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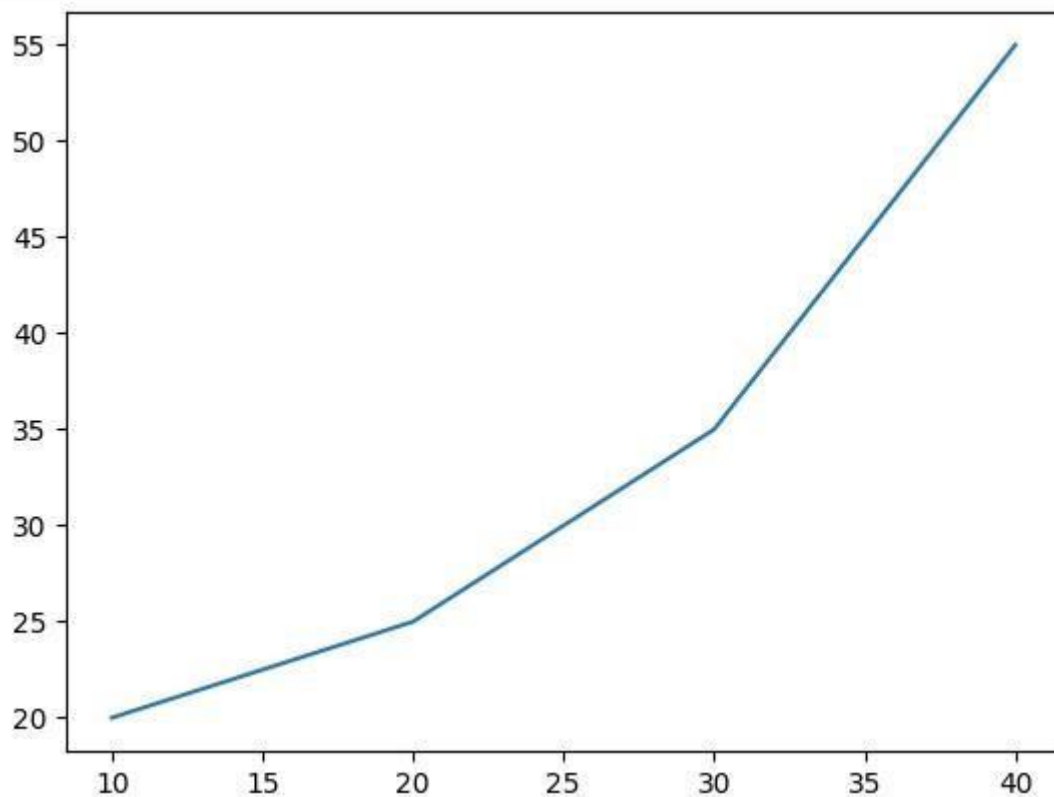
EDS Assignment 5 :

```
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()
```

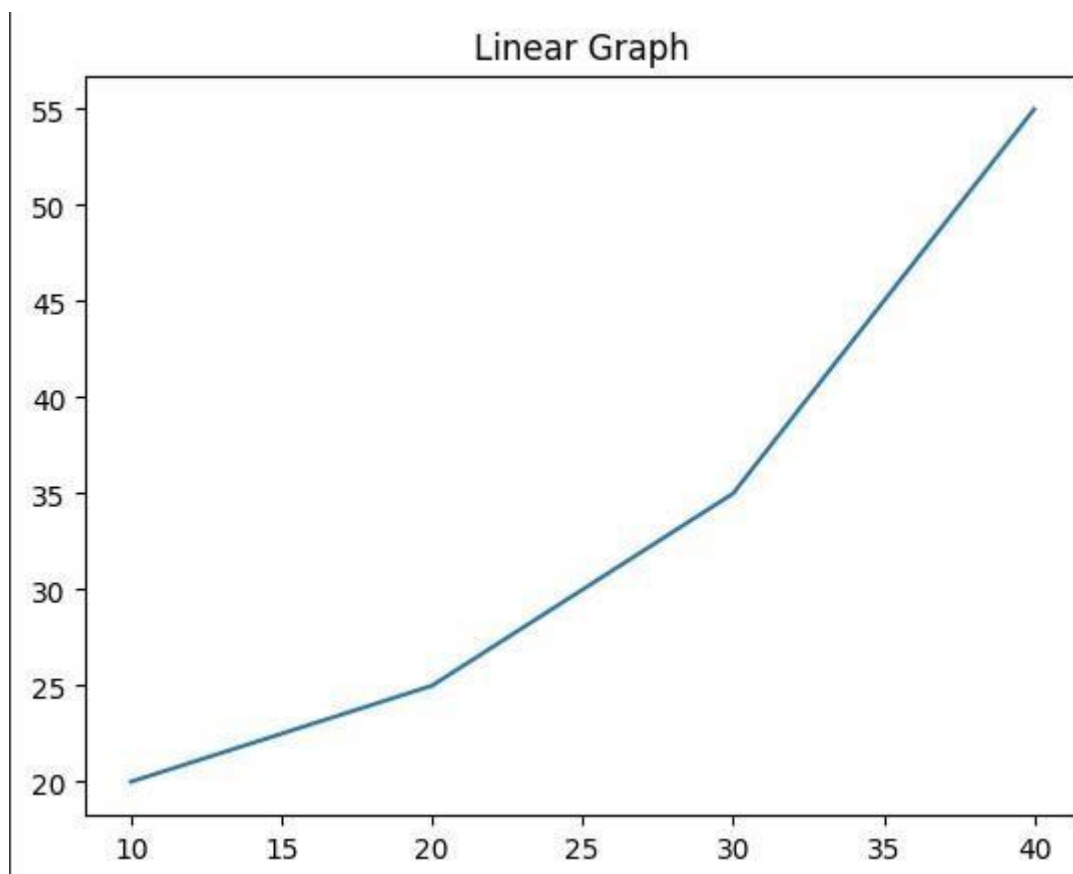


```
#Adding title
