🐑 Capstone Project Plan

- 🔷 **Project Title: Weather Dashboard – Real-Time Climate Tracker**

🎯 Objective

To develop an interactive weather dashboard that allows users to view real-time and forecast weather data by city, helping them plan their day effectively.

✳️ Features

- 🔍 Search weather by city name
- 🌡️ Display current temperature, humidity, wind speed, and weather condition
- 📅 Show 3–5 day weather forecast
- 📊 Visualize temperature trends using graphs
- 📥 Option to export data as PDF (optional)
- 💾 Save recent or favorite cities (optional)

🧰 Tools & Libraries

- Python
- requests – To call weather API
- json – For parsing API responses
- matplotlib / seaborn – For temperature trend charts
- tkinter or flask – GUI or web interface
- OpenWeatherMap API – To fetch weather data
- pandas (optional) – For handling forecast data
- reportlab (optional) – For PDF report generation

🖼️ Timeline

Week   Tasks

Week 1 Project setup, API key registration, fetch/display weather

Week 2 Add forecast display and GUI/web interface (Tkinter or Flask)

Week 3 Graphs for trends, save cities, optional export feature

Week 4 Final testing, polish UI, write documentation, build pitch deck

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👥 Team Members & Roles

Name   Role

Urooj Zaheer Lead Developer, API Integration, Data Visualization

Saad Khan   UI/UX Designer, GUI/Web Developer, Documentation & Testing