Project Title: Python Web Scraper

Objective:

Create a Python-based web scraper using libraries such as BeautifulSoup and requests. The goal is to extract relevant data from websites and store it in a structured, analyzable format.

Requirements:

- Extract specific information (e.g., headlines, product details, URLs).
- Handle various HTML structures and tags.
- Ensure compatibility across different websites.
- Save extracted data in structured formats such as:
    - **CSV**
    - **JSON**

Technologies:

- Python
- BeautifulSoup
- requests
- CSV, JSON for data storage

Deliverables:

- Complete source code of the web scraper

- README or documentation explaining:
    - Setup and usage
    - How to modify target websites or HTML structures
- Example output files (.csv, .json)

Optional Features:

- User input to select which website or data to scrape
- Logging of errors or extraction summaries
- Scheduling or automation with cron or Python schedulers

Project Title: Console/GUI-Based Calculator

Objective:

Develop a Python calculator capable of performing basic arithmetic operations with error handling, optional GUI, and operation logging.

Features & Structure:

1. User Interface:

- **Console-based** interface
- (Optional) **GUI using Tkinter** with:
    - Buttons for digits and operations
    - Input/output fields

2. Core Functionalities:

- Basic arithmetic operations:

    - Addition
    - Subtraction
    - Multiplication
    - Division
- Input validation and error handling:
    - Handle non-numeric inputs
    - Prevent division by zero
- Support for both integers and decimals

3. Reports & History (Optional):

- Log all calculations performed
- Save history to:
    - Text files
    - SQLite database
- (Optional) Use pandas for structured history tracking and report generation

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Technologies:

- Python
- Tkinter (optional GUI)
- SQLite (optional for history)
- Pandas (optional for reports)
- Logging module

Deliverables:

- Python script or executable
- Documentation with:
  - User guide
  - Setup instructions
  - Description of features
- (Optional) Database file or logs

Checklist:

☑ Arithmetic operations with error handling
☑ Input support for integers/decimals
☑ Optional Tkinter GUI
☑ Optional SQLite/Pandas history
☑ Logs or reports (optional)
☑ Edge case testing (non-numeric, divide by zero, etc.)