com</Email>
  </Person>
</Root>
```

The data from the XML file that will be used for the update is selected in two steps:

1. Select the field/s of the record that will be used to uniquely identify the record in the XML file. You can choose any number of fields (from one field to all fields).
2. Select the fields of the record that you want to update. The field/s that were selected as the identifier field/s will not be changed. The data in fields that have not been selected for update can be either (i) kept unchanged, or (ii) removed.

Update Records

Click **More** (see *first screenshot of this topic*). The **Update Records** option (*screenshot below left*) enables you to update a field of all or selected records. Click **Update <data table> Records** to open the Update Records Settings form (*screenshot below right*).

▷ Add
▷ Duplicate
▷ Remove
▷ Loose Link
▷ Change repository
▷ Import Records
▼ **Update Records**

Update Person records

Update field in all records or records selected with a filter using XPath

Cancel

Update Contract records

Select records for update

All records

Filtered ◀ Active Contracts other than IP ▶

14 records found

Select field which will be changed in each record

◀ Review Date ▶

Calculate new Review Date field value for each record with XPath.
Important: if result of the XPath statement is empty, the Review Date field will be deleted

Expiry_Date 

Preview

Cancel **Update now...**

The Update settings are as follows:

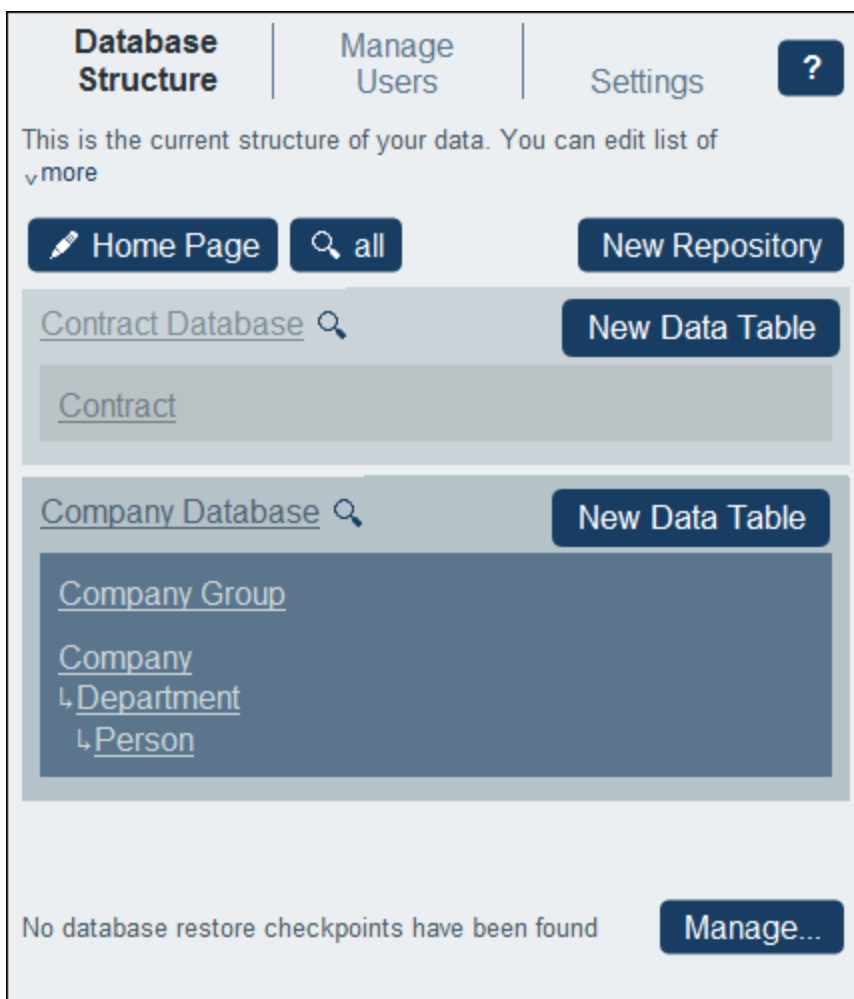
- Select what records to update: either all the records of the data table, or a subset of records selected by one of the data table's [filters](#)⁵⁰.
- Select the field to be updated.

- Enter the new value to write into the selected field of the records to be updated. The value is calculated via an XPath expression. In the screenshot above, we are updating the *Review Date* field with the contents of the *Expiry Date* field. As another example, you can update the *Email* field of each record with an email address that will have the pattern: `FirstName.LastName@altova.com.`, where `FirstName` and `LastName` are taken from the *First* and *Last* fields of the respective records.

You can click **Preview** to confirm that the XPath expression returns what you expect for each record. When you are sure that you want to implement the change, click **Update Now**.

3.2.7 Home Page Form

On the Database Structure page (*screenshot below*), click the **Home Page** button to go to the Home Page Form, where you can design the Home Page of your app.



The page that you design in the Home Page Form will be the page that users of the app will see when they start the app (its Home Page). This page must provide a well-designed entry point for viewing, editing, and otherwise processing records. Typically it would provide access to the app's data tables. Due reminders will be added automatically to the Home Page below the table that makes up the Home Page Form (compare the

design form and the final form in the two screenshots below). So you do not have to include a template for due reminders in the Home Page Form



The Home Page Form is essentially one table, which we call the Home Page Form Table. You can add/delete rows or columns to this table. Inside each table cell, you can add a data table, text, an image, or another table. It is in this way that the design of the Home Page is built up inside the Home Page Form Table. In the screenshot below left, the table contains two rows, each of which contains a table. All three tables are indicated by table icons, which are located at the top right of each table.



The home page is the first page users see in your app. It shows them all the data tables that they may access along with how many records they may access in each data table. During offline use, it also shows how many new records have been added while offline. The home page is a starting point for viewing and editing data in these tables.















√more ^less

Use auto-generated Home Page
 Manual design

Cancel **Save**

Preview  

 	
 Contract Database 	
 Contracts sample count	
 	
 Company Database 	
 Company Groups sample count	 Departments sample count
 Companies sample count	 Persons sample count

The screenshot displays the Altova Home Page interface. At the top left, it says "Home" and "Welcome Neo!". The Altova logo is in the top right. Below the logo are three icons: a globe, a gear, and a question mark. The main content is divided into three sections:

- Contract Database:** A single card showing "Contracts" with "20 records available".
- Company Database:** Four cards arranged in a 2x2 grid:
 - Company Groups: 4 records available
 - Departments: 21 records available
 - Companies: 22 records available
 - Persons: 19 records available
- Contract reminders:** A section titled "Contract reminders" with a sub-section "Past Due (4)". It lists four reminders:
 - Reminder **Renewal** "C2020/3119 Chestnut Telecom License Agreeer"
 - Reminder **Renewal** "C2020/3122 Office Cleaning Contract"
 - Reminder **Renewal** "C2020/3121 Doodle Online Advertising"
 - Reminder **Renewal** "C2020/3114 Deciduous Lease"

Note, in the screenshot at right, that the actual Home Page contains a form at the bottom that is not in the Home Page Form. This form derives from a [Homepage Alert Form](#)¹⁴⁷, which contains reminders of events that have occurred or will occur (according to data in the date fields of data tables). How to design these forms is described in the topic [Homepage Alert Forms](#)¹⁴⁷. The home page will automatically display all the homepage alert forms of the system.

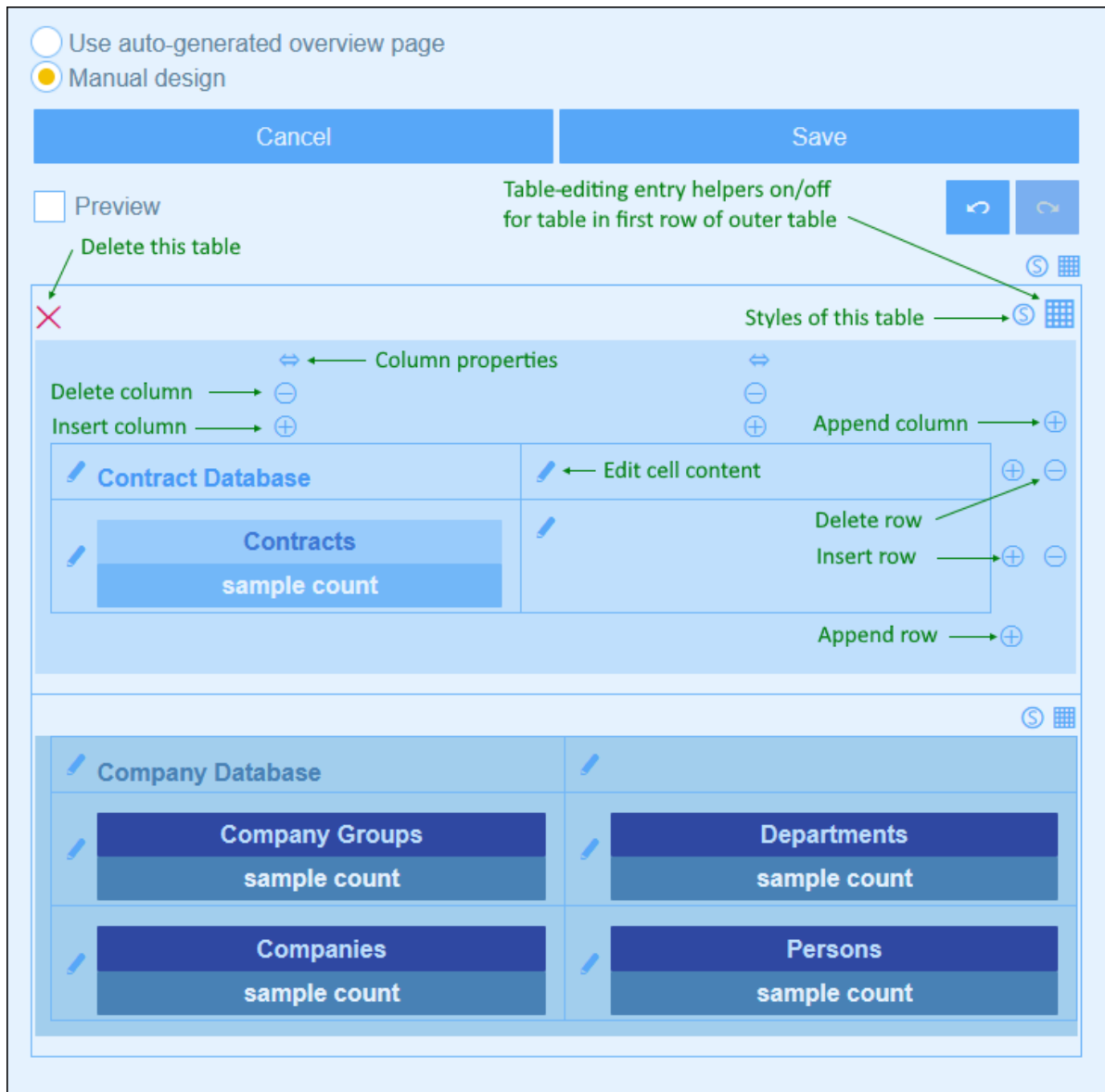
Create a Home Page Form

You can choose to auto-generate the Home Page by selecting the *Auto-generate* radio button near the top of the form. In that case, the Home Page is automatically generated on the basis of the database structure. To design a custom page, select the *Manual design* radio button.

To manually design the Home Page, do the following:

1. Click the *Table-editing entry helpers* icon at top right of the table you want to edit (see *screenshot below*). This causes the table editing icons to appear. In the screenshot below, the table-editing icons

of the table inside the first row have been switched on. This is done by clicking the table icon of that table. To switch off the table-editing icons, click the table icon again. Callouts in the screenshot below indicate the functions of the table-editing icons.

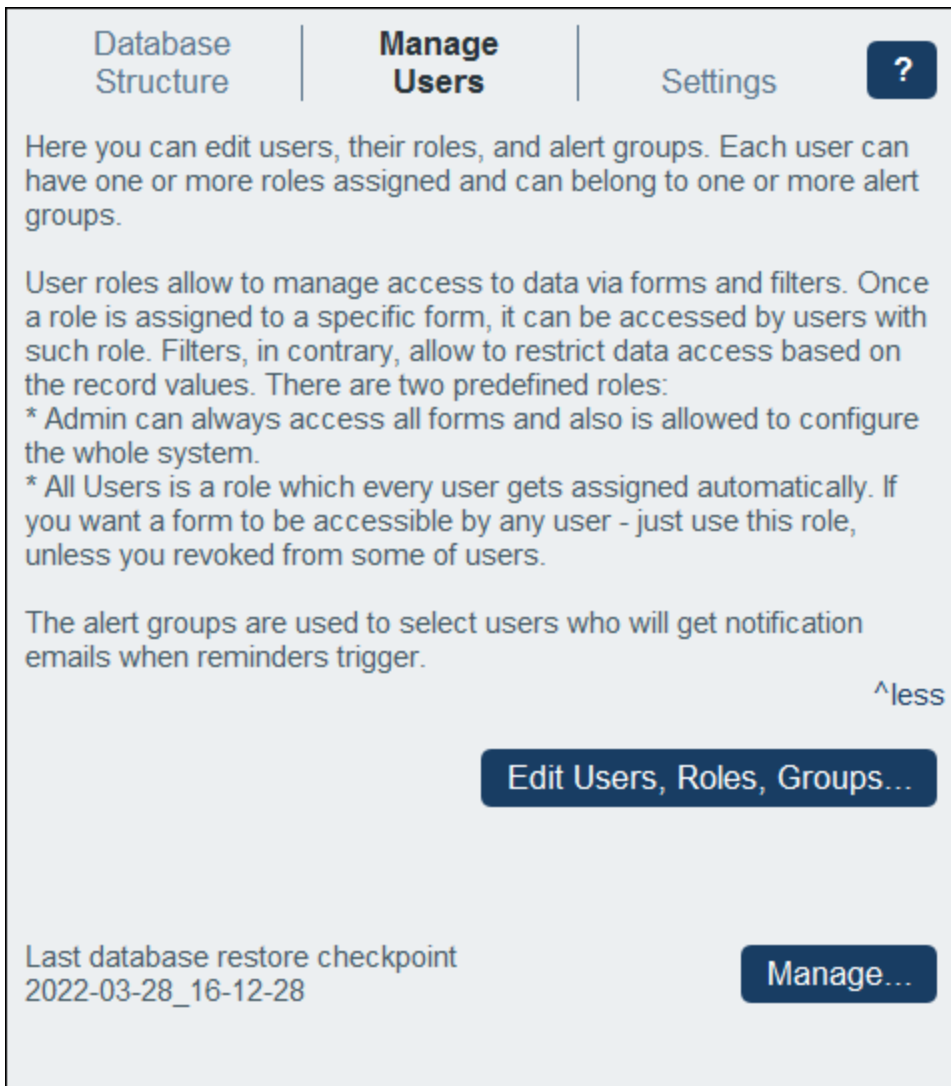


2. Structure the table as you want. You can insert and append columns and rows, as well as delete individual columns and rows. You can also insert sub-tables inside a cell by clicking the cell's *Edit content* icon, then going to the Table tab and defining the table to insert.
3. Set styles for each table as you want. Note that images can also be added to cells.
4. When you have finished, click **Save**.

3.3 Manage Users

The **Manage Users** tab of the Configuration Page (*screenshot below*) is the entry point for defining users, roles, and User Groups.

To access these settings, click **Edit Users, Roles, Groups** near the bottom of the **Manage Users** page.



Database Structure | **Manage Users** | Settings ?

Here you can edit users, their roles, and alert groups. Each user can have one or more roles assigned and can belong to one or more alert groups.

User roles allow to manage access to data via forms and filters. Once a role is assigned to a specific form, it can be accessed by users with such role. Filters, in contrary, allow to restrict data access based on the record values. There are two predefined roles:

- * Admin can always access all forms and also is allowed to configure the whole system.
- * All Users is a role which every user gets assigned automatically. If you want a form to be accessible by any user - just use this role, unless you revoked from some of users.

The alert groups are used to select users who will get notification emails when reminders trigger.

^less

[Edit Users, Roles, Groups...](#)

Last database restore checkpoint
2022-03-28_16-12-28 [Manage...](#)

This section is organized into the following topics:

- [Users](#)¹⁶⁶, which describes creation of users and how to give them roles
- [Roles](#)¹⁶⁹, which describes how roles are created and assigned
- [User Groups](#)¹⁷⁴, which describes how to specify members of User Groups (for [reminder mails](#)¹⁸⁸)

3.3.1 Users

A user of the system is defined with the following properties:

- *Login*: A login name, which is used for login and to identify a user within the system. The login name is case-insensitive.
- *Name*: The user name, which will appear in the system; for example, in lists that show the access rights of a [form](#)⁶¹.
- *Email*: The email address at which a user may be contacted and receive information; for example, for [reminder emails](#)¹⁸⁸ about action to be taken.
- *Password*: A password is required for a user to log in to the system. The password is case-sensitive. A password is assigned to a user by a system administrator when they create the user. The user may change the password on first login. An administrator can change a user's password at any later time (and can let the user again change the password on first logging in with the changed password).
- *Disable user*: A switch to deactivate/activate the user. Deactivated users will be shown in the list of *Deactivated Users* (see *second screenshot of this topic*). To activate a user again, deselect this option.

Edit user

Login

Name

Email

Enter new password

User has to change password on first login

Disable user from future use of the "RecordsManager" system

Roles: [Access overview](#)

Admin

All Users

Executive

Legal

Sales

A user can be [given one or more roles](#)¹⁶⁹ and [added to a user group](#)¹⁷⁴. You can edit a user's properties at any time.

User roles

The roles that are available in RecordsManager fall into three categories:

- *Admin:* Users with this role can: (i) modify the RecordsManager system's users and roles; (ii) configure the RecordsManager database and its components; (iii) modify settings; (iv) configure reminder mails; (v) enter and edit data in the system's database. In short, this role provides a user with all available RecordsManager functionality.
- *All Users:* Users with this role can only enter and edit data in the RecordsManager database. They do not have access to admin tasks. This role is given to all users by default.
- *Custom Roles:* RecordsManager administrators can define custom roles that can be assigned to users. These roles provide additional access or can restrict access to different data tables and different functions within data tables. A user can be associated with one or more roles, and would then be authorized to carry out the functions corresponding to those roles.

Log in as an admin via a server variable

You can skip the RecordsManager login step and instead log in directly as the current MobileTogether Server user. To do this, you must add/modify the [MobileTogether Server configuration file](#) named `mobiletogetherserver.cfg` to include the following setting:

```
[ServerVariables]
records_manager_server_authentication = 1
```

In this case, on starting RecordsManager, you will be logged in automatically as the current MobileTogether Server user. If this user name has been added as a RecordsManager user, then this user will be logged in to RecordsManager straightaway.

How to create users and edit their properties is described below. [Roles](#)¹⁶⁹ are described in the [next topic](#)¹⁶⁹.

The Users tab

The *Users* tab (accessed via the [Manage Users tab of the Configuration Page](#)¹⁶⁵) shows a list of active users and deactivated users (*screenshot below*). Note that users cannot be deleted; they can only be deactivated.

Users
Roles
User Groups

Important: a user, once added, cannot be deleted, but can be disabled from future logins

Active users:

morpheus	Morpheus morpheus@nanonull.com Admin, Executive, All Users
neo	Neo neo@nanonull.com Legal, All Users
root	System Administrator Admin, All Users
trinity	Trinity trinity@nanonull.com Sales, All Users

Deactivated users:

To create a new user, click **New User**. To view or edit user information (of active users or deactivated users), click that user's name.

After creating a new user or editing an existing user, click **Save All** to save the modifications (or click **Cancel** to discard the modifications and return to the [Configuration Page](#)¹⁶⁵).

Creating, editing user properties is enabled only for on-site installations, not for cloud users

If you are configuring RecordsManager on the Altova Cloud Portal, then you must create users for the Altova Cloud Portal there. In the Altova Cloud Portal, you can define their properties as well as give them access to your RecordsManager app in the cloud.

Although you are not allowed to edit cloud user properties In the *Edit User* form, you can modify their roles.

Create a new user

New users can be created only for RecordsManager installations on your own network.

In the *Users* tab (for on-site installations), click **New User**. In the *Edit User* form that appears, enter the user's properties (login, name, email, and password), and give it one or more [roles](#)¹⁶⁹.

Note the following points:

- The property fields are mandatory, and their names stay red till the field has a valid entry.
