**Task: Sales Analysis Project**

**Objective:**

To analyze 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:**
  + 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
  + Insert sample data into each table (you can generate random data or use a dataset).
* **Excel:**
  + Export the SQL data into an Excel file. Create separate sheets for each table (Products, Sales, Salespersons).

**2. Data Cleaning and Transformation:**

* **Excel:**
  + Clean the data by removing duplicates and correcting any inconsistencies (e.g., inconsistent naming).
  + 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.