Project work. Weather web app.

Weather applications were developed, which provides users with real-time weather information, forecasts for the next 24 hours and five days, and additional features such as geolocation support and unit conversion. The application is designed to be responsive, ensuring usability on both desktop and mobile devices.

Implemented features:

1. User Location Search - users can search for weather information based on specific city names.
2. Search based on location or Geolocation Support - application uses the Geolocation API to fetch weather data based on the user's current GPS coordinates.
3. Multiple Data Providers - weather data is sourced from at least two APIs, ensuring reliability and accuracy in the information displayed.
4. Current Weather Display - users can see the current weather conditions at the searched location.
5. 24-Hour Forecast - the application provides a detailed hourly weather forecast for the next 24 hours.
6. 5-Day Forecast - users can view weather forecasts for the next five days.
7. Weather Icons - All weather forecast elements use icons to visually represent conditions (e.g., sunny, cloudy).
8. Dynamic design - the application's look and feel change based on current weather conditions (e.g., blue colors for cold weather, warm colors for hot weather).
9. Dual Forecast Graph: Users can compare 24 hours temperature forecasts from two different sources on graph (from Weatherapi and Open-meteo).
10. Favorites Feature - Users can tag locations as favorites for quick access.
11. Unit Conversion: Users can switch between Celsius, Fahrenheit, and Kelvin for temperature display.
12. Weather Map: User can view a weather map temperature, precipitation, louds and wind

Tools Used

- **HTML/CSS**: For the structure and styling of the application.
- **JavaScript**: To implement functionality, including API calls and DOM manipulation.
- **Weather APIs**: Utilized at least two different weather data providers (OpenWeather, WeatherAPI, Open-Meteo) for accurate data.
- **Geolocation API**: To allow users to fetch weather data based on their current location.
- **Charting Library**: For displaying dual forecast graphs.

Points proposal.

Feature	Max points
Well written PDF report	3
Application is responsive and can be used on both desktop and mobile environment	4
Application works on Firefox, Safari, Edge and Chrome	3
The application has clear directory structure, and everything is organized well	2
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	3
At least three data/forecast providers are used	2
User sees the current weather and other details like wind speed, clouds level, humidity at a specific location	2
User sees the forecast for the next 24 hour, hourly based	3
User sees the forecast for the next 5 days	3
All the weather forecast elements use icons (and numbers) for e.g. sunny and cloudy weathers	3
The look and feel of the application reflect the current weather (background gradient changes depending on the weather conditions)	2
User sees simultaneously two forecast in a graph, 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 (Weatherapi and Open-meteo)	3

User has the option to tag some locations as her favorites and thus access them from the top of the suggested list	2
User has an option to switch between Celsius and Fahrenheit degrees and kelvins of all parts of presented data (main, hourly, 5 days forecasts)	3
User can view a weather map temperature, precipitation, louds and wind	2
Total:	43

Declaration of AI usage:

AI tools there not used, but google for search of some methods explanations, references and website examples there used.