- After you have defined a new user, you can send the user their login details, including the password for logging in. If you want the user to change their password on first login, check this option in the form.
- You can specify what roles the user has by checking the relevant roles from the list of available roles. For information about creating and managing roles in the [Roles](#)¹⁶⁹ tab, see the [next topic](#)¹⁶⁹.
- Click **Access Overview** to see a list of all the forms and records to which the user has access and the type of access that is allowed in each case. The access is determined automatically according to the [roles](#)¹⁶⁹ assigned to the user.
- After you have entered user properties and assigned roles for the user, click **OK** to finish. This takes you back to the *Users* tab. Go to the bottom of the tab, and click **Save All** to save the user information to the database.

Edit user information, and deactivate/activate users

To edit the properties of a user (including deactivating/activating that user), click the user name in the *Users* tab (see [The Users tab](#)¹⁶⁷ above). This brings up the *Edit User* form. Make the changes you want. To deactivate/activate the user, check/uncheck the *Disable user* option. Note that you can change a user's password at any time (and, if wanted, let the user change the password on first login).

When you have completed your changes, click **OK**. On returning to the *Users* tab, click **Save All** to save the changes to the database.

Note: For RecordsManager apps on the cloud, user properties must be defined and modified in the Altova Cloud Portal.

3.3.2 Roles

A role defines a set of access and editing rights that can be assigned to a user. Typically, a role will have the access rights associated with a particular function. For example, a finance role would be granted access to all finance-related forms and data. A user who is given such a finance role would have all the access rights granted to the role. A user can be assigned any number of roles, and would have the access rights of all the assigned roles.

Working with the roles mechanism would involve the following:

- Create the roles you want
- Assign users to each role. This can be done: (i) via each role's *Users* tab (see *below*), or (ii) via a user's [Edit User](#)¹⁶⁶ tab.
- Assign access rights to each role for forms and data. This can be done (i) via each role's *Forms* and *Data Access* tabs (see *below*), or (ii) via the respective *form configurations*.

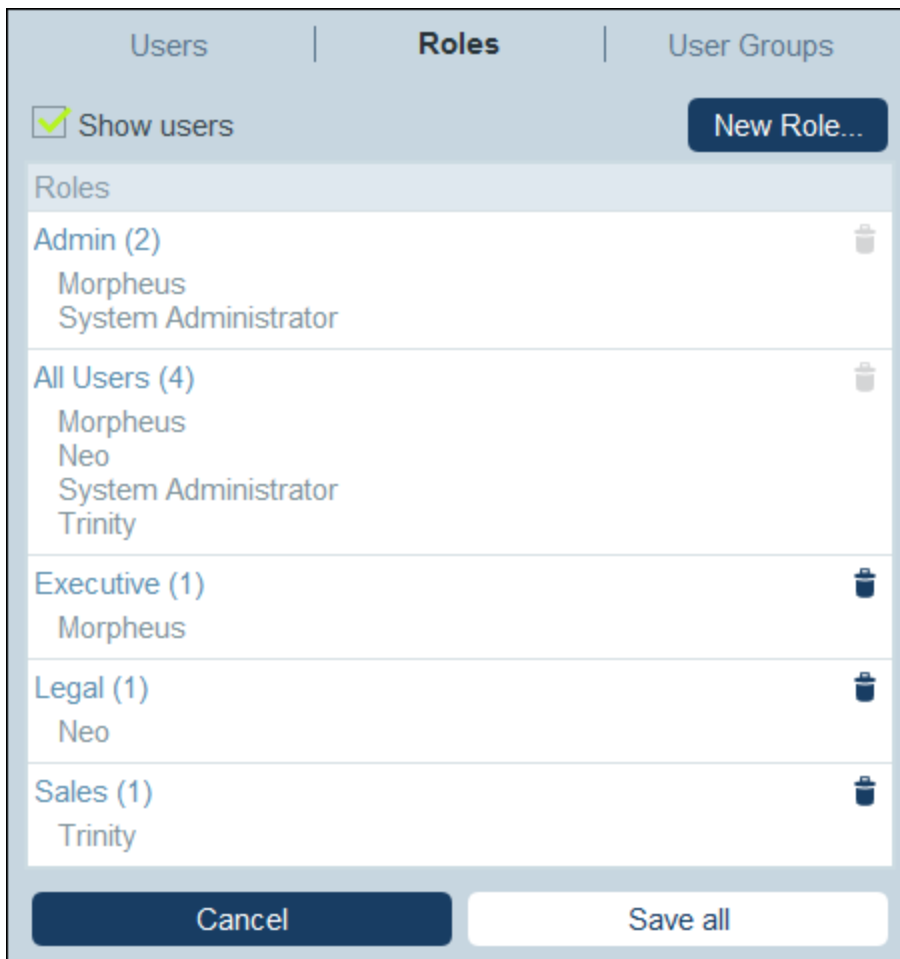
Two roles are predefined:

Admin	Admin has access to the entire system. It can both configure the system as well as enter data. This role cannot be deleted.
All Users	All Users is assigned to all users automatically. You can edit the role's access rights. A user would receive additional rights if the user were given an additional role and this role had more rights than the All Users role. This role cannot be deleted.

This topic describes how to create and edit a role, how to assign roles to users, and how to define the access rights of a role.

The Roles tab

The *Roles* tab (accessed via the [Manage Users tab of the Configuration Page](#)¹⁶⁵) shows a list of the current roles (*screenshot below*).

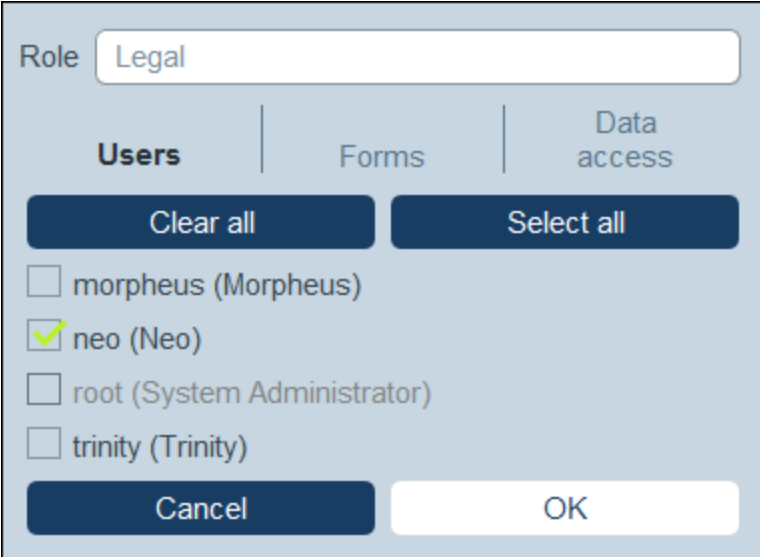


To create a new role, click **New Role**. To view or edit an existing role, click that role. To delete a role, click its **Bin** icon. Note that the predefined *Admin* and *All Users* roles cannot be deleted (*see screenshot*).

After creating a new role or editing an existing role, click **Save All** to save the modifications (or **Cancel** to discard the modifications and return to the [Configuration Page](#)¹⁶⁵).

Create and edit a role, and assign a role to users

In the *Roles* tab (screenshot above), click **New Role**. In the form that appears (screenshot below), enter a name for the new role, assign the role to any of the current users (see screenshot), [define the role's access rights](#) ¹⁷¹, and then click **OK** to finish. [Access rights](#) ¹⁷¹ are defined in the [Forms tab and Data Access tab](#) ¹⁷¹.



The screenshot shows a dialog box for configuring a role. At the top, there is a text input field labeled 'Role' containing the text 'Legal'. Below this, there are three tabs: 'Users', 'Forms', and 'Data access'. The 'Users' tab is currently selected. Under the 'Users' tab, there are two buttons: 'Clear all' and 'Select all'. Below these buttons is a list of users with checkboxes next to their names: 'morpheus (Morpheus)', 'neo (Neo)', 'root (System Administrator)', and 'trinity (Trinity)'. The checkbox for 'neo (Neo)' is checked. At the bottom of the dialog, there are two buttons: 'Cancel' and 'OK'.

Note the following points:

- The same form is displayed if you click an existing role in the *Roles* tab. This enables you to edit the role (its name, users, forms, and data access) at any later time.
- To assign a role to any of the current users, check the respective user/s. You can use the **Clear All** and **Select All** buttons for faster selection of users. Note that you can also assign roles to individual users via [each user's properties](#) ¹⁶⁹.
- After you have edited a role's properties, click **OK** to finish. This takes you back to the *Roles* tab. Go to the bottom of the tab, and click **Save All** to save the user information to the database.

Define the access rights of a role

The access rights to forms and data of a role are defined in the role's *Forms* tab (screenshot below left) and *Data Access* tab (screenshot below right).

Role

Users | **Forms** | Data access

Contracts

List Forms

- Contracts alphabetically Allow
- Contracts by Category Allow
- Contracts by Company Allow
- Contracts by Status Allow
- Contracts by Status & Category Allow
- Contracts by Status & Company Allow
- New contracts with effective dates < 1 months ago Allow

Entry Forms

- Legal Entry Form Full Read-only
- My contract form Full Read-only
- Paralegal Entry Form Full Read-only
- Step by step contract entry Full Read-only

Report Forms

- By category Allow
- Contract dollar amount Allow

Export Forms

- Standard export form Allow
- Whole DB Allow

Company Groups

List Forms

Role

Users | Forms | **Data access**

Contracts

Company Groups

please define filters to restrict view or edit

Companies

please define filters to restrict view or edit

Departments

please define filters to restrict view or edit

Persons

please define filters to restrict view or edit

In each of these tabs, forms and data tables, respectively are ordered by the data tables of the app. In the case of forms, you can select the items to access. In the case of data access to data tables, data access for the role is granted via filters, so you must previously have [defined filters on the data tables](#)⁵⁰.

Note that a role's access to a form can also be specified in the [properties of individual forms](#)⁶¹; changes that are made there and saved in the form will be reflected in the *Forms* tab (screenshot below left).

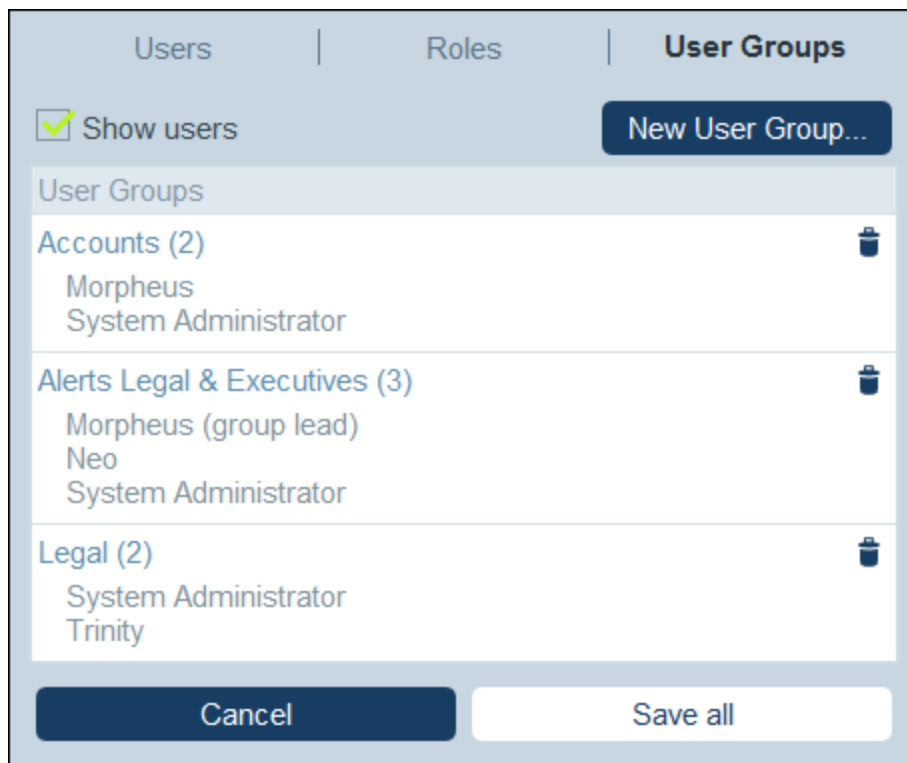
3.3.3 User Groups

A user group defines a group of users. Any number of User Groups can be defined and groups can be organized into hierarchical relationships. Reminder emails concerning a particular contract can then be sent to all members of one or more User Groups.

This topic describes how to create User Groups. For information about how to send reminder email notifications, see the section [Reminder Mails](#)¹⁸⁸.

The User Groups tab

The *User Groups* tab (accessed via the [Manage Users tab of the Configuration Page](#)¹⁶⁵) shows a list of the current User Groups (*screenshot below*).



To create a new User Group, click **New User Group**. To view or edit an existing User Group (*see screenshot below*), click that User Group. To delete a user group, click its **Bin** icon. After creating a new User Group or editing an existing User Group, click **Save All** to save the modifications (or click **Cancel** to discard the modifications and return to the [Configuration Page](#)¹⁶⁵).

When you create a new user group or edit an existing one (*screenshot below*), you can do the following:

- In the *User* tab, specify a Group Lead. In email forms, Group Leads can be selected to receive the email.

- In the *User* tab, optionally specify in the *Parent Group* combo box that the user group is a sub-group of another group. Emails to a user group will be sent to descendant groups as well. Note that when you delete a user group, its descendant groups will also be deleted.
- In the *User* tab, hide users assigned to other groups.
- In the *Roles* tab, select the roles that you want to assign to the members of this user group and those of this group's descendant user groups.

Parent Group

User Group

2 users | **2 role(s)**

Hide users assigned to other groups

Morpheus (morpheus) Group Lead

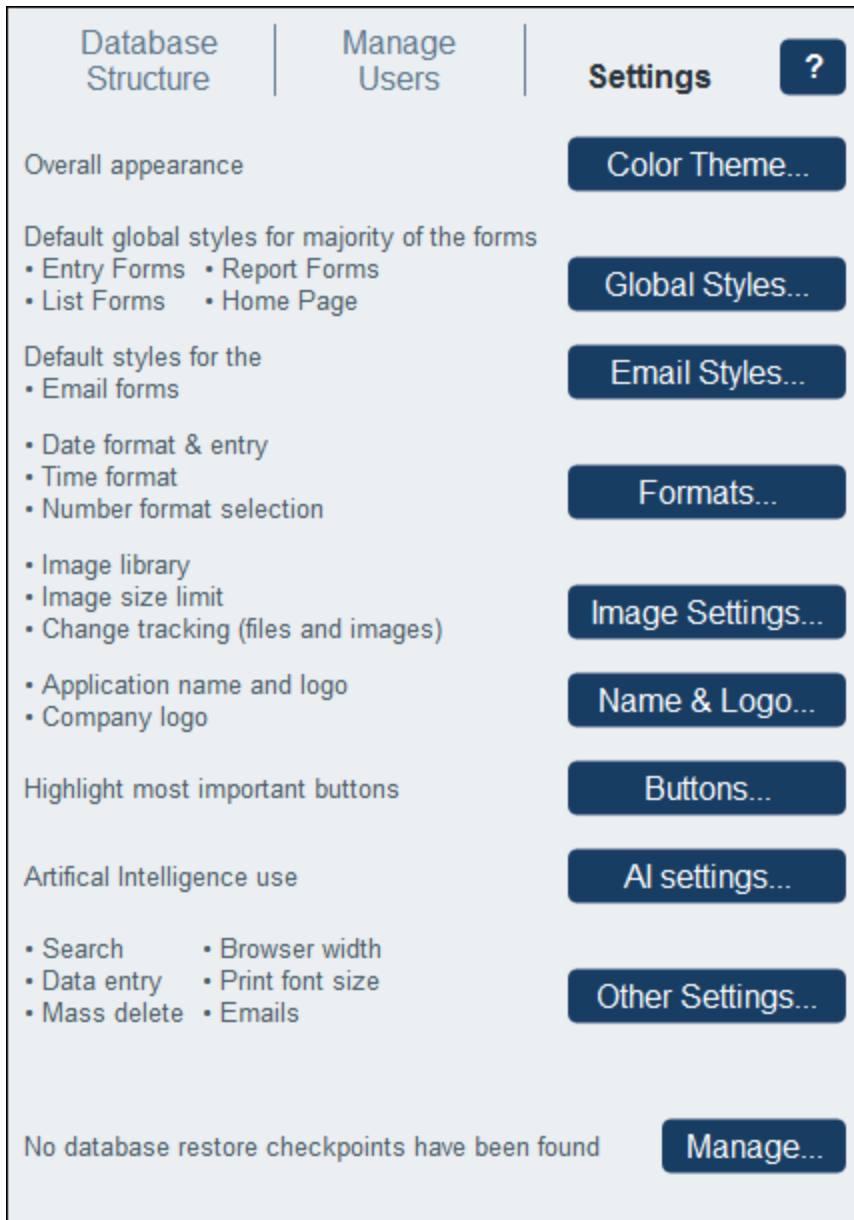
Neo (neo)

System Administrator (root) Group Lead

Trinity (trinity)

3.4 Settings

The **Settings** tab of the Configuration Page (*screenshot below*) is the entry point for defining various system settings. Click the relevant button to access the respective settings.



The available settings are organized into the following groups:

- [Color Theme](#)¹⁷⁷
- [Global Styles](#)¹⁸¹
- [Formats](#)¹⁸⁴
- [Image Settings](#)¹⁸⁴
- [Name and Logo](#)¹⁸⁵

- [Buttons](#)¹⁸⁶
- [AI Settings](#)¹⁸⁶
- [Other Settings](#)¹⁸⁶

3.4.1 Color Theme

In the [Settings](#)¹⁷⁶ tab of the [Configuration Page](#)²⁴ click **Color Theme**. In the form that appears (see *screenshots in the Theme Samples section below*), select the theme you want to set as the **default color theme** of RecordsManager. A preview of the selected theme will be shown in the *Preview* pane, thus enabling you to browse for a theme that you like. Individual users can override the default theme with [their own selection](#)²¹³ at any time.

Theme samples

The screenshots below show the available color themes.

