

24/09/25

Task 10 - Using matplotlib for plotting in python

Aim: To visualize students performance in different subjects using linebar, and pie charts with the help of the matplotlib module in python

Algorithm:

1. Import the matplotlib.pyplot module
2. Create data for 5 students and their marks in maths, Science and English
3. Linechart
 - Plot marks of all 5 students for the 3 subjects
 - Add labels, title, legend and grid
4. Bar chart
 - Compute average marks for each subject
 - Plot a bar chart showing average marks
5. Piechart
 - Select one student and plot a piechart showing marks distribution among subjects.
6. Display all charts using plt.show()

Program:

Step 1: Data for 5 students

Students = ['A', 'B', 'C', 'D', 'E']

maths = [85, 78, 92, 70, 88] 82.5

Science = [80, 85, 90, 75, 95] 85

English = [78, 82, 88, 72, 90] 82

plt.figure(figsize=(8, 5))

plt.plot(Students, maths, marker='o', label='maths')

plt.plot(Students, Science, marker='o', label='Science')

plt.plot(Students, English, marker='o', label='English')

plt.title("Students' performance in different subjects")

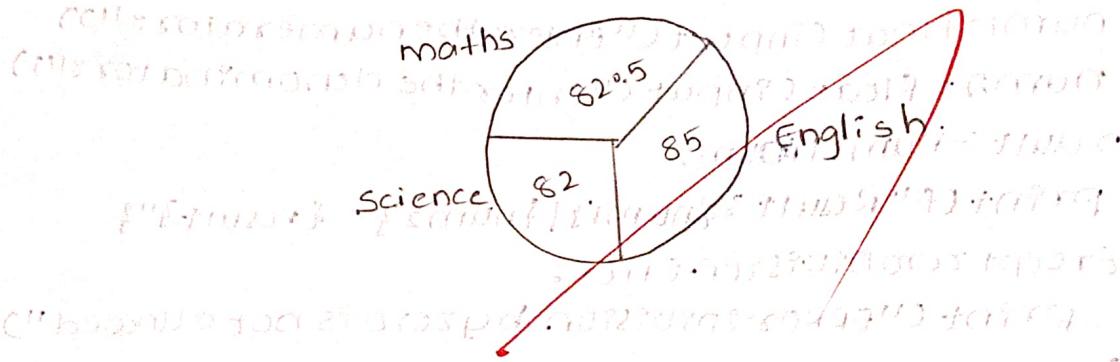
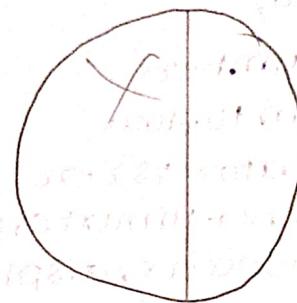
plt.xlabel("Students")

