

CSCI3020U – No Brand Team

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Contents

Topic.....	3
Design.....	3
Angular.....	3
NodeJS Express	3
Requirement Fulfillment.....	3
Independent Study.....	3
Installation	4
Angular.....	4
NodeJS Express	4
Citations	5

Topic

For our CSCI3020U final project we decided on creating health and fitness app. It would include simple data implementations, generic CRUD features such as creating and reading data values such as weight and heart rate history. We also wanted to include a Google Map integration that would allow the user to enter and save routes for planning fitness runs.

Design

For this project we decided on a two-server approach. The front-end is an Angular based client facing server and the back-end is a NodeJS Express based server.

Angular

There is nothing noteworthy about the implementation of Angular. It's version 11 Angular running with compatible typescript.

NodeJS Express

The back-end server is a NodeJS Express framework, running over a Sequelize ORM, wrapping a PostgreSQL database.

Requirement Fulfillment

Requirement	Fulfillment
SVG	Multiple D3 graphs throughout bloodpressure.components.ts, etc.
HTML	*.components.html
CSS and CSS Frameworks	Bulma is used throughout the Angular app
D3	Multiple D3 graphs throughout bloodpressure.components.ts, etc.
JavaScript, jQuery	NodeJS server, *.components.ts
DHTML	Use of dynamic Bulma assets
AJAX, web services	Google Maps integration routes.components.html/ts
Node.js	NodeJS back-end server
Client-side framework	Angular 11
Database	Postgresql with Sequelize ORM
Sockets, multi-threading	Dropped

Independent Study

For our independent study we decided to explore and integrate JWT (JSON Web Tokens) into our application for server authentication and database querying. We also decided to deploy our NodeJS server on a cloud-based service, in this case we decided on Heroku due to it's easy-to-use nature and it's free option.

<https://docs.google.com/presentation/d/1-DSLPeA1waVdRY2TWw0uvydcXP6MTRHXIz-HWTuqc4/edit?usp=sharing>

Installation

Angular

For the Angular installation you can use the latest version of node. First navigate to the /angular/fitnessApp/ directory, then install the Angular CLI and devkit.

```
npm i
```

```
npm install @angular/cli
```

```
npm install --save-dev @angular-devkit/build-angular
```

Then run local with

```
ng serve --open
```

The Angular app will build and start up automatically in your browser, if it doesn't autoload you can navigate to it at localhost:4200

NOTE! The initial build time can take a couple of minutes, please be patient

NodeJS Express

Please note, the NodeJS instance is available on a cloud service at <http://enigmatic-cove-71059.herokuapp.com> (Credentials, git history, and access available upon request)

NOTE! The Heroku service is free and is not active 24/7. After your first initial request, give the service a few minutes to boot up.

For local installation, again the latest Node version is adequate. Navigate from the root directory to /node_server/ then install with npm and npx

```
npm i
```

```
npm install npx
```

At this step, please install PostgreSQL locally and create a DB with match credentials to these

```
"username": "noBrandAdmin",
```

```
"password": "password",  
"database": "noBrandDB",  
"host": "127.0.0.1",  
"dialect": "postgres"
```

Then we run our migrations with

```
npx sequelize-cli db:migrate
```

and run

```
npm run start
```

The server will be accessible on localhost:3000

Citations

- <https://bezkoder.com/angular-11-jwt-auth/>