CT30A2910 Introduction to Web Programming Project work report

Responsible teacher: university lecturer Erno Vanhala

Student: Joose Kukkola 000474830

Declaration of AI tools:

I have used Copilot with the following tasks:

- Fault detection
- Help in combining the datasets from the URLs into the chart.
- Generating ideas for the CSS file/customising
- Cleaning up the JS code
- Help in creating functions that process data into a comparable format

Description

I built a weather forecasting program that fetches data through two APIs. The program has two views: one displays hourly forecasts, and the other shows the next seven days. The data provided by OpenWeather served as the basis for the web app, so most of the forecasts are sourced from there, and the Weather API is used only for comparison purposes.

The tools used:

- Visual Studio Code
- Copilot
- Weather API (Free Weather API - WeatherAPI.com)
- OpenWeather (Current weather and forecast - OpenWeatherMap)

The logic works as follows: the OpenWeather website is used to retrieve the coordinates of the city searched for, and these coordinates can then be used to retrieve weather information from various APIs.

The points

Feature	Reasoning	Points
Well-written PDF report	Exists	3
Application is responsive and can be used on both desktop and mobile environments	Is responsive	4
Application works on Firefox, Safari, Edge and Chrome	Works at Edge at least. I haven't tested others.	3
The application has a clear directory structure, and everything is organised well		2
The user can search for locations	Works	1
User can use his/her location GPS coordinates (Geolocation API)	Works, if allowed in the browser	2
At least two data/forecast providers are used (this means completely different data sources like x.com and y.com, not just different API endpoints on the same service)	Two data sources used	3
User sees the current weather at a specific location	Works	1
User sees the forecast for the next 24 hour, hourly based	There is a chart for that use	3
User sees the forecast for the next 7 days	Exists	3
All the weather forecast elements uses icons (and numbers) for e.g. sunny and cloudy weathers	The different measurements have their own icons. Also, OpenWeatherMap provided icons.	3
User sees simultaneously two forecast in a graph, e.g. there is temperature forecast for the next 24 hours and there are two lines telling how the data sources are providing (a bit) different data	Two data sources are used, and they can be found in the chart	3
Total		**31**