

Lappeenranta teknillinen yliopisto
School of Business and Management

Software Development Skills

Full-Stack , 0607024

LEARNING DIARY, FULL-STACK MODULE

LEARNING DIARY

07.10.2024

As I started to complete the course, I understood clearly what to do. MERN-stack was a familiarity as it was also used in my Advanced Web Programming course. I wanted to make a project which I can enhance to be better and something which is going to be useful for me. I have had a practical normal CV for job application, but when I did research on employment in my field, I realized that a portfolio of my skills would be nice. I loaded up VS Code and started to make the application. Firstly, I installed all the required dependencies and set up MongoDB Atlas. This was my first time using the cloud version of MongoDB and this was the correct approach since I want to use this database in the future.

08.10.2024

When I started to create the portfolio, I quickly realized that I was not sure where I would need the backend implementation. So, I quickly managed to make the backend run and started to focus my attention on the frontend side. I used React as the frontend tool and I wanted to test React-bootstrap since it is good for making responsive applications. I started off simple and made the home page of the site. It took me a while to remember how the file structure works in React and I watched a couple of tutorials on how to set it up properly. Pretty shortly I remembered that almost everything on a website is a component and I started off easy. I made the navigation and the footer for the webpage to start.

09.10.2024

After setting up the frontend to work as intended I was keen on getting the version control underway. I ran in to some issues with version control as I realized that the React application has .git properties by default and I did not initialize the root folder at the start of the project. What ended up happening was that all the commits included only the frontend directory even after a long time of troubleshooting. Here I should have tried to merge the main and the master together so all the files would have been included. Shortly after I got slightly frustrated and took the easy way out. Manually copied the content of backend to a new local

directory and initialized git before making a React application. So, I started the frontend development again. Here I learned that git initialization should be done as a first step in creating a project.

10.10.2024

After the frustration I cooled off and had a clearer approach to my application. I wanted my portfolio to somehow include my projects and an about section. There I realized that the projects themselves could be fetched from the backend API. After I remade the home page, I started to create backend routes for getting and posting projects. At the start I had issues with MongoDB connection through the .env file and I did not find the solution to this until the whole project was finished. What ended up happening was that I used the connection string in the source code to proceed with making the project. I had a couple of syntax errors with the backend at start and could not get it working through Postman. After a while I got it working and now was time to make the frontend fetch the data from the backend API. It was not too hard, but I had to revisit old projects and check a couple YouTube videos to get an understanding of what must be done to make it happen.

13.10.2024

After getting the first two pages done for my site, I wanted to make the site to be more visually attractive. Here I started to go through the react-bootstrap documentation. At the start I did it the more traditional way where I inserted `<navbar>` instead of `<Navbar>`. It took a bit of time to understand the bootstrap documentation, but once I figured how it works everything clicked easily. I really understood how good the bootstrap components are and how easy it is to make them visually attractive.

14.10

I started the day in a similar fashion as I was not satisfied with some of the design in my project and started to tweak my project furthermore. I started to use App.css to structure the body to match my criteria. I tweaked some individual components with CSS and React-Bootstrap. After I was satisfied with the frontend I started to think what else can I have in my project. I knew that About section is just going to be text and a skill chart of some sorts.

Here I went to the internet and checked out other portfolios. I found something which was interesting and that was a contact form. With little to no hesitation I started to make it happen. In this project the backend routing was simple so that did not take me a long time to do. The contact form page in the frontend took me slightly longer to achieve and here I watched some YouTube videos to get inspiration. I got it working by the end of the day even though some of the design of the form was not appealing to my eye.

15.10

Today was the day I was going to finish this project for this course. I started the day similarly to every single other day which was enhancing the design of the application. I got the contact form to look at how I wanted. After that I checked some forums on frontend development more specifically how to make it visually more attractive. During the chaos, I did not even use a custom font for the project. After watching a quick tutorial about it, I was shocked about the fact that how much just fonts make a difference. Even though I was making the frontend to look as appealing as possible it still did not feel good, but after just changing the body font it felt immediately better. After this I did the About section and checked the React-Bootstrap documentation to see how I can make a nice skill chart. I found the progress bars and I went with them and that page was pretty easy to make since it does not have any user functionality. At this point I was quite satisfied with the project for this assignment and published it to GitHub. After publishing it I realized that some things like `node_modules` are still going to GitHub. I did a global `.gitignore` and removed `node_modules` from tracking.

What was left for me was to solve the issue with `.env` and the connection string issues. Basically `.env` was always undefined when I ran the server and the formatting of the string and the `connectDB` function was correctly done. At start I did not have `npm` initialized in the backend directory. I was always using the global `package.json` for that. So, I did that to see if it would work. I installed all the required dependencies into the backend. This did not work. I did a bit of testing and realized that if I did `npm start` command in the backend directory, the `.env` worked as intended. The issue was that the global `package.json` has the `concurrently` script. I realized that there it was not `node server.js` but rather `nodemon server.js`. I tested if I just switch it to `node` and the `.env` started to work as intended.

Apparently nodemon has to be configured differently in some instances to work with environmental files.

Aftermath:

After that was done, I was satisfied with the project for now. I want to enhance it even more, but I want to do it on my own time. In the future I want to make an administration page for myself in the portfolio. With the administration I could read the messages I have been sent and add projects directly from the website without touching the backend. I learned a lot during this project even though MERN-Stack was not a new concept for me. Different projects come with different issues, and I clearly found that out.