Camouflage

Select overall appearance of the whole app

Color theme

Preview

Star

Planet	Distance million km
Mercury	58
Venus	108
Earth	149

Clouds

Select overall appearance of the whole app

Color theme ◀ Clouds >

Preview

Star

Sun

Planet	Distance million km
Mercury	58
Venus	108
Earth	149

Cancel Save Settings

Desert

Select overall appearance of the whole app

Color theme ◀ Desert >

Preview

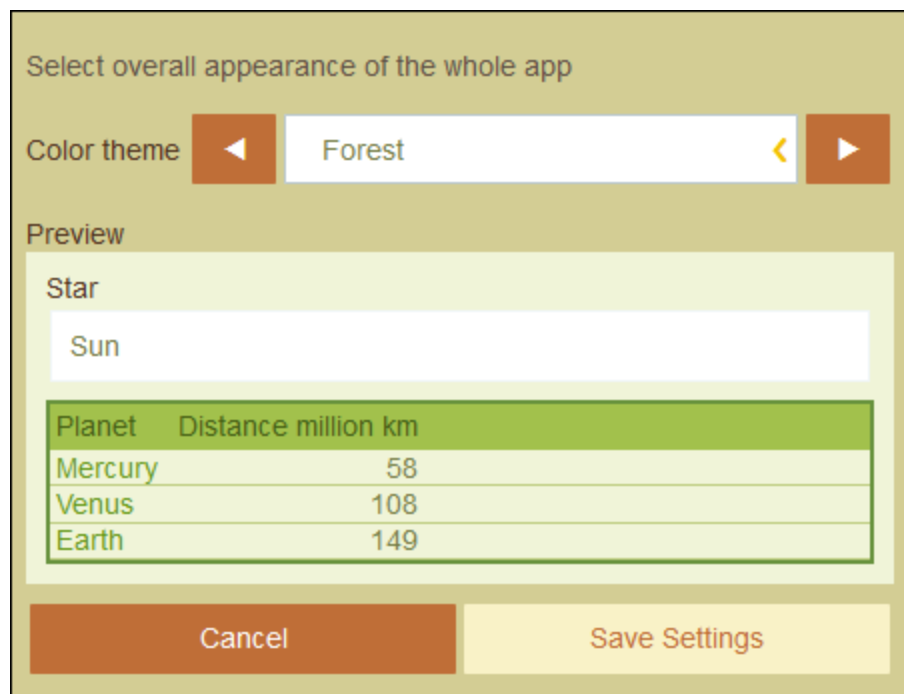
Star

Sun

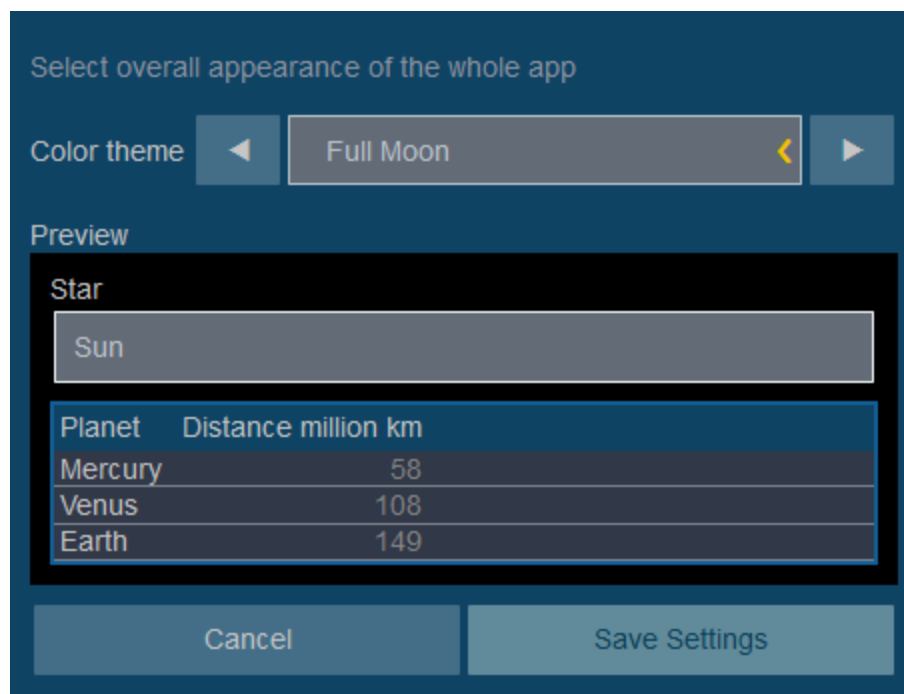
Planet	Distance million km
Mercury	58
Venus	108
Earth	149

Cancel Save Settings

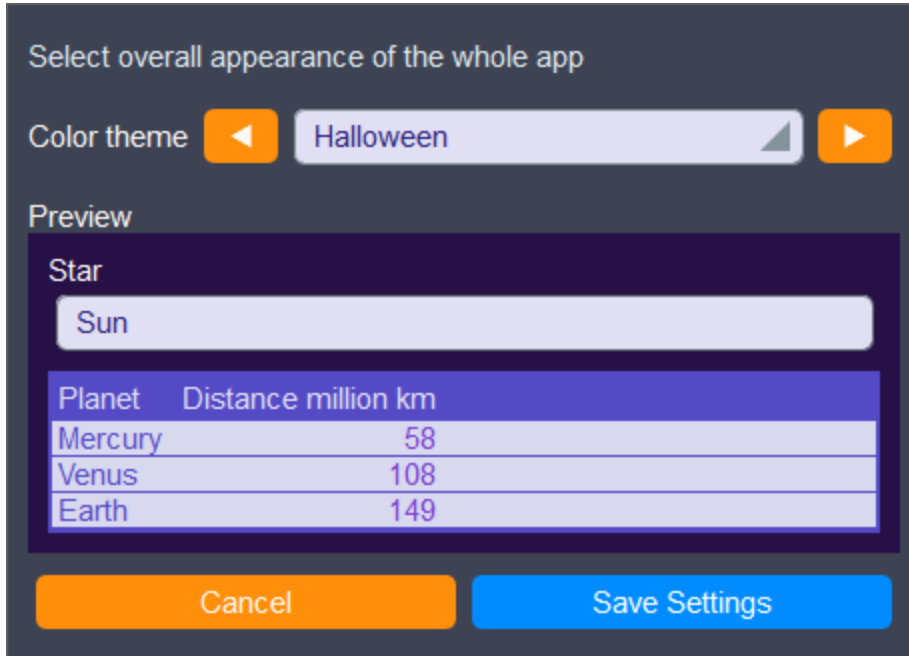
Forest



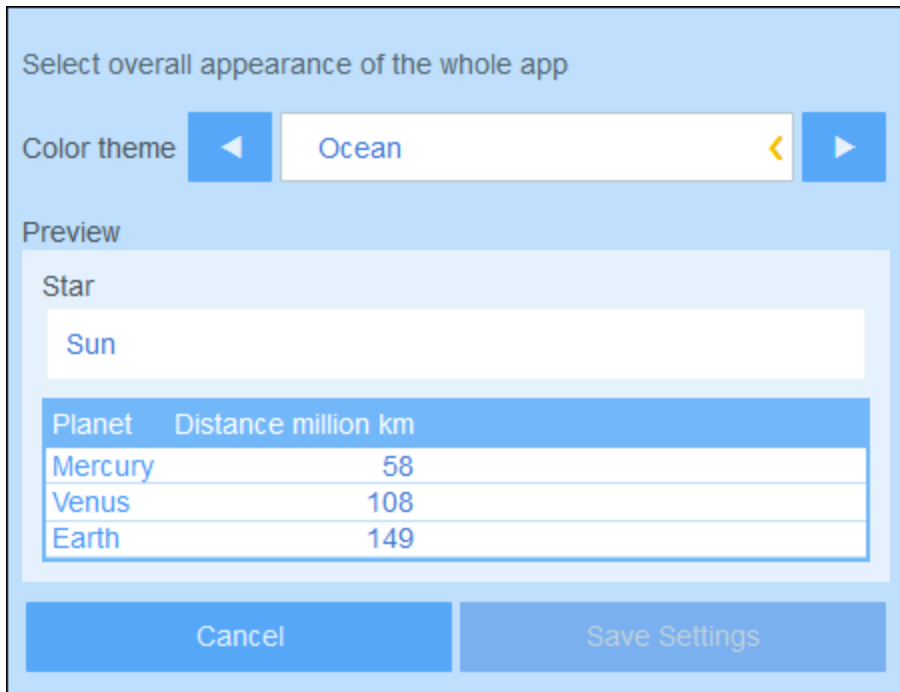
Full Moon



Halloween



Ocean



Polar Night

Select overall appearance of the whole app

Color theme ◀ Polar Night >

Preview

Star

Sun

Planet	Distance million km
Mercury	58
Venus	108
Earth	149

Cancel Save Settings

3.4.2 Global Styles

Global Styles (*screenshot below*) provide a base set of styles for data entry forms. This set of styles can be modified locally on [individual forms](#)⁶¹, either for the whole form or for individual tables within the form.

Edit here styles, which apply to all List, Entry, Report forms, and the Home Page automatically. You can overwrite these styles in specific forms or their parts.

[Reset to default](#)

Labels

size 71%

bold place Above fields (left)

italic text As-is

Values

size 71%

bold align default

italic

Preview **Entry Forms** | List and Report Forms

Label

Flatten entry forms on narrow devices

Limit amount of records shown by each home page alert form

Max rows

The following global styles can be set for [Entry Forms](#)⁷², [List Forms](#)⁶⁴ and [Report Forms](#)¹³⁰. The styles for labels and values apply to all three types of forms.

- *Label*: Properties apply to the text formatting and position of label text within a table cell of the form. After editing a style, you can check the effect in the preview at the bottom of the form.
- *Values*: Properties apply to the text values of fields within a table cell of the form. Changes are reflected in the preview at the bottom of the form.

The preview changes as you edit. It shows the styles of the currently selected tab (entry form or list form).

The *Flatten Entry Forms* option, if selected, will simplify multi-column entry forms on narrow devices to display them as a single column.

You can limit the amount of records that are displayed in [Home Page Alert Forms](#)¹⁴⁷ by selecting the corresponding option and then entering the maximum limit.

To go back to the default settings, click **Reset to Default**.

Click **Save Settings** to finalize your changes.

3.4.3 Email Styles

Email Styles (*screenshot below*) provide the default styles for [Email Forms](#)¹⁴⁴. This set of styles can be modified locally on [individual forms](#)¹⁴⁴, either for the whole form or for individual tables within the form.

Edit here styles, which apply to all Email forms automatically. You can overwrite these styles in specific forms or their parts.

Reset to default

Labels

size 100%

bold place

italic text

Values

size 84%

bold

italic

Preview

Label

Cancel **Save Settings**

Global email styles enable you to set default styles for labels and values of all [Email Forms](#)¹⁴⁴.

- *Label*: Properties apply to the text formatting and position of label text within a table cell of the form. After editing a style, you can check the effect in the preview at the bottom of the form.
- *Values*: Properties apply to the text values of fields within a table cell of the form. Changes are reflected in the preview at the bottom of the form.

The preview changes as you edit. You can go back to the default settings by clicking **Reset to Default**.

Click **Save Settings** to finalize your changes.

3.4.4 Formats

Formats Settings (*screenshot below*) enable you to set the default or available formats of specific field types to use in [forms](#)⁶¹.

The screenshot shows a settings dialog with three tabs: "Date", "Time", and "Number". The "Date" tab is active. The content includes a description of global date field formats, a preview of the format "Dec 31, 2022" with an edit icon, and a description of default date field buttons. The buttons section shows "Today, Clear" with an edit icon. At the bottom, there are "Cancel" and "Save Settings" buttons.

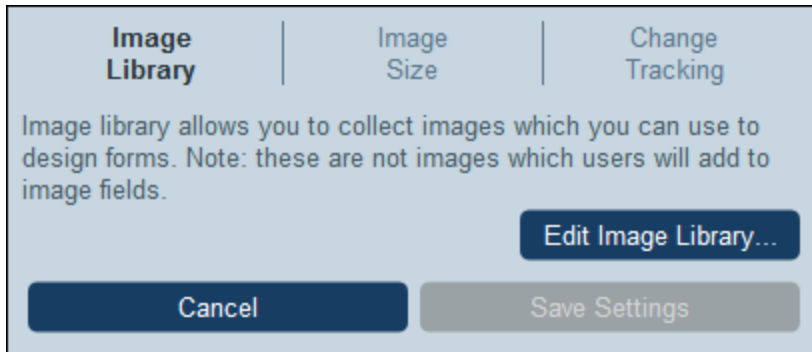
Formats can be set for:

- *Date*: Set the default date format for all forms. You can specify exceptions on individual forms. You can also specify what editing buttons to include for date fields; this global default selection can be overridden on individual date fields.
- *Time*: Set the default format for time fields. This format can be overridden in individual forms.
- *Number*: Select from among various predefined formats for number fields. You can also set a format when [creating a number field](#)⁴³.

Click **Save Settings** when done.

3.4.5 Image Settings

Image Settings (*screenshot below*) enable you to organize your images and to set the properties of images that you use in [forms](#)⁶¹.



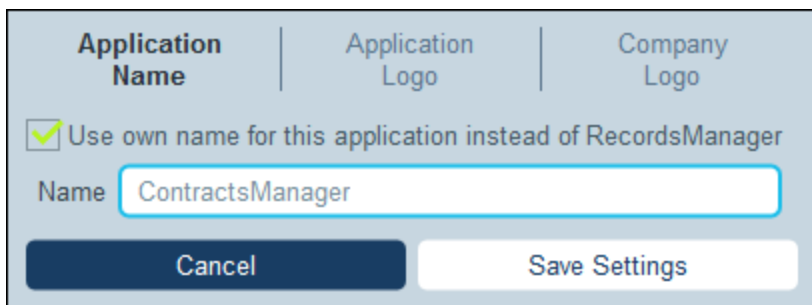
The available image settings are:

- *Image Library*: Click **Edit Image Library** to go to the library of images that are used for designing forms. Here you can add new images to the library and edit design-related properties of the image, such as image size and alignment. The properties you set for an image will apply to all usages of that image. Each image is given a name, by which it will be referenced in the design; so you should use good descriptive names, for example: *Company Logo*.
- *Image Size*: Sets the maximum size of images when these are imported into the library. The size limit applies to new imports only.
- *Change Tracking*: This setting applies not only to images but to files as well. If the tracking of changes is enabled, then the effect is as follows. For images, those images used in the past will be tracked and will be available for use. For files, not only will past files be available, but previous states of edited files will also be available.

Click **Save Settings** when done.

3.4.6 Name and Logo

Name and Logo Settings (*screenshot below*) specify the application name and logo to use, as well as the company logo.



Specify the following settings:

- *Application Name*: The default application name is *RecordsManager*. If you want to give your app another name, then enter it here.

- *Application Logo*: The application logo appears on the Login Page. The image you want to use as the application logo [must have been added to the Image Library](#)¹⁸⁴, from where it will now be available for selection.
- *Company Logo*: The company logo will appear on all pages of your app. The image you want to use as your company logo [must have been added to the Image Library](#)¹⁸⁴, from where it will now be available for selection.

Click **Save Settings** when done.

3.4.7 Buttons

Button settings enable you to specify which of the buttons on a page that the user sees will be highlighted. These buttons are those that appear on the [Home Page](#)²⁰⁹, [Data Table Page](#)²¹¹, and [Record Page](#)²¹⁹.

Click **Save Settings** when done.

3.4.8 AI Settings

You can use the AI resources of OpenAI to help you refine the structure of your RecordsManager database as described in the section [Artificial Intelligence Assistance](#)²⁰².

However, in order to access OpenAI, you will need to have registered with OpenAI and obtained an OpenAI API key. How to do this is described in the topic [Artificial Intelligence Assistance](#)²⁰². After you have obtained a key, you can enter it in this setting AI Settings | OpenAI key. Doing so will enable you to use RecordsManager's AI help without having to enter your key each time you access it.

After entering the OpenAI key, click **Save Settings**.

3.4.9 Other Settings

The Other Settings tab (*screenshot below*) provides access to a number of miscellaneous settings, which are described below.

Search | Data entry | Mass delete | Browser width | Printing | Emails

Two kinds of search are supported

In Memory - search is performed immediately on typing in the search field. The search itself is very quick but all fields have to be always loaded to be able to search in any of them.

In Database - every search requires database lookup. The search itself is slower, but in most cases less data needs to be transferred from server to client - only the fields used in display forms. Also, more fields can be used for search.

In Database
 In Memory

Cancel Save Settings

To change one of these settings, click its tab (see screenshot above).

- **Search:** Select whether searches are performed on the fields currently in *memory* (of the client device) or on all fields in the *database*. Memory searches are faster but are limited to the fields currently loaded in memory. Database searches are more extensive but slower (the slowness is because the look-up is done on the database; the search itself is limited to the fields being used currently in forms).
- **Data Entry:** If a [filter](#)⁵⁰ restricts a user's access to data the user has entered, then this setting determines whether to prevent the saving of this data or to allow saving after warning the user.
- **Mass Delete:** An option to display or hide a mass-delete button on the [Data Table Page](#)²¹¹. The button deletes all currently displayed records. Note, however, that this button will not be displayed in [Offline Mode](#)²⁵¹.
- **Browser Width:** Sets the maximum width of forms when these are shown in browsers. This serves to stop the width expanding to the entire width of very wide browser windows.
- **Printing:** Enables you to set the size of text in the printed reports of the solution. Screen text size is not affected.
- **Emails:** Specifies (i) the URL of the RecordsManager app as a link in reminder emails, and (ii) the email address that will appear in the email's *Sender* field.

Click **Save Settings** for your changes to take effect. The button is enabled after any of the settings above is edited. A single save applies to edits across all settings.

3.5 Reminder Emails

Reminder emails are an important feature of RecordsManager. They can be sent automatically to the concerned people when certain database-related events occur, such as an upcoming renewal of a subscription or the cancellation of a contract.

Mechanism

The key points of the mechanism are as follows:

- In the data table, for the records of which you want to send reminder emails, set up a field of type [Reminder](#)⁴³. The field has a *Categories* property, for which you can define custom categories.
- Set up an email form for the data table and specify that it be used as the form for reminder emails of the data table.
- Finally, each record has its [reminder settings](#)¹⁹⁰, which are defined in a *Reminder Settings* form:
 - (i) The category of the reminder. Having different categories enables you to send different reminders for different events related to the record.
 - (ii) The date when the reminder is triggered. The date can be fixed or calculated relative to date fields of the record.
 - (iii) The frequency of reminder emails. A reminder email is sent when a [due reminder](#)¹⁹⁰ is triggered. However, you can optionally specify that reminder emails are sent every day till the reminder is switched off by a user.
 - (iv) The user groups to which reminder emails should be sent.

Setup

The steps to set up reminder emails are listed below and described in detail in the topics of this section.

1. Set up the [User Groups](#)¹⁷⁴ that will be the recipients of reminder mails.
2. In the data tables where reminders are required, [set up one or more Reminder fields](#)⁴⁴. How to define a Reminder field is described in the next topic, [Reminder Fields](#)¹⁸⁸.
3. If you, as an administrator, want to automatically set a reminder for every new record created in that data table, then define reminder settings for each record. How to do this is described in the topic [Reminder Settings](#)¹⁹⁰.
4. Make sure that an [email form](#)¹⁴⁴ has been specified to be used for reminder emails.
5. Make sure that the [app's URL and the sender's email address](#)¹⁴⁴ has been set. The URL will enable recipients of the reminder email to directly go to the app if a link to the app is included in the reminder email.
6. During data entry, a user can modify reminder settings and manage reminders. See [User Actions](#)¹⁹⁵.

3.5.1 Reminder Fields

In order to send reminders about events related to the records of a data table, that data table must have at least one reminder field. If no reminder field has been created for a data table, then it is not possible to set up reminders for that data table. A reminder field is set up in the [Fields definitions of a data table](#)⁴³.

Note the following points about reminder fields:

- To add a reminder field, [add a new field](#)⁴³ and set its type to *Reminders*. The Reminder field's properties form will look something like in the screenshot below. There are two crucial definitions (framed red in the screenshot below): *Categories* and *Auto-fill*.

The screenshot shows the 'Edit Contract field' form with the following fields and sections:

- Name:** Contract Reminders
- Type:** reminders
- Categories:** "Renewal", "Cancellation", "Verification" (highlighted with a red box)
- Editing:** Not required or read-only
- Hint:** (empty text box)
- Auto-fill:** (highlighted with a red box)
 - Buttons: ? and New Reminder...
 - Row 1: Cancellation, on Dec 31, 2020
 - Row 2: Renewal, 6 weeks before Expiry Date only when Has Expiry Date
- Validate:** no rules defined yet ?
- Buttons:** Cancel and OK

- There must be at least one *Categories* value (see screenshot below). Each category is intended to be associated with one type of event related to the record. For example, in a data table for contract records, a reminder could be for a contract verification, a contract renewal, or a contract cancellation. So we can set up different categories for each of these events and then send reminders for each of these events separately (contract verification, renewal, or cancellation). To add a category, insert or append a new row and enter a name for the category. Alternatively, import categories from a CSV or XML file.

- You, as an administrator, can specify with the *Auto-fill* property (see first screenshot above) that one or more reminders be added automatically to every new record created in that data table. To do this, in the *Auto-fill* property, click **New Reminder** and specify (i) what category of reminder this is and (ii) when it will be triggered. These definitions are specified in the [Reminder settings](#)¹⁹⁰ form (which is described in the [next topic](#)¹⁹⁰).
- Note that the user can, during data entry, [modify or delete any of the automatically added reminders](#)²³¹.
- After you have completed defining the reminder field, click **OK** and then **Save Changes** to save the reminder field to the database.
- Reminder fields can also be used as the content of columns in the [forms of a data table](#)⁶¹, where they will display a record's reminders (together with a summary value that is the count of the record's reminders).

Debugging reminder email errors

If reminder emails are not being correctly sent, check the following:

- Check that [at least one reminder field exists](#)¹⁸⁸ in the data table.
- Check that [a reminder email form has been selected](#)¹⁹⁴ for the data table.
- Check whether [emails have been set to be sent to the intended user group/s](#)¹⁹⁰. If yes, then check (with your system administrator) that users belong to the correct user groups. Note that user groups are selected in directly in the [reminder's settings](#)¹⁹⁰. If there is a problem, contact your system administrator.
- Check that the [reminder settings](#)¹⁹⁰ are correct.
