

## Task 10:- Use Matplotlib module for plotting in python

Aim:-

To use Matplotlib module for plotting in Python

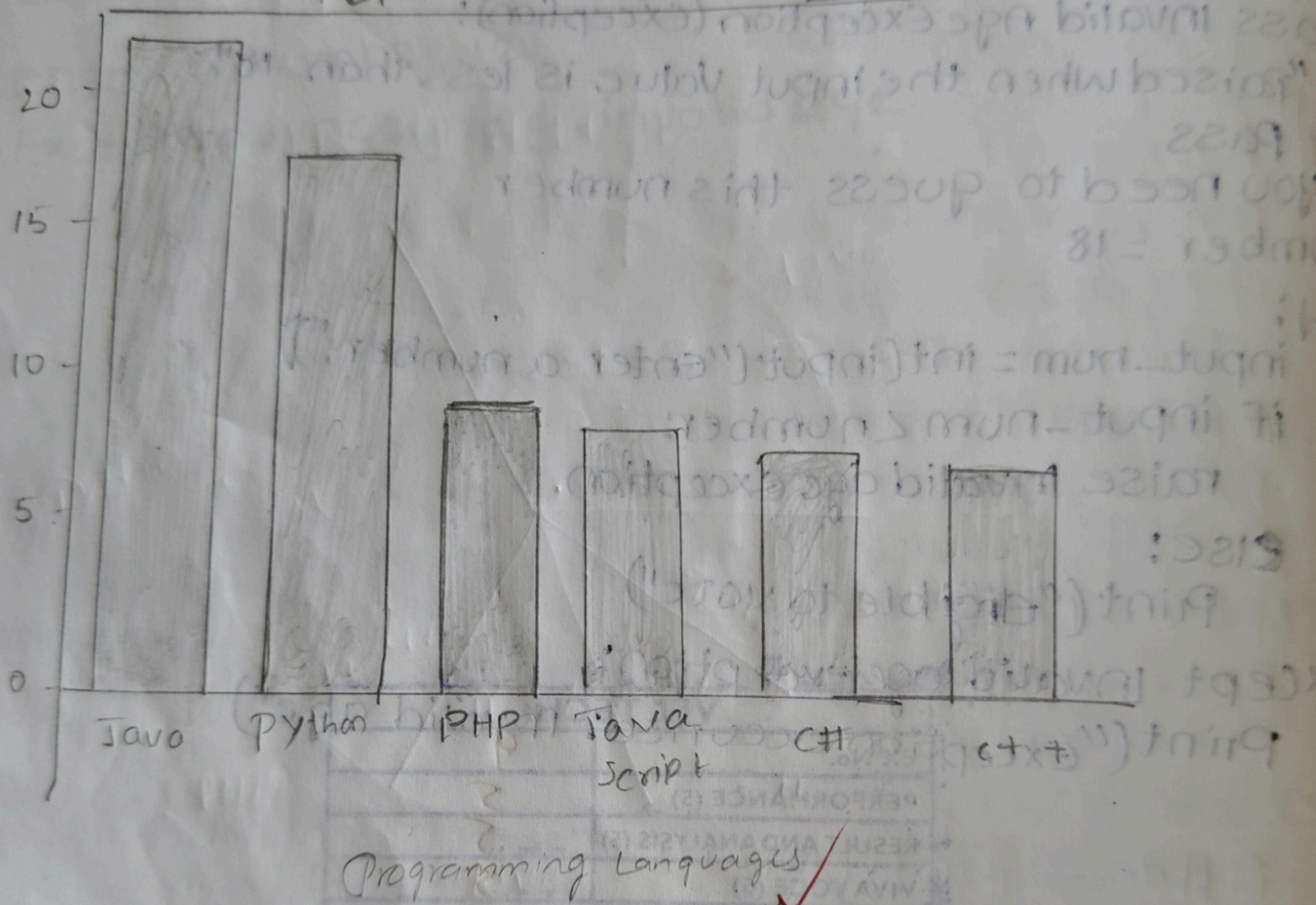
Algorithm:-

- \* Define two lists for programming languages and their popularity respectively.
- \* Find the maximum popularity value in the list
- \* Define a scaling factor to scale the bar heights within a certain limit (e.g. 50 characters)
- \* For each language and popularity pair, calculate the bar heights as the popularity value scaled by the scaling factor.
- \* Print the chart using a loop to iterate over the programming language list:
  - a. Print language name and a separator character (e.g. "\")
  - b. Use a loop to print bar chart by printing the bar character (e.g. "\*") a number of times equal to bar height.
  - c. Print the popularity with a separator character
  - d. Print a newline character

Program:-

```
# PIP install matplotlib
import matplotlib.pyplot as plt
languages = ['Java', 'Python', 'PHP', 'JavaScript', 'C#', 'C++']
Popularity = [22.2, 17.6, 8.8, 8.7, 7.7, 6.7]
plt.bar(languages, Popularity, color='b')
plt.title('Popularity of programming languages')
plt.xlabel('Programming languages')
plt.ylabel('Popularity')
plt.show()
```

## Popularity of programming languages



10.2 : Write a python program to create a pie chart of the popularity of programming languages.

Algorithm:-

1. Create a list of programming languages 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, 7.7, 6.7]  
  
# Step 2  
plt.pie(Popularity, labels=languages, autopct='%.1f%%')  
  
# Step 3  
plt.title('Popularity of programming languages')  
plt.legend(languages, loc='best')  
  
# Step 4  
plt.show()
```

VEL TECH	
EX No.	10
PERFORMANCE (5)	5
ANALYSIS (5)	5
RECORD (5)	5
TOTAL (20)	20
SIGN WITH DATE	A 8/10

Result:- Thus the python program use Matplotlib for plotting is executed and verified successfully.

