Create an Entity Exercise

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Create an Entity Exercise

In this exercise, you will focus on creating additional Entities to the **Employee Directory** app in OutSystems. To do so, you will perform the following actions:

- Create two Entities and its attributes

- Bootstrap data into the newly created Entities

- Create an Entity diagram for the Employee Directory data model

Upon completion, you will end up with two additional Entities and both will contain data that was bootstrapped from Excel files.

Resources

You will need the following two Excel files to complete this exercise.

- Project.xlsx

- Department.xlsx

These files can be found in the **Resources** folder of this lesson materials. The Excel files will be used to bootstrap data to the Entities.

Scenario

In this exercise, you will start from the existing **Employee Directory** app, which has one module. Inside that module, you have the Employee Entity with data that was bootstrapped from Excel file in the previous exercise.

Starting from this application, in this exercise, you will create two additional Entities: **Project** and **Department**.

The first Entity (Project) will be created manually with the following attributes:

- Id (default)

- Name (mandatory)

- Description (mandatory, data type *Description*, length of 500 characters)

- DueDate (mandatory and data type *Date*)

The second Entity (Department) will be created manually with the following attributes:

- Id (default)

- Name (mandatory)

- Description (mandatory, data type *Description*, length of 500 characters)
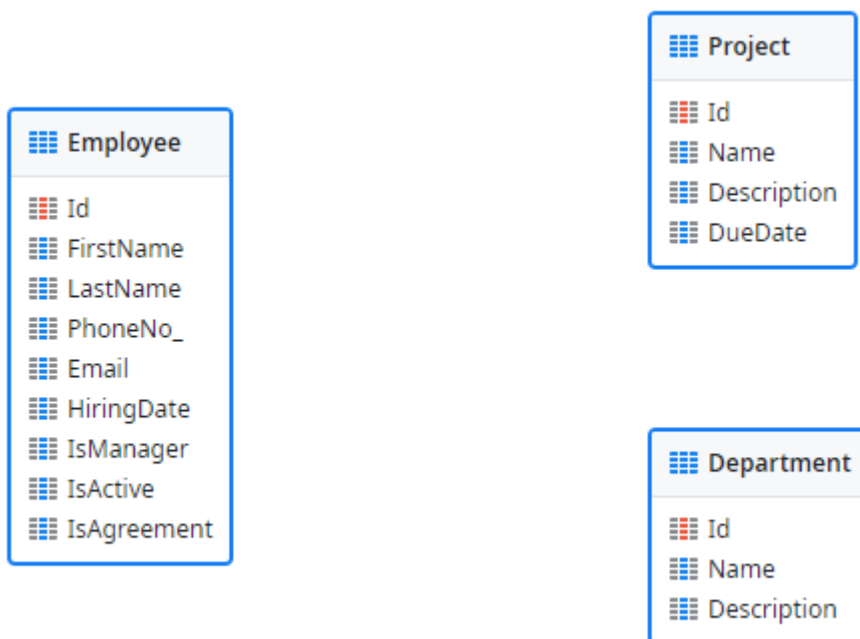
After creating the Entities, its data from the Project.xlsx and Department.xlsx files will be bootstrapped, using the **Bootstrap Data from Excel** action.

How-To

In this section, we will show you how to do this exercise, with a thorough step-by-step description. **If you already finished the exercise on your own, great! You don't need to do it again**. If you didn't finish the exercise, that's fine! We are here to help you.

Getting Started

To start with this exercise, we need to open the Employee Directory App. Before proceeding, you must have Service Studio opened and connected to an OutSystems Environment (e.g. Personal Environment).

1) In the main window of Service Studio, click **Employee Directory** to open it.
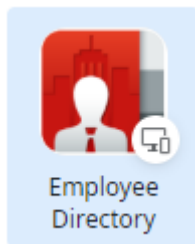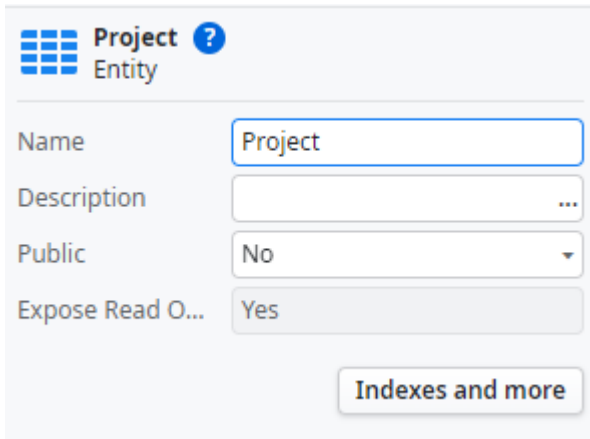

2) The application has only one module, open it!
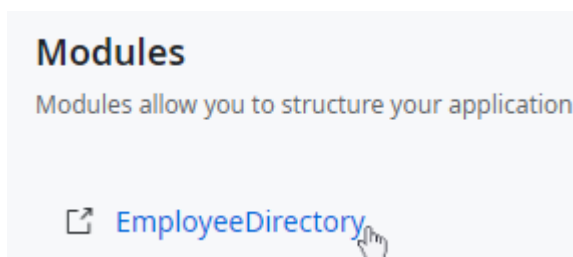
Creating Entities

