Goal: Develop a weather application in Python that connects to a public weather API (e.g., OpenWeatherMap or WeatherStack). The app should allow users to input a location (city or coordinates) and fetch real-time weather data, including temperature, humidity, and wind speed. The app will display the weather information in a user-friendly format.

Structure:

-User Interface: Design a console-based user interface for input and output, allowing users to interact with the calculator using simple commands or GUI using libraries like Tkinter (optional).

-Functionality: Implement features to perform basic arithmetic operations, error handling for invalid inputs, and support for decimal or integer inputs.

-Reports: Generate reports or logs of performed operations (optional) and save them into a text file or a database.

Technologies:

-Python: For developing the application's core logic and features.

-Tkinter (Optional): For building a GUI-based calculator with buttons, input fields, and result displays.

-SQLite (Optional): For saving the history of operations performed by the user.

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-SQLite: For persistent data storage to save the user's history of calculations.

-Pandas (Optional): For storing the history in a table format and generating reports for operations performed.

-Logging: For generating logs of calculations performed and storing them for later reference.

Deliverables:

-Complete Python project files (including source code and necessary configuration files).

-A Python executable or script for running the application.

-Documentation of the application's functionality, usage, and setup.

Checklist:

-Design the system for arithmetic operations with error handling for invalid inputs (e.g., dividing by zero).

-Implement functionality for performing basic operations (addition, subtraction, multiplication, division).

-Optionally implement GUI using Tkinter for a better user experience.

-Optionally implement a history feature using SQLite or another method to store past operations.

-Test the application for various edge cases (e.g., non-numeric input, division by zero).

-Submit the completed project files and documentation.