Report

Design

Step1:

Use fetch function to import json data in to js file. Besides, In the fetch(), I set up the two anchors: back and next, when they are pressed, when the back anchor is clicked, the website will show the 10 former rows of the rows displayed now. When the next anchor is clicked, the website shows the next then rows ranked after rows displayed now.

Step2:

construct a function named initialise, when the web page is loaded, it is called, when it is called, it add options of start year option box and end year option box which can be used to by users to select the movies of the certain years. I respectively use for loop to finish it. Besides, I write two event handlers to make sure when users click on the button or select the options in the pull down lists, system can be triggered to make selection.

Step3:

Define variable page = 1, which means the current page is the first page. Variable lastPageIndex = 1, Respectively construct function next() and prev(). When next() is called, make page += 1, lastPageIndex += 10. which means the last row's index in the last page += 10. Then call rebindData() function, this function first call deleteAllData() function, it uses for if iterated loop to go through all the rows of table and delete them, I use if statement to make the first row is not deleted. Then the function showAllData(data.slice(lastPageIndex, (page * pageSize) + 1)) is called, it shows the several rows of the selected results on the web page. Then a function named extract is called. It gets the the selected value of the element selection and gets user's input.

When the function prev() is called. The other procedures are the same as next() except for page should be reduced by one and lastPageIndex should be reduced by ten.

Step4:

There is also a movie genre option box in website, so I construct a function named genreoptions to add options to it, I use iterated for loop to extract all movies' genres in json data, and put them into a new set, because set only store values that unique, so after the for loops finish, it only contains values that are different from others. Use this set's values to be the element options' values.

Step5:

Construct a function named showAllData, it can insert rows into the table that shows the information of the movies. When it is triggered, it will build up a row and insert cells into the row and then make the cells' innerText is the content extracted from the json data. There is a for loop to make sure this process is repeated until all the movies' information is shown on the cell. It is worth mentioning that because some

movies' genere and cast is empty in json data, so when I first executed my codes, the website reported an error occurred, then I found that there should be a if statement to make sure when the extracted value is null, the cell should show something. I add an column showing the website's wiki link, here I create a new function named create Link, because all the movies' wiki URL have similar structure, the former text of them all all same, so when called, it create a link and the link's href is fixed text add the movies's name.

Step6:

Construct a function named selectGenreChang(), it firstly call rebindData() to get the current page's rows when there is no other limitations. Then it uses if statement to judge if the selected value is "All", if so, it shows data as usual, if not, it then uses for if loop to judge if the selected value is same as the every movie's genres.

Step7:

When the selected value of the year pull down lists changes, the function judging() is called. This function also call rebindData() first, and for every selected rows, it judges if the movie's year is not in the interval between start year and end year. If so, it will delete this row.

Step6:

When the search button is pressed, the function searching() is called. It calls the function rebindData() and judging(), the function judging is called is because the searched data should be base on the data selected by selected value in the year lists. Then it goes through the remaining rows to see if the inputed string is a substring of one movie's title or cast. If so, remains the row, otherwise, the row will be deleted.

Step7:

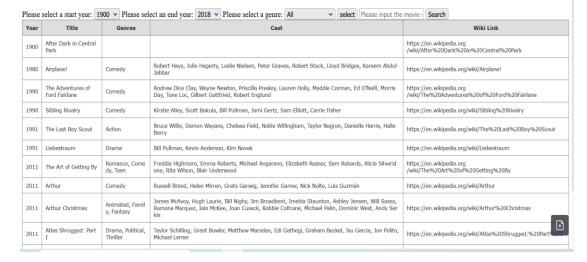
Add some small functions.

Check

When the web page is opened, it is shown as following (using movies-small.json):

American Movies

A database of American movies released since 1900



When I respectively select 1990 and 1990 in the first and second pull-down list, then the website is show as following (using movies.json):

American Movies

A database of American movies released since 1900



back next

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When I input "Sea" in the input bar and click the button, then the website is shown as following:

American Movies

A database of American movies released since 1900



When I select "Comedy" in the genre pull down list, then the website is shown as following (using movies-small.json):

American Movies

A database of American movies released since 1900



When I respectively select 1940 and 2000 in the first and second pull-down list, input "arthur" in the input bar, then the website is show as following (using movies-small.json):

American Movies

A database of American movies released since 1900



Difficulty

The major difficulty I met is I didn't know how to use the fetch function, I haven't use it before, I didn't know if I should put function searching(data) and judging(data) into .then(data =>{}) statement in the beginning, after several experiments, I found it is right to calling these two function in the fetch.

Another difficulty is when I tried executing the codes, an error occurred reminding me that document.getElementById("movieTable") is undefined, I checked my js codes for a long time but couldn't found where I made mistake,finally, I found that it is because in the html file, when I defined the id value of the table, I forgot to write the quotation marks. This mistake teaches me a lesson, when writing the codes, we should concentrate much on the codes, otherwise we could make small mistakes that need us much more time that writing codes to debug.

Another difficulty is in the beginning, I wrote the for of loops in the codes because I think it is more concise, but when I ran the codes, website reported an error, I spent a long time to debug, finally, I found the reason is the for of loop isn't usable to all arrays, this json array is made up by objects, in this situation, the for of loop is not applicable.