**ONL1\_SWD4\_G1d\_Flutter Weather**

Team Work:

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**Project 4: Weather Forecasting App**

**Objective:**

Develop a cross-platform mobile app to provide real-time weather forecasts based on the user’s location.

**Description:**

The Weather Forecasting App displays real-time weather information such as temperature, humidity, wind speed, and forecasts based on the user’s location. The app will integrate with a weather API (e.g., OpenWeatherMap API) to fetch current and forecasted weather data. Features include location tracking, push notifications for severe weather alerts, and the ability to convert temperature units (Celsius/Fahrenheit).

**Technologies to use:**

Flutter.

**4-Week Plan:**

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**Week 1: Setup and UI Design**

* **Set up the development environment:** Install Flutter, and configure the necessary APIs for weather data.
* **Create wireframes:** Design wireframes for the weather display, settings, and forecast pages.
* **Implement basic layout:** Build the UI for displaying real-time weather using Flutter, ensuring responsiveness across devices.

**Deliverables:**

* Development environment set up.
* Wireframes for weather and forecast displays.
* Basic responsive layout for weather information.

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**Week 2: API Integration and Forecast Display**

* **Weather API Integration:** Connect the app to a weather API (e.g., OpenWeatherMap) to fetch real-time weather data.
* **Weather display:** Implement logic to display current temperature, humidity, wind speed, and forecast information.
* **Settings:** Add functionality for users to switch between Celsius and Fahrenheit and set their preferred location.

**Deliverables:**

* Weather API integrated.
* Current and forecasted weather displayed on the app.
* Functional settings for unit conversion and location preferences.

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**Week 3: Location Tracking and Notifications**

* **Location tracking:** Use the phone’s GPS to automatically retrieve the user’s location and display weather for their area.
* **Severe weather alerts:** Set up push notifications to alert users of severe weather conditions (e.g., thunderstorms, high winds).
* **Testing:** Test location-based functionality and push notifications across various devices.

**Deliverables:**

* GPS-based location tracking working.
* Push notifications for weather alerts.
* Tested and functioning weather alerts.

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**Week 4: Final Testing and Deployment**

* **Final testing:** Conduct thorough testing for weather data accuracy, GPS functionality, and notifications.
* **Optimization:** Optimize the app to ensure smooth performance, especially when fetching weather data.
* **Deploy the app:** Publish the app on Google Play and the Apple App Store.
* **Documentation:** Write the project documentation and user guide for setting up and using the app.

**Deliverables:**

* Fully tested and functional weather forecasting app.
* App deployed to Google Play and Apple App Store.
* Complete project documentation.

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