

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: Java, Python, PHP, Javascript, C#, C++  
 Popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7

Algorithm:-

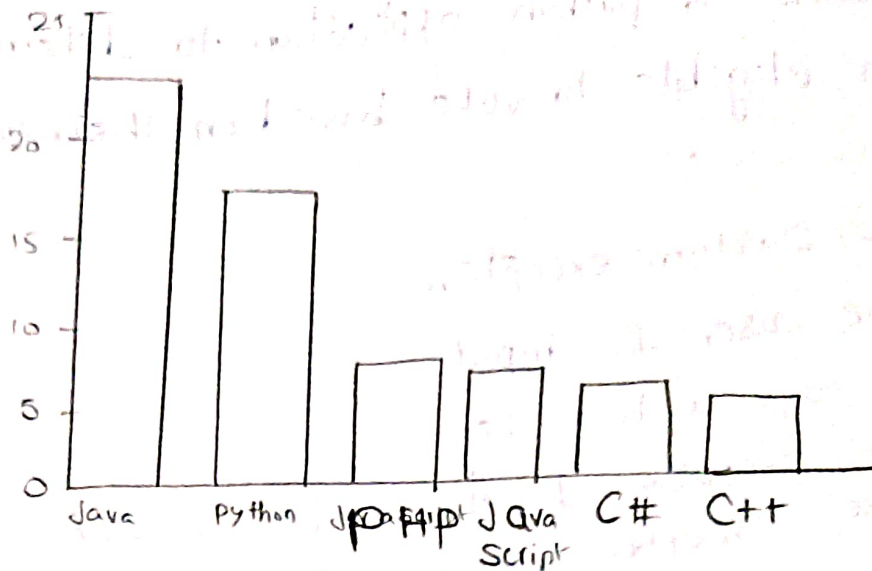
1. Define two lists for programming languages and their popularity respectively
2. find the maximum popularity value in the list
3. Define a scaling factor to scale the bar heights within a certain limit
4. for each language and popularity pair, calculate the bar height as the popularity value scaled by the scaling factor
5. print the chart using a loop to iterate over the programming language.

