

## Task (10) use matplotlib model for plotting in python

29/9/25

Aim: To use matplotlib model for plotting in python

### 10.1 - Algorithm

1. Define a two list for program languages.
2. Find the maximum popularity value in list
3. define scaling factor to scale the bar height.
4. For each language and popularity pairs, calculate the bar pair scaling factor.
5. print the chart using a loop to iterate over the program language.

program:

```
import matplotlib.pyplot as plt.  
language = ['Java', 'python', 'PHP', 'JavaScript', 'etc']  
popularity = (22.2, 17.6, 8.88, 7.7, 6.7)  
plt.bar(language, popularity, color='b')  
plt.title('popularity of program language')  
plt.xlabel('Program language')  
plt.ylabel('popularity')  
plt.show()
```

### 10.2 - Algorithm

1. create a list of program language and popularity
2. Create a pie chart using the matplotlib library.
3. Set the title and legend for pie chart.
4. show the pie chart.

program:

```
import matplotlib.pyplot as plt.  
language = ['Java', 'python', 'PHP', 'JavaScript', 'etc']  
popularity = (22.2, 17.6, 8.88, 7.7, 6.7)  
plt.pie(popularity, labels=language, autopct='%1.1f%%')  
plt.title('popularity of program languages')  
plt.legend(language, loc='best')  
plt.show()
```



the graph

import matplotlib.pyplot as plt  
import numpy as np

x points = np.array([0, 6])

y points = np.array([0, 250])

plt.plot(x points, y points)

plt.show()

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

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