

Pagination and Sorting - Exercise

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Outline

In this exercise, we will add pagination and sorting functionality to the Movies Screen of the OSMDb application.

Our application can have multiple movies, which can lead to the Table in the Movies Screen to have a lot of records to display. To have a better user experience, we want to add the pagination functionality, so that each page only shows five movies at a time.

Then, we want to enable the users to be able to dynamically sort the movies, by clicking on any of the column headers in the Table. This means that if the user clicks on the Title header, the movies should appear sorted by movie title.

At the end, we have an extra challenge to implement two scenarios:

- When the user clicks on a column header twice in a row, the order of the sorting should change from ascending to descending.
- When the sorting by a column is done, the pagination should reset to the first page.

Hands-on

Pagination

Let's start by implementing the pagination in the Movies Screen. The pagination should appear below the Table and we should have 5 movies per page.

To create the pagination we need to:

- Use the pagination widget and set its properties.
- Define the logic that will run whenever the user changes the page.
- Adjust the Aggregate to work with the pagination accordingly.

At the end of this section, the Movies Screen should look like this:

Movies

New Movie

Title ↕	Year ↕	Plot Summary ↕	Gross Takings ↕
Star Wars: The Force Awakens	2015	Three decades after the defeat of the Galactic Empire, a new threat arises. The First Order attempts to rule the galaxy and only a ragtag group of heroes can stop them, along with the help of the Resistance.	\$815,843,529.00
Raiders of the Lost Ark	1981	Archaeologist and adventurer Indiana Jones is hired by the US government to find the Ark of the Covenant before the Nazis.	\$242,374,454.00
Schindler's List	1993	In Poland during World War II, Oskar Schindler gradually becomes concerned for his Jewish workforce after witnessing their persecution by the Nazis.	\$16,439,233.00

Sorting

Now, it's time to enable the users to dynamically sort the movies by clicking on the respective column header in the Table. This should be done for all the columns in the Table.

To create the sorting we need to:

- Define the OnSort logic for the Table
- Adjust the Aggregate to sort the records dynamically, considering what the user selected at runtime.

Extra Challenge

In this section we have two extra challenges that improve our pagination and sorting functionality.

First, we want to make sure that whenever the end-user clicks on the same column twice, the second time the order of the sort is inverted. For instance, if the user clicks on the Title column, the movies appear sorted alphabetically by title (from A to Z). When the user clicks for the second time, the order shifts to descending (from Z to A). If the user clicks again, it goes back to ascending and so on.

Then, whenever the user sorts the movies by clicking on a column header, the pagination should be reset. This means that if we are in the third page of the Table, when sorting by title for instance, the pagination should go back to the first page.