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| Assignment 1 | | Project Summary | |
| Course | | Fullstack Application Development with Node.js + Express.js + React.js - 2022 | |
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| Project author | | | |
|  | Name | |  |
|  | Iskriyan E. | |  |

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| Project name | Car SPA API |

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| * Short project description (Business needs and system features) |
| If you like cars, you can go to Car SPA API and there will be many cars, videos and pictures. Very interesting articles and news. You can spend some free time for fun or to learn something new.You can enter like a guest but in addition to that the app allows guests to register, and there will be administrators to manage them. The system will be developed as a Single Page Application (SPA) using React.js as front-end, and Node.js + express as backend technologies. Each view will have a distinct URL, and the routing between pages will be done client side using React Router. I will use Firebase for authentication and databases. react-animations is going to be used for animating components most probably. The backend will be implemented as a REST / JSON API using JSON data serialization. There will also be a real-time event streaming from the server to the web client using Socket.IO and Server Sent Events (SSE) / WebSocket in order to allow the users to see new comments in real time. The main user roles are:  • *Guest* – can only view the information pages and only watch videos and pictures  • *User -* can watch videos and pictures, articles and news. Can add videos and pictures, articles and can add comments to everyone of this and also “like” and “unlike”.  • *Administrator* (extends Registered User) – can manage (create, edit user data and delete). Can delete pictures, videos, comments and articles with inappropriate content. |

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| * Main Use Cases / Scenarios | | |
| **Use case name** | **Brief Descriptions** | **Actors Involved** |
| * **Browse information** | The *Guest* can browse the information views (Home,Videos,Pictures, About). | All users |
| * **Register** | *Guests* can register in the system by providing a valid e-mail address, first and last name, and choosing a password.  *Administrators* can register new by entering *User Data*. | *Guest, Administrator* |
| * **Change User Data** | *Users* can view and edit their personal *User Data.*  *Administrators* can view and edit *User Data* of all *Users*. | *User, Administrator* |
| * **Manage Users** | *Administrators* can browse and filter users based on different criteria: first and last name, email.  *Administrator* can choose a *User* to manage, and can manage the chosen User - edit or delete.  *Administrators* can create a new user using *Register*. | *Administrator* |
| * **Add/Edit Video** | *Users* can add videos and edit their own videos*.*  *Administrators* can browse videos of all *Users*, edit and delete them. | *User, Administrator* |
| * **Add/Edit Picture** | *Users* can add pictures and edit their own pictures.  *Administrator*s can browse pictures of all *Users*, edit and delete them. | *User, Administrator* |
| * **Add/Edit Article** | *Users* can add articles and edit their own articles.  *Administrator*s can browse articles of all *Users*, edit and delete them. | *User, Administrator* |
| * **Add/ Edit Comments** | *Users* can add comments and edit their own comments*.*  *Administrator*s can browse comments of all *Users*, edit and delete them. | *User, Administrator* |

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| * Main Views (SPA Frontend) | | |
| **View name** | **Brief Descriptions** | **URI** |
| * **Home** | Presents the introductory information for the application. Prominently offers ability to register. | / |
| * **Pictures** | Presents all pictures in the app. | */pictures* |
| * **Videos** | Presents all videos in the app. | */videos* |
| * **Articles** | Presents all articles in the app. | */articles* |
| * **News** | Presents news from the automotive world. | */news* |
| * **Login** | Presents a view allowing the users to login. | */login* |
| * **User Data** | Presents ability to view and edit personal *User Data*. | */personal* |
| * **Users** | Presents ability to manage (CRUD) Users and their User Data (available for *Administrators* only). | */users* |
| * **About** | Presents information about the *Car SPA API* project and his owner. | */about* |

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| * API Resources (Node.js Backend) | | |
| **View name** | **Brief Descriptions** | **URI** |
| * **Users** | GET *User Data* for all users, and POST new *User Data*. Available only for *Administrators*. | */api/users* |
| * **User** | GET, PUT, DELETE *User Data* for *User* with specified *userId*. | */api/users/{userId}* |
| * **Login** | POST *User Credentials* (e-mail address and password) and receive a valid *Security Token* to use in subsequent API requests. | */api/login* |
| * **Logout** | POST a logout request for ending the active session*,* and invalidating the issued *Security Token*. | */api/logout* |
| * **Added videos** | GET *Videos*, and POST new *video*. | */api/videos* |
| * **Added video** | GET, PUT, DELETE videos. | */api/videos/{videoId}* |
| * **Added pictures** | GET P*ictures*, and POST new *picture*. | */api/pictures* |
| * **Added picture** | GET, PUT, DELETE p*icture* | */api/pictures/{pictureId}* |
| * **Added articles** | GET *Articles*, and POST new *article*. | */api/articles* |
| * **Added article** | GET, PUT, DELETE *article.* | */api/articles/{articleId}* |