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| Faculty of Applied Sciences and Technology |
| **XML/JSON Data Processing** |
| ITC5202 - Project |
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| **4/17/2023** |

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| This document explains how to process XML/JSON data …………………………. |

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# Step 1

(Describe the major steps for designing the JavaScript function(s), how you test this program, add some screenshots of the output )

1. Using json

Graphical user interface, text, application, email

Description automatically generated

First, the input from the user needs to be obtained. In this program, the input is the subreddit name entered by the user in the search box. The value of this input is obtained using jQuery.

Next, a GET request needs to be made to the Reddit API. The program makes a GET request to the Reddit API using the subreddit name entered by the user. The request is made using the jQuery.getJSON() function, which returns a JSON object containing information about the matching subreddits.

Once the results are obtained, the program needs to sort them based on the title of the subreddit in ascending order.

Using a loop, the program then iterates through the sorted results and builds an HTML output that displays information about each subreddit. The output is stored in a variable called output.

The final step is to display the output variable on the webpage. This is done by setting the HTML of the #locs element to the value of output.

To test this program, users can enter the name of a subreddit in the search box and click the "SEARCH" button. The program should make a request to the Reddit API and display information about matching subreddits on the webpage. Here's a screenshot of the output for the subreddit "programming":

# Step 2

(Describe the major steps for designing the JavaScript function(s), how you test this program, add some screenshots of the output)

Graphical user interface, text, application

Description automatically generated

Initially we are creating an input field wherein we'll be entering the search term. After clicking on the search button, the function will get executed. Next we are using "event.preventdefault()" to prevent the default action from happening. Following this, we are getting the input and assigning it to the "searchQuery" variable. Next, we are sending out a request to the API using the getJSON() method. Then we are using the forEach loop to loop through the child elements to get the required information.In order to get the date in a proper format, we are using the toLocaleDateString() method.

# Step 3

(Describe the major steps for designing the JavaScript function(s), how you test this program, add some screenshots of the output)

Graphical user interface, text, application, website

Description automatically generated

The 3rd step designed to make a Reddit search using the Reddit API. The major steps in designing the code are as follows. Firstly, when the search button is clicked, the event listener is triggered and the function executes. Secondly, the values entered in the two input fields, subreddit and keyword, are obtained using JavaScript. Thirdly, the URL for the Reddit search is constructed using the values entered in the input fields. Fourthly, an AJAX call is made to the Reddit API using the constructed URL. Fifthly, if the AJAX call is successful, the response data is processed to retrieve the top 3 posts based on their score. Sixthly, for each post, a card is created using HTML and the relevant data is inserted using JavaScript. Seventhly, another AJAX call is made to retrieve the top 3 comments for each post. Eighthly, the data for each comment is inserted into the card for the relevant post. Finally, the card for each post is appended to the HTML page. To test this program, user can enter a subreddit and a keyword in the input fields and click on the search button. If the search is successful, the top 3 posts and their top 3 comments will be displayed in the form of cards on the HTML page.

# Step 4

(Describe the major steps for designing the JavaScript function(s), how you test this program, add some screenshots of the output)

Graphical user interface, text, application

Description automatically generated

In step 4 our webpage is designed to extract user input and data from the Pushshift Reddit API using a JavaScript function. The function follows a series of steps that include adding an event listener to the search button to collect user input, obtaining the values for the subreddit and keyword inputs, and using the jQuery getJSON method to retrieve data from the Pushshift Reddit API. The top three posts are filtered by score and then sorted, and for each post, an HTML output is generated that includes the post ID, author name, comment body, score, and creation date. This HTML output is then added to the locs div element in the HTML document.

After executing enter a subreddit name and a search term into the search box and click the search button. The program will retrieve data from the API and display the top three matching posts from the given subreddit. Any issues can be found in the browser console or by viewing the API response data. A screenshot of the program in action is provided below for your reference.

# Step 5

(Describe the major steps for designing the JavaScript function(s), how you test this program, add some screenshots of the output)

Graphical user interface, application

Description automatically generated

To create JavaScript functions for the Step 5,

We are using the fetch() method to make a request to the reddit API end point for the users in order to retrieve the JSON data. We are setting the type parameter to get the user data and setting the limit to 100. We are then using the sort() method for sorting the data in descending order based on the comment karma. Following this, slice() method is being used to get just the top 10 users off the 100. We are then using the forEach loop to iterate through the user data with the highest comment karma. Every time it iterates through the loop, we get the user information (name, followers, subscribers, id, icon). Then, an empty string "output" is being created where in all the HTML elements are getting concatenated. After this is done, we are appending it to the page using the append() method.

# Step 6

(Describe the major steps for designing the JavaScript function(s), how you test this program, add some screenshots of the output)

Graphical user interface, application

Description automatically generated

In step 6 we fetch data from the Reddit API, create a function named "searchReddit" that takes a search term as input and uses jQuery's $.getJSON() method. Store the API endpoint URL for the search term in the "link" variable and extract the first 50 results using the "slice()" method. Sort the data in descending order by score using the "sort()" method, then iterate over the sorted data using the "each()" method and create HTML content for each item in the loop. Store the HTML content of each item in the "output" variable and append it to the #locs element using the "append()" method. Create an event listener for the click event of the #textsearch button, call the "searchReddit" function inside the event listener, and use the "preventDefault()" method to prevent the page from refreshing.

When user enter a search term in the search box, and click the search button. The program should fetch data from the Reddit API and display the results on the web page. View the fetched data and any error messages in the developer console of the web browser.

# Summary

(Describe how did you divide the work, share your feedback about this project like new points that you learn, challenges, …)

We divided the six steps equally.1&3 were handled by Athira.

George handled 4&6 and the entire UI, Ashish handled 5&2, and each member documented their work. We faced numerous challenges. We used to display a large quantity of data here, therefore UI design is much more difficult and time consuming. Using the json technique, we only got finished output for the first step. The xml version did not produce any output. According to the third step  We got the output of one post and its comments but we were unable to load the all the posts with the corresponding comments .