IT242 Project 1
v1.1
Score: _____/100

Specifications

In this project, you will develop a weather application for iOS using Swift and Storyboard UI. Your app will fetch weather data and display a 7-day forecast on the home screen, allowing users to tap on a day for more detailed weather information. The application should retrieve the user's location via GPS and optionally support multiple locations via ZIP code input (extra credit).

Core Features (Required)

1. Home Screen:
    a. Displays a 7-day weather forecast.
    b. Each day should show:
        i. A weather icon (sun, clouds, rain, etc.).
        ii. High and low temperatures (°F).
        iii. Chance of precipitation (percentage).
    c. Tapping a day should navigate to a detailed weather view.
2. Detailed Weather View:
    a. Displays expanded details for the selected day.
    b. Must include:
        i. All information presented on the home screen for the selected day.
        ii. Current temperature (°F).
        iii. Weather description (e.g., “Partly Cloudy”).
        iv. Humidity levels.
        v. Wind speed and direction.
    c. Users should be able to navigate between days using buttons (extra credit).
3. Location Handling:
    a. Use Core Location to retrieve the user's GPS coordinates.
        i. https://developer.apple.com/documentation/corelocation
        ii. https://developer.apple.com/documentation/corelocation/getting-the-current-location-of-a-device
    b. Use these coordinates to fetch weather data.
    c. Extra Credit: Allow users to input and save multiple locations using ZIP codes.
4. User Interface & Experience
    a. The UI must be professional, visually appealing, and responsive.
    b. The app must have no layout warnings.

c. Use a consistent color scheme, spacing, and font sizes.
d. Prototyping with Figma or another tool is highly recommended before starting.

Note: When creating your project, do not create a git repository when choosing the project location.

Include a README.md in your GitHub repository explaining how your app works and any extra credit features added.

Weather API Suggestions: Open-meteo, OpenWeatherMap, or Apple's WeatherKit.

Constraints

- The app must be built in Swift using Storyboard UI.
- The app must have no layout warnings.
- An app icon is required – the default placeholder icon is not acceptable.
- At least three different weather icons must appear in your application:
  - Sunny, cloudy, and rainy must be used.

Extra Credit

- (+4 pts) Add day-to-day navigation in the detailed weather view.
- (+6 pts) Implement multiple location support via ZIP code input.
- (+4 pts) Include a weather radar in the Detailed Weather View.

Submission

Submit the commit ID of the specific commit you wish to turn in for this assignment.

Academic Honesty Policy

All code submissions must be original and authored by the student. While students are encouraged to use Apple’s built-in AI in Xcode and GitHub Copilot as coding assistants, these tools should be used for guidance and productivity enhancement, not as a replacement for understanding or writing code. Simply copying and pasting AI-generated code without comprehension or modification is not acceptable.

Any code sourced from another student, falsely presented as one’s own, or copied directly from third-party websites will constitute a breach of the school’s academic honesty policy.

Daily commits and pushes to your assignment GitHub repository are <u>mandatory</u> while working on your project. Failure to comply will result in deductions from your final grade at minimum, and could lead to academic honesty violations.