Lappeenrannan teknillinen yliopisto
LENS – School of Engineering Science

Introduction to Web Programming

Aleksi Haapalainen, 0603552

PROJECT WORK DOCUMENTATION AND REPORT

Specification and Grading

Feature	Description	Grading
Well written pdf report	-	3
Responsiveness	Application is responsive and can be used on both desktop and mobile environment	4
Browser support	Application works on Firefox, Safari, Edge and Chrome	3
Clear structure and organization	The application has clear directory structure, and everything is organized well	2
Bonus: Deployment	App is deployed to Microsoft Azure and can be accessed through public web https://nice-bush-0d927e303.4.azurestaticapps.net/ Deployment is done with GitHub actions pipeline.	2
Modern styling	The application has modern styling including restricted and simple lighting, coloring, and styling. Including rounded corners and simplified structure and coloring.	4
Single Page Application (SPA)	Page follows the modern trend Single Page Application. Different features are accessed through auto-scroll style links from menu buttons.	2
Three different data items	There are three different API calls made for different data's (three API calls)	4
Municipality selection	User can select which municipality's data is displayed in chart	4
Chart options	User can select which data is displayed in chart (three different options)	4
Export chart	User can export chart as a svg file	2
Footer	There is footer with copyright and author information	2
Chart type	User can switch between "bar" and "line/dot" type chart	2
Menu	Navigation bar to access different features of the page	4
Info section	Section for getting info about the page functions	2

Report

Web Application displays specific data retrieved from Finland Statistics in different formats. In this application there are three main data subjects to be handled, which are municipality population data, municipality crime rate data and municipality employment rate data.
The starting point for the project was that I didn't have any specific idea for the application nor specific technics to use. I ended up with a few interesting data subjects from the Finland Statistics which I figured could be used together. I decided to do something around different municipality statistics.
Technics and tools for this application were fairly simple. The main core of the application is implemented using plain javascript, HTML and css. Additionally, I decided to use bootstrap for the navigation bar, since it was easy to implement with ready-to-use libraries from bootstrap. The map is developed using Leaflet library and the chart is done with frappe-charts library.
For page design I had decided to create a single page application functionality, so that there is only one page to contain all data. I wanted to keep the styling fairly simple and restricted.
I am somewhat satisfied with the code structure and quality. I decided to separate constant values like links and queries to individual file. The code is commented enough and quality is decent. If something should be improved I probably would split the main.js file into smaller separate files.
Lastly in addition to course requirements I wanted to deploy the app to Microsoft Azure. App is running in static web app resource and can be accessed through internet browser. This deployment was done through GitHub Actions workflow, which automatically creates the CI/CD pipeline.