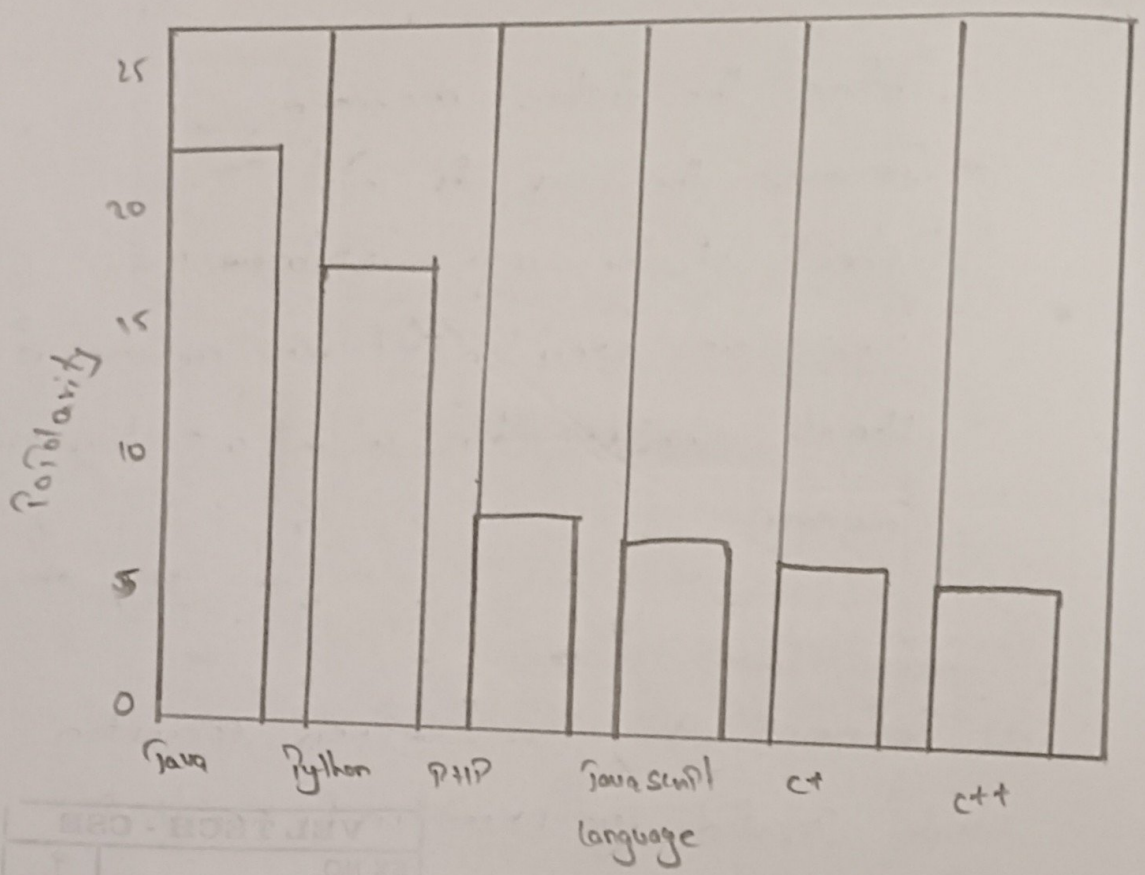
Task-10 Use matPotlib module for Plotting in Python

Aim: To use matPlobit module for Plotting in Python

Algorithm:

1. Define two list for Programming language and their PoPulatority respectively.
2. Find the maximum PoPulority value in the lis
3. Define a scaling factor to scale the bar height within a certain limit
4. for each language and PoPulority Pair, calcuat the bar height as the PoPulatority 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. ":") b. use a loop to Print the bar chart by Printing the bar chorack (eg "*") a number of times equal to the bar height c. Print the PoPulority value with a separator chorocter .d Print a newline chorocter.