#Initializing the data
x=[10,20,30,40]
y=[20,25,35,55]

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

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

plt.show()
```



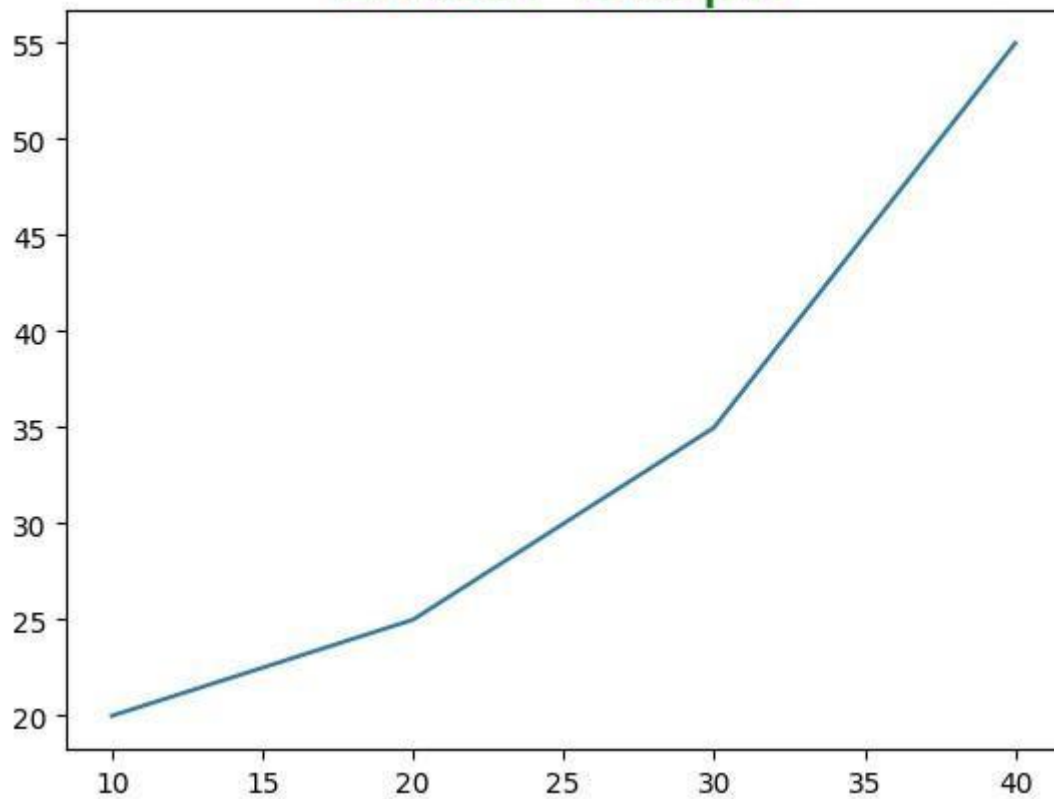
```
