

Task-10

use Matplotlib module for Plotting in Python

Aim:- To use matplotlib module for plotting in python.

→ write a python programming to display a bar chart of the popularity of programming language

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.
- for each language and popularity pair, calculate the bar height as the popularity value scaled by the scaling factor.
- print the chart using a loop to iterate over the programming language list:

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, 7.6, 7]
```

```
plt.bar(languages, popularity, color='b')
```

```
plt.title('popularity of programming languages')
```

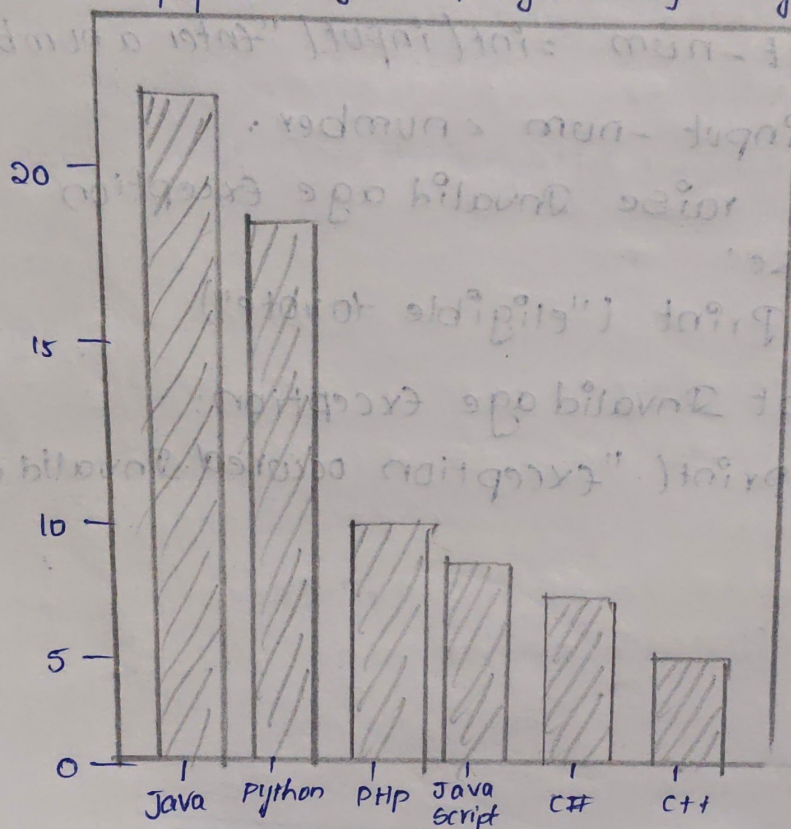
```
plt.xlabel('programming languages')
```

```
plt.ylabel('popularity')
```

```
plt.show()
```

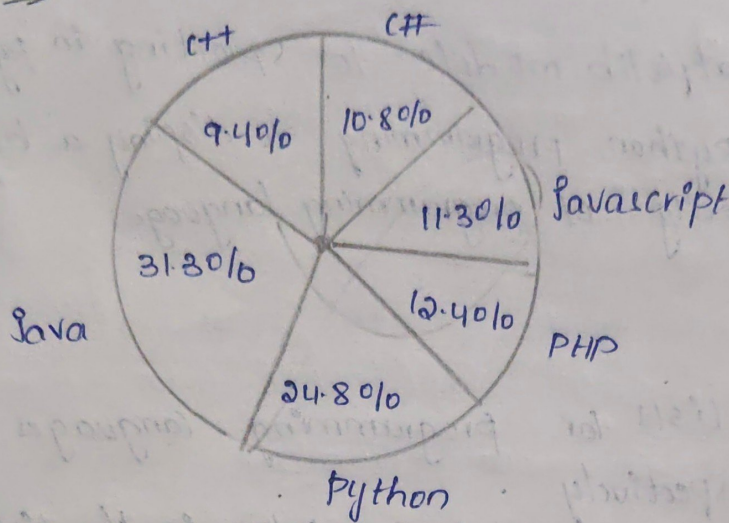

output

popularity of programming languages

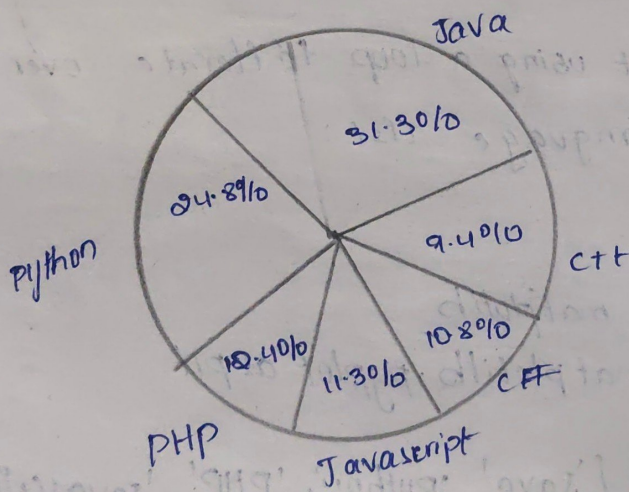


Before the program for implement exception and exception handling is executed & verified successfully.

sample
output :



output :



Task-10.2

Aim: To write a python programming to create a pie chart of the popularity of programming languages.

Algorithm:

- create a list of programming languages and popularity
- create a pie chart using the matplotlib library.
- set the title and legend for the pie chart.
- show the pie chart.

Program:-

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

```
# step 1
```

```
languages = ['Java', 'python', 'PHP', 'JavaScript', 'C#', 'C++']  
Popularity = [22.2, 17.6, 18.8, 8, 17.7, 16.7]
```

```
# step 2
```

```
plt.pie (popularity, labels = languages, autopct = '%0.1f%%')
```

```
# step 3
```

```
plt.title ('popularity of programming languages')
```

```
plt.legend (languages loc = "best")
```

```
# step-4
```

```
plt.show()
```

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

Result:- Thus the python program use matplotlib module for plotting is executed & verified successful.