

CPSC 1520 ClientSide Scripting

Assignment #2

Due Data March 31st, 2024@. 11:59pm.

Skills: fetching data, display templating, arrays methods, objects, filtering.

Introduction

One of the most common tasks that we have to do as Front End Developers is to fetch and display data. In this assignment you are going to load some album data and display it. Once the data is loaded you can use the form inputs to filter the data and update the UI to reflect the search criteria chosen. The lab focuses on your knowledge of arrays, loops, objects, templating, and the fetch API.


Overview

Inside the assignment folder you have a README.md file that contains some of the code resources you will need to finish the tasks. The assignment folder also includes the album data in the folder data. The file is named albums.json. The template you need to display the data is in the README.md file.

You are required to complete all the assigned tasks outlined in the section below marked **Required Tasks**. For information on grading refer to the **Marking Key** located at the end of the document. for instructions on completing and grading the assignment.

Example Functionality

Below is a screen shot of what the UI should look like once you have loaded and rendered the data.

 Album Creator

Filter

Highest Rated Albums

Album	Release	Artist Name	Genres	Average Rating	# of Reviews
OK Computer	16 June 1997	Radiohead	Alternative Rock, Art Rock	4.23	1531
Wish You Were Here	12 September 1975	Pink Floyd	Progressive Rock, Art Rock	4.29	983
In the Court of the Crimson King	10 October 1969	King Crimson	Progressive Rock, Art Rock	4.3	870
Kid A	3 October 2000	Radiohead	Art Rock, Experimental Rock, Electronic	4.21	734
To Pimp a Butterfly	15 March 2015	Kendrick Lamar	Conscious Hip Hop, West Coast Hip Hop, Jazz Rap	4.27	379
Loveless	4 November 1991	My Bloody Valentine	Shoegaze, Noise Pop	4.24	1223
The Dark Side of the Moon	23 March 1973	Pink Floyd	Art Rock, Progressive Rock	4.2	1549
Abbey Road	26 September 1969	The Beatles	Pop Rock	4.25	961
The Velvet Underground & Nico	12 March 1967	The Velvet Underground & Nico	Art Rock, Experimental Rock	4.23	929
The Rise and Fall of Ziggy Stardust and the Spiders From Mars	16 June 1972	David Bowie	Glam Rock, Pop Rock	4.26	721
Revolver	5 August 1966	The Beatles	Pop Rock, Psychedelic Pop	4.23	1160
Madvillainy	23 March 2004	Madvillain	Abstract Hip Hop	4.26	376
Remain in Light	8 October 1980	Talking Heads	New Wave, Post-Punk	4.25	520
The Black Saint and the Sinner Lady	July 1963	Mingus	Avant-Garde Jazz, Third Stream	4.34	365
In Rainbows	10 October 2007	Radiohead	Art Rock, Alternative Rock	4.18	756
A Love Supreme	February 1965	John Coltrane	Spiritual Jazz	4.3	433
good kid, m.A.A.d city	22 October 2012	Kendrick Lamar	West Coast Hip Hop, Conscious Hip Hop	4.2	315
Paranoid	18 September 1970	Black Sabbath	Heavy Metal, Hard Rock	4.19	582

Example Functionality

Below is a screen shot of the UI when you search for dark.

Album Creator

Album Filters

dark

Minimum Album Rating

Filter

Highest Rated Albums

Album	Release	Artist Name	Genres	Average Rating	# of Reviews
The Dark Side of the Moon	23 March 1973	Pink Floyd	Art Rock, Progressive Rock	4.2	1549
My Beautiful Dark Twisted Fantasy	22 November 2010	Kanye West	Pop Rap, Hip Hop	4.07	636

Example Functionality

Below is a screen shot of the UI when you have a minimum rating of 4.3.

Album Creator

Album Filters

Search Albums

4.3

Filter

Highest Rated Albums

Album	Release	Artist Name	Genres	Average Rating	# of Reviews
In the Court of the Crimson King	10 October 1969	King Crimson	Progressive Rock, Art Rock	4.3	870
The Black Saint and the Sinner Lady	July 1963	Mingus	Avant-Garde Jazz, Third Stream	4.34	365
A Love Supreme	February 1965	John Coltrane	Spiritual Jazz	4.3	433

Example Functionality

Below is a screen shot of the UI if you search for beatles with a rating of 4.2.

Album Creator

Album Filters

beatles

4.2

Filter

Highest Rated Albums

Album	Release	Artist Name	Genres	Average Rating	# of Reviews
Abbey Road	26 September 1969	The Beatles	Pop Rock	4.25	961
Revolver	5 August 1966	The Beatles	Pop Rock, Psychedelic Pop	4.23	1160

Bonus Example Functionality

Below is a screen shot of the UI if you click on the average rating header the albums should be sorted by the highest reviews to the lowest review rating. If you click on the reviews heading the albums should be sorted from the highest review count to the lowest.

