Weather Dashboard - Project Instructions

COVER PAGE

Application Name: Weather Dashboard

Group Number: Group 14

Platform: React Native using Expo CLI

Group Members

Role	Developer	Responsibilities
Developer 1	**Anupa Ragoonanan**	API Integration & Progress Management
Developer 2	**Harry Joseph**	Interactive Components & Gestures
Developer 3	**Raj Patel**	Modals, Notifications & Animations
Developer 4	**Kerlan Augustine**	Navigation & Project Documentation

Purpose of the Application

Who Needs This App? Innovation in Weather Applications

Our **Weather Dashboard** addresses critical gaps in existing solutions by combining real-time data accuracy with modern UI/UX principles, offline functionality, and personalized interactivity—making it essential for today's mobile users.

Core User Needs & Solutions

Need	Solution
Universal Accessibility	Clear, reliable access to weather data for all users
Mobile-First Experience	Fast React Native performance tailored for mobile
Enhanced User Experience	Dynamic animations, gesture navigation, interactive components
Offline Access	AsyncStorage retains data for low-connectivity environments
Multi-Location Management	Save and switch between multiple locations effortlessly

Real-World Impact

- 🎓 **Students:** Plan outdoor activities based on real-time weather
- 💼 **Professionals:** Optimize commutes around weather disruptions
- ✈️ **Travelers:** Track forecasts across multiple destinations

- 👨‍👩‍👧‍👦 **Families:** Coordinate weekend activities with accurate forecasts

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Core Features

Display Weather Information: Current conditions, temperature, humidity, wind speed, 7-day forecasts via OpenWeatherMap API
Multi-Location Support: Save multiple locations with persistent storage
Offline Functionality: AsyncStorage maintains recent weather data
Interactive UI: Touch gestures, smooth animations, responsive components
System Integration: Push notifications for weather alerts and updates

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Project Structure & Task Distribution

```
WeatherDashboard/
├── App.js                # Main application entry
├── screens/
│   ├── HomeScreen.js     # Weather display (Anupa)
│   ├── DetailsScreen.js  # Detailed forecast (Harry)
│   └── SettingsScreen.js # Location management (Raj)
├── components/
│   ├── WeatherCard.js    # Weather info component (Anupa)
│   ├── LocationModal.js  # Location selection (Raj)
│   └── NavigationBar.js  # Bottom navigation (Kerlan)
├── services/
│   └── weatherAPI.js     # OpenWeatherMap integration (Anupa)
└── styles/
    └── globalStyles.js   # Consistent styling (All)
```

Individual Developer Assignments

Anupa Ragoonanan: OpenWeatherMap API integration, weather data fetching, HomeScreen development, AsyncStorage implementation for offline capability

Harry Joseph: DetailsScreen implementation, interactive touch components, gesture handling, pull-to-refresh functionality, animation systems

Raj Patel: Modal components, push notification setup, SettingsScreen creation, location management, micro-interactions and visual polish

Kerlan Augustine: React Navigation setup, screen integration, project management, documentation, testing coordination, video presentation

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Development Timeline & Submission Requirements

Phase 1 - Project Planning (Due: November 23, 2025)

- **Current Deliverable:** Two-page technical documentation with cover page, purpose, functionalities, structure, and task distribution
- **Format:** Professional document suitable for academic submission
- **Responsibility:** Team collaboration led by Kerlan Augustine

Phase 2 - Development (Due: December 1, 2025)

- Individual component development by assigned developers
- API integration and testing phases
- **Deliverable:** Working application with documentation

Phase 3 - Final Submission

- **a.** Complete project files (`CPAN_213_Group14_Project.zip`)
- **b.** Task distribution documentation with individual contributions
- **c.** 15-minute video presentation (all team members)
- **d.** Individual conclusion reports (1 page each, excluding cover page)

Weather Dashboard Development Team 14
CPAN 213 - Mobile App Development Project