#Change the appearance of the title import matplotlib.pyplot as plt
#Initializing the data x=[10,20,30,40] y=[20,25,35,55]

#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')
```

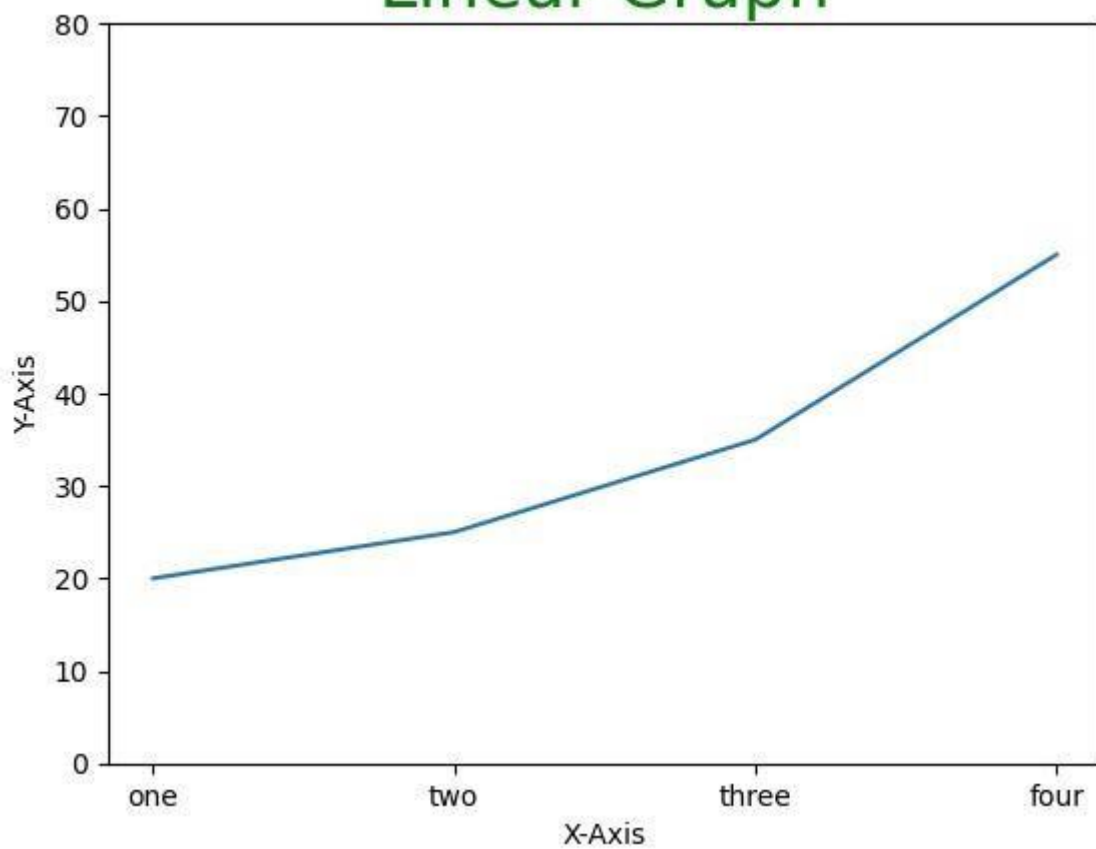
```
