

task 10 Use matplotlib module for plotting in python

Aim: To use matplotlib module for plotting in python.

Algorithm:

1. Define two list for programming language and their popularity respectively.
2. Find the maximum popularity value in the list
3. Define a scaling factor to scale the bar height within a certain limit.
4. for each language and popularity pair, calculate the bar height as the popularity value scaled by the scaling factor.
5. print the chart using a loop to iterate over the programming language list a print the language name and a separator character (eg: "I") b. use a loop to print the bar chart by printing the bar character (eg "*") a number of times equal to the bar height c. print the popularity value with a separator character d. print a newline character.

Program:

```
#Pip install matplotlib  
import matplotlib.pyplot as plt  
language=['java', 'python', 'PHP', 'Javascript',  
          'C++', 'C#']
```

Popularity=[22.2, 17.6, 8.8, 8.7, 7.7, 6.7]

प्राचीन विद्यालयों के बीच स्कूलों के बीच विद्यालयों के बीच

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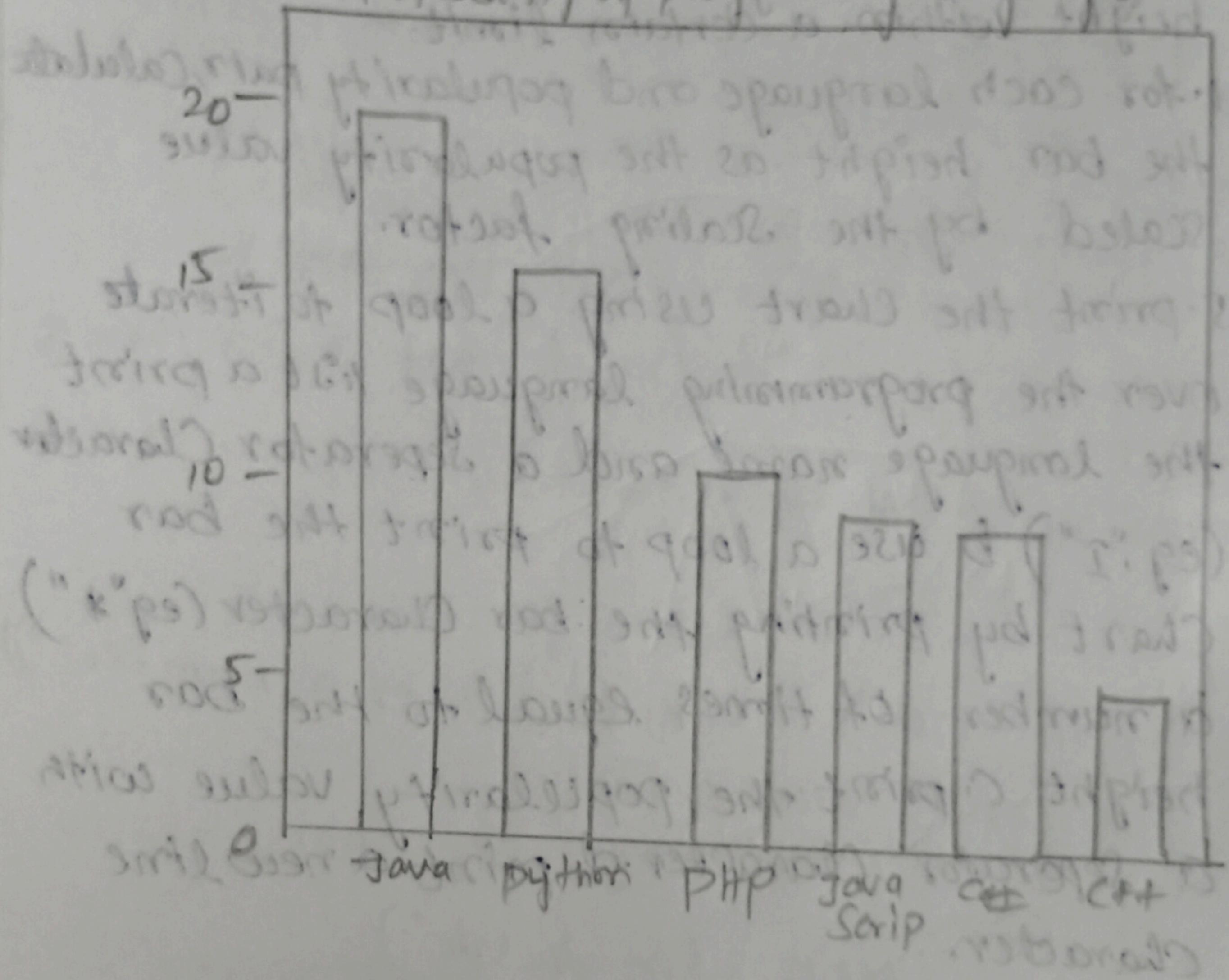
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Popularity of programming Languages



जावा, प्याथन, एफएपी, एसपी, एसपी, एसपी, एसपी, एसपी

[C, C++, C#, VB, Python, Java, PHP, JavaScript, VBScript, JSP, ASP, Perl, VBScript, C/C++]

```
plt.bar(languages, popularity, color = 'b')  
plt.title('popularity of programming language')  
plt.xlabel('programming languages')  
plt.ylabel('popularity')  
plt.show()
```

Result: Thus, the C program matplotlib module for plotting in python is successfully verified.

