COLLEGE CODE : 9111

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DEPARTMENT: B.E COMPUTER SCIENCE AND ENGINEERING

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Completedtheproject named as Phase 1

TECHNOLOGYPROJECT NAME : L i v e   W e a t h e r   D a s h b o a r d

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Live Weather Dashboard – Phase 1

Problem Statement

Users need an intuitive platform to view real-time weather updates for their location and other cities. Current solutions may be cluttered, lack personalization, or fail to provide timely and accurate information. A dedicated live weather dashboard aims to solve this by providing clear, accurate, and customizable weather insights.

Users & Stakeholders

- End Users: General public, travelers, outdoor workers, students.
- Primary Stakeholders: Product owner, development team, UI/UX designers.
- Secondary Stakeholders: Weather data providers (e.g., OpenWeather API), cloud hosting services, system administrators.

User Stories

1. As a user, I want to view the current weather in my city so I can plan my day.
2. As a user, I want to search for the weather in other cities so I can check conditions before traveling.
3. As a user, I want to see hourly and weekly forecasts so I can plan activities in advance.
4. As a user, I want to see severe weather alerts so I can take precautions.
5. As a stakeholder, I want the dashboard to be responsive so it works on both web and mobile devices.

MVP Features

- Current weather (temperature, humidity, wind speed, condition).
- City search option.
- 7-day forecast.
- Real-time API integration (e.g., OpenWeather API).
- Responsive design (desktop & mobile).

Wireframes / API Endpoint List

Wireframes (high-level idea):
- Header: App name + search bar.
- Main Section:
- Current weather card (temperature, weather icon, city).
- Forecast section (scrollable list or grid).
- Footer: Credits (e.g., "Data powered by OpenWeather").

API Endpoint List (example with OpenWeather API):
- Current Weather: GET /data/2.5/weather?q={city name}&appid;={API key}
- Forecast (7-day): GET /data/2.5/forecast/daily?q={city name}&cnt;=7&appid;={API key}
- Geolocation Weather: GET /data/2.5/weather?lat={lat}&lon;={lon}&appid;={API key}

Acceptance Criteria

- The dashboard must display current weather for a searched city.
- The dashboard must show a 7-day forecast with icons.
- The system must update data in real-time (API-driven).
- The dashboard must be responsive (usable on mobile & desktop).
- Weather alerts (if API supports it) must be visible to users.