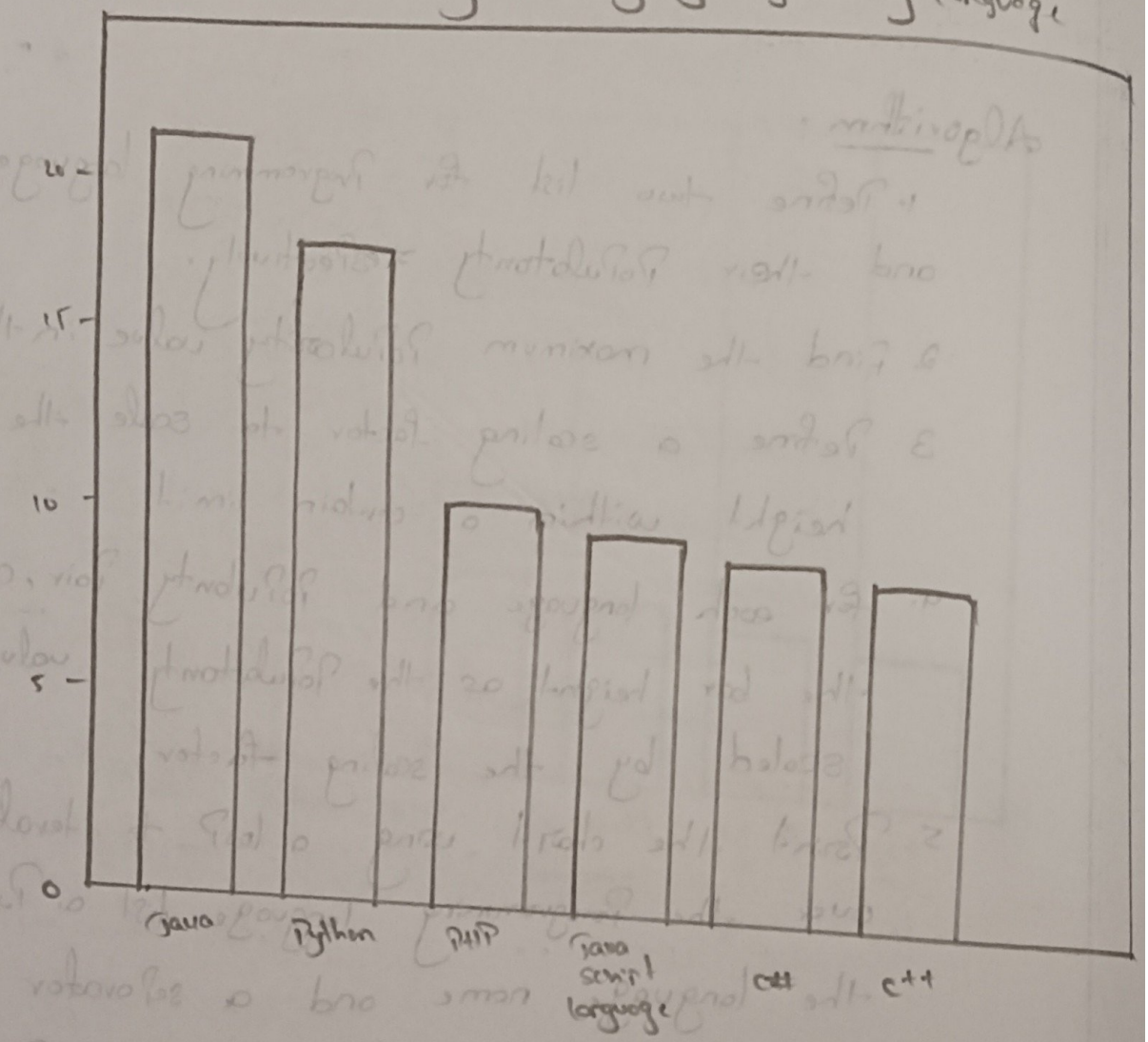

Popularity
0
5
10
15
20
25
Java
Python
PHP
Java Script
C#
C++
language

Program:

```
# PIP install matplotlib
import matplotlib.pyplot as plt
language = ['Java','Python','PHP','Java script','c#','c++']
Popularity = [22.2, 17.6, 8.8, 8, 7.7, 6.7]
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 matplobit module for Plotting in Python. is successfully verified.

output


Popularity of language Programming language
20
15
10
5
0
Java
Python
PHP
Java script language
C#
C++

Task-10.2 Pie chart of Popularity

Aim: To write a Python Programming to create a Pie chart of the Popularity of Programming language.

Algorithm:

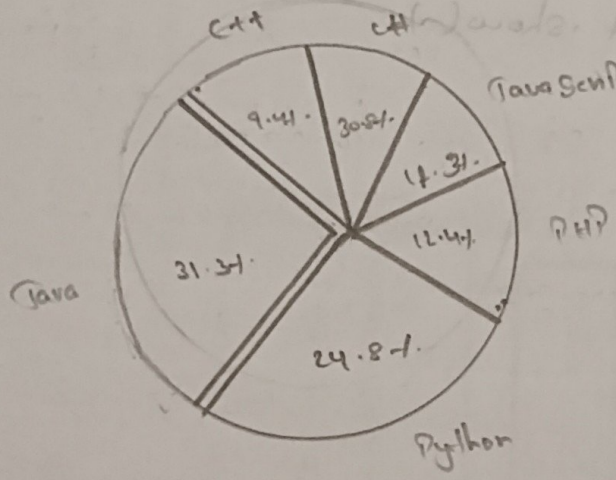
1. create a list of Programing language and Popularity
2. create a Pie chart using the matPlotlib library
3. Set the title and legend for the Pie chart
4. show the Pie chart

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 = '%1.1f%%')

# step 3
plt.title('Popularity of Programming languages')
plt.legend(languages, loc = "best")
```

output

- Java
- Python
- PHP
- Java Script
- C#
- C++



Step 4

plt.show()

VEL TECH - CSE	
EX NO.	10
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 executed and verified successfully.