#Adding label on the x-axis plt.xlabel('X-Axis')

#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()
```

Linear Graph



```
#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')

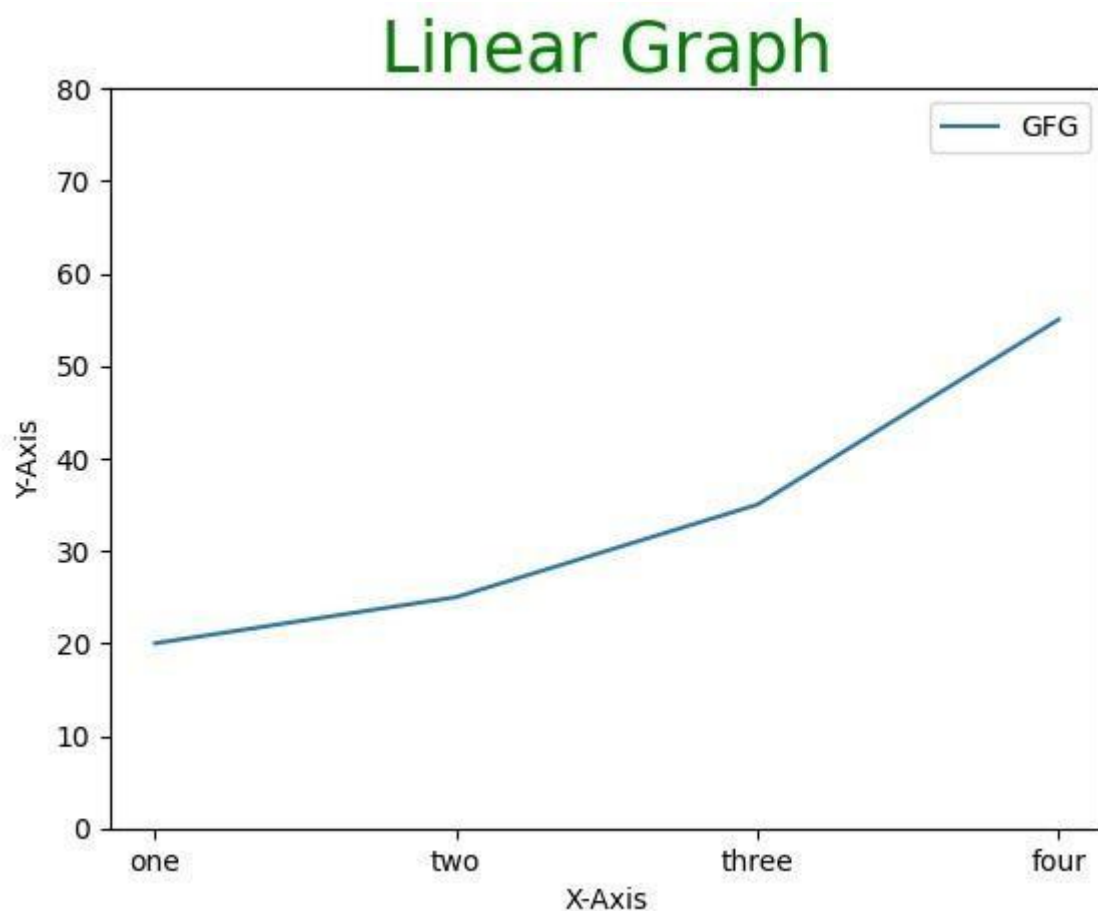
#Adding label on the x-axis plt.xlabel('X-Axis')

