

Task No: 10

use matplotlib module for plotting in python.

Aim:- To use matplotlib module for plotting in python

problem 1.1:- write a python programming to display a bar chart of the popularity of programming languages.

Sample data.

programming languages:

Popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7

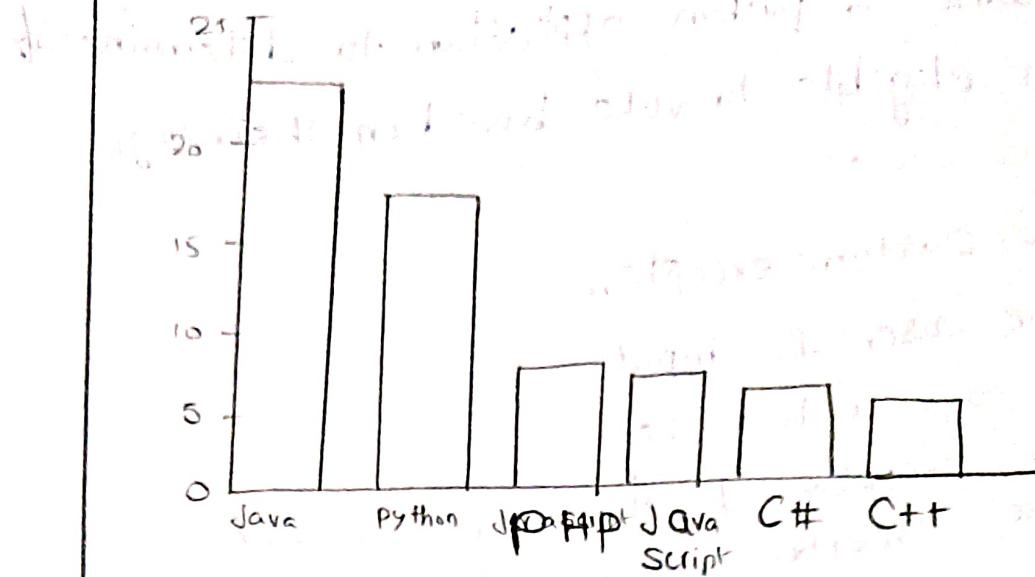
Algorithm:-

1. Define two lists for programming languages and their popularity respectively
2. find the maximum popularity value in the list
3. Define a scaling factor to scale the bar heights 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.

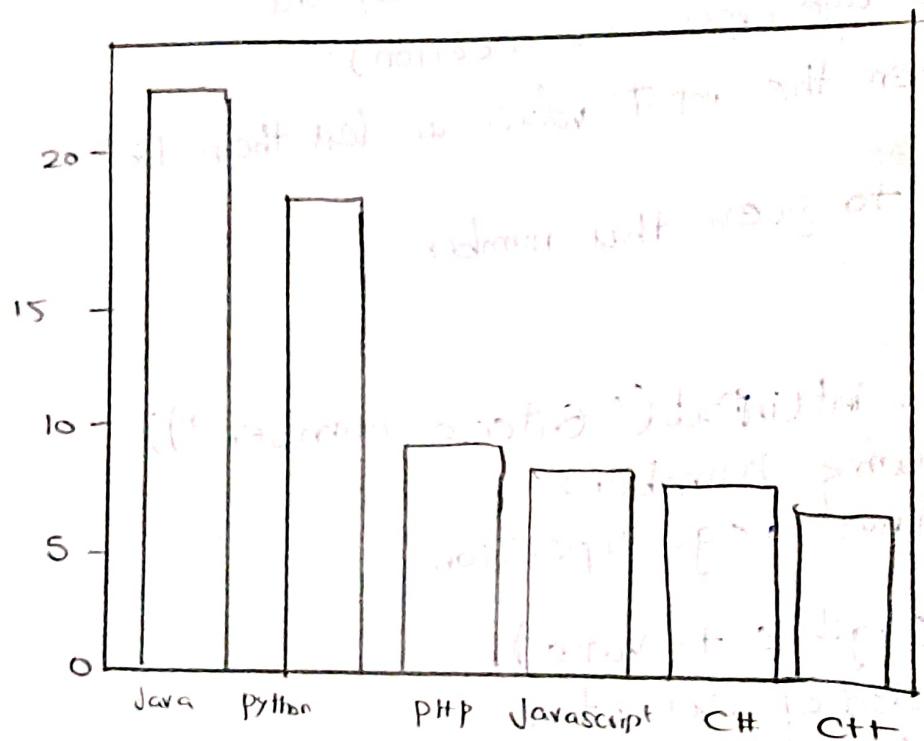
Program:-

```
# PIP install matplotlib.pyplot as plt
language = ['Java', 'Python', 'PHP', 'Javascript', 'C++', 'C++']
popularity = [22.2, 17.6, 8.8, 8, 7.7, 6.7]
plt.bar(language, popularity, color='b')
plt.title('Popularity of programming languages')
plt.xlabel('Programming languages')
plt.ylabel('Popularity')
plt.show()
```

