Task.10: use matplotlib module for plotting in Python.

Aim:

To use matplotlib module for plotting in python.

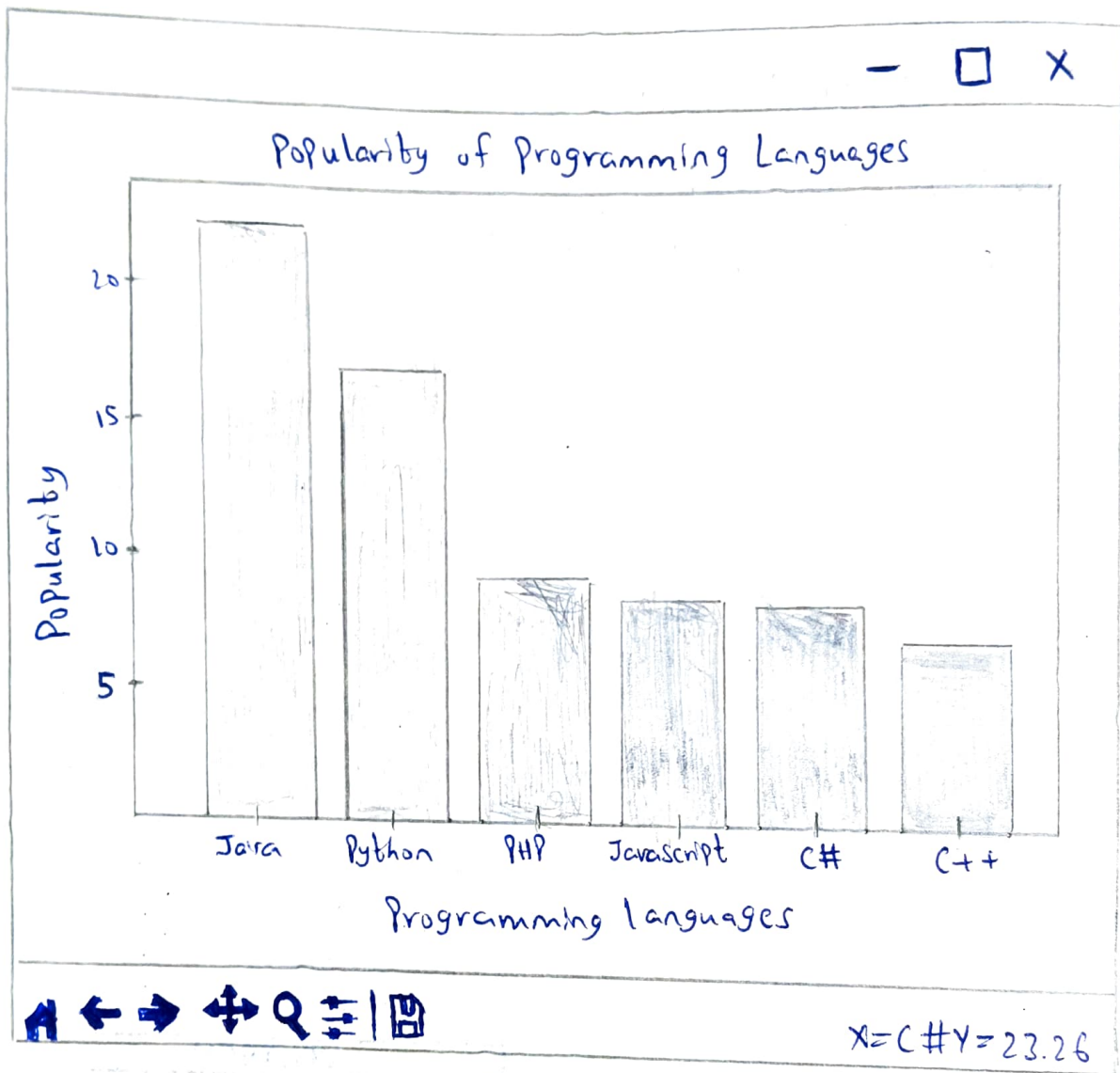10.1. write a Python Programming to display a bar chart of Popularity of Programming language.

