Data Preparation & Modeling

1. **Imported Datasets**:
   - FactSale.csv (Sales transactions)
   - DimEmployee.xlsx (Employee details)
   - DimCity.csv (City and regional data)
   - DimDate.csv (Date dimension)
2. **Established Relationships**:
   - FactSale[EmployeeID] ⟶ DimEmployee[EmployeeID]
   - FactSale[DateID] ⟶ DimDate[DateID]
   - FactSale[CityID] ⟶ DimCity[CityID]
3. **Data Cleaning & Transformation**:
   - Handled missing values, removed duplicates, and ensured data consistency.
   - Created necessary calculated columns and **DAX measures** for analysis.

KPI Calculation Using DAX

- **Total Sales**

  ```
  Total Sales = SUM(FactSale[SalesAmount])
  ```

- **Previous Month Sales**

  ```
  Previous Month Sales = CALCULATE([Total Sales], PREVIOUSMONTH(DimDate[Date]))
  ```

- **Monthly Growth (%)**

  ```
  Monthly Growth = DIVIDE(([Total Sales] - [Previous Month Sales]), [Previous Month Sales], 0)
  ```

- **Total Tax Amount**

  ```
  Total Tax Amount = SUM(FactSale[TaxAmount])
  ```

Dashboard visualizes various aspects of business performance using different types of visualizations:

1. **Map Visualization (Regional Tax Analysis)** - Displays tax data by state.
2. **KPI Cards** - Highlight key metrics like Total Tax Amount (2.98M), Total Profit (9.92M), and Total Sales (22.86M).
3. **Line Chart (Sales Growth by Month)** - Shows the trend of total sales over months.
4. **Bar Chart (Total Sales by Employee)** - Compares sales figures among employees.
5. **Table (Sales Breakdown by Employee and Month)** - Provides a detailed breakdown of sales transactions.
6. **Treemap (Latest Population Count by State)** - Represents state-wise population using area size.
7. **Bar Chart (Sales Distribution Across Countries & Cities)** - Highlights city-level sales distribution.
8. **Pie Chart (Package Count Analysis)** - Displays distribution of package types.
9. **Scatter Plot (Aggregated ISO Week Numbers by Day)** - Shows sales or transaction frequency across ISO weeks.
10. **Grouped Bar Chart (Product Sales Over the Years)** - Compares sales data across different years.