

Task 10 Use Matplotlib Module for Plotting in Python

Aim:

To Use Matplotlib module for Plotting in Python

Problem 10.1 ~~Python command to draw~~

Sample data :

Programming Languages : Java, Python, PHP, JavaScript, C++, C#

Popularity : 22.2, 17.6, 8.8, 8.7, 6.7

Algorithm :

1. Define two lists 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
```

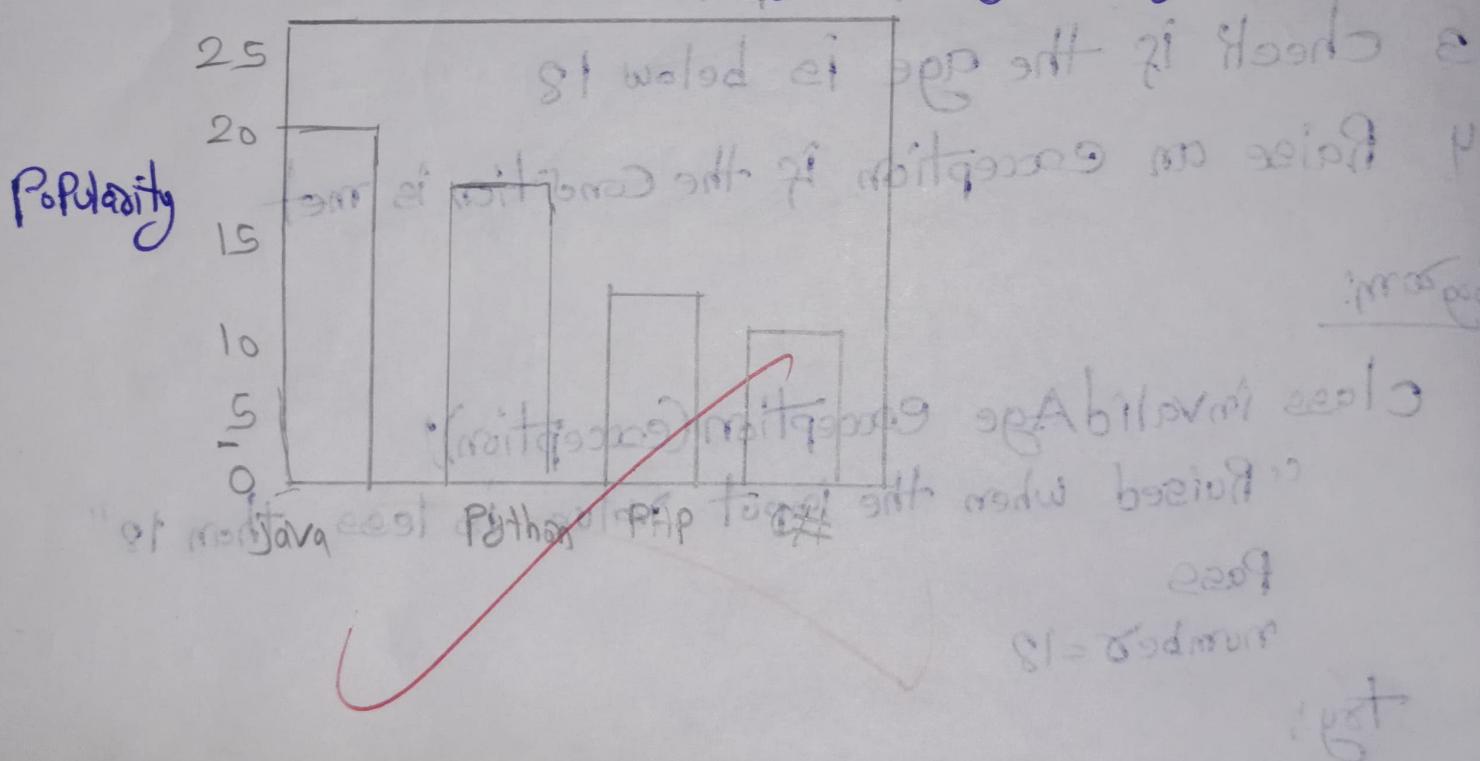
```
languages = ['java', 'Python', 'PHP', 'JavaScript', 'C++', 'C#']
```

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

the most popular language in the world. It is also used in web development, mobile app development, and game development. Python is a high-level programming language that is easy to learn and use. It has a simple syntax and a large standard library. Python is used in data science, machine learning, and artificial intelligence. It is also used in web development, mobile app development, and game development.

output

Popularity of Programming Language



(C) medium or extra difficulty (Python = more difficult)

more difficult than Python?

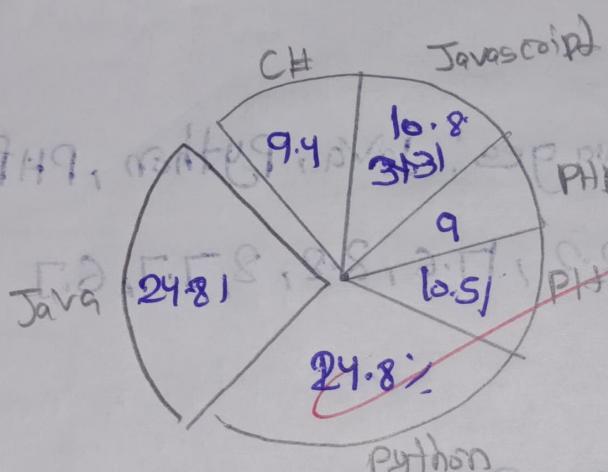
more difficult than Python?

more difficult than Python?

more difficult than Python?

सभी लोगों के में से ३१ हजार
विदेशी विद्यार्थी

Output विदेशी विद्यार्थी के लोगों में से ३१ हजार प्रमुख प्रограм्मिंग भाषाएँ



```
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(loc="best")
plt.show()
```

fig10

X
1. blow off

copy & print

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

Result: thus the program use matplotlib module for plotting
is executed and verified successfull