- Check that the reminder is a [due reminder](#)¹⁹²; if the reminder has any other status, no email will be sent

3.5.2 Reminder Settings

Reminder settings can be defined in the following situations:

- During [configuration of a reminder field](#)¹⁸⁸, an administrator can specify via the [Auto-fill](#)¹⁸⁸ property, that a reminder is automatically added to every new record. When an automatic reminder is added, the administrator can specify its settings (see screenshot below).
- When [users enter the data of a record](#)¹⁹⁵, they can add a new reminder for that record or modify an existing reminder. The reminder's settings are specified in its *Reminder Settings* form (screenshot below).

In both cases, the reminder is defined via its settings (see screenshot below). The last setting shown in the screenshot below (highlighted green) appears only in the cases where an administrator is configuring a reminder field. It is not available to users when they are entering records.

Reminder settings

Category

Description

Recurring

Specific Date | Calculate Date

on

before

after

Once time reached, send notification

every day until reminder is processed or snoozed
 only once

to

Always add to new records
 Only when filter applies

Define the reminder with the following settings:

- *Category*: Select the category of the reminder. Reminder categories were defined when the [reminder field was configured](#)¹⁸⁸.
- *Description*: Provide a description to help users to understand how this reminder will apply.
- *Recurring*: Select this option to define the reminder as a recurring reminder. A recurrence is defined in terms of a period that follows a selected date. For example, a reminder can recur monthly after the selected date. *Also see Status of Reminders below.*
- *Reminder start time*: There are two alternatives: (i) Select a specific date; or (ii) Calculate a date relative to one of the record's [date fields](#)⁴⁴ (such as an expiry date). In the screenshot above, for example, the start time has been set to six weeks before the date in the *Expiry Date* field.
- *Notification frequency*: Send reminder email notifications every day till the reminder is processed or snoozed by the user, or send reminder email notifications once only. *Also see Status of Reminders below.*
- *Notification recipients*: Specify the user groups to which notifications about this reminder will be sent. If no group is specified, then no recipient is selected.
- *Add to new records*: This setting is available only when an administrator is configuring a reminder field. You can choose whether to add the current reminder to all new records or only to records to which the selected filter applies. For example, in the case of the screenshot above, the reminder will be added only for those records where an *Expiry Date* field value exists (which is what is defined in the *Has Expiry Date* filter). Note that if this filter [has user groups defined for it](#)⁶⁰, then notifications will be sent to users of these user groups.

Status of reminders

The status of reminders is defined in the following terms (also see screenshot below, which assumes a current date of 16 September 2020):

- *Start date*: The date from which the reminder becomes *active*. If the start date is in the past, then the reminder stays active if: (i) it is not processed, or (ii) it recurs. If the start date is in the future, then the reminder is an active reminder.
- A *processed reminder* is one for which the reminded event has been carried out and because of which the reminder has been *stopped*.
- *Action date*: (i) For one-time reminders, the same as the start date; (ii) For recurring reminders, the next recurring date after a reminder is processed. An action date can lie in the past or in the future.
- *Active reminder*: (i) A one-time reminder that has a start date in the past and which has not been processed; (ii) A recurring reminder that has a start date in the past (and may have been processed); (iii) (i) A reminder (one-time or recurring) that has a start date in the future. (Note: If the action date of an active reminder is in the past and the reminder has not been processed, then the reminder is a due reminder.)
- *Due reminder*: An active reminder with a start date in the past. Due reminders are a subset of active reminders. Once a reminder becomes due, the possibility to snooze the reminder becomes available.
- A *snoozed reminder* applies to due reminders only. Snoozing a reminder cancels the current action date and selects an action date in the future. The snooze period is specified from the current date.
- *Inactive reminder*: A non-recurring reminder which has a start date in the past and which has been processed.

▼ Reminders	
CONTRACT REMINDERS	NEW REMINDER...
<i>Cancellation</i> on Dec 31, 2020	Active: one-time, start date in future
<i>Cancellation</i> on Sep 01, 2020	Due: one-time, start date in past, not yet processed
<i>Renewal</i> recurring weekly starting on Aug 01, 2020	Due: recurring, start date in past, not yet processed
<i>Renewal</i> recurring weekly starting on Sep 26, 2020 (next on Sep 26, 2020)	Active: recurring, start date in future
<i>Verification</i> on Jun 20, 2020 (snooze until Dec 24, 2020)	Active: one-time, start date in past, was due but now snoozed
<i>Verification</i> recurring yearly starting on Jul 10, 2020 (next on Jul 10, 2021)	Active: recurring, start date in past, processed
<i>Verification</i> on Jul 27, 2020	Inactive: one-time, start date in past, processed

The example uses a current date of 16 September 2020.

Color codes indicate reminder status

During data entry, the text color of reminders indicate their status to the user:

- *Blue*: Active reminders that are not due reminders
- *Red*: Due reminders
- *Gray*: Inactive reminders

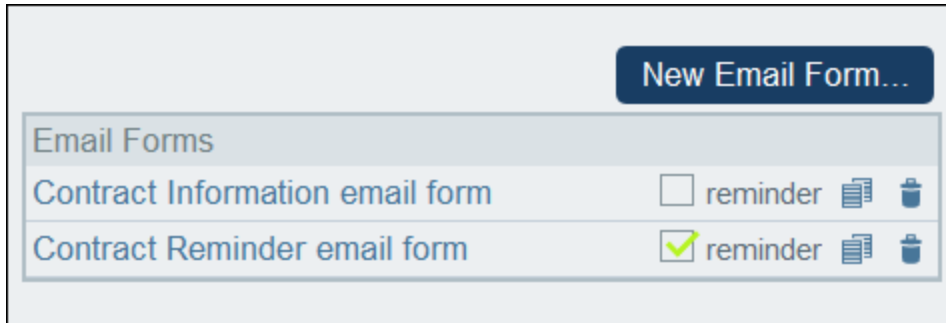
Debugging reminder email errors

If reminder emails are not being correctly sent, check the following:

- Check that [at least one reminder field exists](#)¹⁸⁸ in the data table.
- Check that [a reminder email form has been selected](#)¹⁹⁴ for the data table.
- Check whether [emails have been set to be sent to the intended user group/s](#)¹⁹⁰. If yes, then check (with your system administrator) that users belong to the correct user groups. Note that user groups are selected in directly in the [reminder's settings](#)¹⁹⁰. If there is a problem, contact your system administrator.
- Check that the [reminder settings](#)¹⁹⁰ are correct.
- Check that the reminder is a [due reminder](#)¹⁹²; if the reminder has any other status, no email will be sent

3.5.3 Reminder Email Forms

You must select one of the [Email Forms](#)¹⁴⁴ of the data table to be the data table's Reminder Email form. Do this on the data table's [Edit Forms](#)⁶¹ page by selecting the email form you want (see *screenshot below*).



Note: The option to select an email form as a reminder email form appears only if there is at least one [Reminder field](#)¹⁸⁸ in the data table.

RecordsManager URL and sender's email address

Go to [Settings | Other Settings | Emails](#)¹⁸⁶ to set:

- The URL of your RecordsManager app. This will enable the email recipient to click the URL and go to the app. (Also see [Email Forms](#)¹⁴⁴ for information about how to set hyperlinks in an email.)
- The email address of the sender of the reminder email.

Debugging reminder email errors

If reminder emails are not being correctly sent, check the following:

- Check that [at least one reminder field exists](#)¹⁸⁸ in the data table.
- Check that [a reminder email form has been selected](#)¹⁹⁴ for the data table.
- Check whether [emails have been set to be sent to the intended user group/s](#)¹⁹⁰. If yes, then check (with your system administrator) that users belong to the correct user groups. Note that user groups are selected in directly in the [reminder's settings](#)¹⁹⁰. If there is a problem, contact your system administrator.
- Check that the [reminder settings](#)¹⁹⁰ are correct.
- Check that the reminder is a [due reminder](#)¹⁹²; if the reminder has any other status, no email will be sent

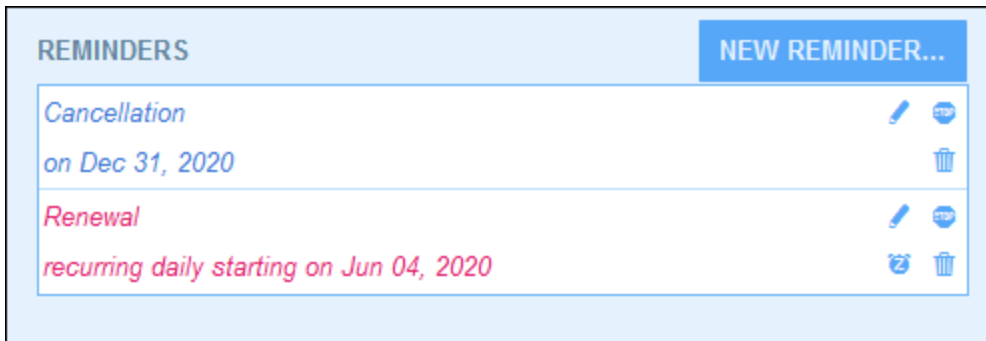
3.5.4 User Actions

Reminders and reminder emails are configured by system administrators. However, users have the final decision about what reminders are sent, when, and to whom.

A user can access a reminder's settings in the following ways:

- By clicking a record to go to that record's data entry form/s. A reminder's settings is best located in one or more of a data table's entry forms.
- By clicking a reminder on the [Home Page](#)²⁰⁹, which would typically take you to an entry from containing the reminder's settings.

The screenshot below shows the reminder settings of a contract record's data entry form.



A user can do the following:

- Add a new reminder or edit an existing reminder. Clicking either of these commands takes the user to the [Reminder Settings](#)¹⁹⁰ form, where the reminder can be configured (see below).
- The user can snooze an existing due reminder. See *Status of Reminders* below.
- The user can stop a reminder (which is equivalent to marking the reminder as processed). See *Status of Reminders* below.
- The user can delete a reminder.

Icons for reminder management

	Edit Reminder
	Snooze Reminder
	Stop Reminder
	Delete Reminder

Reminder settings

The *Reminder Settings* form is shown below.

Reminder settings

Category

Description

Recurring

Specific Date | Calculate Date

on weeks

before

after

Once time reached, send notification

every day until reminder is processed or snoozed

only once

to

Define the reminder with the following settings:

- **Category:** Select the category of the reminder. Reminder categories were defined when the [reminder field was configured](#)¹⁸⁸.
- **Description:** Provide a description to help users to understand how this reminder will apply.
- **Recurring:** Select this option to define the reminder as a recurring reminder. A recurrence is defined in terms of a period that follows a selected date. For example, a reminder can recur monthly after the selected date. *Also see Status of Reminders below.*
- **Reminder start time:** There are two alternatives: (i) Select a specific date; or (ii) Calculate a date relative to one of the record's [date fields](#)⁴⁴ (such as an expiry date). In the screenshot above, for example, the start time has been set to six weeks before the date in the *Expiry Date* field.
- **Notification frequency:** Send reminder email notifications every day till the reminder is processed or snoozed by the user, or send reminder email notifications once only. *Also see Status of Reminders below.*
- **Notification recipients:** Specify the user groups to which notifications about this reminder will be sent. If no group is specified, then no recipient is selected.
- **Add to new records:** This setting is available only when an administrator is configuring a reminder field.

You can choose whether to add the current reminder to all new records or only to records to which the selected filter applies. For example, in the case of the screenshot above, the reminder will be added only for those records where an *Expiry Date* field value exists (which is what is defined in the *Has Expiry Date* filter). Note that if this filter [has user groups defined for it](#)⁶⁰, then notifications will be sent to users of these user groups.

Status of reminders

The status of reminders is defined in the following terms (also see screenshot below, which assumes a current date of 16 September 2020):

- ***Start date***: The date from which the reminder becomes *active*. If the start date is in the past, then the reminder stays active if: (i) it is not processed, or (ii) it recurs. If the start date is in the future, then the reminder is an active reminder.
- A ***processed reminder*** is one for which the reminded event has been carried out and because of which the reminder has been *stopped*.
- ***Action date***: (i) For one-time reminders, the same as the start date; (ii) For recurring reminders, the next recurring date after a reminder is processed. An action date can lie in the past or in the future.
- ***Active reminder***: (i) A one-time reminder that has a start date in the past and which has not been processed; (ii) A recurring reminder that has a start date in the past (and may have been processed); (iii) (i) A reminder (one-time or recurring) that has a start date in the future. (Note: If the action date of an active reminder is in the past and the reminder has not been processed, then the reminder is a due reminder.)
- ***Due reminder***: An active reminder with a start date in the past. Due reminders are a subset of active reminders. Once a reminder becomes due, the possibility to snooze the reminder becomes available.
- A ***snoozed reminder*** applies to due reminders only. Snoozing a reminder cancels the current action date and selects an action date in the future. The snooze period is specified from the current date.
- ***Inactive reminder***: A non-recurring reminder which has a start date in the past and which has been processed.

▼ Reminders	
CONTRACT REMINDERS	NEW REMINDER...
<i>Cancellation</i> <i>on Dec 31, 2020</i>	Active: one-time, start date in future   
<i>Cancellation</i> <i>on Sep 01, 2020</i>	Due: one-time, start date in past, not yet processed    
<i>Renewal</i> <i>recurring weekly starting on Aug 01, 2020</i>	Due: recurring, start date in past, not yet processed    
<i>Renewal</i> <i>recurring weekly starting on Sep 26, 2020</i> <i>(next on Sep 26, 2020)</i>	Active: recurring, start date in future   
<i>Verification</i> <i>on Jun 20, 2020</i> <i>(snooze until Dec 24, 2020)</i>	Active: one-time, start date in past, was due but now snoozed   
<i>Verification</i> <i>recurring yearly starting on Jul 10, 2020</i> <i>(next on Jul 10, 2021)</i>	Active: recurring, start date in past, processed   
<i>Verification</i> <i>on Jul 27, 2020</i>	Inactive: one-time, start date in past, processed   

The example uses a current date of 16 September 2020.

Color codes indicate reminder status

During data entry, the text color of reminders indicate their status to the user:

- *Blue*: Active reminders that are not due reminders
- *Red*: Due reminders
- *Gray*: Inactive reminders

Debugging reminder email errors

If reminder emails are not being correctly sent, check the following:

- Check that [at least one reminder field exists](#) ¹⁸⁸ in the data table.
- Check that [a reminder email form has been selected](#) ¹⁹⁴ for the data table.
- Check whether [emails have been set to be sent to the intended user group/s](#) ¹⁹⁰. If yes, then check (with your system administrator) that users belong to the correct user groups. Note that user groups are selected in directly in the [reminder's settings](#) ¹⁹⁰. If there is a problem, contact your system administrator.
- Check that the [reminder settings](#) ¹⁹⁰ are correct.
- Check that the reminder is a [due reminder](#) ¹⁹²; if the reminder has any other status, no email will be sent

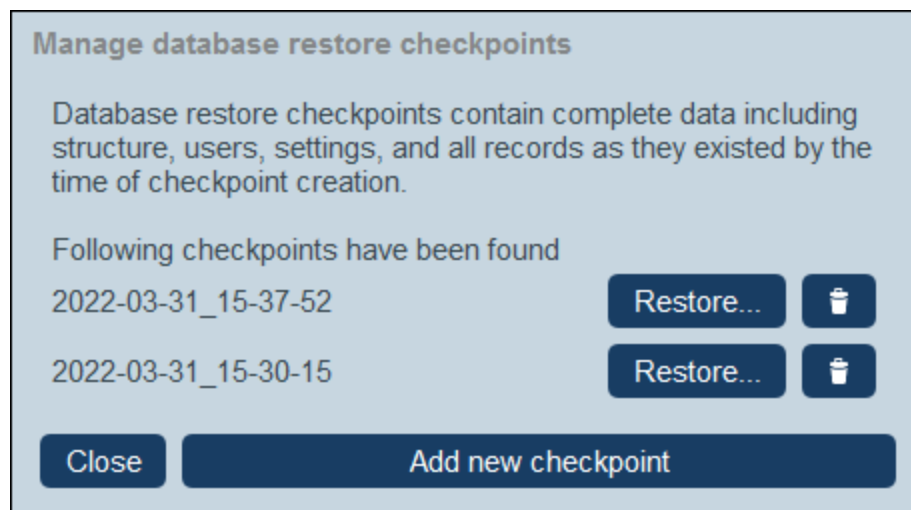
3.6 Database Restore Checkpoints

Database Restore Checkpoints enable you to restore your database to the state it was in at the selected checkpoint. The entire database will be restored: the database structure, the users, the settings, and all records. To use Database Restore Checkpoints, you will first need to create checkpoints at suitable intervals. Subsequently, you can restore your database to any of the checkpoints that have been created. You can delete individual checkpoints at any time.

To access the Database Restore Checkpoints functionality, go to the [Configuration Page](#)²⁴ (screenshot below) and click **Manage** at the bottom of the page starting point for system administration is the **Configuration Page** (screenshot below). The date and time of the last database restore checkpoint is listed to the left of the **Manage** button.

The screenshot displays the 'Database Structure' configuration page. At the top, there are three tabs: 'Database Structure', 'Manage Users', and 'Settings', with a help icon (?) to the right. Below the tabs, a message states: 'This is the current structure of your data. You can edit list of vmore'. The main content area is divided into two sections. The first section, 'Contract Database', includes a search icon, a 'New Repository' button, and a 'New Data Table' button. Below this, a list of items is shown: 'Contract'. The second section, 'Company Database', also includes a search icon, a 'New Data Table' button, and a list of items: 'Company Group', 'Company', '↳ Department', and '↳ Person'. At the bottom of the page, a green-bordered box highlights the 'Last database restore checkpoint' section, which shows the date and time '2022-03-31_15-37-52' and a 'Manage...' button.

On clicking **Manage**, the Manage Database Restore Checkpoints form (*screenshot below*) appears. It lists the currently available checkpoints, each with the date and time the checkpoint was created.



You can now do the following:

- Add a new checkpoint by clicking **Add New Checkpoint**.
- Restore the database to one of the available checkpoints by clicking its **Restore** button.
- Delete a checkpoint by clicking its **Remove** button.

After you have finished creating, restoring to, and/or deleting a checkpoint, click Close to return to the [Configuration Page](#) ²⁴.

3.7 Artificial Intelligence Assistance

RecordsManager uses the API of [OpenAI](#) to enable you to quickly modify your [database structure](#)³¹ and make changes to your [forms](#)⁶¹. This section describes how to use AI assistance in RecordsManager.

Set up your OpenAI API key

The AI assistance of RecordsManager is built on the [OpenAI](#) API. So, to use it, you must have a valid account at [OpenAI](#) and obtain an API key. Do this as follows:

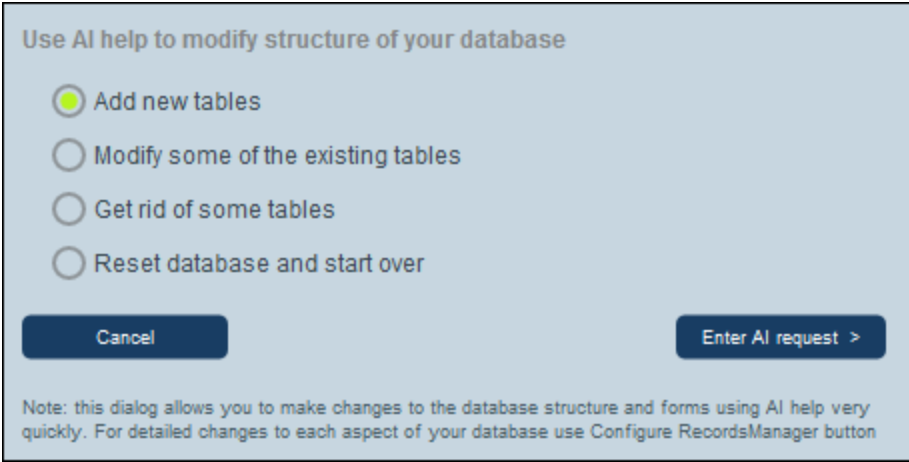
1. Create a account free of cost at the [OpenAI website](#).
2. Log in to your account at the website.
3. Go to the **Personal** menu (at the top right of the web page at the time of this writing) and select **View API Keys**.
4. Select **Create a new secret key**.
5. Copy the generated API key.
6. In RecordsManager, go to the [Settings](#)¹⁷⁶ tab and select [AI Settings](#)¹⁸⁶.
7. Paste the API key that you copied into the *Open AI key* field and select **Save Settings**.

From now onwards you will be able to use the AI help of RecordsManager. If you lose your API key, you can always generate a new one at the [OpenAI website](#) as described above.

