For the assessment, I have built an API using spring boot and Java that is able to register a user by sending the password, username, displayusername and timestamp through a POST request to <https://localhost:8080/api/signup>. Upon successful registration, the displayusername and userid are returned in a response message. After signing up, the user is able to use the credentials with which they used to register, to login to the system. Similar to before, the credentials are sent through a POST request to <https://localhost:8080/api/session/signin>. If the credentials match an existing user in the database, the JWT token, displayusername and userid are returned in the response message. Attaching the returned token in the authorization header now allows the user to access other function of the api.

The first function authorized using the JWT Token is the get profile service available at <https://localhost:8080/api/getprofile>. Simply sending a GET request to the aforementioned URL using the JWT Token provided upon login will return the username, displayusername and userid of the JWT Token’s owner. Another function that is now accessible is the update profile function which can be accessed at <https://localhost:8080/api/updatemyprofile>. This function allows the user to update their displayusername by sending the new displayusername in a POST request body along with the valid JWT Token in the header. Upon successful changing of the displayusername, no response is sent. The user can also log out by accessing <https://localhost:8080/api/session/logout> with the token in the authorization header. If successfully logged out, no response message will be sent. Last but not least, by accessing <https://localhost:8080/api/getcarlist> and providing the search term, the results’ page index, page size and a timestamp, the user can search through the list of cars in the database which names contain the search term. Leaving the search term blank returns all cars. The response message contains the list of cars which match the search term, their respective models and the total number of cars which matched the search term.