Album Creator

Album Filters

Search Albums

4.25

Filter

Highest Rated Albums

Album	Release	Artist Name	Genres	Average Rating	# of Reviews
The Black Saint and the Sinner Lady	July 1963	Mingus	Avant-Garde Jazz, Third Stream	4.34	365
In the Court of the Crimson King	10 October 1969	King Crimson	Progressive Rock, Art Rock	4.3	870
A Love Supreme	February 1965	John Coltrane	Spiritual Jazz	4.3	433
Wish You Were Here	12 September 1975	Pink Floyd	Progressive Rock, Art Rock	4.29	983
To Pimp a Butterfly	15 March 2015	Kendrick Lamar	Conscious Hip Hop, West Coast Hip Hop, Jazz Rap	4.27	379
The Rise and Fall of Ziggy Stardust and the Spiders From Mars	16 June 1972	David Bowie	Glam Rock, Pop Rock	4.26	721
Madvillainy	23 March 2004	Madvillain	Abstract Hip Hop	4.26	376
Abbey Road	26 September 1969	The Beatles	Pop Rock	4.25	961
Remain in Light	8 October 1980	Talking Heads	New Wave, Post-Punk	4.25	520

Tasks #1

Fetch the album data from the projects data folder (**albums.json**).

Create an async function to load the album data.

Create a variable called **albumStore** or use another name that gives semantic meaning to another developer that the variable is a backup of the original data loaded.

Do not edit the **albumStore** variable using any of the array methods, it is the single source of truth for the application data. If you need a new copy of the album data, then make a copy using the spread operator and assign it to new variable as demonstrated in class.

Once you have created a copy of the array data then use display templating to render the data and template into the table. add the album data into the table. Add the template data to the correct section of the table element.

Tasks #2

Add a submit event to the form.

Get the search query and minimum rating values from the form inputs.

Text Input Field Search

Create a function that searches the objects in the JSON array. Use the input text field value as the search term. This function should search the objects in the array for the **artist** and **artistName** properties for each album object. Return the results of the search as an array. If no data is found, then return null. The data query search should be case insensitive.

Number Text Field Search

Create a function that searches the objects in the JSON array based on the minimum rating input. Use this value to search the objects in the albums array against the **numberRating** property of the data objects. Return the search results as an array. If no data is found, then return null.

Render Function

Create a render function that takes the search results from the either of the two functions created as an argument. The render function should update the table display with then results passed as an array of object when the render function was called. Use the template provided.

Bonus Task 1

For the bonus task order the album data based on the average rating and minimum reviews fields in the table. Add an event to the two cells and listen for the click event. Sort the data from highest to lowest value.

Bonus Task 2

Sort the data by release date field.
The data should be sorted from the highest to lowest (lowest means the date closes to today).
Sort the data from highest to lowest value.

Marking key

Tasks	Grade	Marks	Total
TASK 1 Data Fetching & Templating the Data Fetched Album data successfully. Application creates a store variable as a data backup. Implementation of a reusable render function. Template is rendered into the correct location in the table.		2 1 3 1	7
TASK 2 Data Filtering Form Inputs Submit event added correctly and uses a named handler function. Input field values are sanitized before calling the respective functions. Album and Album Name Filter Function Data objects are filtered based on the <i>album</i> and <i>albumName</i> properties. Returned data is rendered into the correct location in the table. Null value return displays feedback that no search results were found. Filter function only called if there is valid data. Number Rating Filter Function Data filtered based on the <i>numberRating</i> property of the album object. Returned data is rendered into the correct location in the table. Null value return displays feedback that no search results were found. Filter function only called if there is valid data.		3 1 1 1 1 1 1 1	10
Bonus Tasks Netlify URL Submitted GitHub URL Submitted Zip file of assignment files submitted		3	20

Marking Rubric

Marks	5 Marks Criteria
5	Task was completed with the highest of proficiency adhering to best practices and followed subject matter guidelines all tasks were completed to a professional standard.
4	Task was completed well some minor mistakes. Well above average work shows good understanding of the task and high degree of competence
3	Satisfactory work some features missing or incorrectly implemented. Show a moderate level of understanding in the task with room for improvement.
2	Below average work. Task was poorly complete. Show understanding of the task and the requirements to implement but implementation was poorly executed.
1	Some of the task was completed. Showed a lack of understanding in the subject matter and very poorly executed
0	Not completed.

Marks	3 Marks Criteria
3	Proficient shows a high degree of competence in completing task.
2	Capable above average degree of competence in completing task
1	Satisfactory shows a satisfactory degree of competence in completing task.
0	Shows a limited degree of competence in completing task.

Marks	1 Marks Criteria
1	Task Completed satisfactorily
0	Task was not executed.