Using AI help

After you have set up your OpenAI key, use AI help as follows:

1. Go to the [Start Page](#)⁹ of RecordsManager and select **Refine structure with AI help**. The AI Help form appears (*screenshot below*).



Use AI help to modify structure of your database

Add new tables

Modify some of the existing tables

Get rid of some tables

Reset database and start over

Cancel Enter AI request >

Note: this dialog allows you to make changes to the database structure and forms using AI help very quickly. For detailed changes to each aspect of your database use Configure RecordsManager button

2. Select one of the options from the menu and select **Enter AI request**.
3. In the AI Request form that appears, enter your AI request and click **Send AI request**. To see how to formulate a request, select **Show samples** and cycle through the samples. (If you want to use one of the sample requests, select **Copy** and then **Send AI request**).
4. The AI request will be processed and your database will be modified accordingly.
5. Go back to the [Start Page](#)⁹ of RecordsManager and select **Configure RecordsManager**.
6. Go to the newly created data table and manually make any final adjustments you want.

3.8 XPath Expressions

The XPath language is used to locate nodes in a hierarchical document, and it is used in RecordsManager to locate field values within the hierarchical structure of your RecordsManager database. For a description of this hierarchical database structure, see the topic [How Data Is Stored](#)¹⁶.

For more information about XPath, see the following links:

[XPath 3.1 Recommendation of the W3C](#)

[XPath 3.1 Functions and Operators](#)

[Altova's "A Gentle Introduction to XPath"](#)

[Altova's "XPath 3.1 Training"](#)

XPath expressions in RecordsManager

In addition to standard XPath procedures, RecordsManager uses the additional features listed below.

The \$CurrentUser variable

The `$CurrentUser` variable holds data about the current user, such as the username and email address. To access this data, you would use the variable as given below.

`$CurrentUser/Name` returns the user's name as a string

`$CurrentUser/Email` returns the user's email address as a string

`$CurrentUser/Group` returns the names of the [user groups](#)¹⁷⁴ to which the user belongs*

`$CurrentUser/Role` returns the names of the [roles](#)¹⁶⁹ to which the user belongs*

* Since the user could belong to more than one user group or role, an XPath expression that returns these would return a sequence of items. You would need to adjust your expression to take this into account. For example, if you want to choose an item from such a sequence, you could use a predicate filter. In the following example, the `EditedBy` field of the current data table is of type [User](#)⁴⁴, which is special in that it has the child properties `Group` and `Role`, both of which can have multiple values (not a single value)

```
EditedBy/Role[contains(., 'Admin')]
```

Locating the fields of ancestor or child records

In the XPath expressions of entry forms, you can use locator expressions to select the fields of ancestor records and child records. The first step of the locator expression would be the name of the data table followed by the text `_fields`. The second step of the expression is the name of the field that you want to locate. The expression would have the following form:

```
<DataTableName>_fields/<FieldName>
```

Note: If a field has a space in its name, use the underscore character for the space. For example, for a field named `Expiry Date`, use `Expiry_Date` in XPath expressions.

In the following examples, the `Person` data table has an `Address` field (*first example below*). It also has an `EditedBy` field, which is of type [User](#)⁴⁴ and is therefore special in that it has the child properties `Group` and `Role`, both of which can have multiple values (not a single value); (the `Name` and `Email` properties of a `User` type field, on the other hand, each have a single string value); see the second and third examples below.

```
Person_fields/Address
```

`Person_fields/EditedBy/Name`

`Person_fields/EditedBy/Role[.='Admin']`

4 System Use

When you open Altova RecordsManager, it will have been configured by a system administrator for use in your organization. Typically, the system administrator will be a person in your organization who has set up the app on your network for use among multiple users. If you have questions about how the app has been configured or how it works, contact your system administrator.

The app provides you with the following functionality:

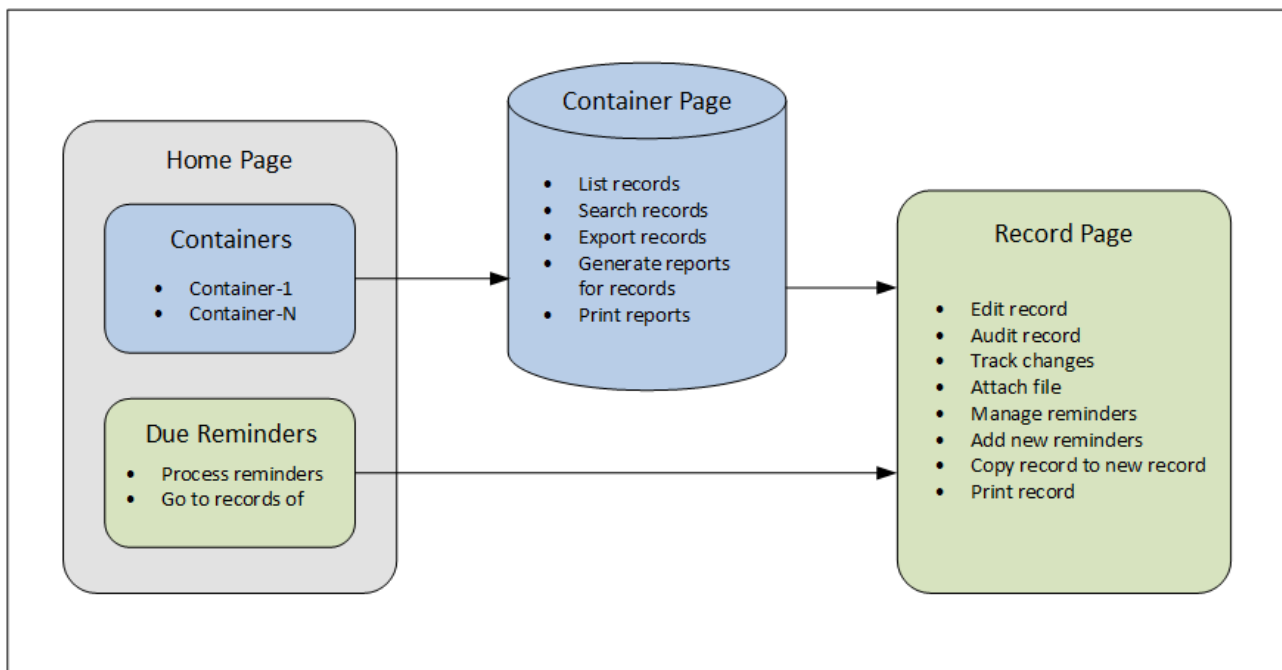
- Enter and edit data about your organization's contracts. You might have the responsibility for maintaining records of all contracts or of only a subset of contracts. Typically, multiple users would be entering and editing data about the contracts. How to enter and edit records is described in the topics [Data Table Page](#)²¹¹ and [Record Page](#)²¹⁹.
- You can [audit changes and track changes](#)²²⁷ made to records.
- Create and edit reminders when significant contract dates come due (for example, a contract renewal). A reminder is used to send notifications to the appropriate persons in your organization. See the topic [Reminders](#)²³¹.
- Export a data table's contents (that is, its records) to XML and/or CSV files. This is described in the topic [Export Records to XML, CSV](#)²⁴⁵.
- Generate charts and reports about a data table's records. For example, in a Contracts data table, you could generate charts and reports showing the cost of contracts by contract categories, and how these have changed over a period of time.
- Print charts, reports, and record listings.

The subsections of this section describe the RecordsManager functionality that is available to you.

4.1 Quick Start: System Use

Before you read this section and get started, we recommend that you read the [General Information](#)⁷ section, especially the section [How Data Is Stored](#)¹⁶, which explains how the RecordsManager database is structured into the data tables in which your data records will be stored. As a user of the RecordsManager app, a large part of your work will involve working with these data tables. You will be adding new records and editing existing records.

The Home Page of the app serves as your navigational base. It provides access to the individual data tables, within each of which you can edit the records of that data table. The due reminders on the Home Page also take you to the record of a particular reminder.



How to use the app

Data entry

- From the **Home Page** select a data table (i) to which you want to add records or (ii) in which you want to edit records
- On a **Data Table Page**, you can view records according to the different listing possibilities available for that data table
- On a Data Table Page, you can search for specific records
- On the data entry form of a record (its **Record Page**), edit the record
- On a Record Page, you can track changes made to the record and audit the record (that is, see who made changes to the record)
- On a Record Page, you can copy the current record to a new record
- On a Record Page, if reminders have been enabled for that data table, you can set new reminders and edit existing reminders

Data processing

- From a Data Table Page, you can export the records of that data table to XML and CSV data formats
- From a Data Table Page, you can generate reports about the records of that data table and print those reports
- From a Record Page, you can print the details of a record

Note: You can also [work offline](#)²⁵¹. Your changes will be synchronized automatically when you come back online.

Help

The **Help** button is available on [Data Table Pages](#)²¹¹ and [Record Pages](#)²¹⁹. Click **Help** on any of these pages to open the online user manual of Altova RecordsManager in a new browser tab.

4.2 Home Page

The Home Page (*screenshot below*) has two parts:

- The upper part contains an overview of the system's databases and their respective data tables. Each data table displays a count of the data table's records. Click a data table to see its record listings and to edit records
- The lower part shows due reminders. Each list item is the reminder of a specific record. Click a reminder to go to its record. Click **Snooze** or **Stop** (located at the left of each reminder) to, respectively, snooze or stop the reminder.

The screenshot displays the Altova Home Page interface. At the top left, it says "Home" and "Welcome Neo!". The Altova logo is in the top right, with navigation icons for home, settings, and help below it. The "Contract Database" section shows a "Contracts" card with "20 records available". The "Company Database" section features four cards: "Company Groups" (4 records), "Departments" (21 records), "Companies" (22 records), and "Persons" (19 records). The "Contract reminders" section is titled "Past Due (4)" and lists four items, each with a snooze and stop icon, a "Reminder Renewal" label, and a contract ID and description.

Contract Database	
Contracts	20 records available

Company Database	
Company Groups	4 records available
Departments	21 records available
Companies	22 records available
Persons	19 records available

Contract reminders	
Past Due (4)	
	Reminder Renewal "C2020/3119 Chestnut Telecom License Agreeemer"
	Reminder Renewal "C2020/3122 Office Cleaning Contract"
	Reminder Renewal "C2020/3121 Doodle Online Advertising"
	Reminder Renewal "C2020/3114 Deciduous Lease"

Navigating the app

There are two types of editing page:

- [Data Table Page](#)²¹¹. You get to this page by clicking a data table on the Home Page (*shown in the screenshot above*). From the [Data Table Page](#)²¹¹, you can edit existing records, add new records, generate reports and charts, and print record listings. See the respective topics for information about these features.
- [Record Page](#)²¹⁹. This page displays the data (the fields) of a record, enabling you to edit that record's data. You get to this page by clicking a record on the [Data Table Page](#)²¹¹.

The pages are arranged in the following hierarchy, and you can navigate with the help of the navigation links at the top left of the page and your browser's **Back** button.

Home Page > [Data Table Page](#)²¹¹ > [Record Page](#)²¹⁹

For more information about editing and viewing records, see the respective topics of the *System Use* part of the documentation.

Help

The **Help** button is available on [Data Table Pages](#)²¹¹ and [Record Pages](#)²¹⁹. Click **Help** on any of these pages to open the online user manual of Altova RecordsManager in a new browser tab.

4.3 Data Table Page

A Data Table Page (*screenshot below*) is accessed by clicking that data table on the [Home Page](#)²⁰⁹. The Data Table Page displays a listing of the data table's records and the functionality available for the data table.

ID ↑	TITLE	CATEGORIES
▶ Active (15)		
▼ Canceled/Terminated (1)		
C2020/3118	Pineable Software Purchase	Sales Agreement
▼ Expired (1)		
C2020/3123	Sycamore Cleaning Contract	Operations
▼ Pending (1)		
C2020/3115	PBP	Partner Agreement

Data table records








The central feature of the Data Table Page is its listing of the data table's records. If your system administrator has created multiple listing options for this data table, then you will be able to select which one to use. The listings will have descriptive names to enable you to choose. For example, in the screenshot above, the selected listing option is *Contracts by Status*. Lists will be different from each other in one or more of the following ways: (i) they have different layouts; (ii) they show different record fields; (ii) they restrict the number of records shown (for example, show only US companies).

Data table functionality

The Data Table Page provides the following functionality: most of which are available via the icons at top right:

- In the *View* combo box, select a list from the available viewing lists. You can switch between lists at any time.
- To add a new record, click **New <Data Table>**. For information about data entry, see the topic [Record Page](#) ²¹⁹.
- To delete all currently displayed records, click the **Nx Bin** icon near the top right of the form.
- To edit an existing record, click that data table's **Edit** icon. For a description of how to edit records, see the topic [Record Page](#) ²¹⁹.
- To delete a record, click its **Bin** icon.
- If alphabetic sorting on a column is possible, such columns are indicated with a vertical arrow (*circled in red above*). The arrow direction indicates the current sorting order (up = ascending; down = descending). Click the arrow to sort in the opposite order.
- To search for specific records, select the *Search* check box. See [Searches](#) ²³⁶ for details.
- To jump to a specific record. See [Jump To](#) ²⁴¹ for details.
- Export the records of the data table in CSV and XML formats. See [Export to XML, CSV](#) ²⁴⁵ for details.
- [Generate reports](#) ²⁴⁸ about the data table's records and print these reports.
- [Print](#) ²⁵⁰ the currently selected listing. See the section [Print to PDF](#) ²⁵⁰ for details.

☐ *Icons of the Data Table Page*

	Offline Mode ²⁵¹
	Customize Appearance ²¹³
	Refresh ²⁴³
	Export Records to XML/CSV ²⁴⁵
	Show Report ²⁴⁸
	Print to PDF ²⁵⁰
	Help ²⁰⁸








Help

The **Help** button is available on [Data Table Pages](#) ²¹¹ and [Record Pages](#) ²¹⁹. Click **Help** on any of these pages to open the online user manual of Altova RecordsManager in a new browser tab.

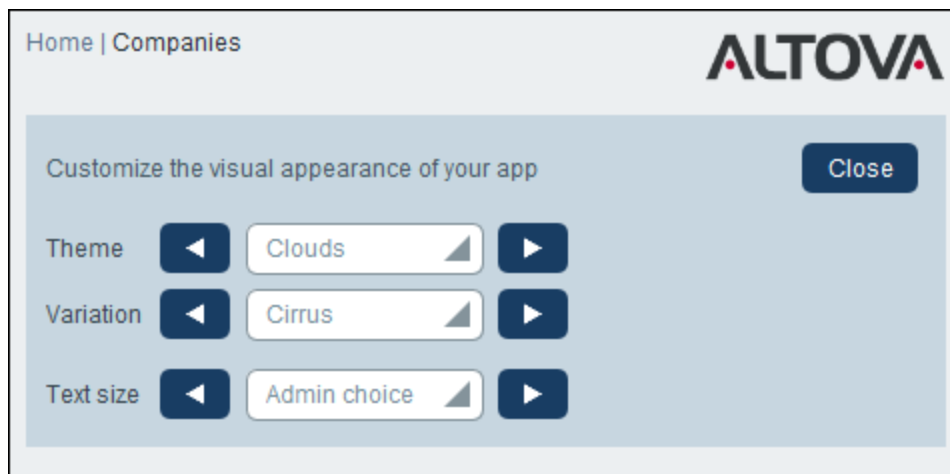
4.4 Customize Appearance

The default appearance of the user interface is determined by the [color theme](#)¹⁷⁷ and [variation](#)³⁴ settings that your system administrator has chosen. You, as the user, can change the appearance of the app by clicking the **Customize Appearance** button on the [Home Page](#)²⁰⁹ or any [Data Table Page](#)²¹¹.

Icons of the Data Table Page

	Offline Mode ²⁵¹
	Customize Appearance ²¹³
	Refresh ²⁴³
	Export Records to XML/CSV ²⁴⁵
	Show Report ²⁴⁸
	Print to PDF ²⁵⁰
	Help ²⁰⁸

On clicking **Customize Appearance**, the settings shown in the screenshot below appear.



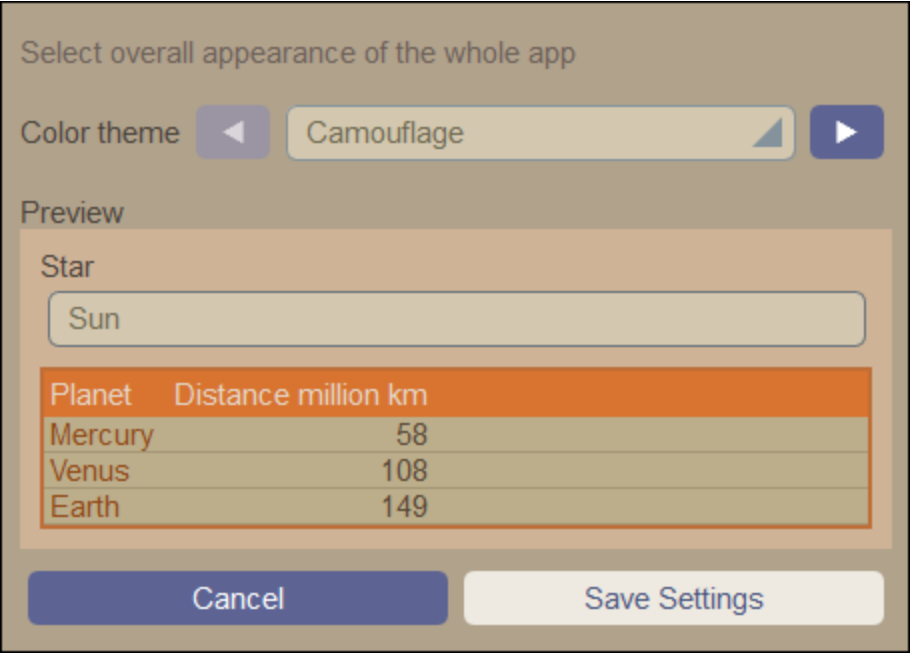
- In the *Theme* combo box, select the theme that you want. This theme will apply to the entire app and all repositories.
- The *Variation* combo box is displayed only on [Data Table Pages](#)²¹¹ (and not on the [Home Page](#)²⁰⁹). It displays the variations of the currently selected app-wide theme and enables you to select a different variation for each repository. When a variation is selected for a data table, it will be applied to the repository that holds the data table—which means to all the data tables in that repository, but not to data tables in other repositories. Note that, if you change the **theme** on a [Data Table Page](#)²¹¹, then the theme change will apply across all repositories.

- The text size of labels and values will, by default, be displayed in the sizes defined by your system administrator. You can change both sizes at once in the *Text Size* combo box (see *screenshot above*), with available choices being sizes relative to the admin-defined sizes.

Changes made here will be applied immediately. They will apply till either (i) you make another change, or (ii) your administrator changes a default selection. Note that the theme applies to the entire app, whereas variations can be set separately for each repository.

