

Introduction to Web Programming – Project Work

Veeti Rajaniemi
0599190

Project 2: Statistic portal

Description

I used Visual Studio Code in my project as I find it as the best possible programming tool. I have also stored my codes to GitHub.

I decided to create the project number 2, as I'm most keen on data analysis and handling of different datasets. I wanted to combine Finland's map with some other interesting data and decided to use suggested election data. I would have liked to use fetching in a bit different way and fetch smaller datasets for each municipality, for example, but as the municipality codes were different, I decided to handle the whole election data. However, it was quite fun to play with the data and find ways to get the correct data for different charts.

My main idea was to use Finland's map and colour it based on the winning party. The most difficult part was the data handling – as I used the whole dataset, lots of tricks were needed to get the correct indexes for the data. Also, it took some time to find appropriate structure for the code so that the map and layers are not loaded when not needed, for example. Then, I also decided to add some basic information on the map: name of the municipality when hovering over certain area and the percentage of votes and number of councillors elected for the winning party of that area. Again, it was very simple to code the feature, but the data handling took lots of time.

After that I decided to add a line chart to demonstrate the support of the different parties in Finland over the years. Then I created a feature to estimate some new values, as was done in weekly exercises. The next step would have been to update the map's colouring based on the estimated values, but I decided to leave it out for now. I could not get the labels working so that every party's abbreviation would show for mobile users also.

Instead, I wanted to try something new and create a different bar chart when the user clicks on a certain area on the map. The bar chart shows all parties' proportion of votes cast in the certain area in the selected year – so bit extra to the winning parties' values only. Also in this task, it took time to find the way to handle data to find the correct values. Also, I had to use some new methods and structure of the code so that the charts update correctly when clicking on the area. For some reason, I didn't get the colouring of the bar charts to work correctly.

Finally, I did some basic CSS to get some visualization to the page and to get it work properly on different sized devices. I don't really like to do lots of fancy design stuff, so I kept things quite simple.

I liked the project much and it wrapped up the course well! It was nice that we could use weekly exercise codes as some kind of base and add new features and stuff to that. Also, it's always nice to get to decide what kind of project will be doing!

Points

Feature	Expected points
Well written PDF report	2
Well documented code – easy to follow	2
Application is responsive and can be used on both desktop and mobile environment	4
Application works on Firefox, Safari, Edge, and Chrome	2
The application shows relevant data on a map and user has change to change the data by selecting the year	3
GeolJson map and election data (proportion of votes cast and number of councillors elected) are combined – two API calls are made	4
Map is coloured with the colour of the winning party of every area and the colouring updates when changing the year	4
User gets information (area's name) when hovers on area	1
User gets information (winning party of current year, its' vote percentage and number of counsellors elected) by clicking an area	3
By clicking (twice) the map user gets additional bar chart covering that area – every party's votes in current year	4
There is a line chart below the map which shows the votes of each party in every year	4
Line chart's colours are based on each party's colour	1
User can add estimated data points to the chart and reset the chart	3
Simple CSS styling for the page – title, button, colours	2
Sum of points	39