Task : 10.2 Pie chart of popularity

Aim: To write a python programming to create a pie chart of the popularity of programming languages.

Algorithm:

1. Create a list of programming language and popularity.
2. Create a pie chart using the matplotlib library.
3. Set the title and legend for the pie chart
4. Show the pie chart

Program:

```
import matplotlib.pyplot as plt  
# Step 1  
languages = ['Java', 'Python', 'PHP', 'JavaScript',  
             'C', 'C++')  
popularity = [22.2, 17.6, 8.8, 8.7, 7.6, 7]  
# Step 2  
plt.pie(popularity, labels=languages,  
        autopct='%.1f %%')  
# Step 3  
plt.title('Popularity of programming  
           languages')  
plt.legend(loc='best')
```

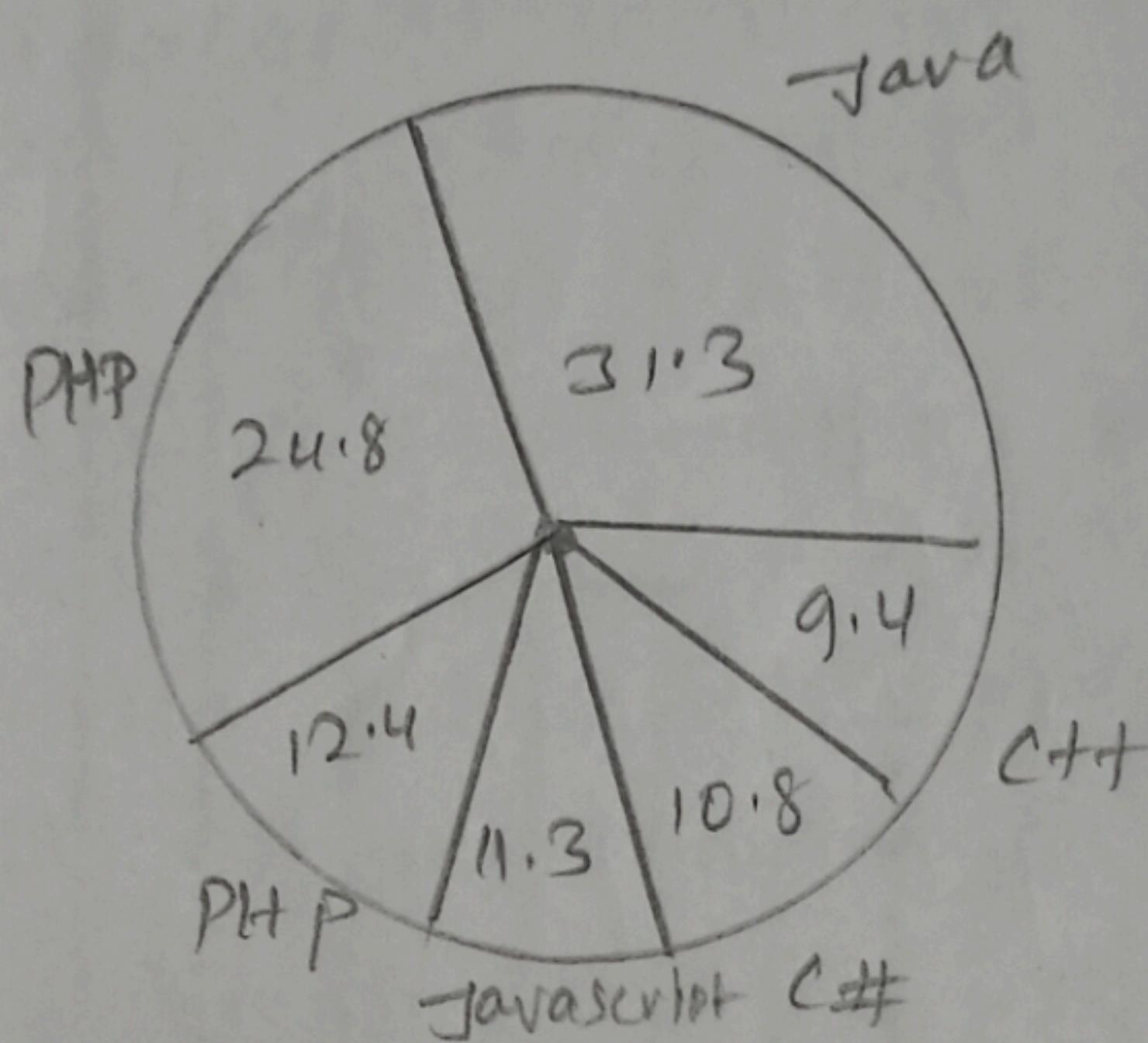
Step 4

plt.show()

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X NO.	9
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	3
VIVA VOCE (3)	3
RECORD (4)	4
TOTAL (15)	
SIGN WITH DATE	15

Result: Thus the Python program use matplotlib module for plotting is

(Carrol), PHP (24.8%) and the
(general programming) 31.3%
(general programming) 11.3%
(programming) 12.4%
(Java) 9.4%



Videlicet non programo o seft, 2017-2018
2. i matematice i programacije na dubravu
• klasnoj grupi 2022/2023