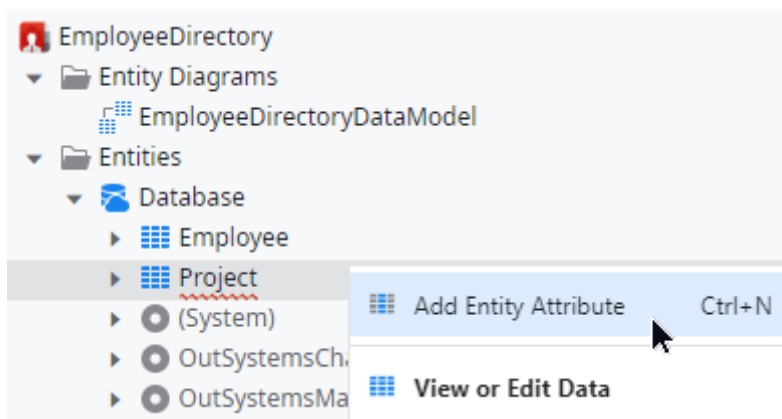1) In the **Data** tab, right-click the **Database** element, then select **Add Entity**.
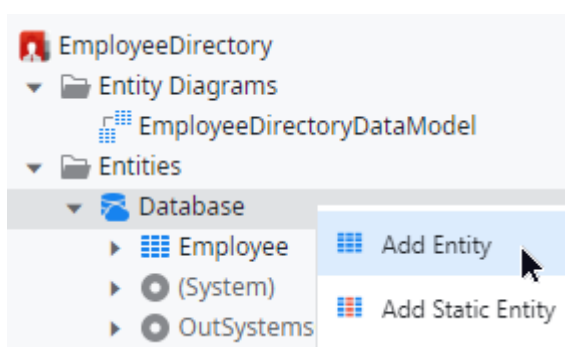
2) Set the Entity **Name** to *Project* in the properties window.
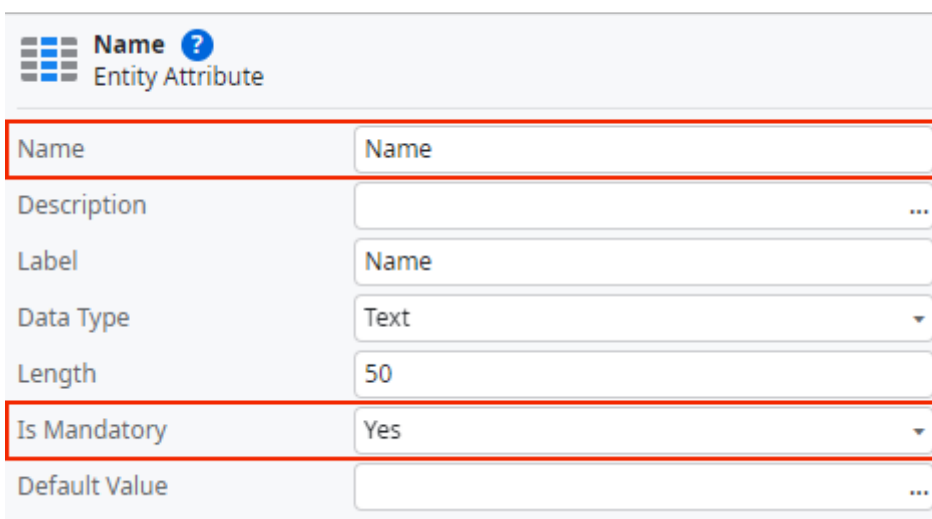
3) Right-click the Project Entity, and select **Add Entity Attribute**.

4) Set the new attribute **Name** to *Name*, and set it as mandatory.

5) Add another attribute named *Description* with a **Length** of *500* and set it as mandatory.

6) Add another attribute named *DueDate*, and set it as mandatory.

7) Publish the module.

8) Similarly, create another Entity and set the Entity **Name** to *Department*.

9) Add the following attributes to the Department Entity.

   ● Name (mandatory)

- Description (data type *Text*, length of 500 characters, and not mandatory)
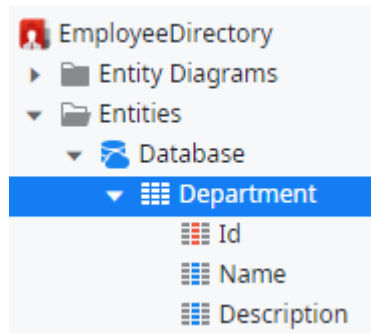
10) Publish the module to save the changes.

Bootstrap Data into an Entity from Excel

Although you have the Entities created, they have no data. Let's use the Project.xlsx and Department.xlsx files to bootstrap some data to the Project and Department Entities, respectively.