Algorithm:

1 Define two lists for programming languages and their Popularity.

2 Find maximum Popularity value in list.

3. Define a Scale factor to Scale the bar heights within a certain limit (e.g., 50 characters).

4. For each language and Popularity pair, calculate the bar hieght.

5. Print the chart using a loop to iterate over the Programming language

Program:

```
#PiP install matplotlib
import matplotlib.pyplot as plt
languages = ['Java', 'Python', 'PHP', 'Javascript', 'C#', 'C++'].
Popularity = [22.2, 17.6, 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()
```
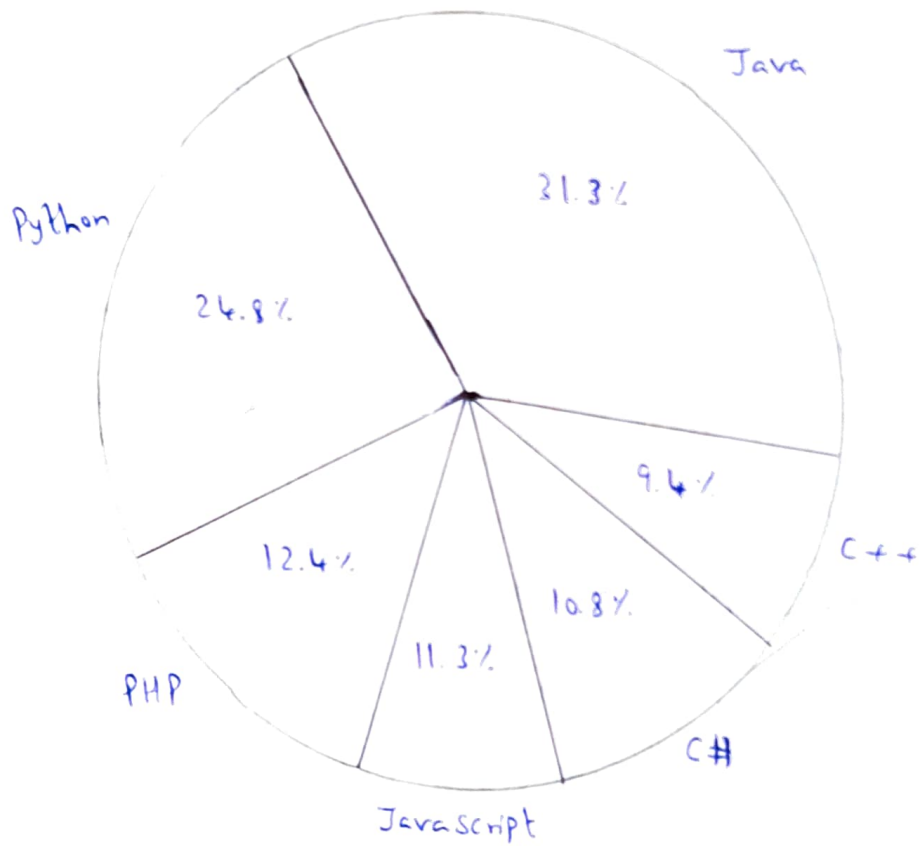
Output!

Popularity of Programming Languages

Popularity

20 —

15 —

10 —

5 —

Java   Python   PHP   Javascript   C#   C++

Programming languages

X=C#Y=23.26

Output:

Popularity of Programming Languages

Java — 31.3%

Python — 26.8%

C++ — 9.6%

C# — 10.8%

JavaScript — 11.3%

PHP — 12.4%

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 charts

4. Show the Pie charts

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 languages')
plt.legend(languages, loc="best")
plt.show()
```

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EX No.	10
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	20
SIGN WITH DATE	19/9

Result:

Thus, the Python program use matplotlib module for Plotting is executed and verified successfully.