MEASURE ENERGY CONSUMPTION

PHASE-3 PROJECT

**Step 1: Install necessary libraries**

pip install pandas matplotlib

**Step 2: Load Data**

import pandas as pd # Replace 'your\_data.csv' with the actual filename file\_path = 'your\_data.csv'

Load data into a pandas DataFrame df = pd.read\_csv(file\_path) # Display the first few rows of the DataFrame to inspect the data print(df.head())

**Step 3: Preprocess Data**

Depending on your specific requirements and the nature of your data, preprocessing steps may include:

* Handling missing values
* Converting data types
* Parsing dates and times
* Aggregating data at different time intervals (e.g., hourly, daily)

Check for missing values print(df.isnull().sum()) # Convert date column to datetime format df['Date'] = pd.to\_datetime(df['Date']) # Set the date column as the index df.set\_index('Date', inplace=True) # Resample data to daily frequency, aggregating by sum df\_daily = df.resample('D').sum() # Display the preprocessed DataFrame print(df\_daily.head())

**Step 4: Visualize Data**

import matplotlib.pyplot as plt plt.figure(figsize=(12, 6)) plt.plot(df\_daily.index, df\_daily['EnergyConsumption'], label='Energy Consumption') plt.title('Daily Energy Consumption') plt.xlabel('Date') plt.ylabel('Energy Consumption') plt.legend()

plt.show()