

Explanation of the Code

1. Imports: The script begins by importing necessary libraries: `pandas` for data manipulation, `csv` for writing CSV files, `math` for mathematical operations, `pathlib` for handling file paths, and `os` for interacting with the operating system.

2. Variable Initialization:

- `column_year` is set to 2012, which is the starting year for data aggregation.
- `transform` and `data` dictionaries are initialized to store aggregated results.

3. Reading CSV Files:

- A loop iterates over the years 2013 to 2016 (indicated by the range 3 to 7).
- For each year, it reads the corresponding CSV file into a DataFrame using `pd.read_csv()`.

4. Data Aggregation:

- For each row in the DataFrame, the script initializes quarterly totals for each state.
- It checks for missing values using `math.isnan()` and sums the values for each quarter (Q1 to Q4).
- The results are stored in the `data` dictionary, with each state as a key.

5. Writing to CSV:

- The script checks if a directory named "data" exists; if not, it creates one.
- It then writes the aggregated data into a new CSV file named "Formula_Fed-Totals.csv".