

## Task 10

Use Matplotlib module for plotting

Aim: To use Matplotlib module for plotting in python

10.1) Write a python programming to display a bar chart of the popularity of programming languages.

Algorithm:

1. Define two lists for programming languages and their popularity respectively.
2. Find the max popularity value
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.

Program

```
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, colour='b')
```

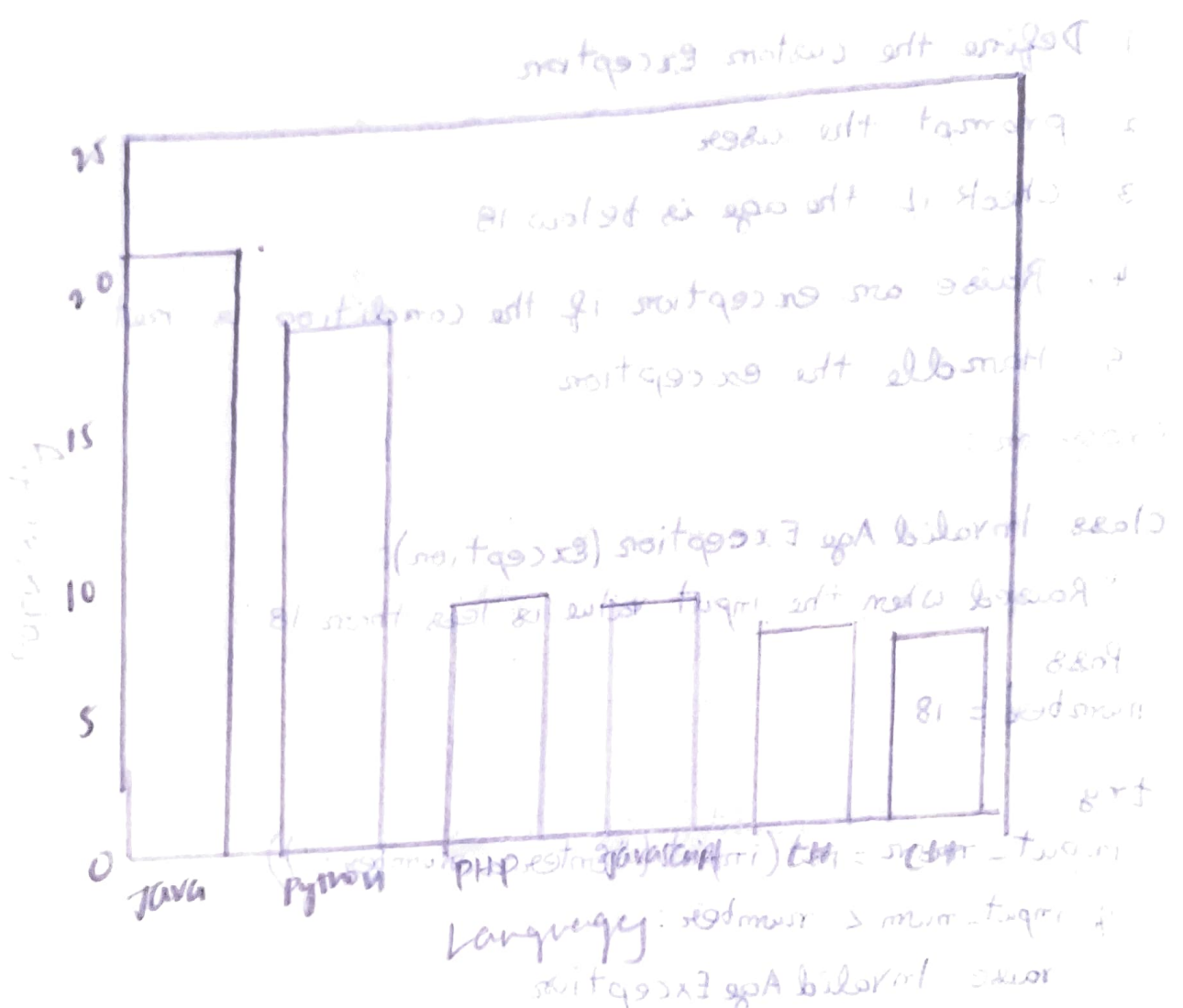
```
plt.title('Popularity of programming languages')
```

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

```
plt.show()
```



... of ...  
 ... of ...  
 ... of ...  
 ... of ...



Print ("Eligible to vote")

Exception: InvalidAgeException

Print ("Exception: InvalidAgeException")

...

Use the following table to calculate the percentage of the population of each country for each language.

Language

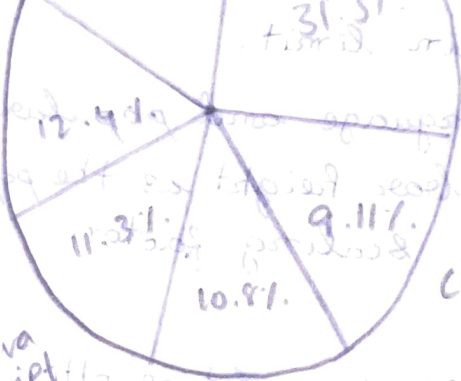
Country

Python

31.31%

Java

31.31%



Java

script

12.41%

PHP

12.41%

Perl

12.41%

Python

12.41%

Java

12.41%

JavaScript

12.41%

PHP

12.41%

Perl

12.41%

Python

12.41%

Java

10.2 Write a python programming 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
languages = ['Java', 'Python', 'PHP', 'Javascript', 'C#', 'C++']
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(languages, loc="best")
plt.show()
```

Result: Thus, the python programme use matplotlib for plotting is executed and verified successfully.

VELTECH	
EX No.	10
PERFORMANCE (5)	5
RESULT ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	20
SIGN WITH DATE	24/9/25