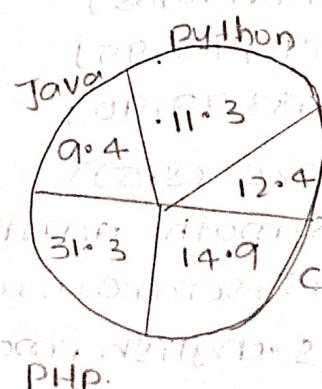
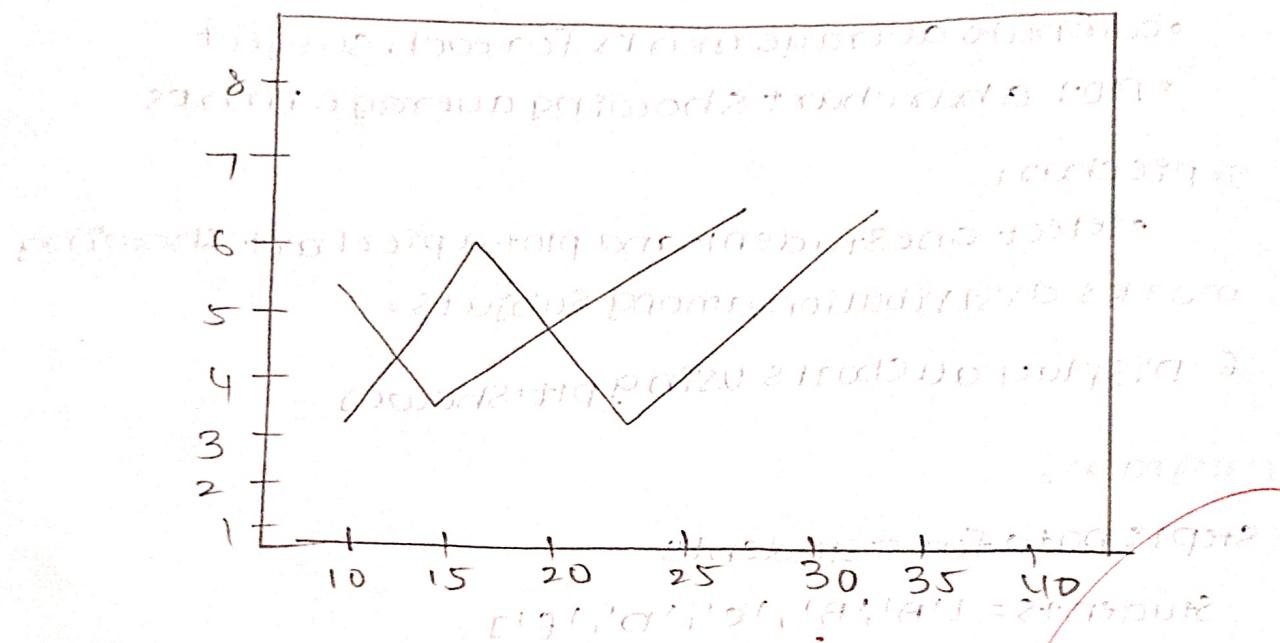
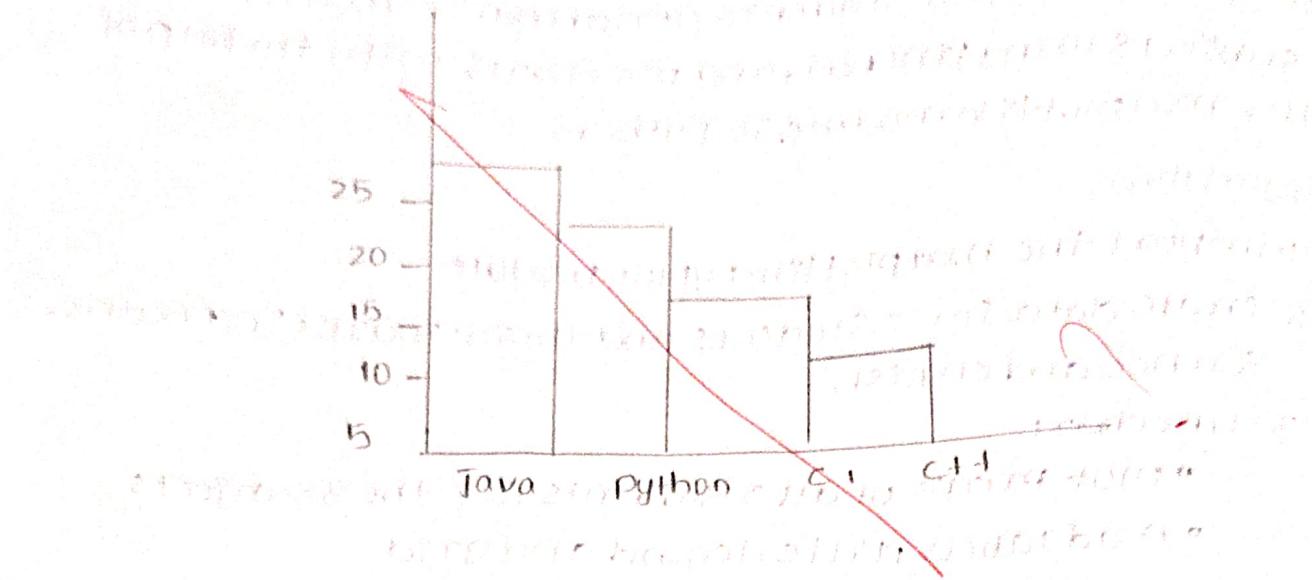
plt.ylabel("marks")

plt.legend()

plt.grid(True)

plt.show()





```
plt.figure(figsize=(5,5))
plt.pie(marks, labels=subjects, autopct='%.1f%%'
startangle=90
shadow=True
plt.title('Marks distribution for students')
plt.show()
```

VEL TECH - CSE	
EX NO.	16
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	3
RECORD (5)	3
TOTAL (20)	18
SIGN WITH DATE	

15/10/26

Result %

Thus, a python program was successfully written and executed using the matplotlib.

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