Evaluation Assignment

Create a web based SPA (single page application) for displaying users and their vehicles, and mapping the vehicle locations on a map.

The app consists of two main sections:

- List view – displays user data and vehicle data
- Map view – plots selected vehicles on a map

The application works with the following two methods:

- Get list - retrieves a list of users and their vehicles
  - `GET` `http://mobi.connectedcar360.net/api/?op=list`
- Get vehicle locations – gets the current position of user vehicles
  - `GET` `http://mobi.connectedcar360.net/api/?op=getlocations&userid={userid}`

The application should support the following workflow:

- When the application is opened, it should display the list of users in the list view.
  - The list item should also include the number of user vehicles and may contain other available information that makes it easier to work with the data.
- When a user item from the list is selected:
  - The list of user vehicles is displayed and
  - The user vehicles are plotted on the map.
    - The map should pan and zoom to display the selected vehicles, if necessary
    - The color of the marker should match the color returned in the `vehicle.color` attribute
  - There should be a way to go back and choose another user from a list
- When a vehicle is selected on the map:
  - The map view should highlight the selected vehicle
  - a custom callout (tooltip / overlay) should be displayed that shows *vehicle image, vehicle name, current address* (not present in data; needs to be retrieved by lat, long, i.e. reverse geocoding)
- When a vehicle item is selected on the list:
  - The map view should pan to center on the selected vehicle
  - The map should highlight the selected item and display the information callout as when selecting the item on the map

Additional requirements:

- Ignore the HTTP cache headers returned by the API. The user and vehicle data should be cached for 5 minutes, the vehicle location data should be cached for 30 seconds, i.e. when quickly switching between items the data should not be retrieved again if the cache is not expired.
- Automatically reload vehicle positions for the plotted vehicles every minute
- Display a human-readable error message if any occur

Remarks

- Use a modern JavaScript development environment.
  - For many projects, Scope relies on Angular with TypeScript, and uses OpenLayers for mapping, but you may use other frameworks
- The application should run on all major modern browsers: Chrome, Firefox, Edge, Safari, IE 11, etc. Recent of the browsers need to be supported, i.e. IE9 and IE10 support is not a requirement
- Use browser facilities for persistent data storage, e.g. local storage
- You may use public OpenStreetMaps map tiles sources, and publicly available OpenStreetMaps services for reverse geocoding (http://wiki.openstreetmap.org/wiki/Nominatim)

Desired non-functional attributes

- Clean code and logic will be highly valued
- Well-considered project structure, consistent with chosen framework conventions will be highly valued
- Attention paid to UI will be appreciated

Submitting the assignment

The completed project should be made available in a public git repository - Github, Bitbucket, or other.