

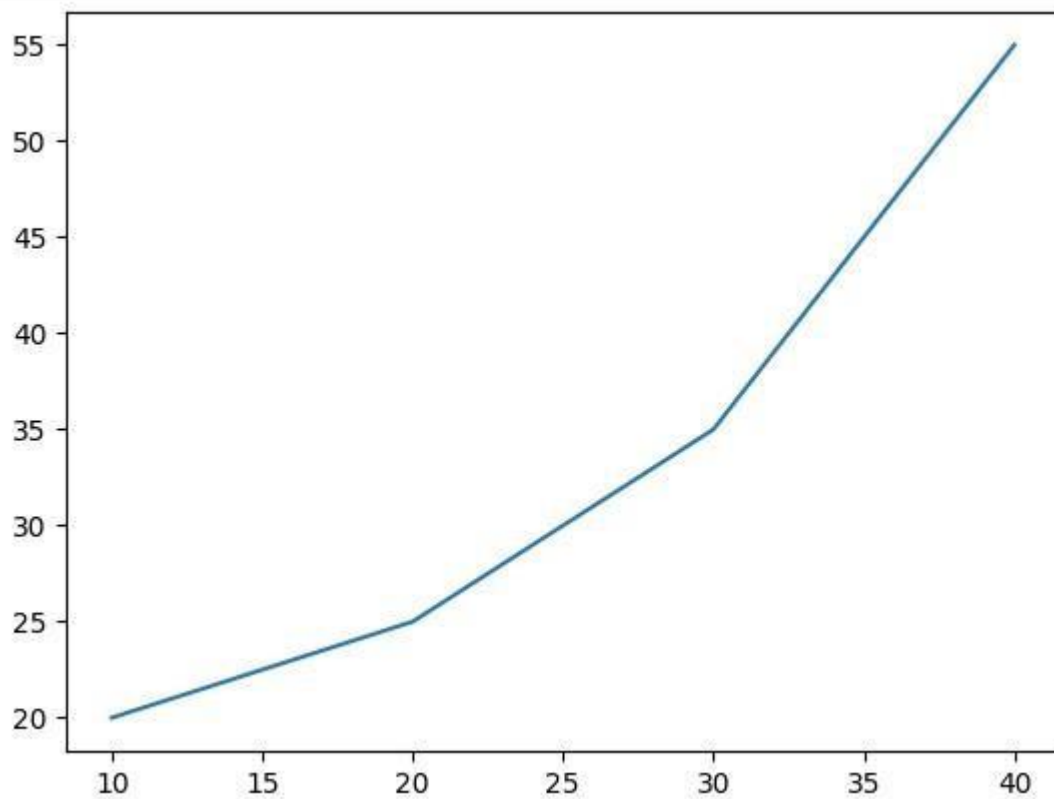
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## EDS Assignment 5 :

```
import matplotlib.pyplot as plt

#initializing the data
x=[10,20,30,40] y=[20,25,35,55]

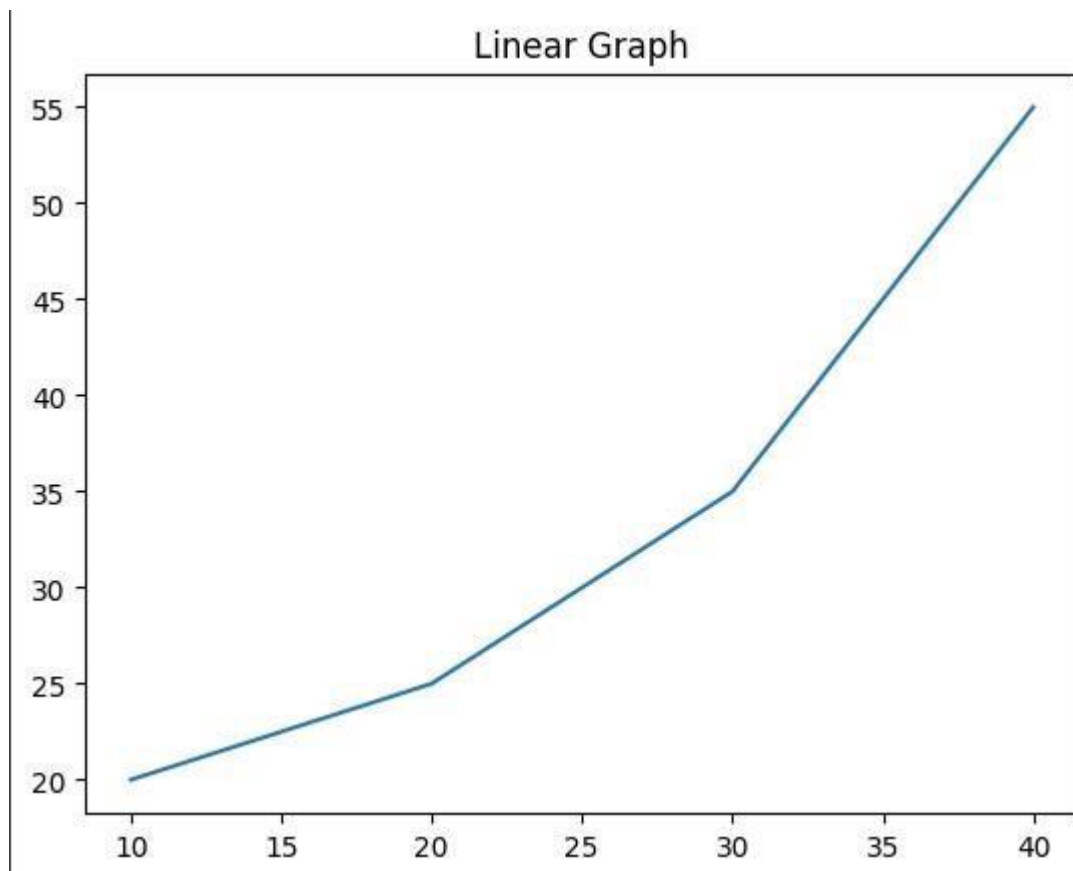
#plotting the data plt.plot(x,y)
plt.show()
```



```
#Adding title
#Initializing the data
x=[10,20,30,40] y=[20,25,35,55]

#plotting the data plt.plot(x,y)

#Adding title to the plot plt.title("Linear
Graph")
plt.show()
```

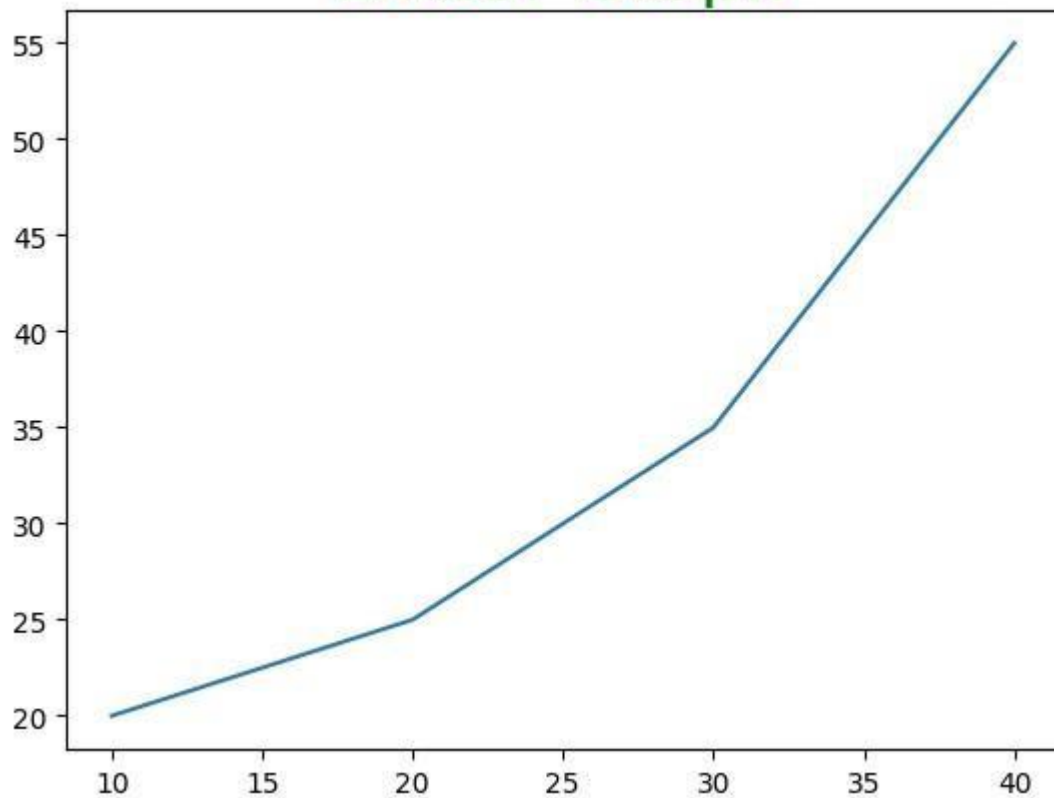


```
