Module: **Web Application Development**

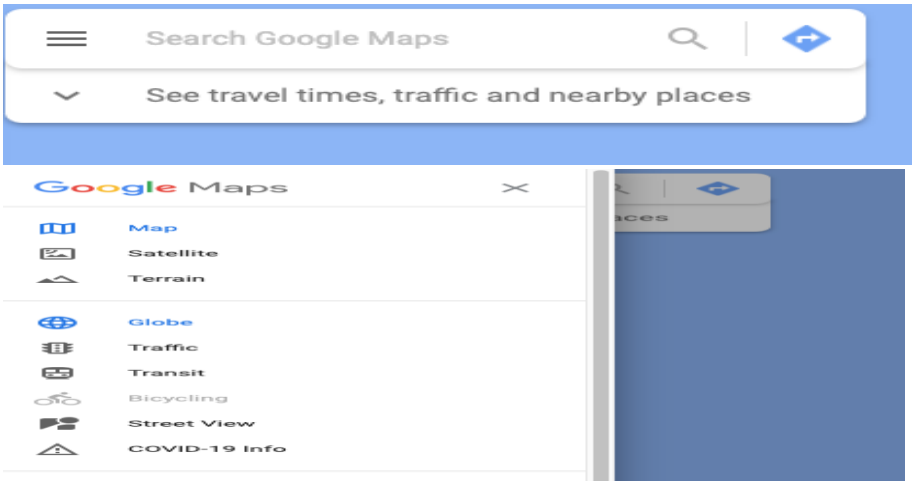
Assignment No. = **2**

Total Marks: **15**

In this assignment, you are required to extend the client-side interface for your Web application submitted as Assignment 1. You are required to introduce JavaScript and related technologies learnt during Lecture 4 to enhance the client-side interface for your web application. You also need to demonstrate good Java Script programming/scripting skills for processing HTML/CSS documents, dynamic content generation, event handling and local data processing.
You are required to introduce at least the following features;

Q1. Dynamic Menu Bar with Java Script (4 Marks)

Introduce a dynamic menu bar on the top and/or side panel of your web application. The menu bar should only appear after a client-side event (click, mouse over etc.) is captured and should disappear upon capturing another event. Please note that you are required to create this menu bar using JavaScript rather than CSS only and it should be more aesthetic in design and appearance. You are encouraged to come up with your innovative design ideas and introduce multiple features (fading in, scrolling, dynamic positioning etc.) which you believe are suitable for your web application and target audience. An example menu bar from Google maps is shown below.



Q2. Form Data Validation (4 Marks)

Create at least two different HTML forms in your web application having a minimum of 10 different input fields/types combined in both forms requiring input from a user. You are required to introduce different types of validation checks and controls for user input fields using JavaScript and provide suggestions/hints to the user regarding the right input.

Q3. Form Data Local Storage (4 Marks)

Using the web forms you created for Q2, collect user input dynamically and store all inputs from the user either into a local file or in the system cache. Then introduce a button in your webpage that on click displays all responses received so far in a tabular form creating a dynamic HTML table and its contents. Alternatively, you can get dynamic input from the user in the form and display the input incrementally just below the form e.g. A table below the form which has one row added after every time a submit button is hit on the form. You can use either HTML local storage, session storage or AJAX external contents loading functionality.

Q4. Event Capturing and Handling (3 Marks)

You are required to implement a variety of events capturing functionality in your web application. You are expected to use at least 3 different types of events (e.g. alert, confirm, submit, right click, on focus, and hover etc.). Each of these events listeners should perform some meaningful task relevant to your application domain which will be triggered on users action within the browser.

You are required to add comments (wherever possible) in your code to describe functions/statements you have written and their purpose.

A briefing document should be prepared for all questions, which should clearly describe your approach and code written for addressing the assignment questions. In your briefing document, you should clearly point to the appropriate section within the visual interface (through screenshots) and code files (using file name and line number or any other handler) explaining the logic of your code and how it accomplishes the required tasks.

Assignment should be submitted on the loop as a single zip file containing all relevant code files including the briefing document (word doc or pdf).

Students must ensure that their web application must not have any broken links if executed on a different machine and tested for a variety of browsers ensuring its compatibility. The main HTML file (starting point of your application) must be named index.html

Please note, your submission will be assessed qualitatively e.g. fix marks on completion of a required task plus additional marks depending on the quality of the final appearance and functionalities introduced by the student.