Click here for samples of available themes

[Camouflage](#)



Select overall appearance of the whole app

Color theme ◀ Camouflage ▶

Preview

Star

Sun

Planet	Distance million km
Mercury	58
Venus	108
Earth	149

Cancel Save Settings

Clouds

Select overall appearance of the whole app

Color theme ◀ Clouds >

Preview

Star

Sun

Planet	Distance million km
Mercury	58
Venus	108
Earth	149

Cancel Save Settings

Desert

Select overall appearance of the whole app

Color theme ◀ Desert >

Preview

Star

Sun

Planet	Distance million km
Mercury	58
Venus	108
Earth	149

Cancel Save Settings

Forest

Select overall appearance of the whole app

Color theme ◀ Forest >

Preview

Star

Sun

Planet	Distance million km
Mercury	58
Venus	108
Earth	149

Cancel Save Settings

Full Moon

Select overall appearance of the whole app

Color theme ◀ Full Moon >

Preview

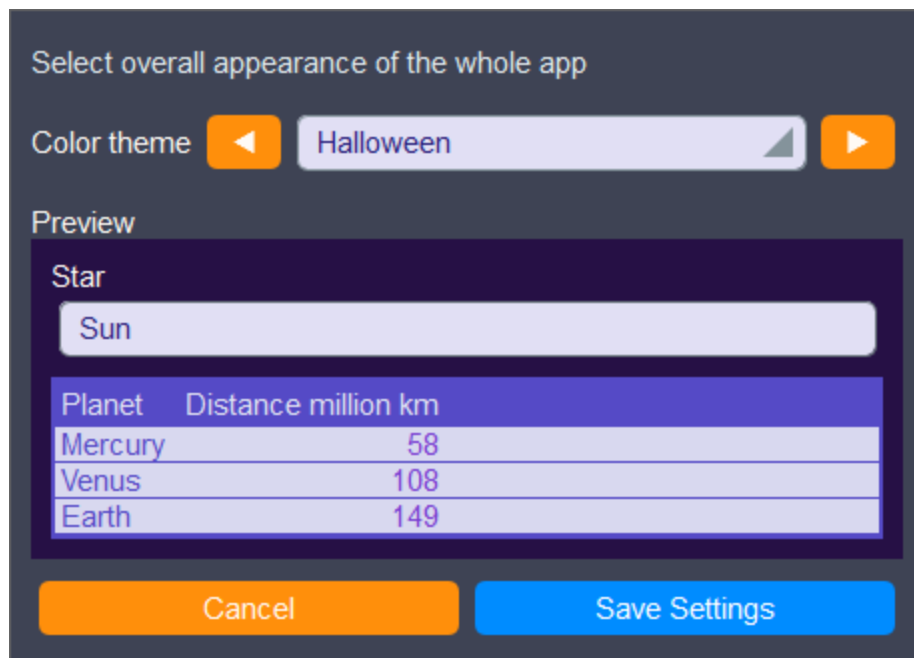
Star

Sun

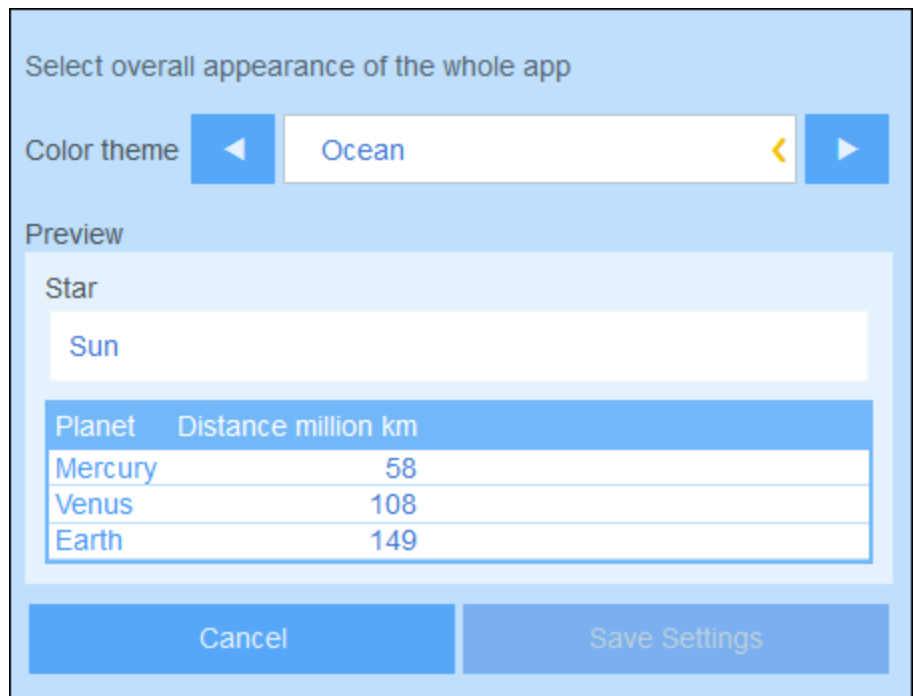
Planet	Distance million km
Mercury	58
Venus	108
Earth	149

Cancel Save Settings

Halloween





Ocean



Polar Night

Select overall appearance of the whole app

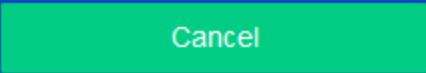

Color theme  Polar Night 

Preview

Star

Sun







Planet	Distance million km
Mercury	58
Venus	108
Earth	149

4.5 Record Page



The Record Page (*screenshot below*) displays the data of a single record of a data table. You can select different data entry forms to view and edit the record's data in different layouts. Note that different data entry forms not only have different layouts, but could also show or hide different fields.



Home | Contracts | Edit **ALTOVA**

Contract Database







Contracts

View







Cancel
Changes
Save




ID	TITLE
C2020/3122	Office Cleaning Contract

Contracting Party

CONTRACTING PARTY

CONTRACTING DEPARTMENT

Type, Status, Categories, Signee

TYPE

STATUS PROCESS STATUS

CATEGORIES

SIGNEE

\$ AMOUNT

Description and comments

The following points describe the main features of record pages:

- A [new record](#)²²¹ can be created for a data table by going to the [Data Table Page](#)²¹¹ and clicking **New <DataTableName>**. This brings up the Record Page.

- If templates have been defined for the data table, you will be given the option of [selecting a template](#)²²¹ instead of starting with a blank record.
- A Record Page essentially displays a [data-entry form](#)²²². If multiple data-entry forms have been defined for the data table, then you can switch data-entry forms at any time during editing of the record.
- Your system administrator might have divided long data-entry forms into [sections for ease of navigation](#)²²³.
- Every record can be viewed in Changes Mode, where [changes can be tracked and audited](#)²²⁷.

The sub-sections of this section describe these features in detail.

Help

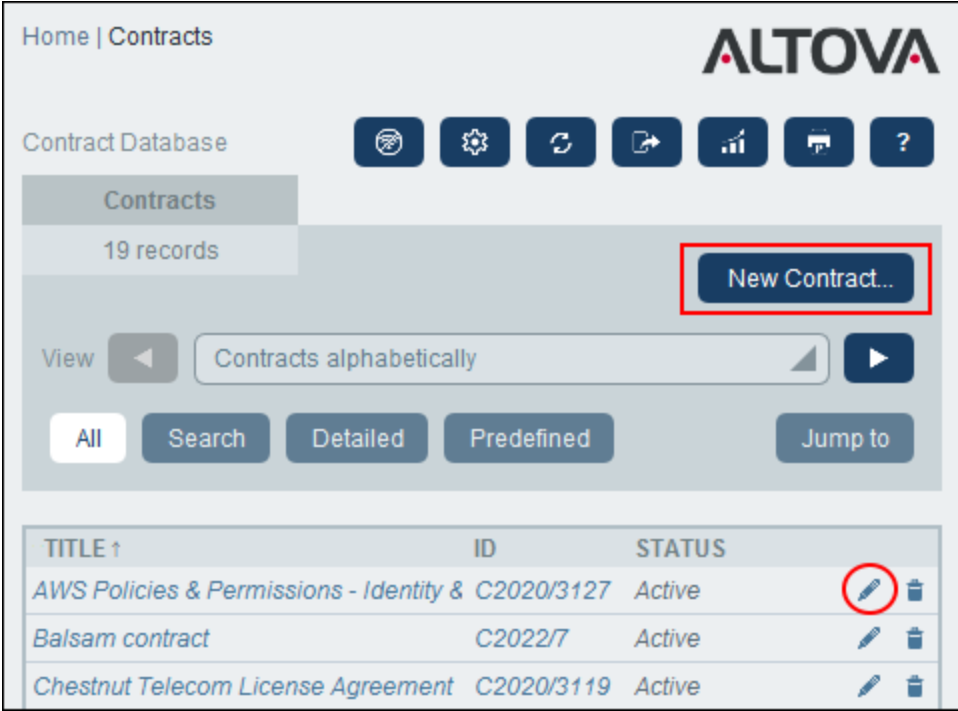
The **Help** button is available on [Data Table Pages](#)²¹¹ and [Record Pages](#)²¹⁹. Click **Help** on any of these pages to open the online user manual of Altova RecordsManager in a new browser tab.

4.5.1 New Records and Templates







Creating new records

To create a new record in a data table, do the following:

1. Go to the [Data Table Page](#)²¹¹ of the relevant data table. The existing records of the data table will be displayed (*screenshot below*). You can select a filter that your system administrator has defined to organize or restrict the display of the records of the data table. For example, in the screenshot below, the *Contracts Alphabetically* filter has been selected. Your system administrator might have designed some filters to offer you a choice of further restriction. In such cases, the additional filtering will be offered in a combo box immediately below the main filter.



The screenshot shows the Altova RecordsManager interface for the 'Contracts' data table. The page title is 'Home | Contracts' and the Altova logo is in the top right. Below the title, there are several icons for database management. The main content area shows 'Contract Database' with a 'Contracts' filter selected, displaying '19 records'. A 'New Contract...' button is highlighted with a red box. Below the filter, there are 'View' controls and a dropdown menu set to 'Contracts alphabetically'. At the bottom, there are buttons for 'All', 'Search', 'Detailed', 'Predefined', and 'Jump to'. A table of records is displayed with columns for 'TITLE', 'ID', and 'STATUS'. The records are:

TITLE ↑	ID	STATUS	
AWS Policies & Permissions - Identity &	C2020/3127	Active	 
Balsam contract	C2022/7	Active	 
Chestnut Telecom License Agreement	C2020/3119	Active	 

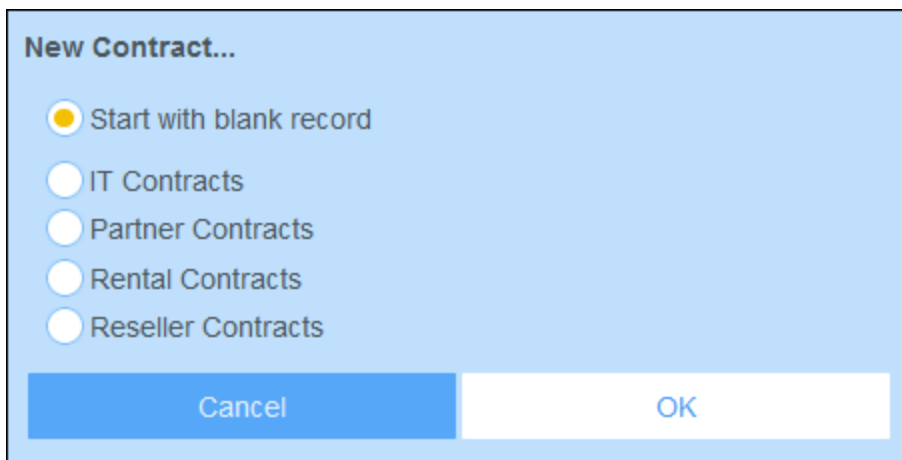
2. To create a new record, click **New <Data Table>** (*red rectangle above*). The data table's data-entry form appears, and you can enter data for the record.

Note: To edit an existing record, click the record's **Edit** icon (*red circle above*). The record's data will be displayed in a data-entry form and can be edited.

Templates

Some data tables might have templates defined for them. A template is a new record in which some fields are pre-filled with data to save you work. When you create a new record in a data table that has one or more templates defined, you can choose to use one of these templates or to start with a blank record. If you use a template, you can edit any of the pre-filled fields at any time.

On a [Data Table Page](#)²¹¹, when you click **New <DataTableName>** to create a new record in that data table, you are presented, if templates have been defined for this data table, with a form to select a template. For example, in the screenshot below, the user is creating a new record in the *Contracts* data table, and is presented with five entry form options: four templates and a blank record. If you are given such a choice of templates, select the option you want, and click **OK**. The data-entry form appears.



New Contract...

- Start with blank record
- IT Contracts
- Partner Contracts
- Rental Contracts
- Reseller Contracts

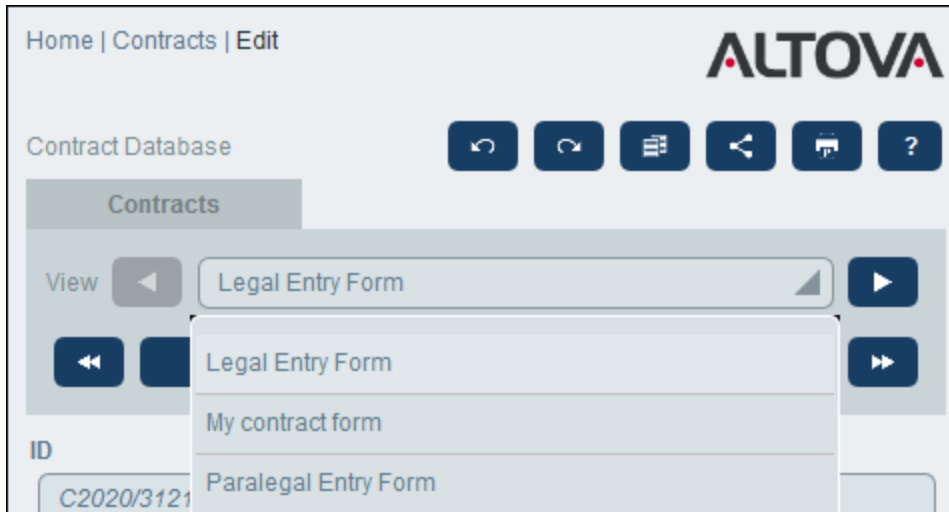
Cancel OK

Note: If no template has been defined for a data table, then the choice described above is not given to you and the data-entry form appears directly after you click **New <DataTableName>**.

4.5.2 Data-Entry Forms

A data table's data-entry form appears when you either create a new record or edit an existing record.

If multiple data-entry forms have been defined for a data table, then these will be available in the *View* combo box (*see screenshot below*). Select the form you want to work with. Each form provides a different layout for data entry, so you can change forms at any time. But be sure to save your data before changing forms. In the screenshot below, for example, *Legal Entry Form* might provide a layout that displays basic legal information; whereas *Paralegal Entry Form* might show specific fields related to auxiliary legal matters.



Note: If only one data-entry form has been defined for a data table, then that form is displayed directly and the *Select View* combo box does not appear.

For information about editing a record, see the topic, [Editing Data](#)²²⁵.

Sorting records on columns

Records can be sorted on a column if an arrow symbol is displayed next to the column's header. Within a record list that is sorted on one column, you can sort on two further columns. For example, a list can be sorted on a *Country* column, then a *State* column, and then a *City* column. Consequently, records of *San Francisco* and *Los Angeles* would be located near each other because they would first have been sorted on *USA* and then on *California*. The sorting priority of columns is indicated by the number of arrows in their respective headers. The column with the highest priority has one arrow, and that with the lowest has three arrows. This order of priority will have been set by your administrator, and you cannot change it.

You can, however, reverse the order of each column by clicking that column's arrow symbol. In our example, if the order of the *City* column is reversed, then the following happens: the order of *USA* records relative to other countries will not change; the order of *California* records relative to other American states will not change; only the order of cities within states will change.

4.5.3 Sections

Your data-entry form might be designed as a single page or might be divided into sections (*see screenshots below*). The following possibilities exist:

- Single page
- Single page divided into sections (each of which may initially be open or closed, independent of each other)
- Sections (open or closed) that appear one after another (not on a single page)

The screenshot below shows the first three sections of a data-entry form, where all sections are on the same page. The first three section names are: (i) *Contract Header*, (ii) *Contracting Party*, (iii) *Type, Status*,

Categories, Signee. When the form is initially displayed, the first and third sections are open, while the second is closed. To open/close a section, click the arrow to the left of its name.

Home | Contracts | Edit

Contract Database

Contracts

View Legal Entry Form

Cancel Changes Save

▼ Contract Header

ID	Title
C2020/3122	Office Cleaning Contract

▶ Contracting Party






▼ Type, Status, Categories, Signee

Type



Service Contract



In the screenshot below, the data-entry form has nine sections, of which the second is shown. Each section appears one after the other; they are not on the same page. The section number and the total number of sections are given next to the section's name. To navigate between sections, click the **Previous/Next** arrows on either side of the section's header. Note that when sections are shown one after another, they are always shown open and cannot be closed.



Home | Contracts | Edit

Contract Database      




Contracts

View  Legal Entry Form 


 Cancel Changes Save 

 **Contracting Party 2/9** 

Contracting Party

American Hornbeam   

Contracting Department

4.5.4 Editing Data

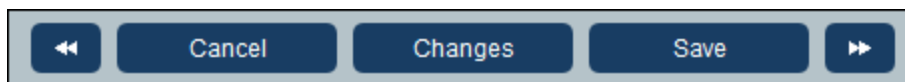
Data for each field of the record is entered via a data-entry device such as a text field, combo box, or date picker, and data entry is straightforward. Click **Save** when you finish editing a record.

The screenshot shows a web interface for a 'Company Database'. At the top, there are navigation icons: a back arrow, a refresh arrow, a list icon, a share icon, a print icon, and a help icon. Below this is a 'Departments' section with a 'View' dropdown menu set to 'Departments with Persons'. Below the dropdown are navigation buttons: a left arrow, 'Cancel', 'Changes', 'Save', and a right arrow. The main form fields are: 'COMPANY' (AWS), 'NAME' (Amazon Legal), and 'DESCRIPTION' (Include legal on all sales and agreement discussions). Below these is a 'PERSONS' section with a 'NEW PERSON...' button and a table of related records.

FIRST ↑	LAST	PHONE		
James	Mason	123456578		
Jane	Trimbell	567890123		

Note the following points:

- If your system administrator has set validation rules for a field value, then the field name stays red till a valid value is entered.
- If your system administrator has set validation rules for the record, errors/warnings will be displayed when you click **Save**.
- When you are entering data for a new record, the **Save++** button is available (in addition to the **Save** button). Click **Save++** to save the record and create a new record.
- The arrow buttons (see screenshot below) enable you to navigate to the previous and next records.



- If your system administrator has enabled the data of related records to be edited, then access to these related records will be available at the bottom of the form. In the screenshot at the start of this topic, for example, the related *Person* records are shown at the bottom of the form and can be edited. Separate data entry forms for each *Person* record will be displayed, and you can navigate through the different *Person* records by clicking the *Previous* and *Next* icons at the bottom of the form.
- When you edit data of an existing record, the **Changes** button (see screenshot above) is available. Click it to see past and current changes that have been made to the record being edited. This enables you to review changes before saving. When you are in Changes Mode, you cannot edit the record. To

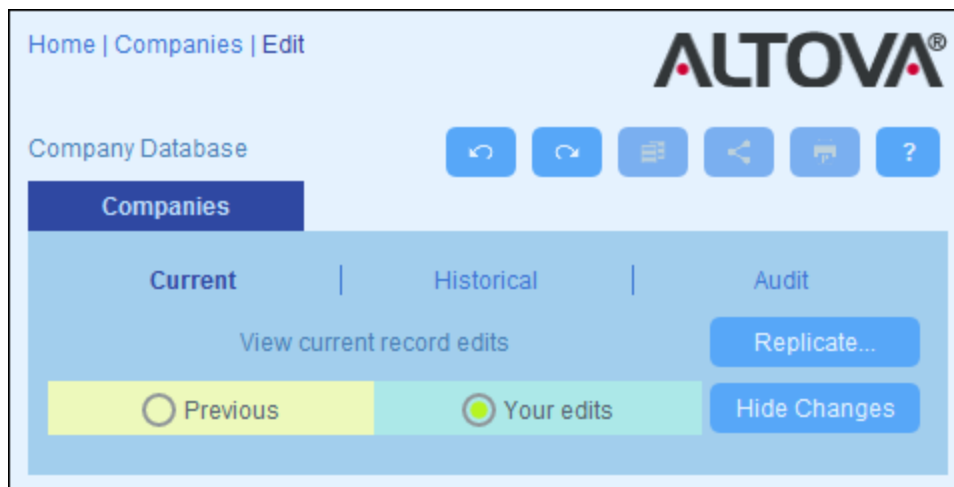
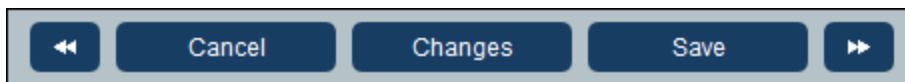
leave Changes Mode, click **Hide Changes**. Changes Mode is described in the next topic, [Audits and Change Tracking](#)²²⁷.