#Change the appearance of the title import
matplotlib.pyplot as plt
#Initializing the data
x=[10,20,30,40] y=[20,25,35,55]

#plotting the data plt.plot(x,y)
```

```
#Adding title to the plot plt.title("Linear  
Graph",fontsize=25,color="green")  
plt.show()
```

## Linear Graph

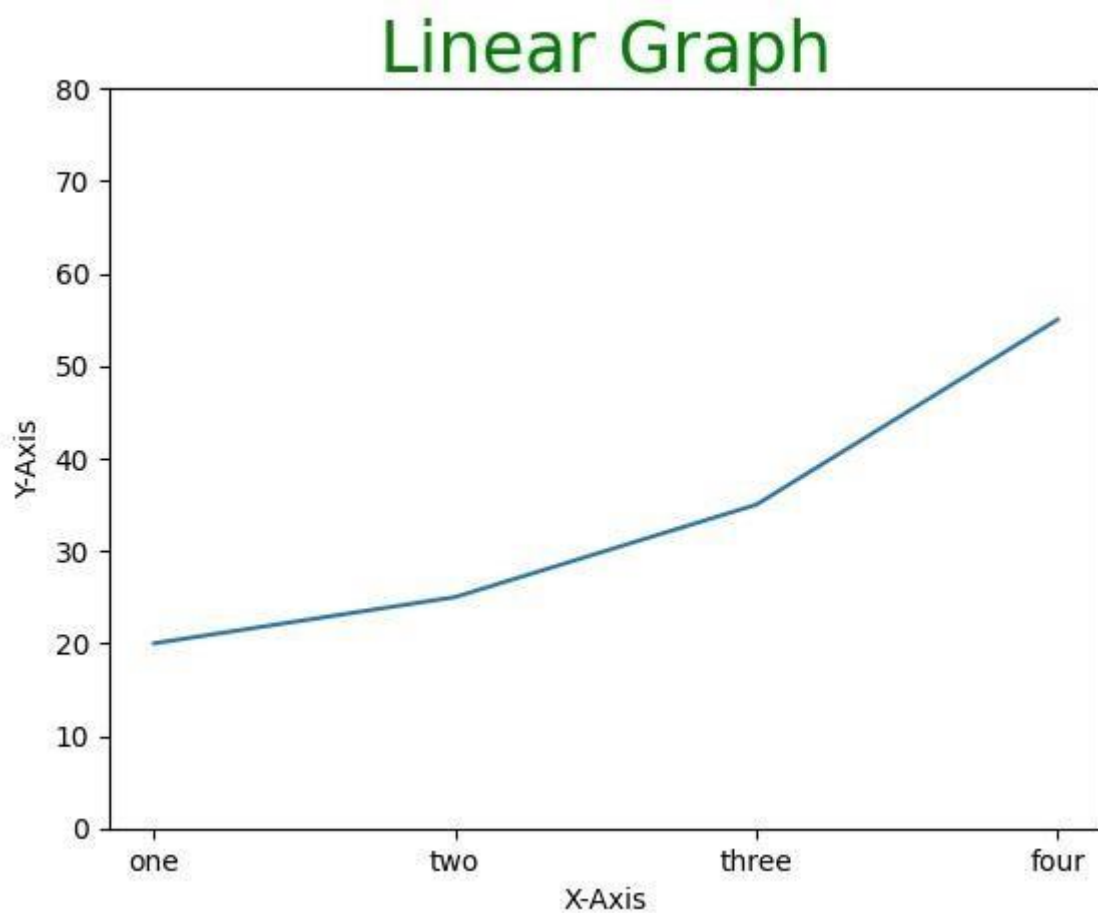


```
#Setting Limits and Tick labels import  
matplotlib.pyplot as plt  
#Initializing the data  
x=[10,20,30,40] y=[20,25,35,55]  
  
#plotting the data plt.plot(x,y)  
  
#Adding title to the plot plt.title("Linear  