Sample output :-

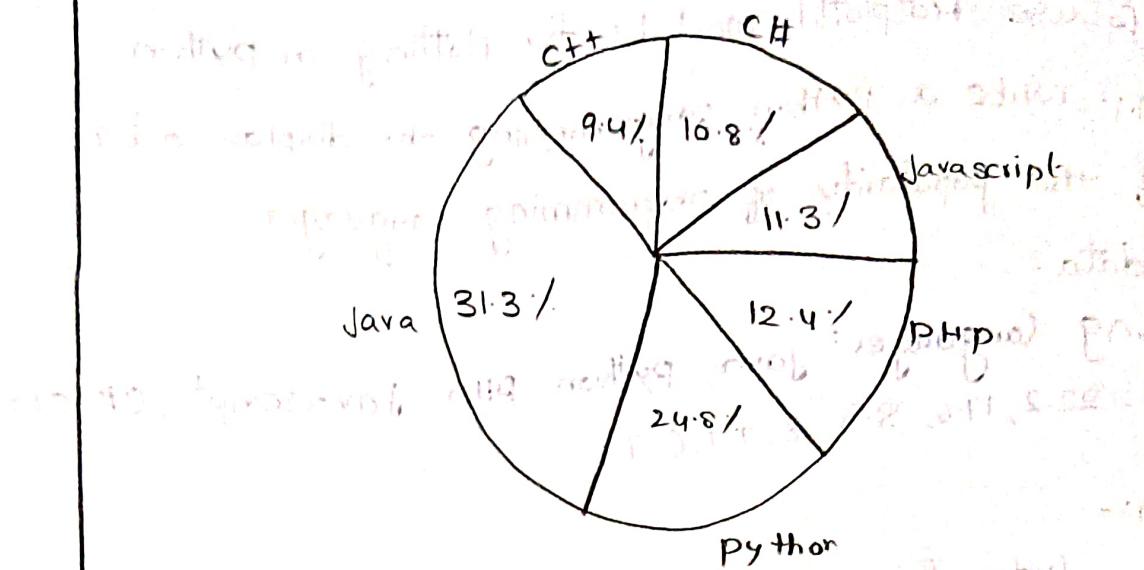


output

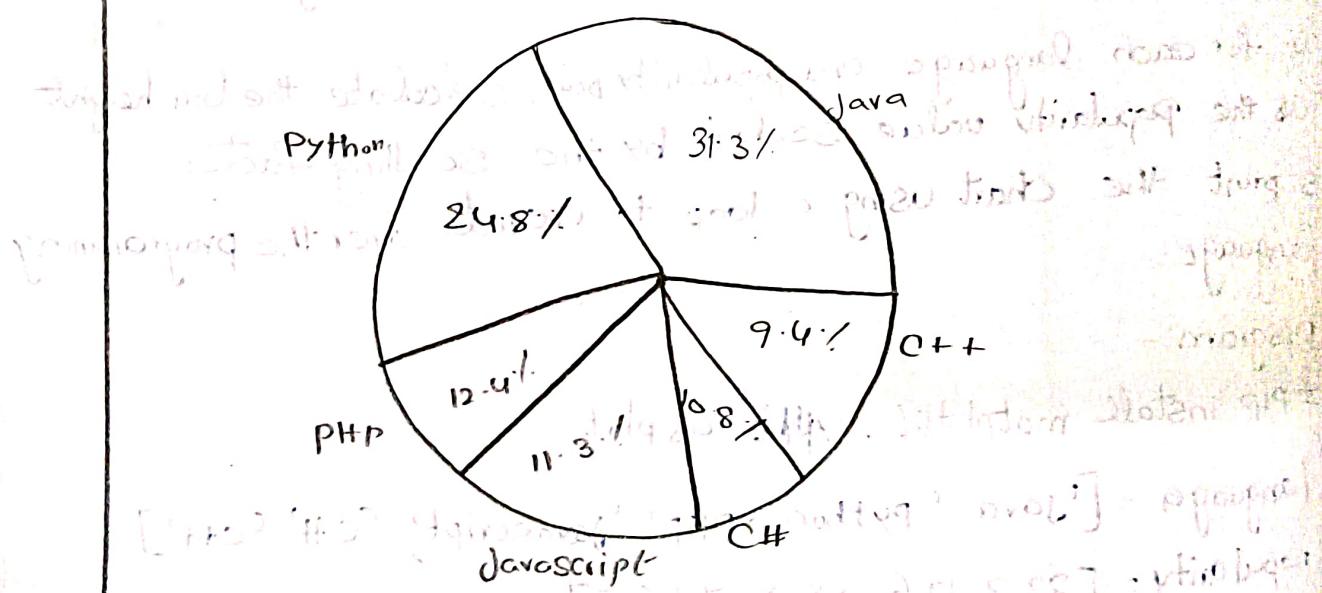


Similarity of both outputs nothing with
first one which stay at <http://www.apress.com>

Sample output:-



Output



problem 10.2 write a python programming to create a pie chart of the popularity of programming language

Sample data:-

programming languages: java, python, PHP, Javascript, C++, C#
programming: 22.2, 17.6, 8.8, 8, 7.7, 6.7

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, 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()
```

VELTECH	
EX No.	10
PERFORMANCE (5)	5
RESULT AND ANALYSIS (3)	5
VIVA VOCE (3)	5
RECORD (4)	
TOTAL (15)	
SIGN WITH DATE	15

Result:- Thus, the python program use matplotlib module for plotting is executed and verified successfully