

Task-10:- Use Matplotlib Module for plotting in python

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

Problem-10:- 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

Sample output:-

Algorithm:-

1. Define two lists for programming languages and their popularity respectively
2. Find the maximum popularity value in the list
3. Find the maximum 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 list a. print the language name and separator character
b. use a loop to print the bar chart by printing.

Program:-

~~H~~Pip .install .matplotlib.

~~import matplotlib.pyplot as plt~~

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

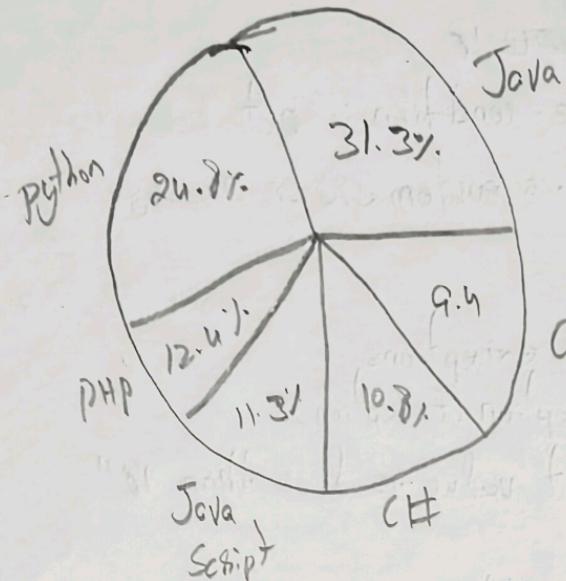
~~Popularity = [22.2, 17.6, 8.8, 8, 7.7, 6.7]~~

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

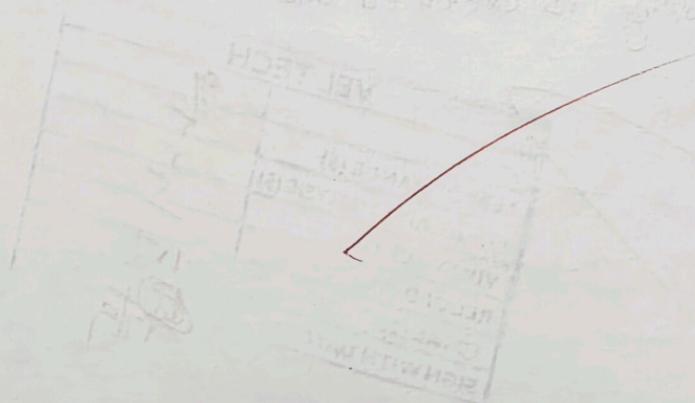
~~plt title ('popularity of programming languages')~~

~~plt xlabel ('popularity - languages')~~

Output :-



Popularity of programming languages.



plt.ylabel('popularity')

plt.show()

Q.2:- Write a python to create a pie 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

Sample Output:-

Algorithm:-

1. Create a list of programming languages and popularity.
2. Create a pie chart using the matplotlib library.
3. Set the title and legends for the pie chart
4. Show the pie chart

Program:-

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

Step 1

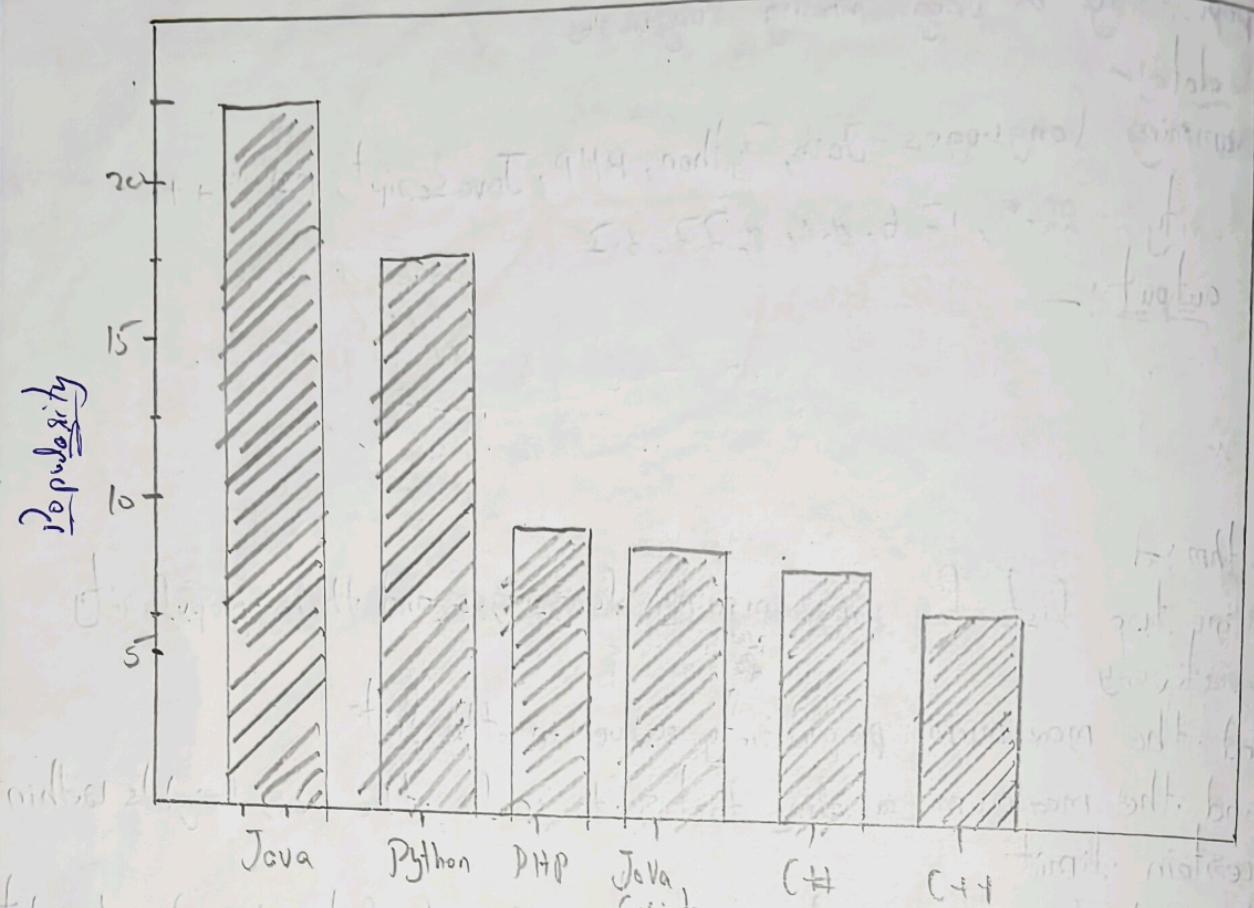
languages = ['Java', 'python', 'PHP', 'JavaScript', 'C#', 'C++']

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

Step 2

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

Output



Programming languages

Step 3

```
plt.title('Popularity of programming languages')  
plt.legend(loc = "best")
```

Step 4.

```
plt.show()
```

Result:- Thus, The python program use matplotlib module for plotting is executed and verified successful.

VELTECH	
EX No.	VELTECH
PERFORMANCE (5)	10
RESULT AND ANALYSIS (5)	5
CIVIL VOICE (5)	5
RECORDS (5)	15
TOTAL (20)	30
SIGN WITH DATE	10/10/2020