1) Right-click the **Project** Entity, then select **Advanced > Create Action to Bootstrap Data from Excel...**
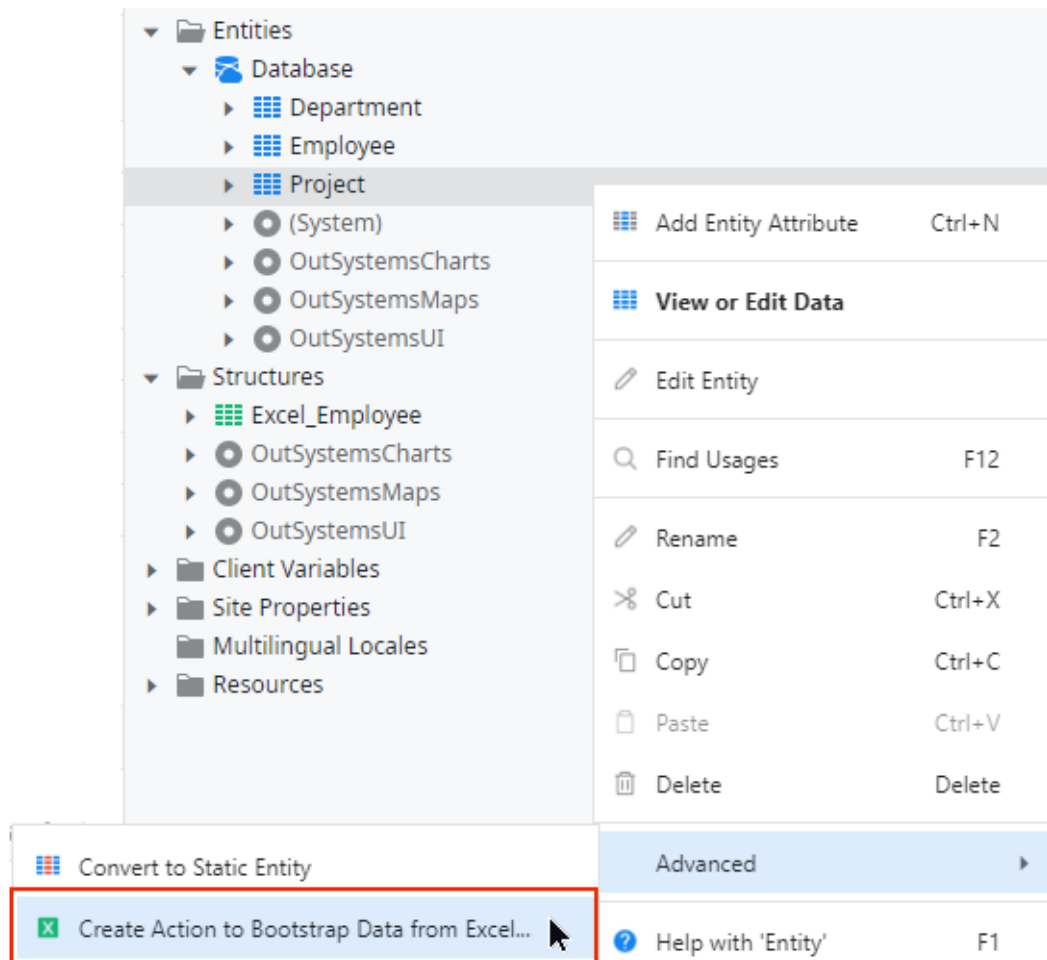
2) Locate the Project.xlsx file and open it.

3) Validate that the three Entity attributes are mapped to the three columns in the Excel file, then click **Proceed**.

4) Publish the module.

5) Right-click the **Project** Entity then select **View or Edit Data**.

The data from the Excel file should appear on the data previewer.

6) Similarly, bootstrap the data from the Department.xlsx file to the **Department** Entity.

7) Publish the module.

8) Right-click the **Department** Entity then select **View or Edit Data**.

The data from the Excel file should appear on the data previewer.

Create Entity Diagram

1) In the Data tab, under **Entity Diagrams**, double-click the **EmployeeDirectoryDataModel** to open it.
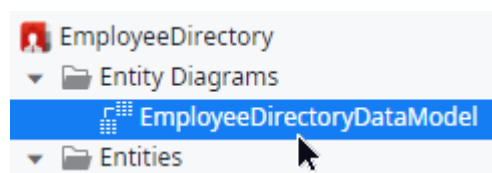
2) Drag the **Department** Entity to the previewer.
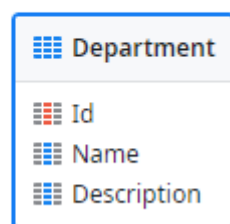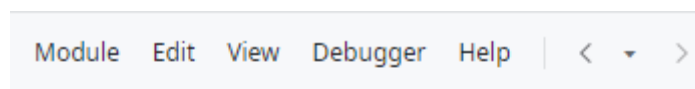
3) Similarly, drag the **Employee** and the **Project** Entities to the previewer.

4) Publish the module to save the changes.

Congratulations! with this, you've effectively performed the following tasks.

- Create two Entities and its attributes

- Bootstrap data into the newly created Entities

- Create an Entity diagram for the Employee Directory data model