Lab Activity: HTTP Requests via JavaScript

1 Introduction

You are working in a Software company and your current task it to create a HTML webpage along with its JavaScript to interact with an API from a given company. However, this other company is a little behind and due to that you will need to create a fake database to be able to develop and test your work.

The project is about handling creation, reading, updating, and deleting (CRUD) operations on smartphone information found in the database.

2 The general webpage layout

Your webpage shall resemble the one that we have used in the hands-on lecture. This is a hint for you to start your lab by copying that project and modifying as needed…

Figure 1 has a suggestion on how the page looks like. This specific page does not have any CSS style, but if you want to make it prettier, go ahead and surprise your instructor.

3 Smartphone Features considered in this project

Your fake database shall have the following information for each smartphone

- `Brand`
- `Price`
- `Screen`
- `Pixels`
- `Resolution`
- `Storage`
- `Ram"`
- `Battery`
- `Weight`

All the above information can be found in the following site:

https://www.productchart.com/smartphones/

By hovering over a given picture in the map shown in the right side of that page, you can get info about any of the hundred's phones shown in that map (See Figure 2). Please create a database with at least 4 smartphones.

4 General webpage behavior

4.1 Display all Smartphone entries

By clicking on the "View all Smartphone entries" button, your page shall show the list of available smartphones in the fake database. For this event, only the smartphone brand and its price shall be displayed, along with its ID, as shown in Figure 3.

4.2 Display details about a given Smartphone

If the user enters a smart phone ID (such as 3) and clicks the "View Smartphone" button, your application shall show all the features of the specified smart phone, as shown in Figure 4. The smart phone ID input field shall be reset to nothing.

