**Batch IS 04**

**Assignment on Microsoft Excel**

**Data Analysis and Visualization Using Microsoft Excel**

**Task Description:** You are required to perform the following tasks using Microsoft Excel:

1. **Data Entry and Formatting**
   1. Create a dataset with the following columns:
      1. Student Name
      2. Student ID
      3. Subject 1 Marks (marks above 50 and less than 90)
      4. Subject 2 Marks (marks above 70 and less than 80)
      5. Subject 3 Marks(marks above 40 and less than 100)
      6. Subject 4 Marks(marks above 30 and less than 50)
      7. Total Marks
      8. Average Marks
      9. Grade
   2. Enter data for at least 10 students (use fictional names and IDs).
2. **Data Analysis**
   1. Calculate the **Total Marks** for each student using an appropriate formula.
   2. Calculate the **Average Marks** for each student.
   3. Assign a **Grade** based on the following criteria:
      1. ‘A’ for Average Marks ≥ 80
      2. ‘B’ for Average Marks between 70 and 79
      3. ‘C’ for Average Marks between 50 and 69
      4. ‘F’ for Average Marks < 50

(Use the **IF** function for this.)

1. **Summary Statistics**
   1. Calculate the **class average** for each subject using functions like **AVERAGE**.
   2. Find the **highest and lowest scores** for each subject using **MAX** and **MIN**.
2. **Data Visualization**
   1. Create a **bar chart** showing the total marks of all students.
   2. Create a **pie chart** to represent the percentage distribution of grades (A, B, C, F).
   3. Create a **line chart** showing trends in average marks across subjects.
3. **Conditional Formatting**
   1. Apply conditional formatting to highlight:
      1. Students with grades ‘A’ in Red.
      2. Students with grades ‘F’ in yellow.

**\*\*\*Evaluation Criteria:**

* Correctness of formulas and calculations (30%)
* Proper use of Excel functions (20%)
* Accuracy of charts and visualizations (20%)
* Neatness, formatting, and organization (20%)
* Creativity and insights (10%)
* Submission Deadline: 19.12.2024