#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")
```

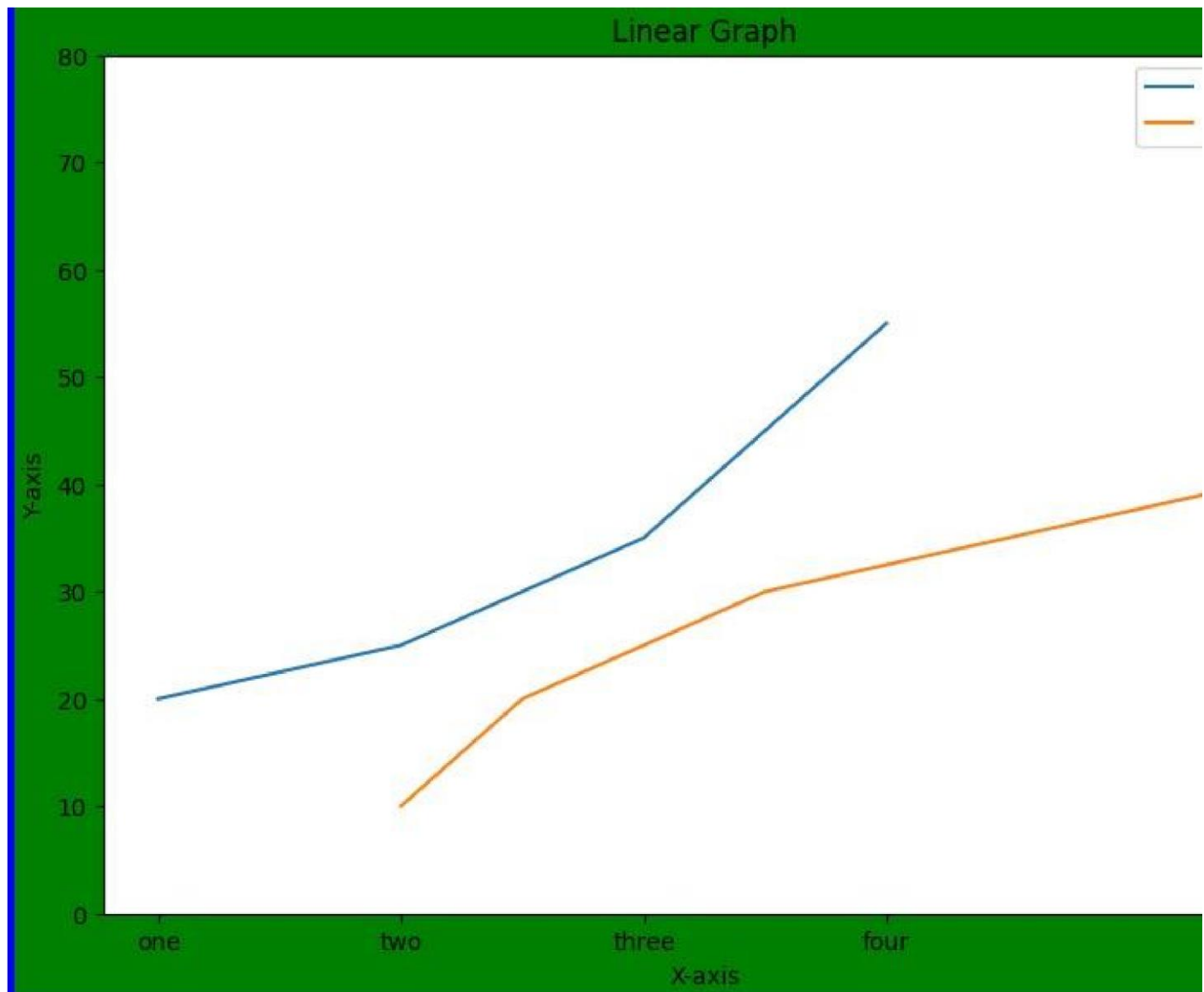
```

ax.set_ylabel("Y-axis")

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

plt.show()

```