Program:-

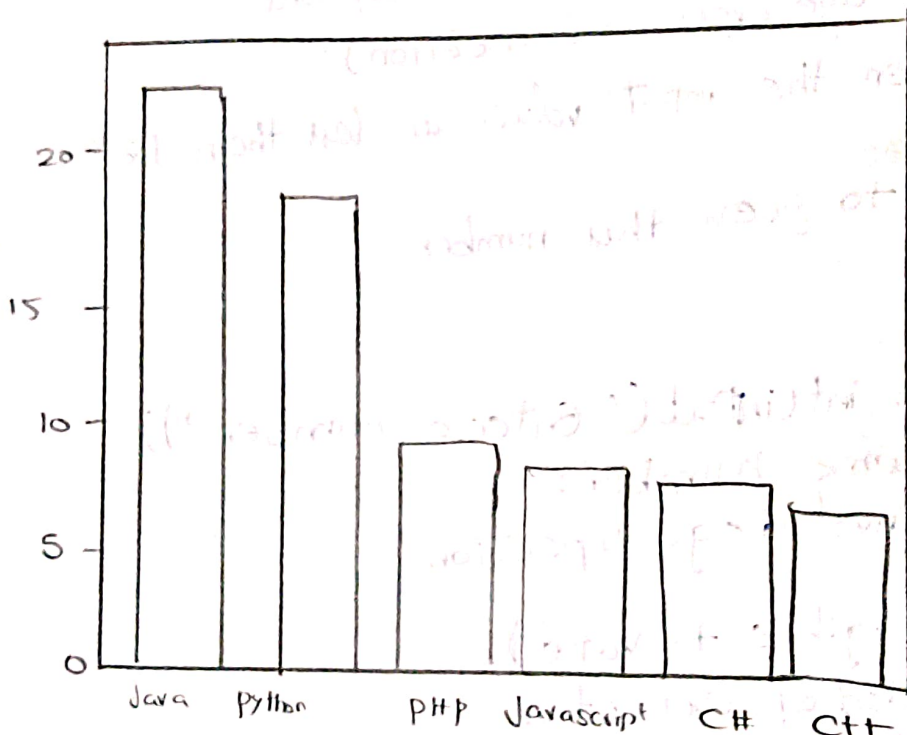
```
# pip install matplotlib.pyplot as plt
language = ['Java', 'Python', 'PHP', 'Javascript', 'C#', 'C++']
popularity = [22.2, 17.6, 8.8, 8, 7.7, 6.7]
plt.bar(language, popularity, color='b')
plt.title('popularity of programming languages')
plt.xlabel('programming languages')
plt.ylabel('Popularity')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



Sample output:-



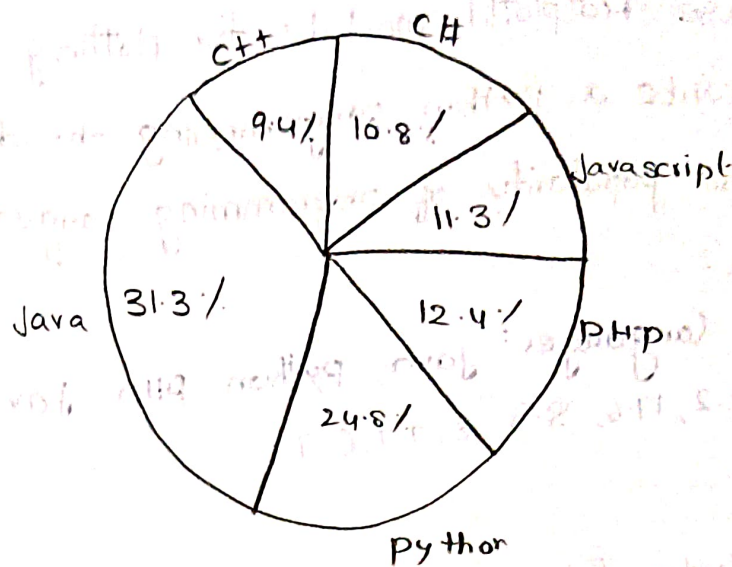
output



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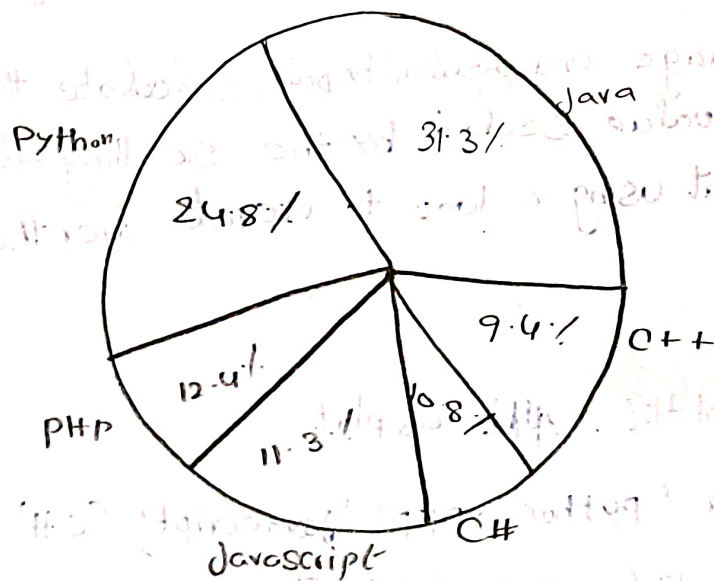


Sample output:-



Output

Popularity of programming languages





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++  
popularity: 22.2, 17.6, 8.8, 8, 7.7, 6.7

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='%1.1f%%')
```

# Step 3

```
plt.title('popularity of programming languages')  
plt.legend(language, 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