Assignment 2: Bus Position Locator for new students to TAMK

(assignment is worth 50% of the marks for this course)

Requirements

You should build an application in HTML, CSS and Javascript that is aimed at non-Finnish speaking students unfamiliar with Tampere. It will perform a similar function to the bus location viewer (**lissu.tampere.fi**) While this is a very good service, it may appear quite complex to someone new to the city. This application is intended for new TAMK students and visitors. However, it is only necessary to support interaction in English.

The application (requirements):

- should be based on a map service, such as Google maps, or Leaflet.
- should allow the user to select a number of bus lines and then display the present locations of buses on those lines. should allow the user to display their current location
- should include some TAMK branding in the interface

Main structure

In this application, the JSON file is retrieved from an external source (http://lissu-api.herokuapp.com). Copy and paste this address into a browser and observe the response.

Set up an array of BusesOfInterest in your JavaScript file. Provide a means on the page of allowing the user to select which buses to add in the HTML. You may also decide to pre-select these for the user.

Now decide how you will maintain a set of markers for the buses of interest.

When you run the application, use window.setInterval() to get a new set of bus data. There is no point in requesting this more frequently than every 1000ms as this is the frequency at which the 'proxy server' collects this.

Now the main job is:

```
//(on each update)

      //get the JSON data

      //loop through the 'vehicles' array and check whether the 'line'
      attribute of the current object is included in the
      BusesOfInterest array.

            //If it is, use the data from the current object to update
            the position of a marker on the map. Update also the marker
            with bus details
```

Design Report

This should be 800 words (+/- 10%) and include word count. Should be well presented. This should indicate how you have taken the needs of the user group into account in the design of your application

Assessment

The key assessment points will be

- correct display of the user's current location, means of selecting of buses of interest and presenting current location of buses on map. (60%)
- responsive application (10%)
- design of the interface suited to target user group (10%)
- your own extensions (10%)
- design report (10%)

The indicators for the marks awarded for each assessment point are shown on the attached mark scheme.

Web and App Programming: Assignment 2 Design of a Bus Guide for Visitor/New Arrivals at TAMK

Mark Scheme

assessment point	weight	% * wt	%	Fail	Low Pass	High Pass
correct display of the user's current location, means of selecting of buses of interest and presenting current location of buses on map.	0.5			significant parts of the applications fail to work properly. Little apparent effort, code does not validate	some limitations in the implementation of the required features, but most of these work.	Possible to select buses to display and to change these, informative feedback about which buses displayed, current location of user visible and distinct from buses, settings saved in local storage, bus positions updated correctly. HTML and CSS validate
responsive application	0.1			little or no attempt made to adapt presentation to device size	some responsive behaviour evident	Interface responds to different display device sizes, held in portrait and landscape, clear resizing design strategy
design of the interface suited to target user group	0.1			little or no evidence of thought about user needs	some limitations in how user needs have been taken into account	well-designed interface, features and defaults appropriate for target user
your own extension(s)	0.1			no extension	minor extension	significant or interesting extension
design report	0.1			too short, contains no critical evaluation, and little or no design justification, presentation may be poor and unprofessional	some significant omissions, presentation may be poor	word count 1200 words +/- 10% contains critical evaluation of own work contains explanation of how target group needs have been considered includes reports from evaluation lists extensions implemented contains validation reports
Total	1.0					