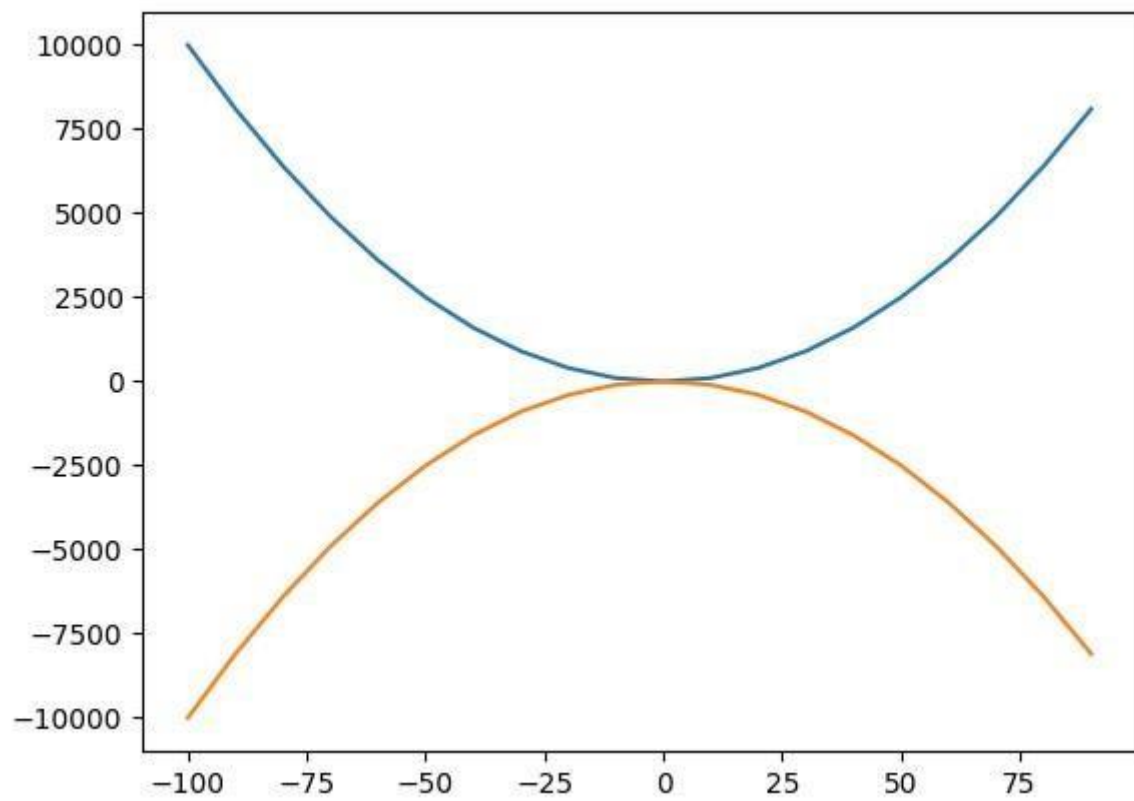
```

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)

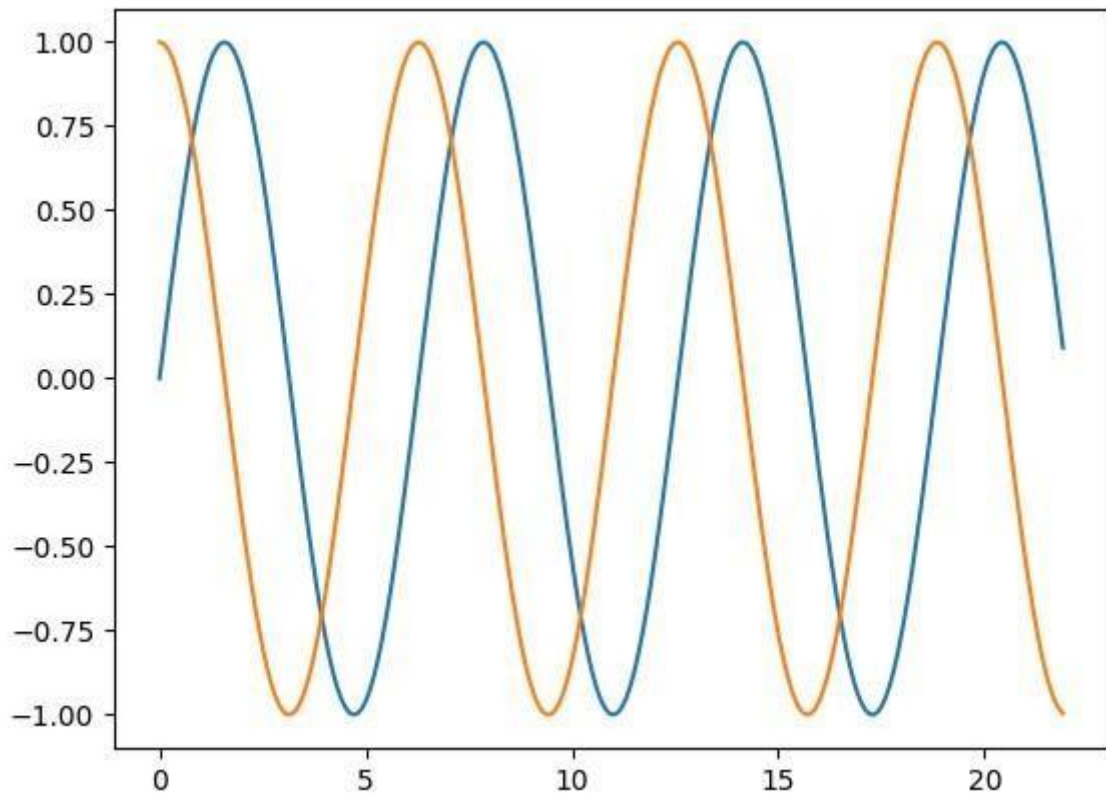
plt.plot(x,y1)
plt.plot(x,y2)

plt.show()

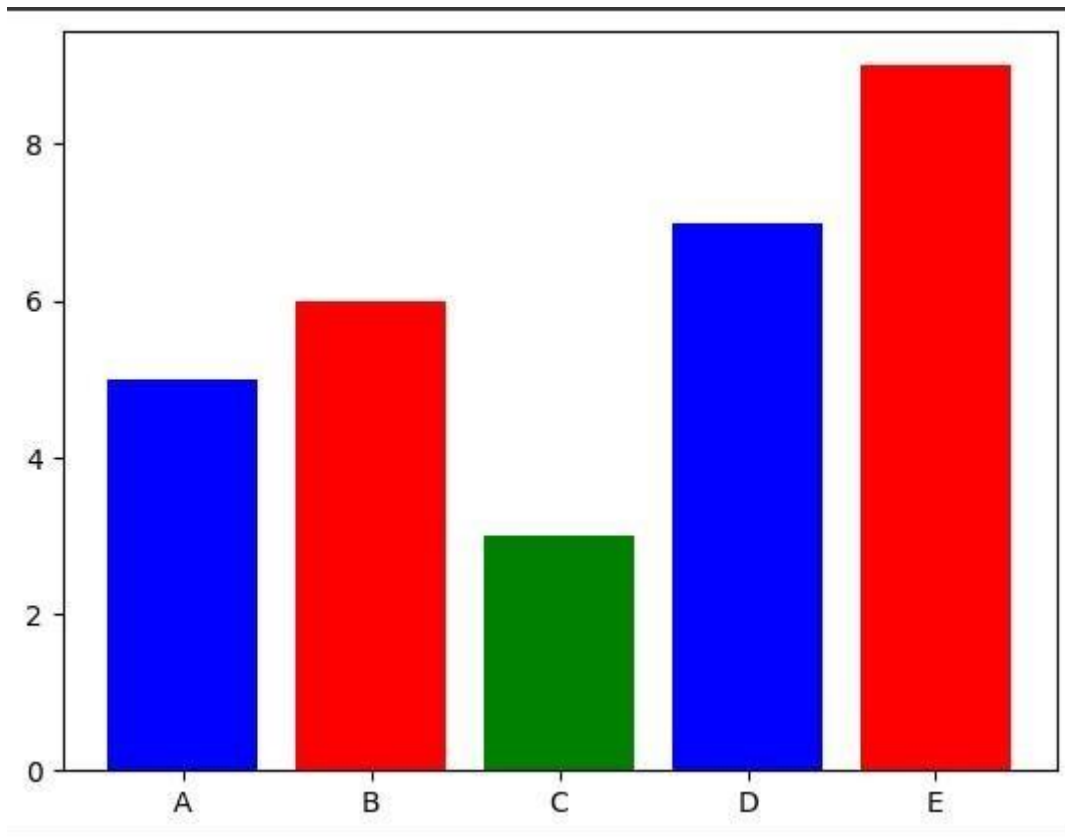
```



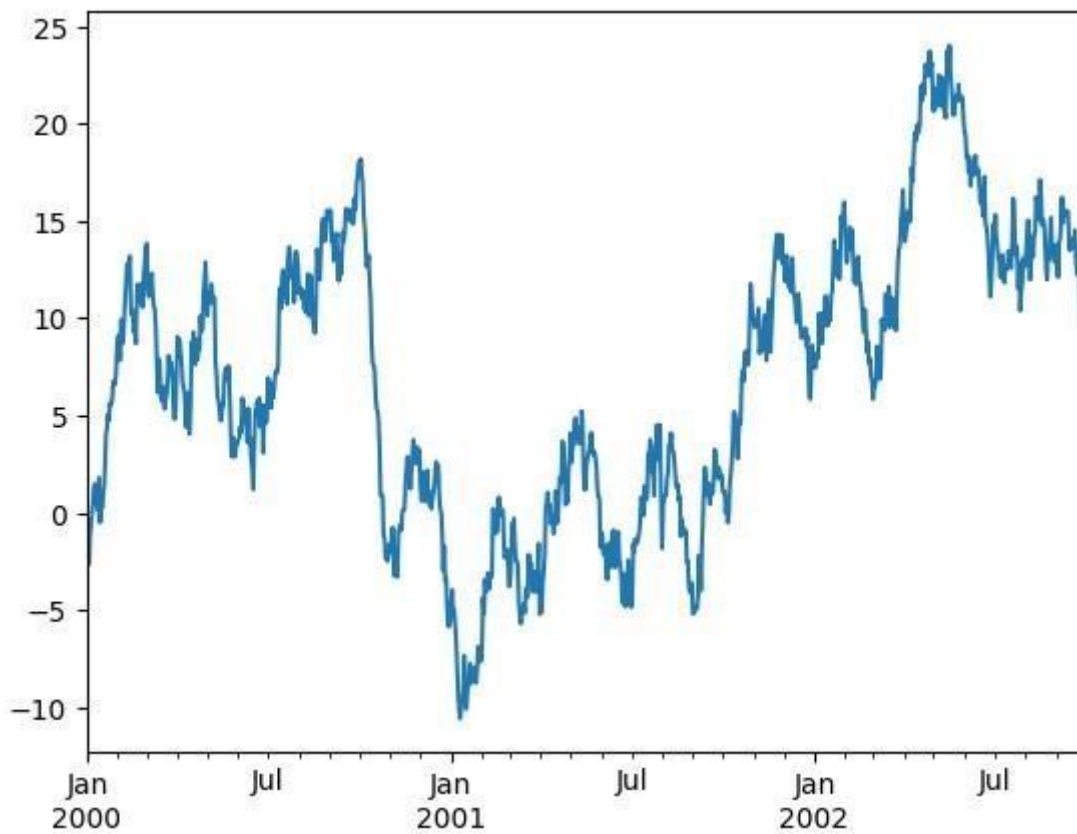