Graph",fontsize=25,color="green")  
  
#Adding label on the y-axis plt.ylabel('Y-Axis')
```

```
#Adding label on the x-axis plt.xlabel('X-Axis')

#Setting the limit of y axis plt.ylim(0,80)

#Setting the labels of x-axis
plt.xticks(x,labels=["one","two","three","four"])
plt.show()
```



```
#Adding Legends import
matplotlib.pyplot as plt
#Initializing the data
x=[10,20,30,40] y=[20,25,35,55]

#plotting the data
plt.plot(x,y)
```

```
#Adding title to the plot plt.title("Linear
Graph",fontsize=25,color="green")

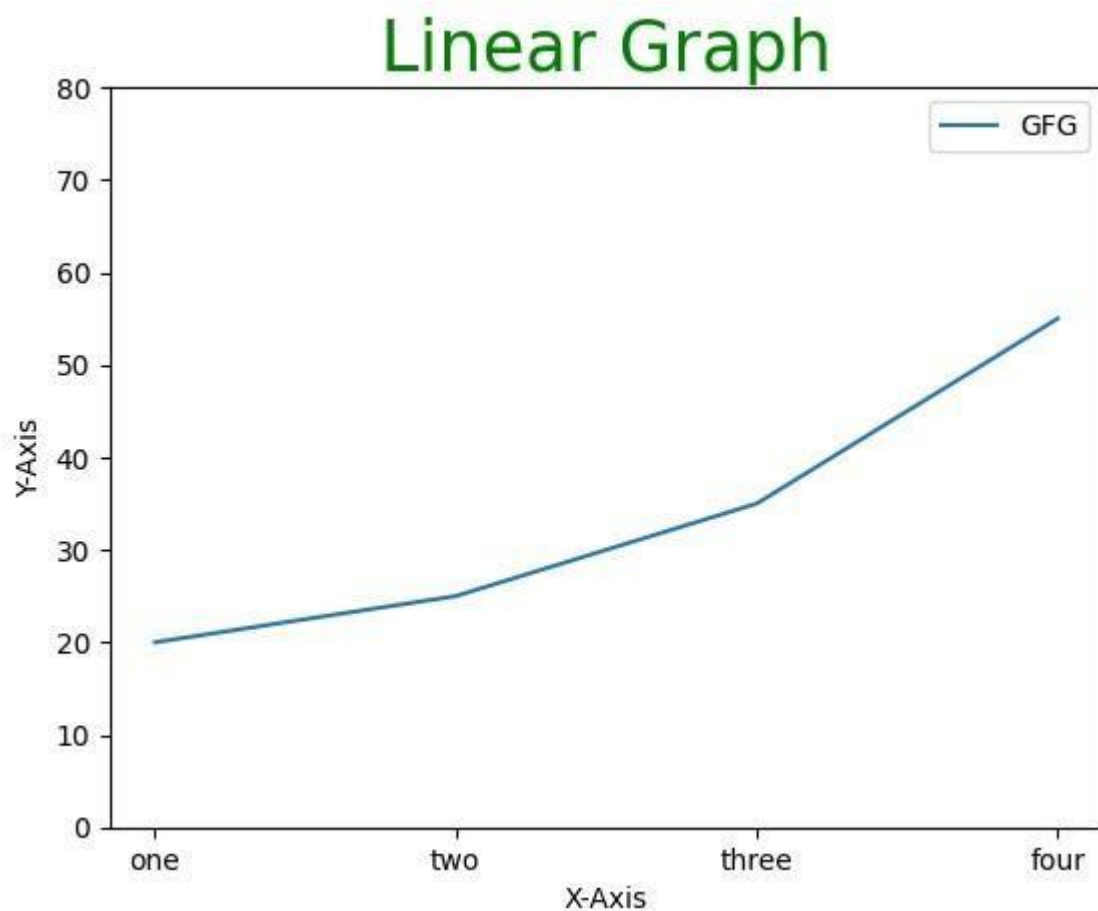
#Adding label on the y-axis plt.ylabel('Y-Axis')

#Adding label on the x-axis plt.xlabel('X-Axis')

#Setting the limit of y axis plt.ylim(0,80)

#Setting the labels of x-axis
plt.xticks(x,labels=["one","two","three","four"])

#Adding Legends plt.legend(["GFG"])
plt.show()
```



```
#Figure Class
#Python program to show pyplot module
import matplotlib.pyplot as plt from
matplotlib.figure import Figure

#Initializing the data
x=[10,20,30,40] y=[20,25,35,55]

#Creating a new figure with width = 7inches
