Project 2: Weather app, Documentation

Tools/API-sources

Html, js, css

Editor: visual studio code

Version control: Github repository: KatjaRos/projectwork

Used Geeks for geeks Build a weatherapp page to give me a starting point for the body and API codes: Build A Weather App in HTML CSS & JavaScript - GeeksforGeeks

Used Current weather data - OpenWeatherMap

Used HTML Geolocation API to get help with the geolocation api

Used Meteoblue forecast API for the 7-day forecast: Forecast Data | Technical Documentation

Downloaded weather icons from Meteoblue too.

Free Open-Source Weather API | Open-Meteo.com OpenMeteo for 24 hour weather

index.html contains:

- – Header and search input.
- – Current weather info:
    - <h3> for location
    - <p> elements for temperature, wind, and description
    - <img id="weather-img"> for weather icon
- –24-hour forecast:
    - <h3> title
    - <ul id="hourly-list"> for hourlyforecast blocks
- – 7-day forecast:

- <h3> title
- <ul id="items-list"> for daily forecast blocks
- with <img id="meteogram"> for graphical forecast

AI Assistance

- Used **ChatGPT** to:
  - Debug missing src="" attribute in the <img> tag for weather icons.
  - Understand how **callback functions** work in JavaScript.
  - Explore alternatives for geolocation APIs (result: browser's built-in API is best).
  - Get ideas for how to implement icons for the 7-day forecast when Meteoblue didn't provide them directly/documentation was messy so it took me a while to lacate the weather icons
- Used **Microsoft Copilot** to:
  - Review and improve the structure and clarity of this documentation.

Implemented features:

Feature	**Max points**
User can search for locations	1
User can use his/her location GPS-coordinates (Geolocation API)	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 same service)	3
At least three data/forecast providers are used	2
User sees the current weather at a specific location	1
User sees the forecast for the next 24 hour, hourly based	3
User sees the forecast for the next 7 days	3

All the weather forecast elements uses icons (and numbers) for e.g. sunny and cloudy weathers -> the hourly blocks don,t but 7-day forecast and current weather does so	3=1.5
The look and feel of the application reflects the current weather (e.g. it is blueish, when it is cold; reddish, when it is hot;, dark, when it is night...)	2
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	3
User has the option to tag some locations as her favorites and thus access them from the favorites menu	2
User has an option to switch between celsius and fahrenheit degrees and kelvins	2
Feature	Max points
Well written PDF report	3
No report	-30
Application is responsive and can be used on both desktop and mobile environment	4
Application is not responsive	-2
Application works on Firefox, Safari, Edge and Chrome	3
The application has clear directory structure and everything is organized well	2
Application does not work	-30
CSS, JavaScript and HTML are all in the same file	-5
Inappropriate content, including hate speech -related memes and other trash	-100
Weather icons are dynamically selected based on day/night status and pictocode using a local icon set. This improves visual clarity and avoids dependency on external icon URLs.	2

Included a dynamically generated meteogram from Meteoblue with the 7-day-forecast to better visualize weather changes and for example preciripation and wind speed	2
Total points	31.5

Time consumption

Building the application.js and css: approx 30 hr

Writing the documentation: approx 0.75 hr