

Assignment 1	Project Summary
Course	Multimedia Web Technologies with Angular and TypeScript - 2020

Project author		
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Project name	Online Traffic and Road Map Alerts
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1. Short project description (Business needs and system features)
<p>Often, when driving on some route you may find it useful to know about the traffic jams, speed cameras, accidents, toll and etc. The Online Traffic and Road Map Alerts provides the ability for drivers to share such information by inserting it and managing it through the application. Other users will be able to see the different inserted data on a map and be able to specify a beginning and end point of travel and select all or some of the information.</p> <p>The system will be developed as a <i>Single Page Application (SPA)</i> using Angular as front-end, and Node.js + express as backend technologies.</p> <p>The main user roles (actors in UML) are:</p> <ul style="list-style-type: none"> • <i>Anonymous User</i> – can only view the map but cannot edit the data on the map; • <i>Registered User</i> – can manage own data, only provide feedback; • <i>Administrator</i> (extends <i>Registered User</i>) – can manage (create, edit user data and delete) all <i>Registered Users</i>;

2. Main Use Cases / Scenarios		
Use case name	Brief Descriptions	Actors Involved
2.1. Browse information	The User browse information about what he/she and other people have added.	All users
2.2. Register	<i>Anonymous User</i> can register in the system by providing a valid e-mail address, first and last name, and choosing password.	<i>Anonymous User</i>
2.3 Login	<i>Registered User and Administrator</i> can login in the system by providing a valid email address and password.	<i>Registered User, Administrator</i>
2.4 Manage User Data	<i>Registered User</i> can change the information which he added; <i>Administrator</i> can view and edit the data of all <i>Users</i> .	<i>Registered User, Administrator</i>
2.5 Manage Users	<i>Administrator</i> can browse, filter and delete users	<i>Administrator</i>
2.6 Add/Edit Data	Registered Users can add and edit their own data; <i>Administrator</i> can add/edit all the data.	<i>Registered User, Administrator</i>
2.7 Routes	<i>Registered users</i> can see/select/delete routes.	<i>Registered User</i>

3. Main Views (SPA Frontend)

View name	Brief Descriptions	URI
3.1. Home	First thing when you go to the website, show a map with current location and markers of the data provided by you and other users.	/
3.2. Add	View for adding a specific type of data marker, the type is specified by a dropdown and depending on the type the needed information changes.	/add
3.3. Show Information	View for displaying the full of information of the data, gives the ability to provide feedback if RegisteredUser or delete if Administrator	/info/<data_id>
3.4 Routes	Presents ability to manage (CRUD) routes.	/routes
3.5 Users	Presents ability to manage (CRUD) users.	/users
3.6 User data	Presents ability to manage (CRUD) user data (available for Administrators only, as described in UCs).	/user/<id>/
3.7 About	Presents information about the project..	/about
3.8 Register	View for register	/register
3.9 Login	View for login	/login

4. API Resources (Node.js Backend)

Resource name	Brief Descriptions	URI
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4.1. Users	GET users for Administrator, and POST new <i>user</i> for Unregister User.	<i>/api/users</i>
4.2. User data	GET, PUT, DELETE <i>User Data</i> for <i>User</i> with specified <i>userId</i> .	<i>/api/user/{userId}</i>
4.3. Car accidents	GET car accidents for anyone, POST, PUT, DELETE for Registered User and Administrator	<i>/api/accidents</i>
4.4. Traffic jams	GET traffic jams for anyone, POST, PUT, DELETE for Registered User and Administrator	<i>/api/jams</i>
4.5. Tolls	GET tolls for anyone, POST, PUT, DELETE for Registered User and Administrator	<i>/api/tolls</i>
4.6. Speed cameras	GET speed cameras for anyone, POST, PUT, DELETE for Registered User and Administrator	<i>/api/cameras</i>
4.7 Routes	GET all routes; GET, POST, PUT, DELETE route by id for Registered User and Administrator .Administrator can only see and edit his own routes.	<i>/api/routes, /api/route/<route_id></i>
4.8 Routes for user	GET, POST, PUT, DELETE routes for Registered User and Administrator . Administrator can only see and edit his own routes.	<i>/api/routes/<user_id></i>