🧪 Correlation Analysis Task

📝 Objective:

Explore and compare the relationships between variables in the dataset using scatterplots and correlation coefficients (Pearson and/or Spearman).

📂 Dataset:

correlation_dataset_200_rows.xlsx

📊 Task Instructions:

Step 1: Load the Data

Load the dataset using your preferred tool:

- **Excel**, **Google Sheets**

Step 2: Visualize the Relationships (Scatterplots)

For each of the following variable pairs, create a scatterplot:

1. `Hours_Studied` vs `Test_Score`
2. `Hours_Studied` vs `Stress_Level`
3. `Hours_Studied` vs `Coffee_Cups`
4. `Hours_Studied` vs `Commute_Duration`
5. `Test_Score` vs `Commute_Duration`

Step 3: Calculate Correlation Coefficients

For the same pairs, compute:

- **Pearson Correlation**: measures **linear** relationships
- **Spearman Correlation**: measures **monotonic** relationships (based on ranks)

You can calculate them using:

- **Excel**:
    - Pearson: `=CORREL(A2:A201, B2:B201)`
    - Spearman (requires ranking or using `RANK.AVG`)