- The icons at the top of the form provide additional functionality: *Undo*; *Redo*; *Copy Current Record to New Record*; *Share*; *Print*. Clicking the *Share* icon enables you to send a link to the current record via email to another user: you can either (i) directly send the mail from your email client or (ii) copy the link to the clipboard. (For Print setup, see the [Print](#)²⁵⁰ topic); *Help* (links to the RecordsManager user manual).



4.5.5 Audits and Change Tracking

Changes Mode (switched on when you click the **Changes** button; see *screenshot below*) enables you to audit changes (see who has made what changes), to track changes, and to see a historical view of changes.



Changes Mode has three tabs:

- Current:** Shows changes made during the current editing session, before saving. All your changes of the current editing session are shown. Select *Previous* or *Your Edits* to switch between the pre-change and post-change versions of the record. Click **Replicate** if you want the changes you made to the current record to be applied to other records of the data table. In this case, you will be cycled through the records of the listing, and you can decide whether to replicate the change in individual records. The **Save** button will be enabled when the changes can be applied. To move to the next record, click the **Next** navigation arrow button (see *first screenshot above*).

- *Historical*: Shows past changes of any field by any user. Cycle through the change events of the past by clicking the **Previous Event** and **Next Event** icons. For each change event, you can see the field values before and after the change by selecting *Before* or *After*, respectively.
- *Audit*: Shows the last change made to any field by any user. Next to each changed field, the last user to have made the change is listed as a link. You can click a link to see details of the change, including the date and time of the change.

To leave Changes Mode, click **Hide Changes**.

Collision detection

If another user has modified a record after you have started editing it, then, when you save, you will be warned about the modification and advised to review changes to the record. You can click the **Your Edits** button to see what you have changed and the **Previous** button to see the edits of the other user. If you want to keep the changes of the other user, then click the **Keep Changes** icon near the respective field titles (*circled in red in the screenshot below*).

Company Database

Companies

Current | Historical | Audit

Previous | Your edits | Hide Changes

COMPANY GROUP
Magic Corporations

FULL NAME: Mystery Company | SHORT NAME: MC

STREET1: Mountain View

CITY: Denver | STATE: CO | ZIP: 80212

COUNTRY: USA

CATEGORY

- Customer
- Distributor
- Legal firm
- Operations
- Property Lease
- Reseller
- Vendor

Company Database

Companies

Current | Historical | Audit

Previous | Your edits | Hide Changes

COMPANY GROUP
Magic Corporations

FULL NAME: Mystery Company | SHORT NAME: MC

STREET1:

CITY: Denver | STATE: CO | ZIP:

COUNTRY: USA

CATEGORY

- Customer
- Distributor
- Legal firm
- Operations
- Property Lease
- Reseller
- Vendor

The situation shown in the screenshots above is that you have changed the *Street1* and *ZIP* fields (screenshot left), while another user has added two values to the *Category* field (screenshot right). You can keep the

Category field changes of the other user by clicking the **Keep Changes** icon near the title of the *Category* field (circled red in screenshot above right). Then click, sequentially, **Hide Changes** and **Save** to save your changes as well as the other user's changes. Note that you can also undo your changes by pressing the relevant **Keep Changes** icon (see screenshot above right). After you click **Hide Changes**, you can review the final edit before saving the record.

Undo/Redo changes

You can undo and redo edits you make to a record by clicking, respectively, the **Undo** and **Redo** buttons (circled green in the screenshots above).

4.6 Reminders

Reminders on the Home Page

Due reminders are displayed at the bottom of the Home Page (see screenshot below). (See [Status of Reminders](#)²³⁴ below for the meaning of due reminders.)

Contract reminders		
Past Due (4)		
	Reminder Renewal	"C2020/3119 Chestnut Telecom License Agreement"
	Reminder Renewal	"C2020/3122 Office Cleaning Contract"
	Reminder Renewal	"C2020/3121 Doodle Online Advertising"
	Reminder Cancellation	"C2020/3127 AWS Policies & Permissions - Identity & Access Management 7/22/2020"

There are 1 alert group(s) available.
You are currently member of 1 alert group(s)

You can carry out the following reminder-related actions on this page:

- Snooze or stop a reminder. (See [Status of Reminders](#)²³⁴ for information.)
- Click a reminder to go to the relevant record's data entry form, where you can edit the reminder and/or add new reminders.

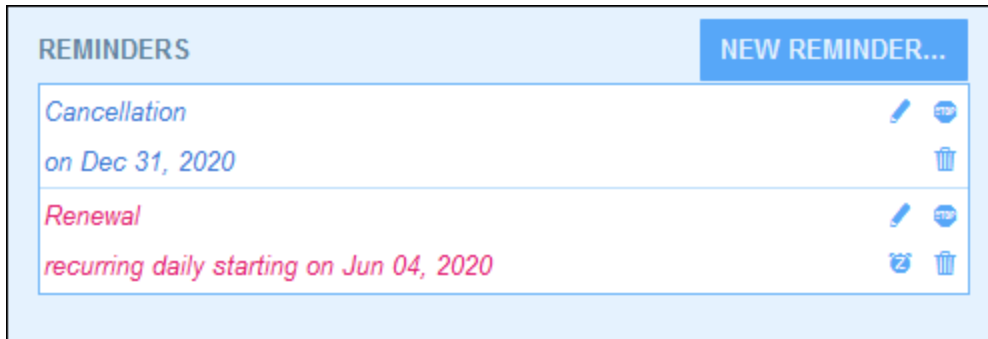
Reminders in data entry forms

Reminders and reminder emails are configured by system administrators. However, users have the final decision about what reminders are sent, when, and to whom.

A user can access a reminder's settings in the following ways:

- By clicking a record to go to that record's data entry form/s. A reminder's settings is best located in one or more of a data table's entry forms.
- By clicking a reminder on the [Home Page](#)²⁰⁹, which would typically take you to an entry from containing the reminder's settings.





The screenshot below shows the reminder settings of a contract record's data entry form.



A user can do the following:

- Add a new reminder or edit an existing reminder. Clicking either of these commands takes the user to the [Reminder Settings](#)¹⁹⁰ form, where the reminder can be configured (see below).
- The user can snooze an existing due reminder. See *Status of Reminders* below.
- The user can stop a reminder (which is equivalent to marking the reminder as processed). See *Status of Reminders* below.
- The user can delete a reminder.

Icons for reminder management

	Edit Reminder
	Snooze Reminder
	Stop Reminder
	Delete Reminder

Reminder settings

The *Reminder Settings* form is shown below.

Reminder settings

Category

Description

Recurring

Specific Date | Calculate Date

on

before

after

Once time reached, send notification

every day until reminder is processed or snoozed

only once

to

Define the reminder with the following settings:

- **Category:** Select the category of the reminder. Reminder categories were defined when the [reminder field was configured](#)¹⁸⁸.
- **Description:** Provide a description to help users to understand how this reminder will apply.
- **Recurring:** Select this option to define the reminder as a recurring reminder. A recurrence is defined in terms of a period that follows a selected date. For example, a reminder can recur monthly after the selected date. *Also see Status of Reminders below.*
- **Reminder start time:** There are two alternatives: (i) Select a specific date; or (ii) Calculate a date relative to one of the record's [date fields](#)⁴⁴ (such as an expiry date). In the screenshot above, for example, the start time has been set to six weeks before the date in the *Expiry Date* field.
- **Notification frequency:** Send reminder email notifications every day till the reminder is processed or snoozed by the user, or send reminder email notifications once only. *Also see Status of Reminders below.*
- **Notification recipients:** Specify the user groups to which notifications about this reminder will be sent. If no group is specified, then no recipient is selected.
- **Add to new records:** This setting is available only when an administrator is configuring a reminder field.

You can choose whether to add the current reminder to all new records or only to records to which the selected filter applies. For example, in the case of the screenshot above, the reminder will be added only for those records where an *Expiry Date* field value exists (which is what is defined in the *Has Expiry Date* filter). Note that if this filter [has user groups defined for it](#)⁶⁰, then notifications will be sent to users of these user groups.

Status of reminders

The status of reminders is defined in the following terms (also see screenshot below, which assumes a current date of 16 September 2020):

- ***Start date***: The date from which the reminder becomes *active*. If the start date is in the past, then the reminder stays active if: (i) it is not processed, or (ii) it recurs. If the start date is in the future, then the reminder is an active reminder.
- A ***processed reminder*** is one for which the reminded event has been carried out and because of which the reminder has been *stopped*.
- ***Action date***: (i) For one-time reminders, the same as the start date; (ii) For recurring reminders, the next recurring date after a reminder is processed. An action date can lie in the past or in the future.
- ***Active reminder***: (i) A one-time reminder that has a start date in the past and which has not been processed; (ii) A recurring reminder that has a start date in the past (and may have been processed); (iii) (i) A reminder (one-time or recurring) that has a start date in the future. (Note: If the action date of an active reminder is in the past and the reminder has not been processed, then the reminder is a due reminder.)
- ***Due reminder***: An active reminder with a start date in the past. Due reminders are a subset of active reminders. Once a reminder becomes due, the possibility to snooze the reminder becomes available.
- A ***snoozed reminder*** applies to due reminders only. Snoozing a reminder cancels the current action date and selects an action date in the future. The snooze period is specified from the current date.
- ***Inactive reminder***: A non-recurring reminder which has a start date in the past and which has been processed.

▼ Reminders	
CONTRACT REMINDERS	NEW REMINDER...
<i>Cancellation</i> on Dec 31, 2020	Active: one-time, start date in future   
<i>Cancellation</i> on Sep 01, 2020	Due: one-time, start date in past, not yet processed    
<i>Renewal</i> recurring weekly starting on Aug 01, 2020	Due: recurring, start date in past, not yet processed    
<i>Renewal</i> recurring weekly starting on Sep 26, 2020 (next on Sep 26, 2020)	Active: recurring, start date in future   
<i>Verification</i> on Jun 20, 2020 (snooze until Dec 24, 2020)	Active: one-time, start date in past, was due but now snoozed   
<i>Verification</i> recurring yearly starting on Jul 10, 2020 (next on Jul 10, 2021)	Active: recurring, start date in past, processed   
<i>Verification</i> on Jul 27, 2020	Inactive: one-time, start date in past, processed   

The example uses a current date of 16 September 2020.

Color codes indicate reminder status

During data entry, the text color of reminders indicate their status to the user:

- *Blue*: Active reminders that are not due reminders
- *Red*: Due reminders
- *Gray*: Inactive reminders

Debugging reminder emails

If reminder emails are not being correctly sent, contact your RecordsManager system administrator to verify that the system has been correctly set up.

4.7 Searches

The Search functionality is enabled at the data table level. It enables you to search a data table's records. You can search for:

- a term within all fields of the data table's record (select *Search*), or
- a selected field of the current data table, an ancestor data table, or a linked-to data table (select *Detailed*), or
- records returned by a filter (select *Predefined*).

To run a search, do the following:

1. In the *View* combo box of a data table, choose a record listing form for displaying the records of the data table. For example, the screenshot below shows the records of a *Departments* data table, with the records being listed in a listing form named *Standard list form*.

@ | Home | Departments

Company Database

Departments
16 records

New Department...

View Standard list form

All Search Detailed

COMPANY ↑	NAME		
Arbomull, Inc.	Arbomull Legal		
AWS	Amazon Legal		
Chestnut Group	Chestnut Corporate Sales		
Deciduous Partners	Deciduous Legal		
Dropbox Corporation	Dropbox Enterprise Sales		
HoneyLocust	HoneyLocust Legal		
Microsoft Corporation	Microsoft Enterprise Licensing		
Pineable	Pineable Partners		
Red Maple and Sons	Red Maple Legal		
Salesforce	Salesforce Regional Sales New Englands		
Sycamore	Sycamore Sales		
Tulip, Walnut, and Willow, LLC	TWW Marketing		
Twitter, Inc.	Twitter Florida Regional Sales		
Twitter, Inc.	Twitter Regional Legal		
White Pine Partners	White Pine Operations		
Willow Properties, Inc.	Willow Sales		

- To search for a term across all fields of all the data table's records: (i) click **Search** (see screenshot below), (ii) enter the search term (searches are case-insensitive), (iii) click the **Search** icon at right. All records will be listed that contain the search term in any of their fields.

@ | Home | Departments

Company Database

Departments
6 records

New Department...

View Standard list form

All Search Detailed

legal

COMPANY ↑	NAME		
Arbomull, Inc.	Arbomull Legal		
AWS	Amazon Legal		
Deciduous Partners	Deciduous Legal		
HoneyLocust	HoneyLocut Legal		
Red Maple and Sons	Red Maple Legal		
Twitter, Inc.	Twitter Regional Legal		

3. To search for a term across a single field of all the data table's records: (i) click **Detailed** (see *screenshot below*), (ii) enter the search term (searches are case-insensitive), (iii) select the field you want to search (in the screenshot below this is the *Description* field), (iv) click the **Search** icon at right. All records will be listed that contain the search term in the selected field. Note that the available fields will be the fields of the current data table, an ancestor data table, or a linked-to data table

@ | Home | Departments

Company Database

Departments

3 records

New Department...

View Department Names & Descriptions

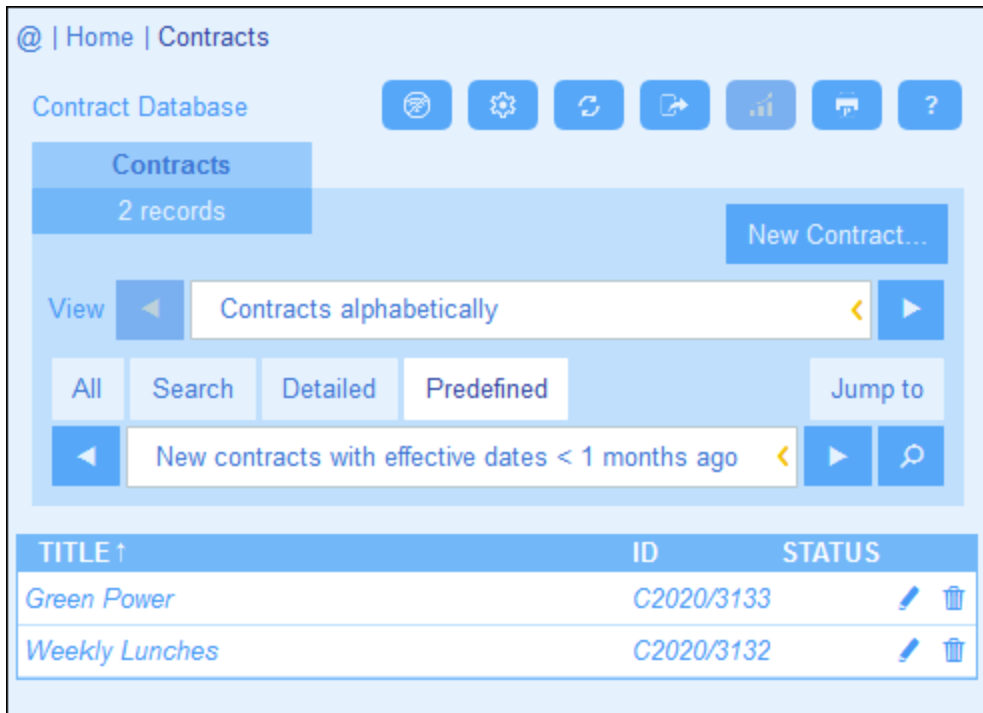
All Search Detailed

Description

legal

NAME ↑	DESCRIPTION
Amazon Legal	Include legal on all sales and agreement discussions
Sycamore Sales	We've worked with both the sales and legal teams at Sycamore
Twitter Regional Legal	Legal discussions

4. If one or more filters have been defined for a data table, then the **Predefined** button will be available. To return records selected by a filter: (i) click **Predefined** (see screenshot below), (ii) select one of the filters in the combo box that appears, (iii) click the **Search** icon at right. All records will be listed that match the conditions of the filter.



Icons of the Data Table Page

	Offline Mode ²⁵¹
	Customize Appearance ²¹³
	Refresh ²⁴³
	Export Records to XML/CSV ²⁴⁵
	Show Report ²⁴⁸
	Print to PDF ²⁵⁰
	Help ²⁰⁸

4.8 Jump To

The Jump To functionality enables you to jump to a record that begins with or contains the text string you enter. The look-up for the text string is carried out in either one field of the data table's records or all fields. What fields are being looked up and whether the text string occurs at the beginning of the field or is contained anywhere in the field would ideally be indicated by the name of the list form (or should be made clear to you in some other way by your administrator).

For example, in the screenshot below, when the list form named *Contracts by Status & Company* is selected, the **Jump To** button becomes available, thereby indicating that the Jump To feature is available for this list form. Since the list form is based on status and company, it is reasonable to assume that a jump-to would look up status and/or company. On typing *Amer*, the first company name that begins with *Amer* moves to the top of the list.

The screenshot shows the 'Contract Database' interface. At the top, there are navigation icons and a 'New Contract...' button. Below that, the 'Contracts' section shows '19 records'. The 'View' dropdown is set to 'Contracts by Status & Company'. Below the view selector, there are tabs for 'All', 'Search', 'Detailed', and 'Predefined'. A 'Jump to' button is circled in red. Below the tabs, a search input field contains the text 'Amer'. Below the search field, a list of contracts is shown, with the first item, 'American Hornbeam (1)', highlighted in blue. The list includes details like 'C2020/3122 Office Cleaning Contract' and 'Operations'.

To use the Jump To feature: click **Jump To**, and then enter the text string you want to look up. The record that you want will move to the top of the list.

Note: If the **Jump To** button is not available, it means that your system administrator has not activated the Jump To setting for the current list form.

Icons of the Data Table Page



	Customize Appearance ²¹³
	Refresh ²⁴³
	Export Records to XML/CSV ²⁴⁵
	Show Report ²⁴⁸
	Print to PDF ²⁵⁰
	Help ²⁰⁸

4.9 Refresh








When a data table is opened and its records are listed (as in the screenshot below, which shows a list of *Company* records), you can refresh the data by clicking the **Refresh** button.

The screenshot shows the Altova Companies database interface. At the top, there is a navigation bar with "Home | Companies" and the Altova logo. Below this, there is a "Company Database" section with several icons: a globe (Offline Mode), a gear (Customize Appearance), a circular arrow (Refresh), a document with arrows (Export Records to XML/CSV), a bar chart (Show Report), a printer (Print to PDF), and a question mark (Help). The main content area is titled "Companies" and shows "22 records". There is a "New Company..." button. Below the record count, there is a "View" dropdown menu set to "Companies alphabetically" and buttons for "All", "Search", and "Detailed". The bottom part of the screenshot shows a table of company records with columns for "FULL NAME", "CATEGORY", and "STATE".

FULL NAME ↑	CATEGORY	STATE
American Hornbeam	Customer	CA
Arbornull, Inc.	Legal firm	MA
AWS	Vendor	WA
Balsam Fir and Sons	Vendor	AZ
Balsam, Fir, and Oak	Legal firm	DE

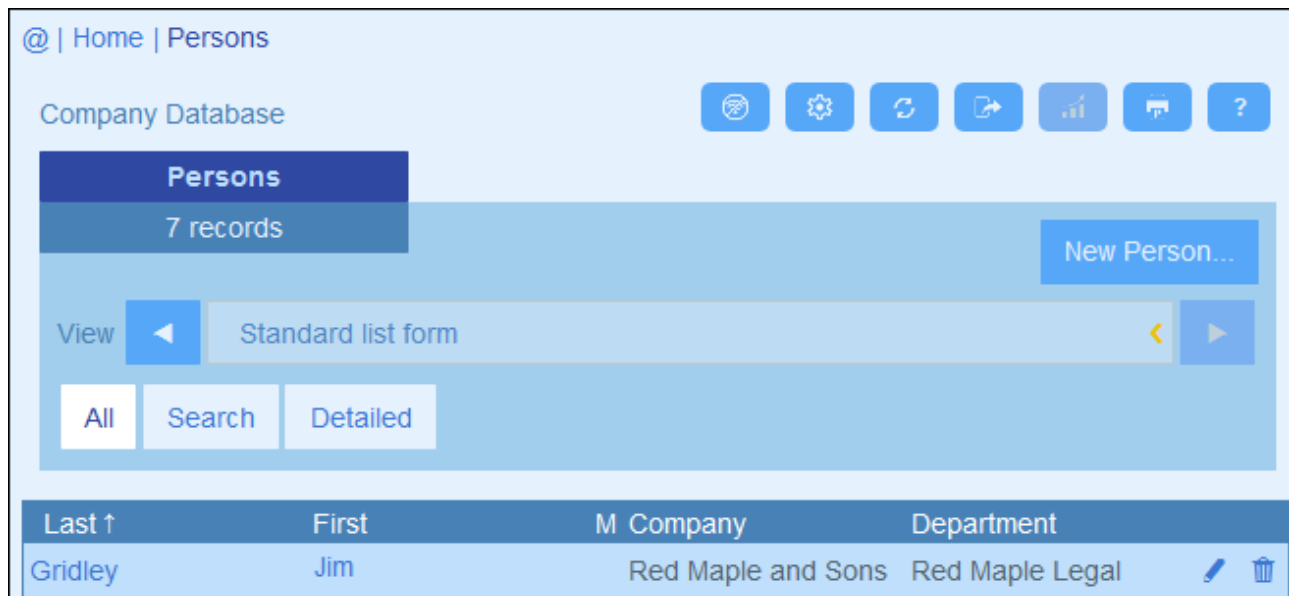
This is useful since the RecordsManager app is a distributed system that can be updated by multiple users. Clicking **Refresh** ensures that you are viewing the latest data in the database.