#and height = 5inches with face color as
#green,edgecolor as red and the line width
#of the edge as 7 fig =
plt.figure(figsize=(7,5), facecolor='g',
edgecolor='b',linewidth=7)

#Creating a new axes for the figure ax
= fig.add_axes([1,1,1,1])

#Adding the data to be plotted ax.plot(x,y)

#Adding title to the plot plt.title("Linear
Graph",fontsize=25,color="black")

#Adding label on the y-axis plt.ylabel('Y-Axis')

#Adding label on the x-axis plt.xlabel('X-Axis')

#Setting the limit of y axis plt.ylim(0,80)

#Setting the labels of x-axis
plt.xticks(x,labels=["one","two","three","four"])

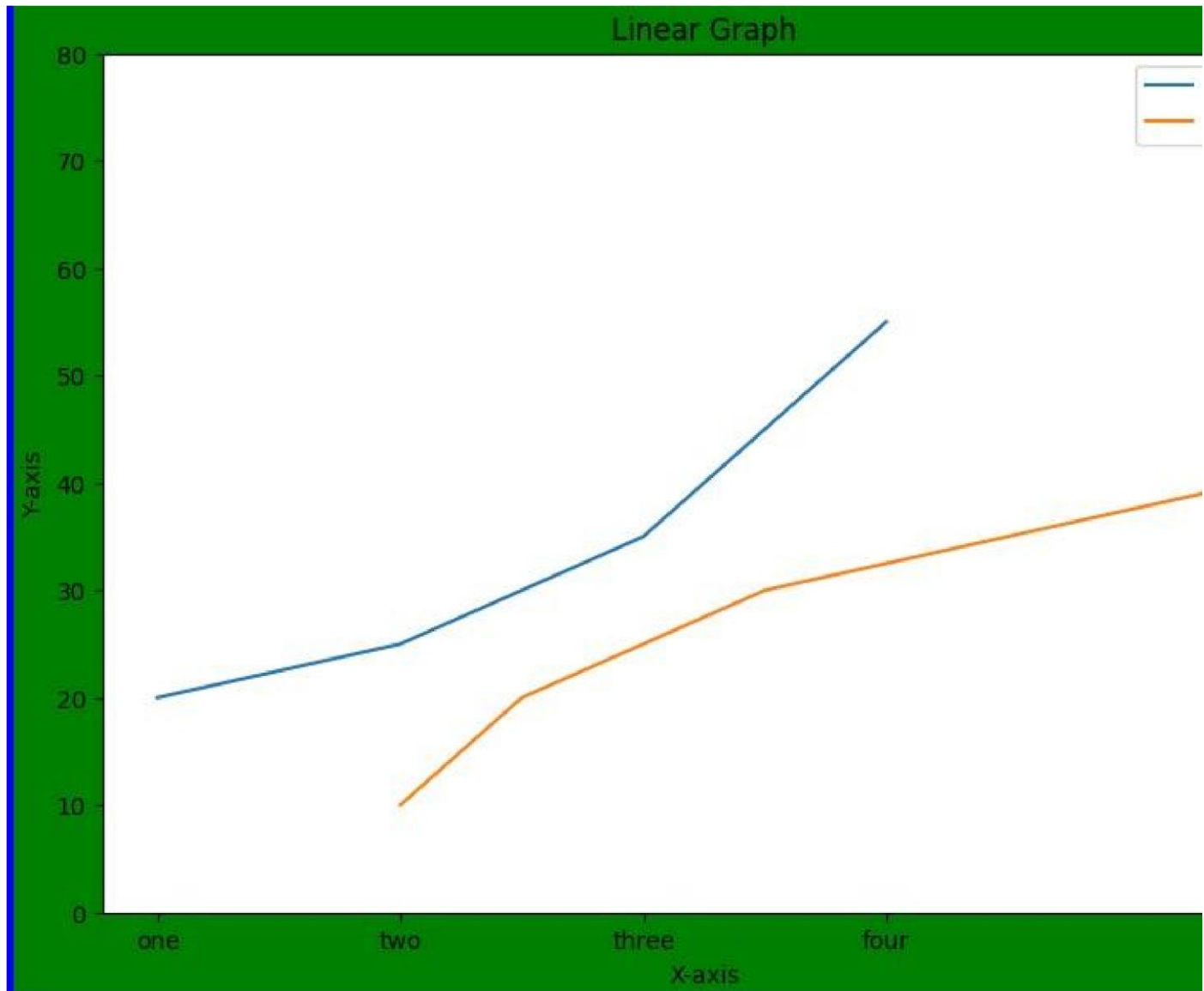
#plotting the 2nd dataset to the figure ax2
= ax.plot(y,x)

#Setting title
ax.set_title("Linear Graph")

#Setting label ax.set_xlabel("X-axis")
```

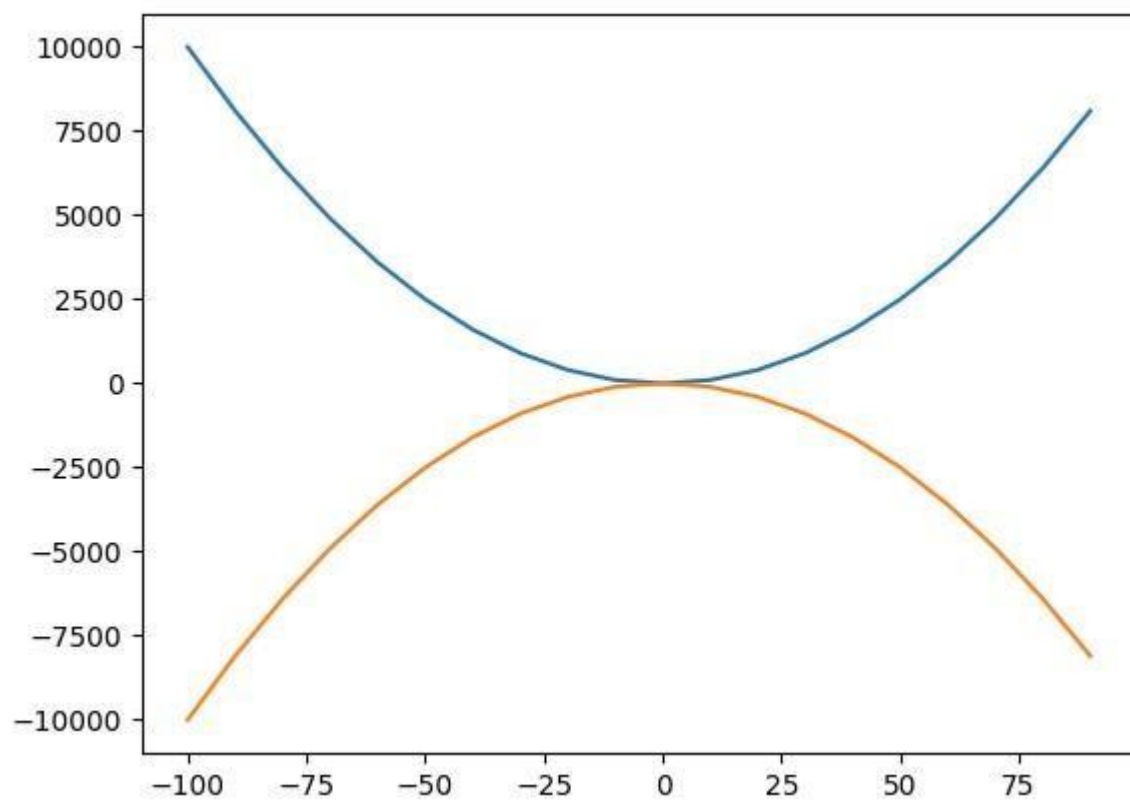
```
ax.set_ylabel("Y-axis")

#Adding Legends plt.legend(["Line1","Line
2"])
plt.show()
```



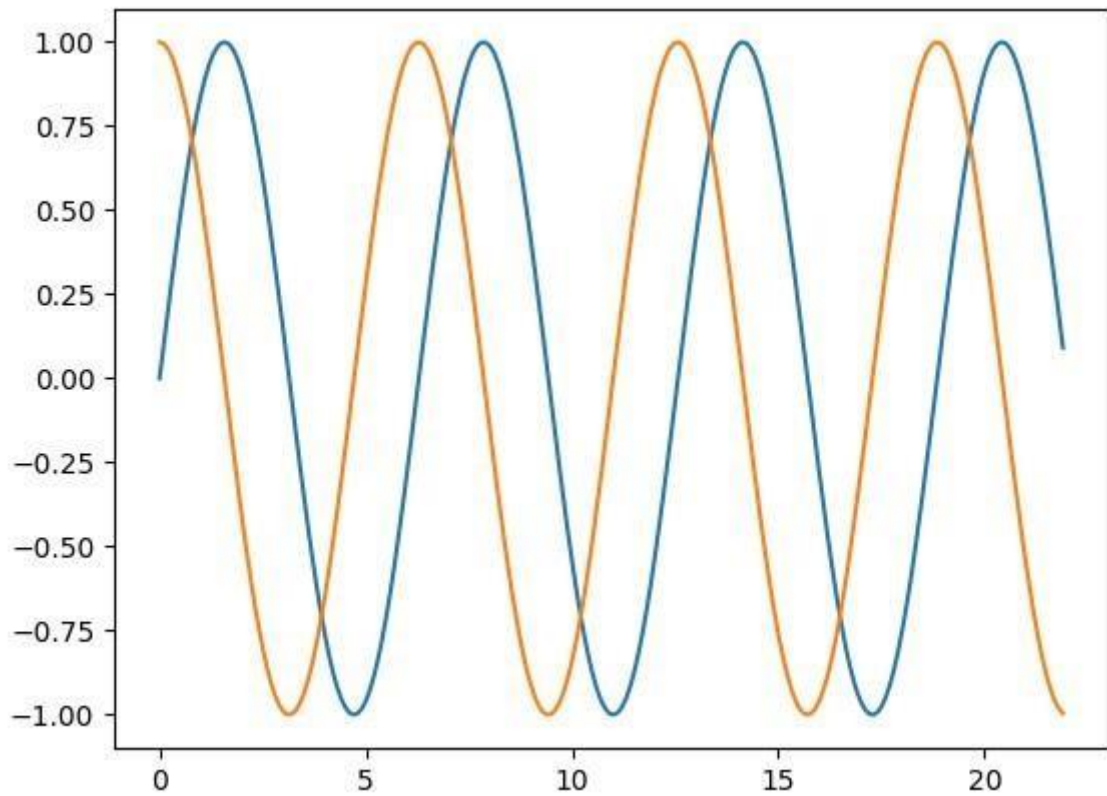
```
import matplotlib.pyplot as plt y1=[] y2=[] x=
range(-100,100,10) for i in x: y1.append(i**2) for
i in x: y2.append(-i**2)

