

iOS Coding Assignment

Building a Weather Forecast App

Overview:

In this coding assignment, you are required to build a weather forecast app using SwiftUI and Swift. The app will fetch weather data from a REST API and display it in an interactive and visually appealing user interface.

Requirements:

UI Design:

- Create a visually pleasing user interface using SwiftUI.
- The main screen should display the current weather conditions, including temperature, weather description, and an icon representing the weather.
- Implement a daily forecast section that shows the weather forecast for the next 5 days. Each forecast cell should display the date, an icon representing the weather, and the temperature range.
- Include a refresh button or gesture to update the weather data.

Networking:

- Integrate a REST API to fetch weather data. You can use a free weather API of your choice (e.g., OpenWeatherMap).
- Fetch the current weather conditions and 5-day forecast for a specific location (latitude and longitude).
- Implement error handling for network requests.

Data Parsing:

- Parse the JSON responses from the API into Swift models.
- Create data structures to store the current weather data and forecast data.

User Experience:

- Implement smooth transitions and animations to enhance the user experience.
- Allow users to pull to refresh the weather data.
- Display appropriate loading indicators while fetching data.

Bonus:

- Implement a search functionality that allows users to search for weather in different locations.
- Add unit tests to ensure the correctness of your networking and parsing code.
- Utilize SwiftUI's built-in animation capabilities for a more polished UI.

Submission Guidelines:

1. Github Link:

- a. Commit your code regularly with meaningful commit messages.
- b. Include a README.md file that explains how to run your app, any design decisions you made, and any challenges you encountered.
- c. If you couldn't implement any specific requirement, explain the reasons in the README.
- d. Submit the link to your repository before the specified deadline.

2. App Screen recording:

- a. Screen recording of the app in working condition showcasing the screens that are developed
- b. Video can be sent via a drive link or any other method

Evaluation Criteria:

Your assignment will be evaluated based on the following criteria:

- **Code Quality:** Is the code well-structured, clean, and organized?
- **UI/UX:** Is the user interface intuitive, visually appealing, and responsive? Are animations used effectively?
- **Networking:** Is the REST API integration implemented correctly? Is there proper error handling?
- **Data Parsing:** Are the JSON responses parsed accurately into Swift models?
- **Functionality:** Does the app display the current weather and forecast data correctly? Does the refresh functionality work as expected?
- **Bonus:** If you attempted the bonus tasks, they will contribute to your evaluation.

Note: The goal of this assignment is to assess your iOS development skills, including SwiftUI, networking, and UI/UX design. Feel free to use any external libraries or resources that you think would enhance the quality of your work. Good luck, and have fun building the weather forecast app!