☐ Icons of the Data Table Page


	Offline Mode ²⁵¹
	Customize Appearance ²¹³
	Refresh ²⁴³
	Export Records to XML/CSV ²⁴⁵
	Show Report ²⁴⁸
	Print to PDF ²⁵⁰
	Help ²⁰⁸

4.10 Export Records to XML, CSV

When a data table is opened and its records are listed (as in the screenshot below, which shows a list of *Person* records), you can export the data of these records to an XML and/or CSV file. Your system administrator will have defined one or more export forms for each data table. Each export form defines a separate set of data fields (of that data table) to export. An export form could include not only the fields of the data table, but also the name of the parent data table and higher-level ancestor data tables. In the case of XML exports, child data tables and a selection of their fields could also be included. The different export forms will typically have suggestive names, and the multiple options will give you a choice of datasets to export. If you need another dataset for a data table, contact your system administrator.



Icons of the Data Table Page

	Offline Mode ²⁵¹
	Customize Appearance ²¹³
	Refresh ²⁴³
	Export Records to XML/CSV ²⁴⁵
	Show Report ²⁴⁸
	Print to PDF ²⁵⁰
	Help ²⁰⁸

XML and CSV formats

XML format

The exported XML file will have a root element named `<Root>`, and `<Root>` will have a child element that has the same name as the current data table (in our example, this is the data table named *Person*). This element will have the child elements that were selected (in the export form) as the fields to export. For example, the export form for a *Person* data table (as shown in the screenshot above) might generate an XML file that looks like this:

```
<Root>
  <Person>
    <Department>Sales</Department>
    <First>Jim</First>
    <Last>Gridely</Last>
    <Title>Executive</Title>
    <Phone>123456789</Phone>
    <Email>legal.01@redmaple.com</Email>
  </Person>
  ...
  <Person>
    <Department>Accounts</Department>
    <First>Jane</First>
    <Last>Locke</Last>
    <Title>Manager</Title>
    <Phone>123789777</Phone>
    <Email>accounts.04@altova.com</Email>
  </Person>
</Root>
```

CSV format

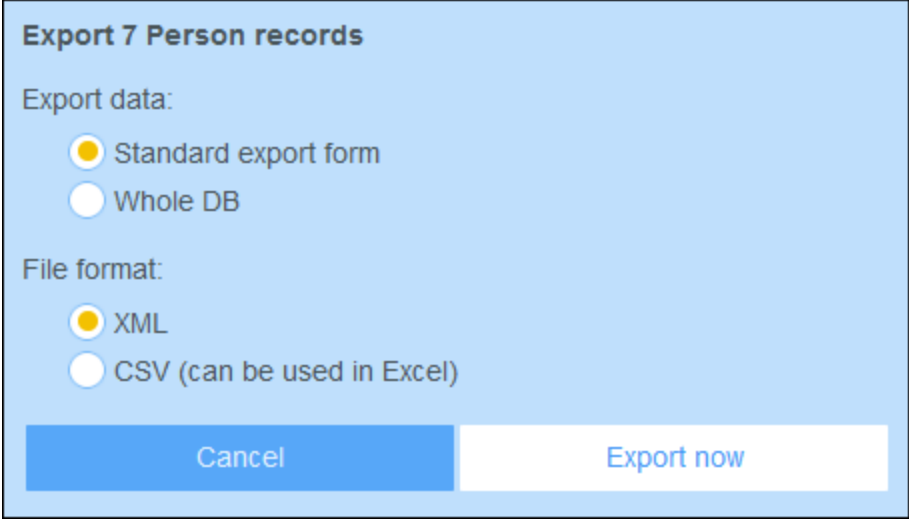
The first line of the CSV file will contain the headers of fields. Each subsequent line contains one record, with the values of fields being in the same sequence as the headers. The separator in records is a comma. Note that each record is a flat listing of the rows of the export form. Child records cannot be displayed because of the flat structure of CSV files. Compare with the XML structure above.

```
"Department","First","Last","Title","Phone","Email"
"Sales","Jim","Gridely","Executive","123456789","legal.01@redmaple.com"
...
"Accounts","Jane","Locke","Manager","123789777","accounts.04@altova.com"
```

Export data

To export to an XML file or a CSV file, do the following:

1. Click **Export to XML/CSV** (see screenshots above).
2. The form that appears (screenshot below) has two parts: (i) the top part lists the export forms that are available for the current data table; these will have been defined by your system administrator; select the form you want to use; (ii) in the bottom part, select the export format you want (XML or CSV).



Export 7 Person records

Export data:

Standard export form

Whole DB

File format:

XML

CSV (can be used in Excel)

Cancel Export now

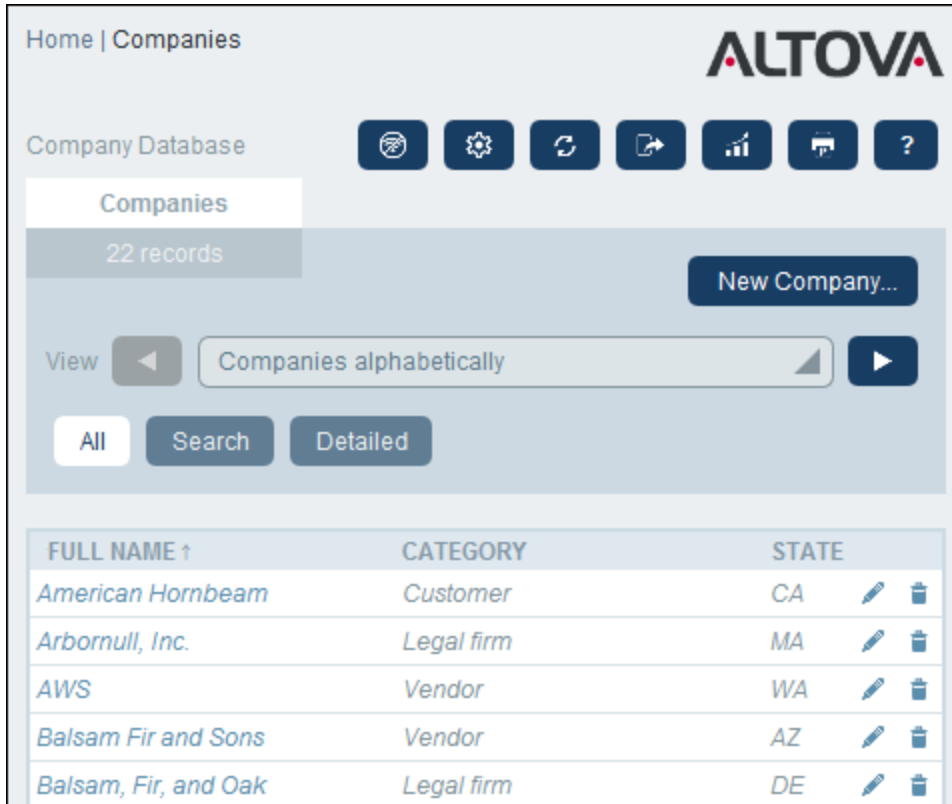
3. Select **Export Now**.
4. In the Save dialog that appears, select the file location where you want to save the exported file, and click **Save**.

Points to note








- An export form exports data related to the current data table (for example, a *Person* data table).
- XML export: The fields of the data table that are selected for export will be exported as XML elements that are children of an element that has the name of the current data table (so, for example, an element named *Person*). See *the XML listing above*.
- CSV export: The fields of the data table that are selected for export will be exported as the columns of a CSV row, where each CSV row corresponds to a record from the database (for example, one *Person* record). See *the CSV listing above*.
- In export forms, it is not only the data table's fields that can be added; parents and higher-level ancestors can also be added. As a result, an exported record can also contain the current data table's parents and higher-level ancestors. See *the listings above*.
- While data from child data tables can be exported to XML files, they cannot be exported to CSV files. This is because of the flat structure of CSV files.

4.11 Reports

Reports can be generated for the records of a data table, separately for each data table. The content and layout of reports is defined by your system administrator in a report form. If a report form exists for a data table, then the **Reports** button on the data table's [Record Listings page](#)²¹¹ is enabled (see screenshot below).

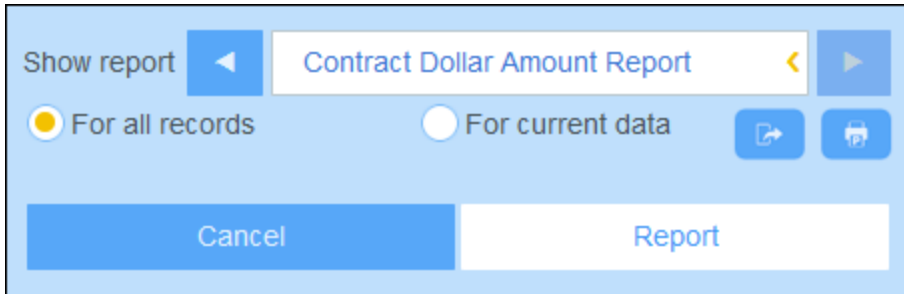


Icons of the Data Table Page

	Offline Mode ²⁵¹
	Customize Appearance ²¹³
	Refresh ²⁴³
	Export Records to XML/CSV ²⁴⁵
	Show Report ²⁴⁸
	Print to PDF ²⁵⁰
	Help ²⁰⁸

Report options

On clicking the **Reports** button, the *Report Options* form appears (*screenshot below*).



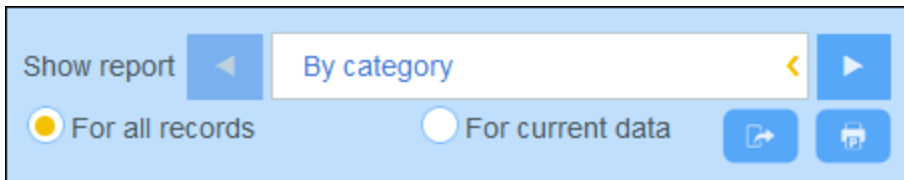
The screenshot shows a light blue dialog box titled "Report Options". At the top left, it says "Show report" followed by a left arrow button, a text input field containing "Contract Dollar Amount Report", a right arrow button, and a yellow chevron button. Below this, there are two radio buttons: "For all records" (which is selected) and "For current data". To the right of these are two blue buttons with icons: a document with an arrow and a printer. At the bottom, there are two buttons: "Cancel" (blue) and "Report" (white).

You can set the following options:

- If multiple report forms have been defined for the data table, then set the *Show report* option to the report form you want to use. If only one report form is available, then this option is not displayed.
- Select whether the report should be generated for all records in the data table or only the records in the current record listing (for example, the record listing *Standard list form* that is shown in the first screenshot of this topic, has four records, which may not be the full record count of this data table).

The generated report

After the report has been generated, you are once again given the report options (*see above*), but this time within the generated report (*see screenshot below*).



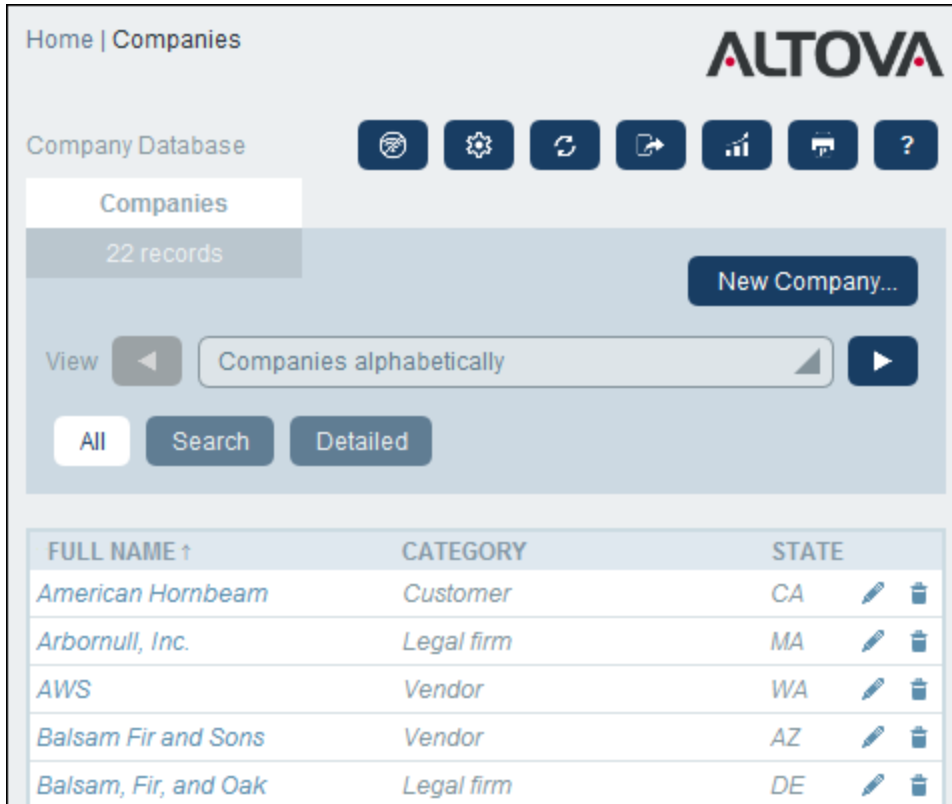
The screenshot shows a light blue dialog box titled "Report Options". At the top left, it says "Show report" followed by a left arrow button, a text input field containing "By category", a right arrow button, and a yellow chevron button. Below this, there are two radio buttons: "For all records" (which is selected) and "For current data". To the right of these are two blue buttons with icons: a document with an arrow and a printer. At the bottom, there are two buttons: "Cancel" (blue) and "Report" (white).

Additionally, you will be given the following options:








- You can export the report as an XML file or CSV file;
- You can print the report by clicking the **Print** icon (*see screenshot above*). The report will be created as a PDF, which you can save to file.

4.12 Print to PDF

On a [Data Table Page](#)²¹¹, click the **Print** icon (at top right) to print the current record listing of the current data table. The report will be created as a PDF, which you can save to file.



Icons of the Data Table Page

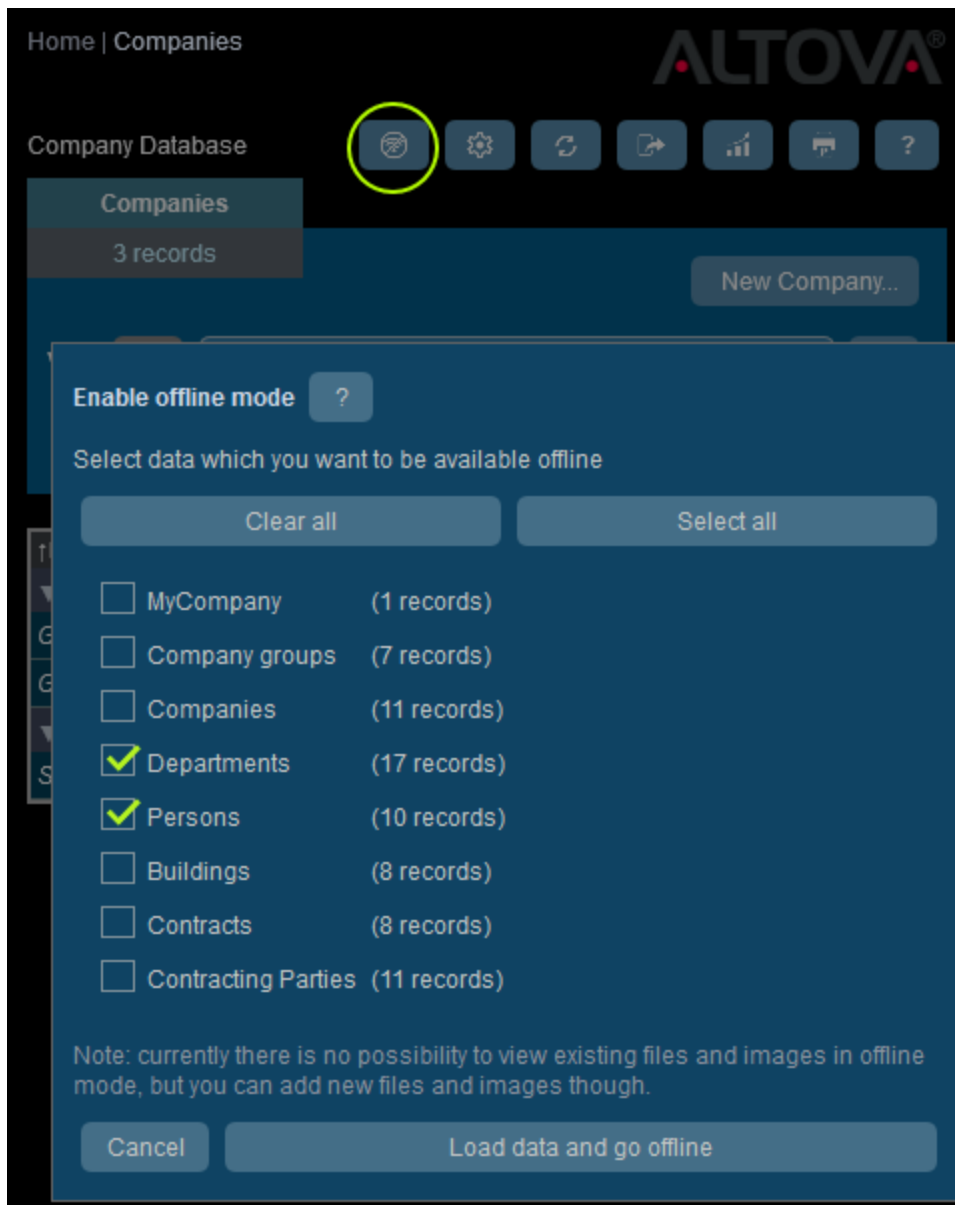
	Offline Mode ²⁵¹
	Customize Appearance ²¹³
	Refresh ²⁴³
	Export Records to XML/CSV ²⁴⁵
	Show Report ²⁴⁸
	Print to PDF ²⁵⁰
	Help ²⁰⁸

4.13 Offline Mode

Offline Mode enables you to save the records of selected data tables to your device, edit these records offline, and save your edits back to the server when you exit Offline Mode. The **Offline Mode** button (*circled green in the screenshot below*) is available on the [Home Page](#)²⁰⁹ and any [Data Table Page](#)²¹¹. For example, the screenshot below shows the **Offline Mode** button of the *Companies* data table.

To go offline, edit records offline, and return online, do the following:





1. Click the **Offline Mode** button (circled green in the screenshot below) at any level. It does not matter in which data table you are; all data tables will be available for selection.
2. In the *Enable Offline Mode* form that appears (*screenshot below*), all data tables are displayed and you can select the data table/s that you want to edit offline.



3. Click **Load data and go offline.**
4. Records of the data table/s that you selected will be available for editing offline. Edit these and save your changes.
5. That you are in Offline Mode will be indicated by a button named **OFFLINE** at top right. To go back online and save your changes to the server database, click **OFFLINE**. When you are back online, your changes will be saved automatically to the RecordsManager database.

☐ *Icons of the Data Table Page*

	Offline Mode ²⁵¹
	Customize Appearance ²¹³

	Refresh ²⁴³
	Export Records to XML/CSV ²⁴⁵
	Show Report ²⁴⁸
	Print to PDF ²⁵⁰
	Help ²⁰⁸

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