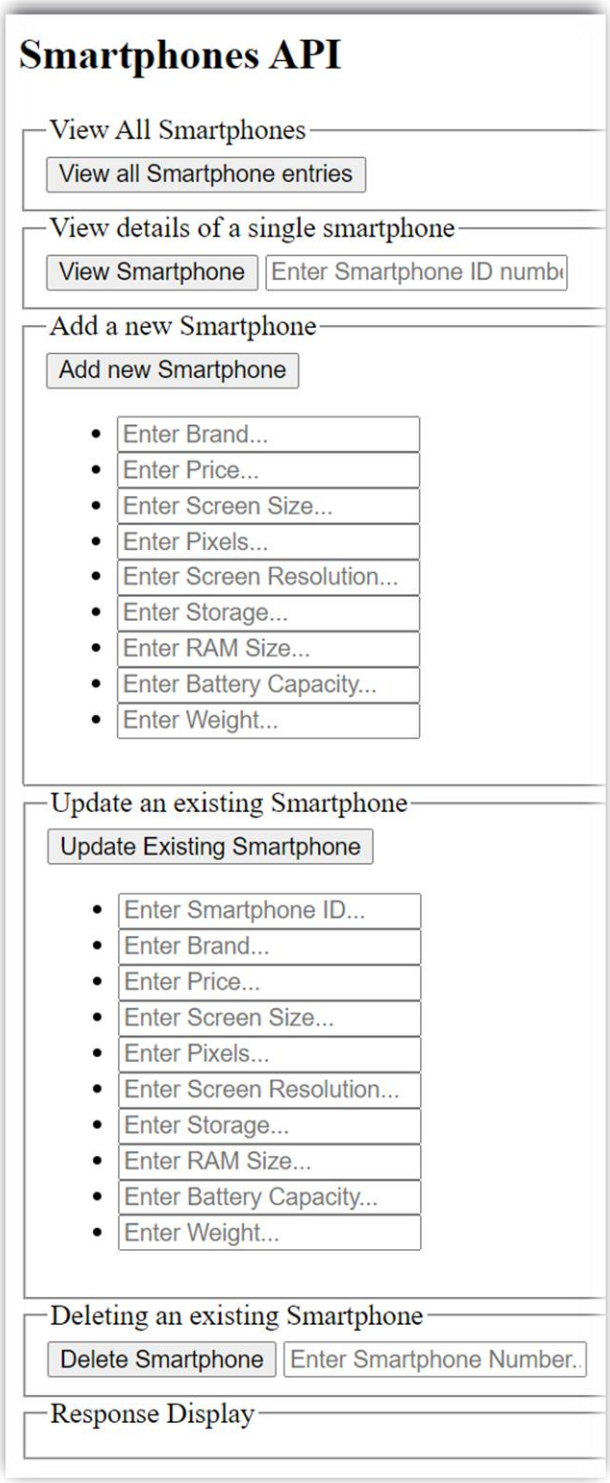

Figure 1. The Webpage Layout

Figure 2: Website containing the required information

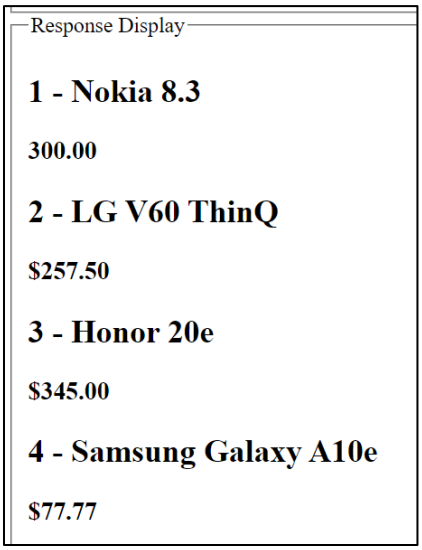

Figure 3: List of all smartphone entries

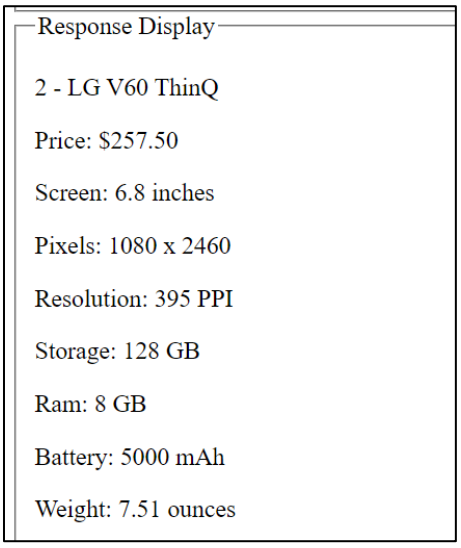

Figure 4: Details of a given smartphone

4.3 Adding a new Smartphone

The user can add new smartphones into the database by filling all the fields in the “Add a new Smartphone” area, and click the “Add new Smartphone” button. By doing so, your database shall include this new smartphone and clean up all the input fields in the webpage. No output is required to be displayed by your webpage application. To check if the smartphone was successfully entered in your database, use the ”View all Smartphone entries” button, as discussed in Section 4.1.

4.4 Updating an existing smartphone

The user can update some or all information about a given device in the database by using the “Update an existing Smartphone” area. Since this will evoke a PATCH http request (not a PUT), you do not need to provide all the information on the fields found in this area; only the ones you want to change. Example of such situation would be changing a given smartphone price (on sale), let’s say from $600.00 to $400.00. In this scenario, only the Smartphone ID and the price fields are necessary; the other fields can be left blanked.

No output is required to be displayed by your webpage application. To check if the smartphone was successfully updated in your database, use the ”View all Smartphone entries” button, as discussed in Section 4.1.

4.5 Deleting a smart phone from database

Your application shall allow the user to delete a smart phone from the database (e.g., the phone is not produced anymore). The only information that you need to provide is its ID and click the “Delete Smartphone” button.

No output is required to be displayed by your webpage application. To check if the smartphone was successfully updated in your database, use the ”View all Smartphone entries” button, as discussed in Section 4.1.

5 The Fake JSON database

To create and run a fake JSON database in your computer, please follow the steps discussed in class and shown in the respective short videos found in the course Syllabus.