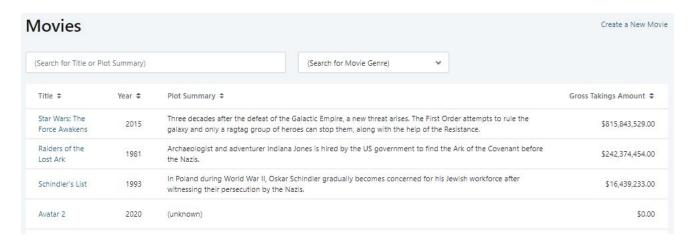# Search Filters - Exercise

Table of Contents

Outline

In this exercise, we will use Client Variables to expand the functionality of the application.

This will be done by adding a filter capability on the Movies Screen. We want to be able to search by movie title, plot summary and movie genre and we want to make sure that when we change to a different Screen, and come back, the search filter was not lost. The search filter should look like this:
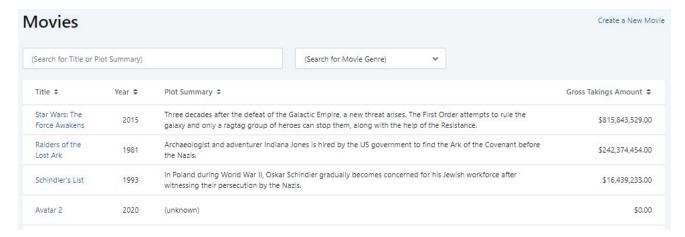
Note that the search should be done automatically, when the users finished typing the title/plot summary keyword, or when it just chose the movie genre. Also, the end-user does not need to type the whole movie title and the whole plot summary, for the search to return the movies that match the keyword that was typed.

Hands-on

Adding the Search Widgets

We will start this exercise by defining the UI part of the search filters. We want to make sure that any end-user will be able to search for the movie title and the movie plot summary, as well as for the movie genre. As indicated above, we want to make sure that the search filter looks like the following screenshot:

Hint: For the *(Search for Title or Plot Summary)* and *(Search for Movie Genre)* texts, the input widgets that we will use have a property that help us define such texts.

Saving the Searched Keywords

Any keyword that the user types for the title / plot summary, or any movie genre that the user selects, needs to be saved somewhere. And there is a special requirement we cannot forget. In our application, when the end-user searches for something and eventually navigates to a different Screen, the search filter used should not be lost. Meaning, that when the user eventually returns to the Screen, the search criteria is still applied.

The search criteria should only change when the user explicitly changes it on the page (by typing a new title or selecting a new genre), or when the user logs out. Note that at this point, the search does not work yet!

Search Logic

So far, we have the input widgets to support the UI part of the search and we have the data being saved in the corresponding variables. The last thing we need is to trigger the logic that supports the search.

GetMovies Aggregate

On this Screen, we have the GetMovies Aggregate that fetches all the movies. Now, we need to change it to make sure that it considers the search criteria introduced by the user.

Hint: For the title and plot summary, we don't need to have the full title or summary in the search box to find a match. A simple keyword that is contained in the title/plot summary matters. For instance, if I search for 'sta', every movie with 'sta' in the title or plot summary should appear. To accomplish that, we can do the following:

Movie.Title like "%" + TitleAndSummarySearch + "%" or Movie.PlotSummary like "%" + TitleAndSummarySearch + "%"

Here, the % are used as wildcards, so this expression can be read as: we want a movie title with some text (possibly empty), followed by the keyword and then another text (possibly empty). The same logic is valid for the plot summary.

Triggering the Search

We want this particular search to be triggered automatically, whenever the user types a keyword or selects a genre. For that, we need to use the **OnChange** property of the input fields. This OnChange is similar to the OnClick on Buttons and Links. With the OnClick, when the user

clicks on the widget, it triggers an Action. Here, with the OnChange, everytime a user changes the search criteria, an Action will be triggered.

Now, we just need to implement the logic needed to make sure the movies list is refreshed using the new searching criteria.