Lappeenrannan teknillinen yliopisto

LUT School of Engineering Sciences

Software Development Skills Front-End, Online course

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LEARNING DIARY, COURSEWORK AND PROJECT WORK MODULE

Date : 27.11.2024

Activity : Get known with course requirements

Learning outcome:

I went through the general aspects of the course, such as how the course is conducted, what is required during the course, and how to achieve a passing grade.

Date : 27.11.2024

Activity : Lecture video from 00:00 to 31:00

Learning outcome:

In previous courses, I had already set up the environment and downloaded the add-ons/extensions, so it was a review of old material or ‘knowledge’ for me. After setting up the environment, I downloaded the same icons/images and fonts that the video creator used.

Once the basics were in place, the actual programming began. Front-end programming isn't very familiar to me, so during this lesson, I learned a lot about the basics—how to create a main page, make a stylesheet (style.css) for it, how to style various components, and how to create variables in CSS that can be used throughout the code. This way, you don't have to modify, for example, the highlight color in multiple places if you want to change it.

Date : 28.11.2024

Activity : Continue coursework from 31 ->

Learning outcome:

I continued working on creating CSS grids and implementing the FAQ section. Initially, there were no big problems with the grids, but I faced challenges with styling during the FAQ implementation. At first, I didn't realize how important it was for classes to be in the correct order and that CSS operates in a "top-down" manner meaning the lower rule overrides the higher one. I spent quite a bit of time figuring this out. I also learned how to add functionalities and gradually began to understand better how to correctly reference different elements in CSS. Implementing the JavaScript functionalities felt easier than CSS because I have previously taken Java courses and developed an Android application. Eventho, I had issues with js-file location or with referring the correct source.

The last task to implement was the menu, which was the most challenging for me so far—or perhaps I had spent so many hours on the assignment that careless mistakes started to occur. I struggled for a long time with the hamburger menu not appearing in certain situations, and the reason turned out to be a single capital 'H' in the CSS file. I also found debugging errors challenging, because I find it easier on the back-end where creating various log files seems simpler. Of course, this was my first experience working purely with front-end development, which certainly affects things. I also found it challenging that the front-end doesn't adhere as strongly to the principles of object-oriented programming.

In my opinion, the most important lessons of the day were debugging, learning the basics of CSS styles and formatting, and how certain features can be implemented either with JavaScript or CSS.

Date: 28.11.2024

Activity: Start of project work

Learning outcome:

First, I started thinking about what I would implement or what kind of solution would meet all the requirements:

1. Page with navigation
2. Responsive styles with CSS
3. Flexbox and CSS Grid
4. Deployed Website

I wondered if I could somehow utilize an existing implementation and what kind of design I would start developing. I also sought inspiration from YouTube videos, such as those by Fireship.io. I sketched an 'About Us' page on paper, where I planned to create navigation on one side and some kind of profile cards in the middle, but I didn't want to use an existing one. I also thought that it might not be an acceptable solution. I got the first hand-drawn version good enough and began implementing my vision.

Date : 29.11.2024

Activity : Project work

Learning outcome:

I began the implementation and tried to leverage my old code, which after half a day proved almost impossible, leading me to start from scratch. It felt like I was constantly making makeshift fixes to the existing code, which I feared would eventually blow up in my face. I started by implementing the center column and the cards with their styling. At this point, I really began to understand how CSS grid works. When I got the cards to a certain stage, I wanted to add a bit of flair to the dull screen and started implementing functionality. I intended to create just a simple highlight feature, but I had an "aha" moment about how the hover functionality works and wanted to experiment with it.

I learned more about how functionalities can be created with CSS without using JavaScript. I thought I couldn't implement the highlight feature using only CSS, and I was excited about this discovery.

Date: 30.11.2024

Activity: Project work

Learning outcome:

I started implementing a new menu and was excited about what I had learned the previous day. I wanted to continue the same highlighting theme in the menu as well. Implementing the menus felt like the most challenging part of the entire project, and I had to read a lot of documentation and watch videos just to get the basic functionality done.

First, I implemented a basic desktop version of the side menu. I quickly created the icons and texts, as well as the grid that placed the bar on the left side. I decided to explore SVG elements and use them to implement the icons. However, the challenges began when adding the highlighting effect. Initially, I thought I could use the animation I had extensively used in the cards, and I got it to work. The difficulties started when I began making the bar scalable. At first, the bar kept disappearing because I had set the attribute 'hidden' for text in one of the CSS definitions.

I managed to solve the problem but quickly realized that the sidebar wouldn't work properly on mobile devices because it would take up too much screen space, and tapping the options would be challenging. I started researching how to move the bar to the bottom or top of the page. I found a way to shift the bar to the bottom or top, but the animations caused a lot of headaches. I couldn't correctly define settings in the media components, and the icons behaved unpredictably—sometimes the animations flickered, and other times the SVG component pushed the text to the middle of the page. There were errors in many parts of the code, which I managed to resolve based on documentation and experiences shared on GitHub. Some errors were certainly due to carelessness; for example, I tried to hide text but referenced the wrong element.

I learned a great deal about using SVG icons because they were entirely new to me. Understanding how to style the size of the icons was challenging, and at first, I started doing it in the HTML code instead of CSS. Additionally, implementing navigation that changes position taught me a lot about styling and the use of media tags.

Date: 30.11.2024

Activity: Publishing page

Learning outcome:

I had big issues with publishing both pages (coursework and project work). I’m not familiar with package.json file and how and which attributes should be defined. First, I tried to publish page with instructions given in YouTube video but without success. I had two major issues in my .json file. First one was that I was referring to wrong directory and second one was that I didn’t have prebuild in script. Some stackoverflow chains had the information that it is the most important line to succeed in publishing. So, my learning outcomes were the basics of package.json file attributes and how to publish webpage in Github pages.