Homework 1

Title: Downloading and Importing Multiple Files from a ZIP Archive

Objective: Your task is to download a ZIP file containing multiple data files and then import all these files into Python using four different methods we discussed in class.

Instructions:

1. **Downloading the ZIP File**:

   - Download the provided ZIP file named **data_files.zip** from the course portal or the link provided by the instructor.

   - Extract the ZIP file's contents to a directory on your computer.

2. **Setup Your Working Environment**:

   - Ensure you have the required libraries installed for file operations, including **pandas**.

   - Set up a new Python script or Jupyter notebook for this assignment.

3. **Import Libraries**:

   - Import necessary libraries. You will need **pandas** and any other libraries we discussed related to file operations in class.

4. **Method 1: Same Directory:**

   - Use the first method we discussed in class to import all data files from the extracted directory (the same directory of your jupyter notebook)

   - find your directory first and place it in the samedirectory

   - Store each file in a separate DataFrame and print the first 5 rows to verify.

5. **Method 2: Raw Strings: (very important use full method)**

   - Apply the second method to import the data files.

   - As before, store each file in a separate DataFrame and verify by printing the first few rows.

6. **Method 3: Double Backslashes (\\)**:

   - Import the files using the third method discussed in class.

   - Validate your imports by displaying the initial rows of each DataFrame.

7. **Method 4: Using Forward Slashes (/):**

- Lastly, utilize the fourth method to import the data.

- Verify the imports by showing the top rows of each DataFrame.

Hints:

- Remember the syntax to import libraries in Python.

- Pay close attention to file paths, especially if the extracted files are in a different directory.

- Some methods might require you to iterate over files or directories. Remember the techniques we discussed for this.