In [1]:
```
!pip install matplotlib
```

```
Requirement already satisfied: matplotlib in c:\users\ajays\anaconda3\lib\site-packages (3.4.3)
Requirement already satisfied: cycler>=0.10 in c:\users\ajays\anaconda3\lib\site-packages (from matplotlib) (0.10.0)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\ajays\anaconda3\lib\site-packages (from matplotlib) (1.3.1)
Requirement already satisfied: numpy>=1.16 in c:\users\ajays\anaconda3\lib\site-packages (from matplotlib) (1.20.3)
Requirement already satisfied: pillow>=6.2.0 in c:\users\ajays\anaconda3\lib\site-packages (from matplotlib) (8.4.0)
Requirement already satisfied: python-dateutil>=2.7 in c:\users\ajays\anaconda3\lib\site-packages (from matplotlib) (2.8.2)
Requirement already satisfied: pyparsing>=2.2.1 in c:\users\ajays\anaconda3\lib\site-packages (from matplotlib) (3.0.4)
Requirement already satisfied: six in c:\users\ajays\anaconda3\lib\site-packages (from cycler>=0.10->matplotlib) (1.16.0)
```

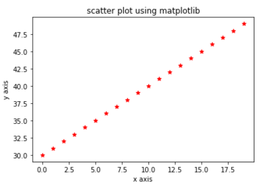
In [2]:
```
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
```

In [ ]:
```
#scatter plot
```

In [3]:
```
x=np.arange(0,20)
y=np.arange(30,50)
```

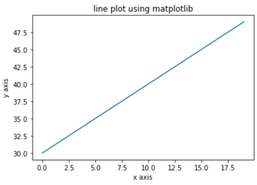
In [7]:
```
plt.scatter(x,y, c='r', marker='*')
plt.xlabel('X axis')
plt.ylabel('y axis')
plt.title('scatter plot using matplotlib')

plt.show()
```



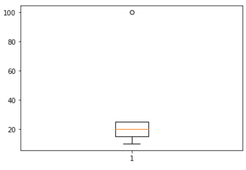
In [10]:
```
plt.plot(x,y)
#plt.plot(x,y,c='r'):-we can specify the color also
plt.xlabel('x axis')
plt.ylabel('y axis')
plt.title('line plot using matplotlib')

plt.show()
```



In [11]:
```
df = [20,15,25,10,100]
```

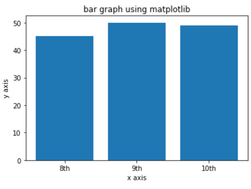
In [12]:
```
plt.boxplot(df)
plt.show()
```



In [ ]:
```
#bar charts
```

In [13]:
```
#class
x=['8th','9th','10th']
#strenth of class
y=[45,50,49]
```

In [14]:
```
plt.bar(x,y)
plt.xlabel('x axis')
plt.ylabel('y axis')
plt.title('bar graph using matplotlib')
plt.show()
```



In [ ]:
```
#pie charts
```

In [15]:
```
x=[1000,200,300,50]
```

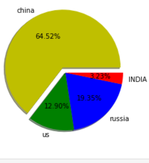
In [17]:
```
labels=['china','us','russia','INDIA']
colors=['y','g','b','r']
plt.pie(x,labels=labels,colors=colors, shadow=True)
plt.title('Pie Chart')
plt.show()
```

In [ ]:
```
#pie chart with explode
```

In [19]:
```
e=(0.1,0,0,0)
plt.pie(x,explode=e,labels=labels,colors=colors, shadow=True)
plt.title('Pie Chart')
plt.show()
```

In [ ]:
```
#pie chart with explode & auto pct
```

In [22]:
```
e=(0.1,0,0,0)
plt.pie(x,explode=e,labels=labels,colors=colors,autopct= "%1.2f%%", shadow=True)
plt.title('Pie Chart')
plt.show()
```



In [ ]:
```

```