

q.1. A teacher wants to analyze the marks of students in different subjects using a Pivot Table and Pivot Chart.

Given Data (Sample):

Student Name Subject Marks

Aarav	Math	85
Aarav	Science	78
Aarav	English	82
Riya	Math	76
Riya	Science	80
Riya	English	72
Kunal	Math	90
Kunal	Science	88
Kunal	English	85
Priya	Math	84
Priya	Science	81
Priya	English	79

Tasks:

4. **Create a Pivot Table** to show the **average marks per subject**.
 5. **Use filters** to check individual student performance.
 6. **Create a Pivot Chart** (such as a bar or column chart) to visually compare marks across different subjects.
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Use What-If Analysis (Scenarios Manager) to create different scenarios for **Subject 4 Marks**, such as:

1. **Best Case:** 90 marks
2. **Expected Case:** 75 marks

3. **Worst Case:** 60 marks

Analyze how the total marks and average marks change based on these different scenarios.

q.2. A teacher wants to analyze the marks of students in different subjects using a Pivot Table and Pivot Chart.

Given Data (Sample):

Student Name Subject Marks

Aarav	Math	85
Aarav	Science	78
Aarav	English	82
Riya	Math	76
Riya	Science	80
Riya	English	72
Kunal	Math	90
Kunal	Science	88
Kunal	English	85
Priya	Math	84
Priya	Science	81
Priya	English	79

Tasks:

1. **Create a Pivot Table** to show the **average marks per subject**.
2. **Use filters** to check individual student performance.
3. Use **Goal Seek** to achieve an **average of 80**.
4. (B) Show prediction using **Linear Regression**.
5. **Viva**
6. **Journal**

q.3. A student has scored marks in four subjects, and they want to predict their total and average marks based on possible improvements in Subject 4.

Given Data:

Subject	Marks
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Subject 1	80
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Subject 2	75
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Subject 3	85
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Subject 4	70
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Tasks:

1. Calculate the **total marks** and **average marks** using Excel formulas.
 2. Use **What-If Analysis (Data Table)** to check how the total marks will change if the student scores different marks in Subject 4 (e.g., 70, 75, 80, 85, 90, 95).
 3. Find out the **minimum marks** the student must score in Subject 4 to achieve an **average of 80** using **Goal Seek**.
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2. **Perform the data clustering using clustering algorithm in Python/R Programming.**

Q.41. Implement k-means algorithm in Python/R

2. A student has scored marks in four subjects, and they want to predict their **total and average marks** based on different scoring scenarios for **Subject 4**.

Given Data:

Subject	Marks
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Subject 1	78
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Subject 2	82
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Subject 3	74
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Subject 4 (To be changed in scenarios)	
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Tasks: Calculate the total marks and average marks using Excel formulas.

Q.5(A) Perform data visualization using PowerBI on any sales data.

(B) Import the data warehouse data in Microsoft Excel and create the Pivot table and Pivot Chart.

2. Show prediction using Linear Regression Python/R.

Q.61. Write a Python program to read data from a CSV file, perform simple analysis, and generate insights.

2. Perform the linear regression on the given data warehouse data **Python/R**.

Q.7

(A) Perform the Extraction Transformation and Loading (ETL) process to construct the database in the SQL Server.

(B) Apply the what-if Analysis for data visualization. Design and generate necessary reports based on the data warehouse data.

2. Perform the data clustering using clustering algorithm in **Python/R Programming**.

Q.81. Import the above cube in Microsoft Excel and create the Pivot table and Pivot Chart to perform data analysis.

2. Perform data visualization using Python on any sales data **Python/R**.

Q.9.1. Write a Python program to read data from a CSV file containing columns such as 'Date', 'Product', 'Category', 'Sales', and 'Profit'. The program should perform simple analysis.

2. Perform the data clustering using clustering algorithm using **Python/R**.

Q.10.1. A student has scored marks in four subjects, and they want to predict their **total and average marks** based on possible improvements in **Subject 4**.

Given Data:

Subject Marks

Subject 1 78

Subject 2 82

Subject 3 74

Subject 4 65

1. Calculate the **total marks** and **average marks** using Excel formulas.
2. Use **What-If Analysis (Data Table)** to check how the **total marks** will change if the student scores **different marks in Subject 4** (e.g., 65, 70, 75, 80, 85, 90).

Q.11.1. A student has received marks in four subjects and wants to predict their total and average marks based on potential improvements in **Subject 4**.

Given Data:

Subject Marks

Subject 1 80

Subject 2 75

Subject 3 85

Subject Marks

Subject 4 70

Tasks:

1. **Calculate** the total marks and average marks using Excel formulas.
2. Use **What-If Analysis (Data Table)** to examine how the total marks change if the student scores different marks in **Subject 4** (e.g., 70, 75, 80, 85, 90, 95).
3. **Determine** the minimum marks the student must score in **Subject 4** to achieve an **average of 80** using **Goal Seek**.

Q.12.• Import the above cube in Microsoft Excel and create the Pivot Table and Pivot Chart to perform data analysis.

- Perform the data clustering using clustering algorithm in Python/R.