### Project Title: Employee Performance Analysis with Excel

#### Objectives:

1. Create an Excel spreadsheet to store employee information and performance metrics.
2. Analyze employee performance based on various criteria (e.g., projects completed, sales achieved).
3. Visualize the results using Excel charts.

#### Tools and Technologies:

* **Software**: Microsoft Excel
* **Programming Language**: (Optional) Python with Pandas for more advanced analysis (if desired)
* **Visualization Tools**: Excel charts

### Steps:

#### 1. Create the Excel Database

**Open Excel and Create a New Workbook**.

**Create Two Sheets**:

* + **Sheet 1**: Employees
  + **Sheet 2**: Performance Metrics

**Define the Structure**:

* + **Employees Sheet**:
    - Columns: EmployeeID, Name, Department, Age
  + **Performance Metrics Sheet**:
    - Columns: MetricID, EmployeeID, ProjectsCompleted, SalesAchieved, EvaluationScore

**Input Sample Data**:

**Employees Sheet**:

| **EmployeeID** | **Name** | **Department** | **Age** |
| --- | --- | --- | --- |
| 1 | Alice | Sales | 30 |
| 2 | Bob | Marketing | 25 |
| 3 | Charlie | Sales | 35 |
| 4 | David | HR | 40 |
| 5 | Eva | IT | 29 |
| 6 | Frank | Sales | 32 |

**Performance Metrics Sheet**:

| **MetricID** | **EmployeeID** | **ProjectsCompleted** | **SalesAchieved** | **EvaluationScore** |
| --- | --- | --- | --- | --- |
| 1 | 1 | 10 | 50000 | 85 |
| 2 | 2 | 8 | 20000 | 90 |
| 3 | 3 | 15 | 70000 | 88 |
| 4 | 4 | 5 | 30000 | 75 |
| 5 | 5 | 12 | 45000 | 80 |
| 6 | 6 | 9 | 55000 | 82 |

#### 2. Analyze Data

**Calculate Aggregate Metrics**:

* + You can use Excel functions like SUM(), AVERAGE(), and COUNT() to summarize data.
  + For example, calculate the total sales and average evaluation score for each department if needed.

**Create a Pivot Table**:

* + Select the data in the Performance Metrics sheet.
  + Go to **Insert > PivotTable**.
  + Drag fields to summarize performance metrics (e.g., EmployeeID and ProjectsCompleted) to get an overview of employee performance.

#### 3. Data Visualization

**Create Charts**:

* + **Bar Chart for Projects Completed**:
    - Select data in the Performance Metrics sheet.
    - Go to **Insert > Bar Chart** and choose your desired style.
  + **Pie Chart for Sales Achieved**:
    - Select sales data.
    - Go to **Insert > Pie Chart** to visualize the proportion of sales achieved by each employee.
  + **Line Chart for Evaluation Scores**:
    - Select the evaluation scores data.
    - Go to **Insert > Line Chart** to track performance scores over time.

**Format Charts**:

* + Add titles, labels, and adjust colors to make the charts easy to understand.

#### 4. Conclusion

* **Summary of Findings**: Write a brief analysis based on the charts and pivot tables. Identify top performers, areas needing improvement, and overall trends.
* **Recommendations**: Suggest strategies for enhancing employee performance based on the analysis.