```
import numpy as np
x=np.arange(0,7*np.pi,0.1)
y=np.sin(x)
y1=np.cos(x)
plt.plot(x,y)
plt.plot(x,y1) plt.show()
```

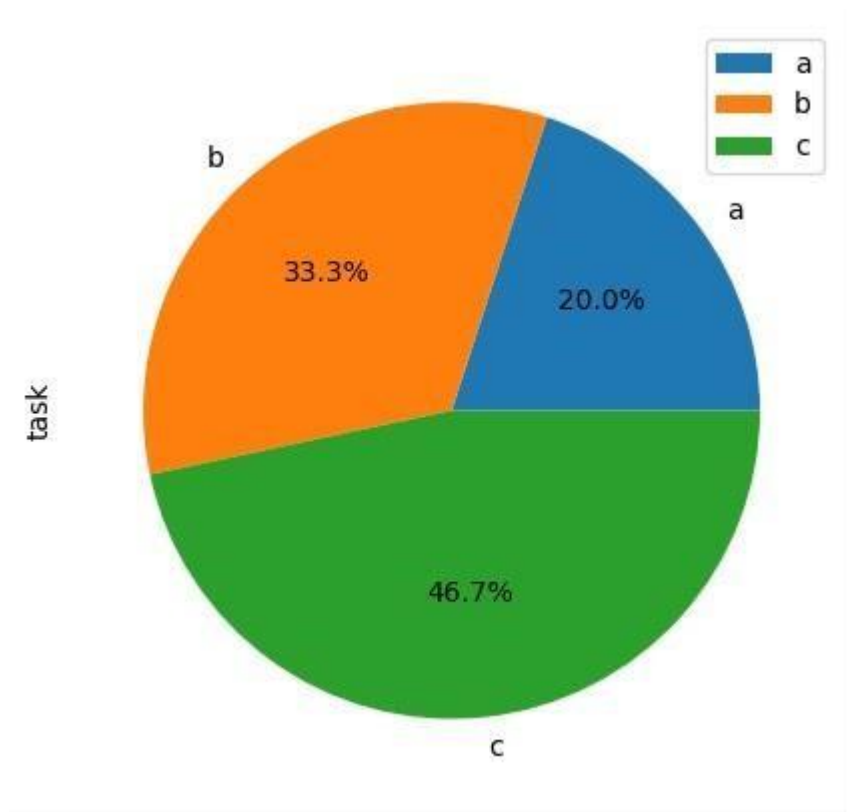
```
import pandas as pd
values=[5,6,3,7,9]
names=["A","B","C","D","E"]
c1=['b','r','g']
plt.bar(names,values,color=c1)
plt.show()
```



```
import pandas as pd #print ts
ts=pd.Series(np.random.randn(1000),index=pd.date_range("1/1/2000",peri
o 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%%')
```

