

Task 10 Use Matplotlib Module for Plotting in Python

Aim:

To Use Matplotlib module for Plotting in Python

Problem 10.1

Sample data :

Programming languages: Java, Python, PHP, JavaScript, C++,
Popularity: 22.2, 17.6, 8.8, 8.7, 7.7, 6.7

Algorithm:

1. Define two list 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 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

Program

```
import matplotlib.pyplot as plt
```

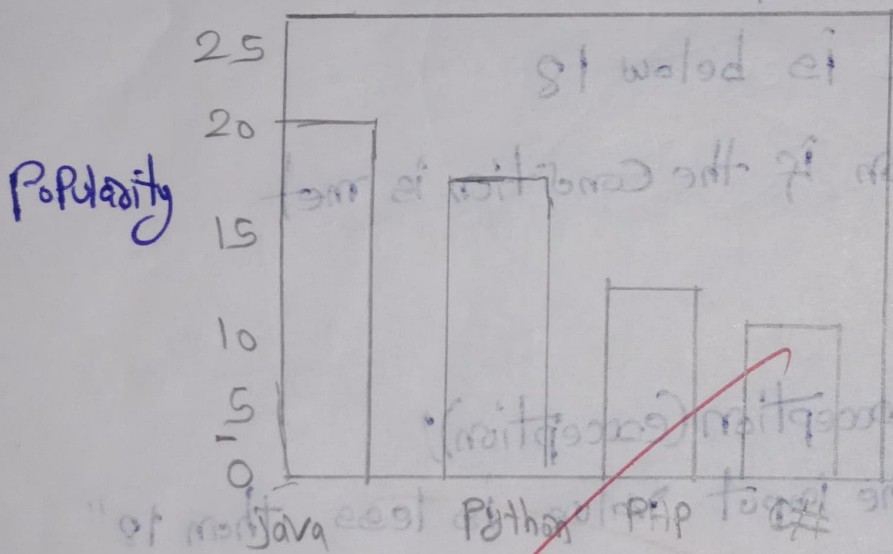
```
languages = ['Java', 'Python', 'PHP', 'JavaScript', 'C#', 'C++']
```

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


You are building a Python application to determine
 if a person is eligible to vote based on their age.
 According to the rules only individuals who are 18
 years old or allowed to vote. To enforce this rule
 you decided to create a custom exception called
 InvalidAgeException.

output

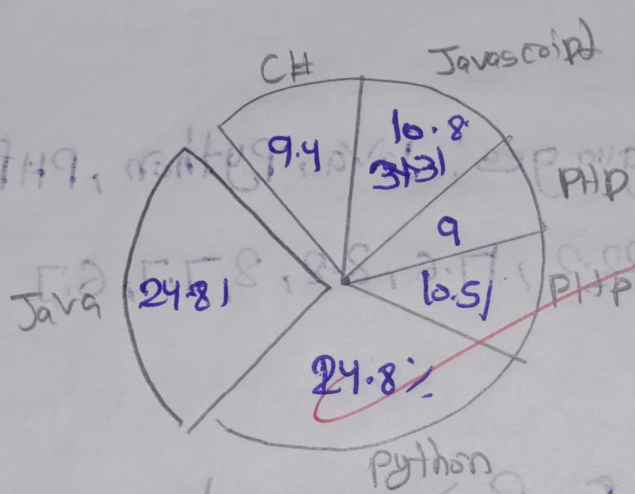
Popularity of Programming Language



Task 10 Use Matplotlib module for plotting in Python

output of plotting module for plotting in Python

Popularity of Programming language



1. Define two list 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 height with a certain limit.

4. For each language and popularity pair, calculate the bar height as the popularity value scaled by the scaling factor.

Program


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

Problem 10.2 :

Sample data :

Programming language : Java, Python, PHP, JavaScript,
C#, C++
Popularity : 22.2, 17.6, 8.8, 7.7, 6.7

Algorithm :

1. Create a list of Programming language and Popularity
2. Create a Pie chart using matplotlib library
3. Set the title and legend for the Pie chart
4. Show the Pie chart

Program :

```
import matplotlib.pyplot as plt
```

```
languages = ['Java', 'Python', 'PHP', 'JavaScript']
```

```
Popularity = [22.2, 17.6, 8.8, 8, 7.7, 6.7]
```

```
plt.pie(Popularity, labels=languages, autopct='%1.1f%%')
```

```
plt.title('Popularity of Programming language')
```

```
plt.legend(language, loc="best")
```

```
plt.show()
```

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Change Font

VEL TECH	
EX NO.	10
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	15
DATE	

Result: Thus the Program use matplotlib module for plotting is executed and verified successfully