Conceptual Design Document: Weather Application

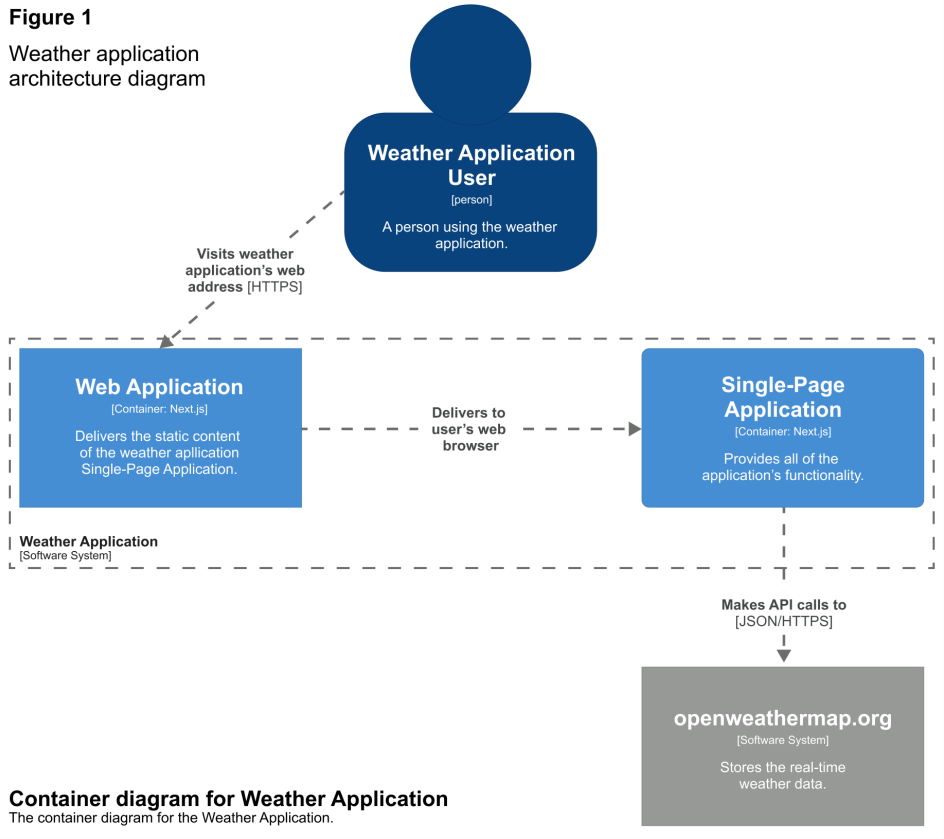
The aim of this project is to develop a weather application that delivers real-time weather information for the user's desired location. The intended target user group consists of people who rely on accurate weather to plan their activities accordingly. This includes travelers, hikers, photographers, videographers, event planners, as well as any individuals who want to have a timely weather forecast for specific areas.

The benefit of using this application is its provision of real-time and accurate weather information about user's desired location. The application offers a clean, simple, modern and responsive interface where users can customize the location, temperature format as well as get the most important information for their current time and forecast for the week. The value of this application is that it does not overload the user with excess data, but instead presents them with the essential information needed to plan their outdoor activities or choose appropriate clothing.

The following high-level architecture diagram (Figure 1) demonstrates the choice of software technologies (frontend and backend) of the weather application. The technologies used are Next.js as frontend framework, https://openweathermap.org/ API for fetching real-time weather data, React.js components for the user interface and Tailwind CSS for visual design.

Figure 1

Weather application architecture diagram



Container diagram for Weather Application

The container diagram for the Weather Application.