Global Coffee Consumption and Preferences Dashboard

1. Objective

- The objective of this project is to visualize and analyze global coffee consumption trends, consumer preferences, and the environmental impact of coffee production. The dashboard will provide insights into various aspects such as annual consumption, price comparisons, regional differences, and the relationship between coffee exports/imports and environmental impact.

2. Procedure

2.1 Data Collection:

- **Source**: The dataset used in this analysis contains information about coffee consumption, price per cup, coffee type preferences, and environmental data across 15 countries.
- **Dataset Variables**:
    - **Country**: The country where the data was collected.
    - **Region**: The continent or region.
    - **Coffee Type**: Type of coffee consumed (e.g., Espresso, Black Coffee, Latte).
    - **Annual Consumption (kg per capita)**: Amount of coffee consumed per person annually.
    - **Price per Cup (USD)**: The average price of a cup of coffee.
    - **Age Group**: The age group of the primary coffee consumers.
    - **Income Level**: The income level of coffee consumers (Low, Medium, High).
    - **Environmental Impact (kg CO2 per kg of coffee)**: Carbon footprint of coffee production.

2.2 Data Preparation:

- **Data Cleaning**: Remove any missing values and erroneous entries.

- **Categorical Data**: Convert categories like coffee type, age group, and income level into factors for easy analysis.
- **Numeric Data Formatting**: Format numeric data like coffee consumption and price to standard units for consistency.

2.3 Visualizations in Power BI:

Visualization 1: Coffee Consumption by Country

A bar chart comparing coffee consumption (in kg per capita) across all countries. This will highlight which countries consume the most coffee annually.

Visualization 2: Price Comparison by Country

A bar chart comparing the average price of a cup of coffee across different countries.

Visualization 3: Coffee Preferences by Age Group

A pie chart or stacked bar chart showing the coffee preferences of different age groups (e.g., preference for espresso, latte, black coffee, etc.).

Visualization 4: Coffee Exports vs. Imports

A scatter plot or line chart comparing the coffee export and import data for each country, showing global trade patterns.

Visualization 5: Environmental Impact of Coffee Production

A bar or line chart visualizing the environmental impact (CO_2 emissions) for each country based on coffee production.

2.4 Dashboard Creation:

- Combine all visualizations into a single interactive Power BI dashboard.
- Add slicers and filters for regions, coffee types, and income levels to allow users to interact with the data and explore different perspectives.

3. Analysis and Insights:

- **Global Coffee Consumption Trends**: Identify which countries have the highest and lowest coffee consumption rates and examine the underlying factors.
- **Price Trends**: Analyze the price differences across countries and explore reasons for these variations.

- **Coffee Preferences by Age Group**: Discover which coffee types are preferred by different age groups and understand changing preferences.
- **Environmental Impact**: Examine the carbon footprint of coffee production in each country and correlate it with export and import data.

4. Result :

- Summarize key findings from the dashboard, providing insights into global coffee consumption and its environmental implications.
- Offer recommendations for policymakers or businesses based on the data insights.

5. Output: