Lappeenrannan teknillinen yliopisto

School of Business and Management

Software Development Skills

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LEARNING DIARY, Back-end

**REST Intro MODULE**

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I had VS Code and Git already installed on my computer and they were familiar to me. Although I had to remind myself a bit on handling git repositories. Then I created a repository for the course work.

In the REST API module, I learned about:

What API stands for: Application Programming Interface. REST API means: REpresentational State Transfer.

APIs are software that communicate with each other. A REST API usually works the same as a web page. It gives data when requested through a http request.

You can either get or post data through apis. Postman is a good tool that will create post requests and create the headers for you.

**NodeJS MODULE**

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Node.JS is not a language but it lets you run JavaScript code on the server. It is fast, efficient and highly sclabale. It’s popular in the industry and it allows you to use the same language on front and back-end.

It works on a single thread. Events go through a event loop. Node is good for anything that is not CPU intensive for example CPU calculations. “npm” manages node packages.

I installed node.js on my computer through its website. Then I created package.json where I store my dependencies. I installed uuid and nodemon. Even if I would delete these modules I could simply install them again through the package using “npm install”-command.

Then I learned how to make simple classes in js. Object-oriented programming is not that new to me, so I understood how to create methods and constructors.

Then I learned demos that showed node.js commands and variables that would help working with paths, files, file modification, hardware info, url data and using a logger.

After this I learned how to get a running server and put info there from html files from my computer. Then I learned how to make a REST api with just node. Then I learned some more on how to filter depending on the file and learned how to direct user to a 404 address.

Finally I pushed my module work to Heroku.

**MongoDB MODULE**

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MongoDB is for building database. I installed MongoDB and started and connected the Compass without problems. MongoDB has databases which have collections which are like tables. I learned to make a database and collection from the mongo terminal. Then I learned how to add data structures and find info about them with filters. There were a lot of ways to sort data and find specific fields. Then I learned how to update fields and rows.

Basically I learned a bunch of commands on how to manage a collection through the mongodb terminal.

Then I created a new cluster to mongo atlas. And then connected it to my databases.

**Express JS MODULE**

3.8.2021

Express is a web framework for Node.js. It also gives full control how you use your api.

It is a back-end framework. It makes building web applications with Node.js much easier.

It is also fully Javascript. Middleware functions are functions that execute whenever there is a request to the server.

I made the initial package and installed express via terminal. Starting a web applications was much easier with express and it took only 5 lines to create. Then I added nodemon so I don’t have to restart the server everytime I make a change. Then I made my public folder static with express. Then I put a css file to add a style file to the html files.

After this I made a json file where I requested data through postman and made a logger which would act every time a request was made. There I made the logger give me the url that was requested and the time of that request. Then with res.json(members.filter I requested certain member from the js file. After that I made a post request with the postman application.