Lappeenrannan teknillinen yliopisto

School of Business and Management

Sofware Development Skills

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# LEARNING DIARY, FULL-STACK MODULE

# LEARNING DIARY

29.8.2023

I read through the Course overview, General Course Information and Environment Setup for my Full-Stack module. Since I've already completed the Front-End module, these were just reminders of how these modules work. I've used GitHub and Git for my version control and VS Coode as my Code Editor for a long time, so these were my obvious choices of tools for this module.

I set up the course folder  with sub-folders "Course work" and "Project" and published the folder to GitHub for initial commit.

6.12.2023

I started by watching the older NodeJS introduction video linked in the course and pretty much copied everything done on the video even though I already knew those things from other courses. After that I watched the more recent video about the same topic, which was more detailed, and I learned more about some of the modules, and I now have a better understanding about them and how to use them. I also learned how to set up a simple server without Express and how to deploy it to Heroku.

However, when I tried to deploy the server to Heroku I got a message to the console stating that I need to verify my account by adding payment information. Since this is only a school project, I'm not willing to add payment methods even though the actual deployment would be free.

8.12.2023

While I've used MongoDB earlier, I've never used it from command line. From the video I learned to do that and found it quite intuitive since the syntax is so similar to JavaScript and

JSON. I also learned that MongoDB atlas is similar to MongoDB Compass which I've used on earlier courses.

Afterwards I continued to the Express task. Most of the stuff on the newer video I was already familiar with, but now I understand them better than before. However, I encountered a problem when trying to use the handlebars view engine. I followed everything on the video but got an error: Cannot find module 'node:path'. After some googling I decided to uninstall the handlebars and install the exact version used in the video I found in the source files and now the app started working again.

11.12.2023

I haven't used Angular before, so I thought starting the tutorial Your first Angular app would've been a good idea. However, since the tutorial assumes I'm using the latest version of Angular and Angular CLI I encountered problems. After trying to fix those I just decided to instead try the second tutorial: Tour of Heroes because I can choose my Angular and Angular CLI versions myself because the tutorial starts from actually creating the problem instead of downloading it.

At first everything went fine but when I reached part 2. Display a list, some of the files were slightly different from part 1 files. Troubleshooting the error that occurred took quite a while, but eventually when I compared the live example files from parts 1 and 2, I noticed that. I changed my own files and got it to work but decided that I'll continue the Angular task tomorrow.

12.12.2023

I continued from yesterday and found couple other problems in my app. All these problems within these two days probably occurred because I'm not using the latest Angular version. With the help of ChatGPT I understood what the problem was and was able to solve them.

I learned to divide big components into smaller ones and how child-parent relations work in Angular as well as property binding. I then continued to the part 4 of the tutorial which adds services to the app, more specifically, I learned to use Angular Dependency Injection. I also learned how to make method have an asynchronous signature and while I don't fully understand it yet, I used Observable library. I also learned to create communications between classes.

I've realized I don't find Angular as intuitive as React. I think it might be because the errors I've encountered in my app which have hindered my learning. If the tutorial isn't working when I copy-paste the code and have to use ChatGPT, which doesn't explain concepts as throughout as tutorials, it limits how well I can actually understand what I am doing.

13.12.2023

I continued learning Angular by completing part 5 of the Tour of Heroes tutorial. After doing this part I now know how to add routing to the app, which is quite but not exactly similar to basic JavaScript routing. Learning the routing also taught me how to build app that has multiple views.

15.12.2023

In the final part of the Tour of Heroes tutorial I learned to use in-memory API module to simulate communication with remote server and thus learned how to make the application use HTTP methods post, put, and delete. Now in the app users are able to add new heroes, edit existing heroes, delete heroes and search heroes.

At first, I didn't quite understand Observables but after a quick question about it from ChatGPT I think I now know at least the basics and how to use them.

16.12.2023

I started the MEAN-stack task and in the first couple videos there were nothing I didn't already know how to do. However, on the 4th video I encountered a problem with the authentication. I did exactly as instructed in the video, but when I made the post request to the /users/authenticate on postman, I got this on my console: "Error: Login sessions require session support. Did you forget to use `express-session` middleware?"

17.12.2023

I asked ChatGPT for advice and it suggested I comment out 'app.use(passport.session()'. It fixed the error but then I got another one: "Error: expected 'payload' to be a plain object". I checked the source code repository provided in the course pages and noticed the 'jwt.sign' method was slightly different from the video. I tried that and wrapped the 'user' object with 'data' property and now the post request to authenticate works.

After starting the Angular video and after typing 'ng serve', the terminal welcomed me with and error message: "ERROR in /node_modules/@types/node/index.d.ts (20,1); Invalid 'referencce' directive syntax.". After a google search and a stack overflow thread, I removed one forward slash from the line '/// <reference lib="es2015" />' and now the error doesn't show up anymore.

I saw red squiggly lines under my app.component.html file's <app-navbar>. I got confused and thought something was wrong, so I tried asking ChatGPT what was the error. After troubleshooting for a while and gave up.

18.12.2023

I continued form yesterday and tried to troubleshoot the problem. I thought I had something wrong, and tried to change some of the dependencies' versions since ChatGPT said it could solve the problem. Nothing helped and eventually I tried deleting the 'angular-src' folder and started implementing Angular from scratch. I encountered the same problem, but noticed that the app worked anyway, which I didn't even try yesterday since I just saw errors in the code. I don't know why the errors showed up, they just say: "'app-navbar' is not a known

element". The navbar shows on the page so I'm totally confused about what is going on, but since the app works, for now I'll assume they'll go away eventually once I  go further into the tutorial.

I was able to finish the fifth, sixth, and seventh videos and learned how to connect Angular to the back-end of my app and authenticate the filling of the forms.

19.12.2023

I got reminded how to do login and logout using local storage and how to implement that on Angular. After completing the ninth video I noticed a problem with the project: the navbar obstructed some of the content, for example all the h2 elements and flash messages. This might be because the tutorial used Sandstone version link that no longer works, and when I copied the link, which was different, from the source repository provided in the course pages and edited the html classes to match the repository code, the navbar looked different than in the tutorial video. Other than that the MEAN stack app works fine.

I also watched the part 10 video about deploying the app to Heroku and reminded myself how to do that, but as stated earlier in this diary, I won't deploy it, and because of that, won't make changes to the project to support the deployment.