Weather App Proposal

1. **Overview**

Problem Statement: A lot of weather apps are unpersonalized or overflowing with advertisements. In order to observe the weather and arrange their daily activities, users require a straightforward and trustworthy source.

Purpose: Distraction-free, succinct, and clear weather forecasts will be provided by this app. For an interesting user experience, it will have features like daily forecasts, customisable location tracking, and dynamic weather graphics.

Audience: The app caters to commuters, travellers, and outdoor enthusiasts who appreciate a simple weather experience. It is intended for those that require weather updates while on the go, free of advertisements and extraneous details.

2. **Major Functions of the Application**
1. Real-Time Weather Display: Using information from OpenWeatherMap, it displays the current temperature, humidity, wind speed, and overall conditions.
2. 3-Day Forecast: Enables users to make plans by providing daily highs, lows, and concise weather summaries for the upcoming three days.
3. Location Tracking and Selection: Shows pertinent weather information by automatically tracking or allowing users to pick areas.
4. Animated Weather Visuals: Shows dynamic animations of the sun, rain, and clouds to depict the state of the weather.
5. Light and Dark Themes: This feature improves usability in a range of lighting conditions by enabling users to alternate between light and dark modes.
6. Weather Icon Display: On desktop and mobile interfaces, mini icons are used to provide quick and easy access to weather conditions.
7. Error Notifications: These improve dependability by informing users when API calls are unsuccessful or when the selected location cannot be located.
8. Backup API Option: Provides continuity by switching to a backup API (WeatherAPI) in the event that OpenWeatherMap experiences issues.
9. Hourly Forecast (Desktop): Makes use of more screen real estate to give hourly forecasts for desktop users in greater detail.
10. User Settings Module: Enables user settings to be saved, including display units (Celsius/Fahrenheit), frequently seen locations, and theme selection.

3. **Wireframes**
Mobile:
Home Screen: Displays the temperature, weather, and an animated background that changes according to the conditions.
Weekly Forecast: Mini weather icons and daily high and low temperatures are displayed in a scrollable area.

Location Selection: A list of recently viewed locations and a search bar for adding new destinations.

Desktop:

With more room for extra information such as hourly predictions and comprehensive details on daily conditions, the structure is comparable to that of mobile.

Tools: Pencil Stretches

4. **External API Data Sources:** • OpenWeatherMap API: Offers a wealth of weather information, including hourly updates, daily predictions, and current conditions.

Backup Option: In the event that OpenWeatherMap has restrictions on availability or requests, http://WeatherAPI.com provides comparable data.

5. **List of Initial Modules**
* **API Module:** Manages all API calls, parses OpenWeatherMap data, and stores it.
* **UI Components:** Modules for every UI component, such as the forecast display, weather icons, and location selection input.
* **Animation Module:** Manages weather-related animations (such as rain and clouds).
* **Settings Module:** Controls user preferences, including theme selection.
* **Error Handling:** Oversees user notifications of unsuccessful API queries or incorrect locations.

6. Colors/Typography/Styling
* Colors: Soft blues and grays for a calming, weather-themed aesthetic. Light and dark mode themes.
* Typography: Clear sans-serif fonts like Roboto or Open Sans or poppins for readability.
* Styling: Minimalistic, flat design with rounded corners for a friendly, modern look.

7. Schedule with Milestones
Week   Milestone
Week 5
Finalize wireframes and API setup
Develop API module and UI components
Week 6
Implement animations and styling
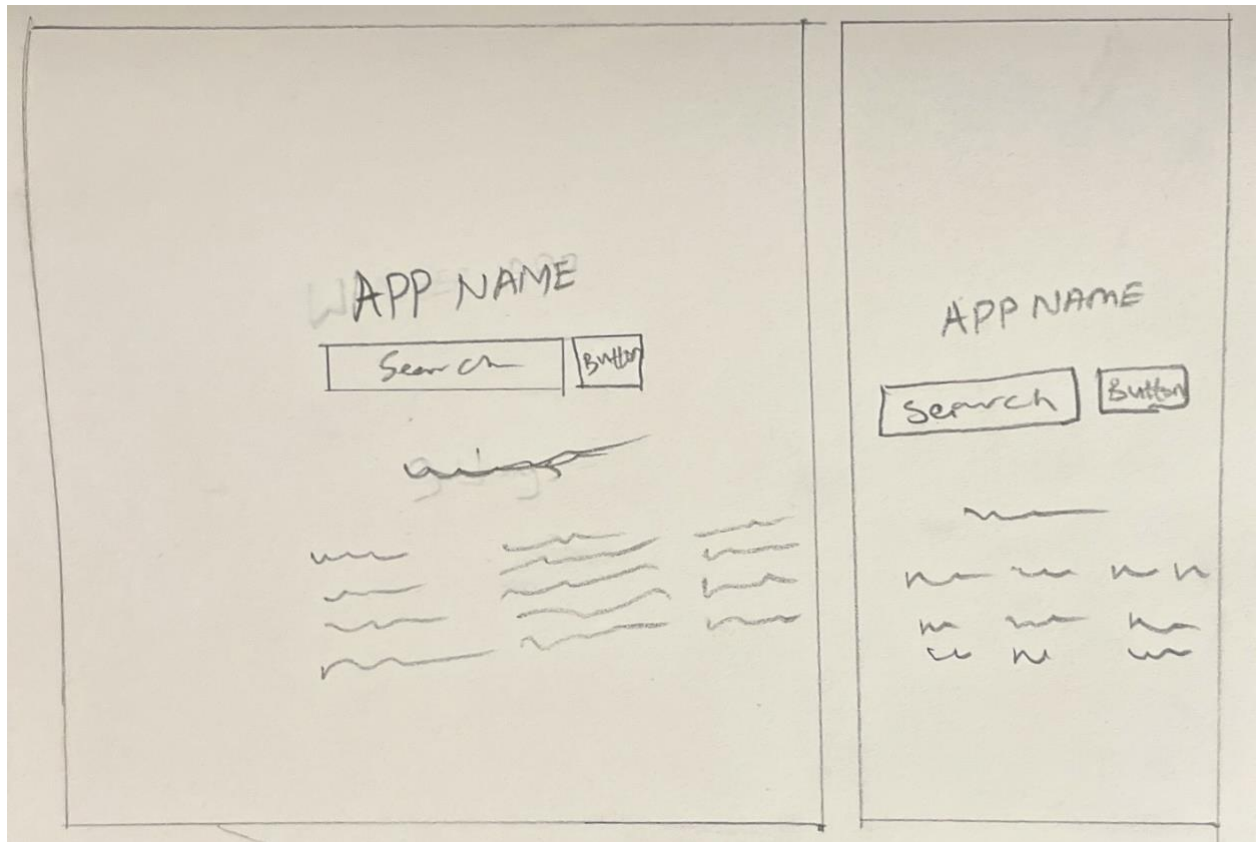Testing and bug fixing
Week 7
Final adjustments, code cleanup, deploy

8. Trello Board
Link:https://trello.com/invite/b/671c9ed292fb88d73cddb32f/ATTIb5b1e0c60105b268d4aa7c24f496f3a13AD4B3AC/weather-app

Wireframes

Color Scheme:

Primary Blue: #4A90E2

Soft Blue: #A0D9F6

Light Gray: #F2F2F2

Dark Gray: #3A3A3A

Accent Yellow: #FFD700

Night Mode Background: #1C1C1E

Text White: #FFFFFF