Task: Sales Analysis Project

Objective:

To analyse a fictional company's sales data using SQL, Excel, and Power BI, and create a report that provides insights into sales performance.

Steps:

1. Data Preparation:

- **SQL:**

    o Create a SQL database and define tables to store sales data. Suggested tables:

        ▪ **Products**: ProductID, ProductName, Category, Price

        ▪ **Sales**: SaleID, ProductID, QuantitySold, SaleDate, SalespersonID

        ▪ **Salespersons**: SalespersonID, SalespersonName, Region

    o Insert sample data into each table (you can generate random data or use a dataset).

- **Excel:**

    o Export the SQL data into an Excel file. Create separate sheets for each table (Products, Sales, Salespersons).

2. Data Cleaning and Transformation:

- **Excel:**

    o Clean the data by removing duplicates and correcting any inconsistencies (e.g., inconsistent naming).

    o Use Excel functions to create new calculated columns. For example:

        ▪ Total Sales (QuantitySold * Price)

        ▪ Month from SaleDate

3. Data Analysis:

- **SQL:**

  - Write SQL queries to extract key insights. For example:

    - Total sales per product

    - Total sales by region

    - Average sales per salesperson

- **Excel:**

  - Use PivotTables to summarize data, such as:

    - Sales by month

    - Sales by product category

    - Top 5 products by sales

4. Data Visualization:

- **Power BI:**

  - Import the cleaned Excel data into Power BI.

  - Create a dashboard that includes:

    - A bar chart showing total sales by product

    - A line graph showing sales trends over time

    - A pie chart for sales distribution by region

    - A table displaying top salespersons and their sales figures

5. Reporting:

- **Create a Power BI report:**

  - Add a title and a brief introduction explaining the analysis.

  - Provide filters to enable users to explore different dimensions (e.g., by region, product category).

  - Include tooltips and data labels for clarity.