plt.plot(x,y1) plt.plot(x,y2)
plt.show()
```

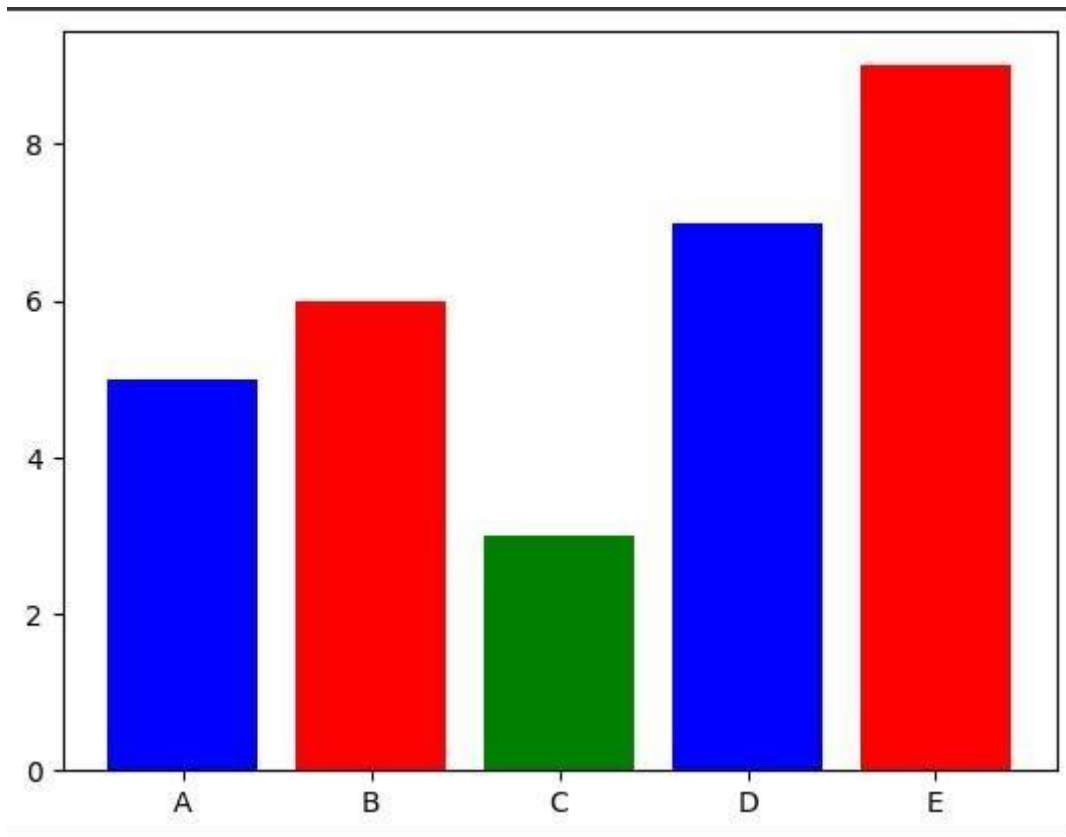


```
import numpy as np
x=np.arange(0,7*np.pi,0.1)
y=np.sin(x) y1=np.cos(x)
plt.plot(x,y)
plt.plot(x,y1) plt.show()
```

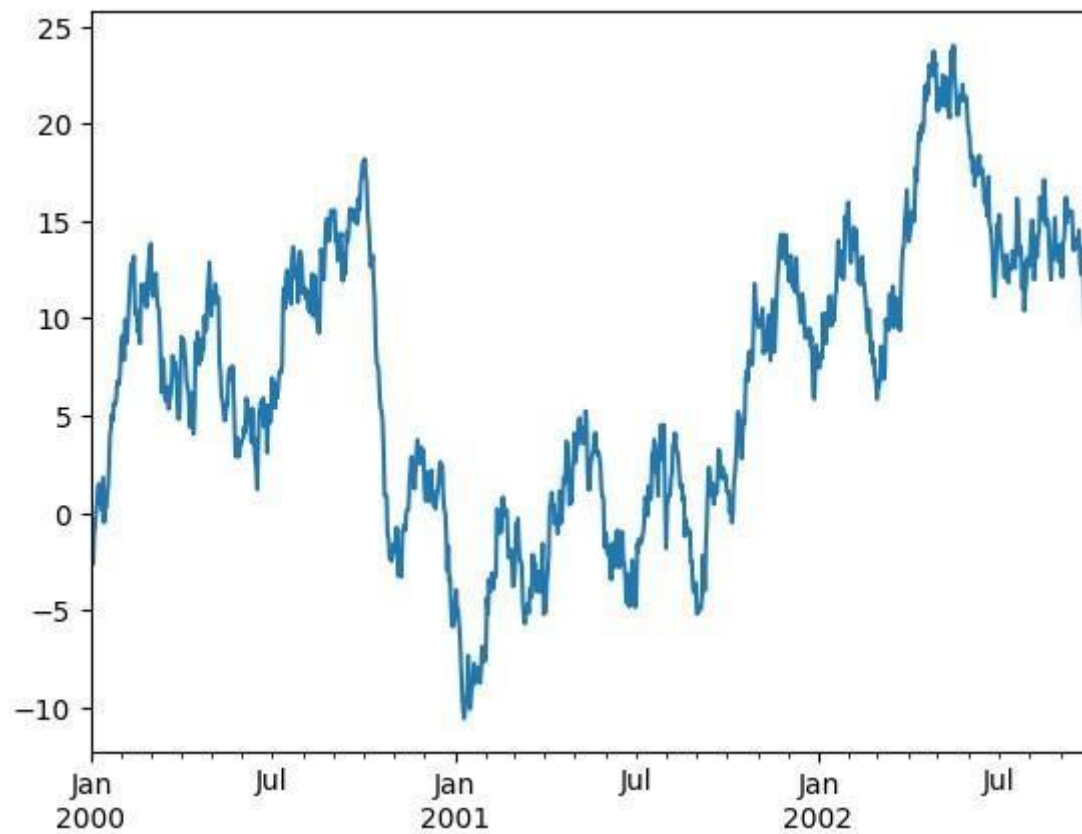




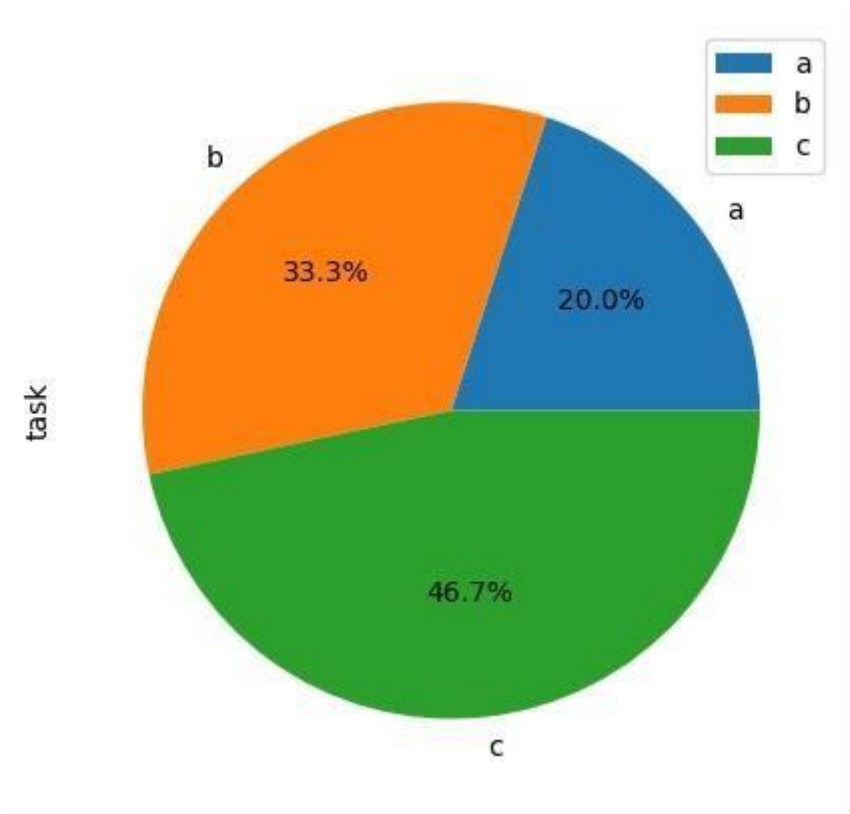
```
import pandas as pd
values=[5,6,3,7,9] names=["A","B","C","D","E"]
c1=['b','r','g'] plt.bar(names,values,color=c1)
plt.show()
```



```
import pandas as pd #print ts
ts=pd.Series(np.random.randn(1000),index=pd.date_range("1/1/2000",perio
ds=1000)) ts=ts.cumsum() #print(ts) ts.plot()
```



```
data={'task':[300,500,700]} df
=pd.DataFrame(data,index=["a","b","c"])
df.plot.pie(y='task',figsize=(5,5),autopct='%1.1f%%',startangle=0)
print(df)
```



```
#defining labels activities =  
['eat','sleep','work','play']  
  
#portion covered by each label  
slices = [3,7,8,6] colors =  
['r','y','g','b']  
plt.pie(slices, labels = activities, colors=colors, startangle  
= 90, shadow = True , explode = (0.1,0,0.1,0), radius = 1.2,  
autopct = '%1.1f%%')
```

