**Problem Statement**

**Project Title:** World Energy Consumption Analysis Report (1965-2023)

**Dashboard 1: Summary Analysis**

**Objective:**  
To monitor and assess global energy consumption activities and performance, we need to create a comprehensive World Energy Consumption Report. This report aims to provide insights into key energy-related metrics and their changes over time. The report will help us make data-driven decisions, track the energy consumption portfolio of various nations and regions, and identify trends that can inform energy policy and economic strategies.

**Key Performance Indicators (KPIs) Requirements:**

1. **Total Energy Consumption Over Time:** We need to visualize the trend of total world energy consumption from 1965 to 2023 to understand the overall growth trajectory.
2. **Top Consuming Countries:** Identify the top 10 countries with the highest energy consumption in the most recent year (2023). This helps pinpoint the major players in the global energy market.
3. **Top Consuming Regions:** Identify the top 10 regions (e.g., Total North America, Total Asia Pacific) with the highest energy consumption in the most recent year (2023). This provides a broader, continent-level perspective.
4. **Consumption Growth Rate:** Calculate the percentage growth in energy consumption for each country from 1965 to 2023. We need to identify the top 10 countries with the highest growth rates to understand which economies have industrialized or expanded the most rapidly.

**Regional vs. Country-Level KPIs**

In order to evaluate the performance of different entities, we need to create a comprehensive report that distinguishes between **‘Countries’** and **‘Regions’** based on the provided labels in the dataset.

**Good Analysis KPIs (Countries):**

* **Top 10 Countries by 2023 Consumption:** Determining the absolute highest energy consumers in the modern era.
* **Top 10 Countries by Growth Rate (1965-2023):** Identifying countries that have shown the most significant percentage increase in energy usage over the entire period.

**Bad Analysis KPIs (Regions):**

* **Top 10 Regions by 2023 Consumption:** Identifying the largest regional blocs of energy consumption.
* **Top 10 Regions by Growth Rate (1965-2023):** Understanding which parts of the world have seen the most collective growth in energy demand.

**Dashboard 2: Detailed Views**

**Objective:**  
To gain a comprehensive overview of our energy data and monitor the performance of different entities, we aim to create a series of focused visualizations. These reports will serve as valuable tools for analyzing and understanding key indicators associated with different years and countries.

**Chart Requirements:**

1. **Country-Specific Trend View (Line Chart):**  
   A function to generate a line chart showing the energy consumption trend for any specified country from 1965-2023. This allows for detailed deep-dives into the energy history of individual nations.
2. **Yearly Snapshot View (Bar Chart):**  
   A function to create a bar chart that provides a comprehensive overview of energy consumption across all countries for a single, specified year. This will be a valuable tool for comparing national performance at any point in time.
3. **Yearly Correlation View (Heatmap):**  
   A heatmap to visualize the correlation between energy consumption levels across all years. This will help identify periods of similar global growth or stagnation and understand the overall consistency of consumption trends.