Assignment 5

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Colablink:
https://colab.research.google.com/drive/1oa5nvilC1n01yI3HhO0dwv-QFtxJaHRt#

1.Graph of straight line.

[]

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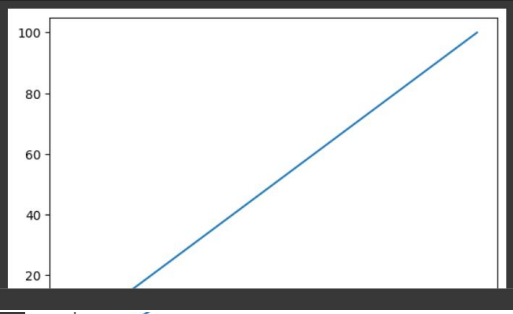
```
[ ] import matplotlib.pyplot as plt
    import numpy as np

    x = np.array([0,10])
    y = np.array([0,100])

    plt.plot(x,y)
    plt.show()
```



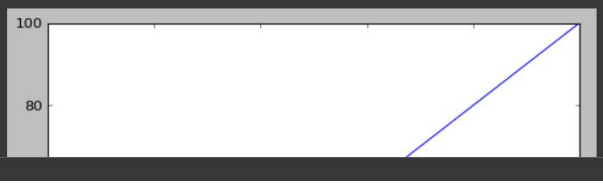
[ ]


```
[ ] %matplotlib inline
```

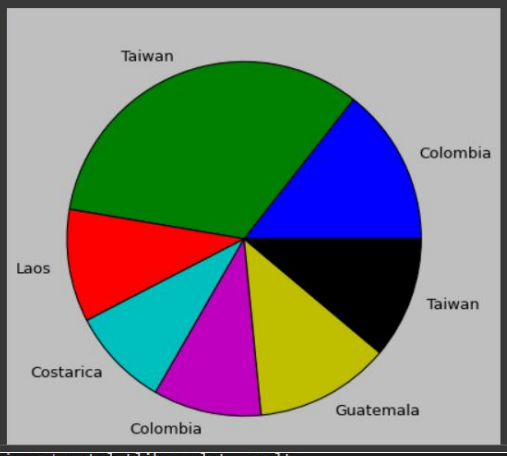
```
[ ] plt.style.use('classic')
```

2.Graph of straight line using classic.

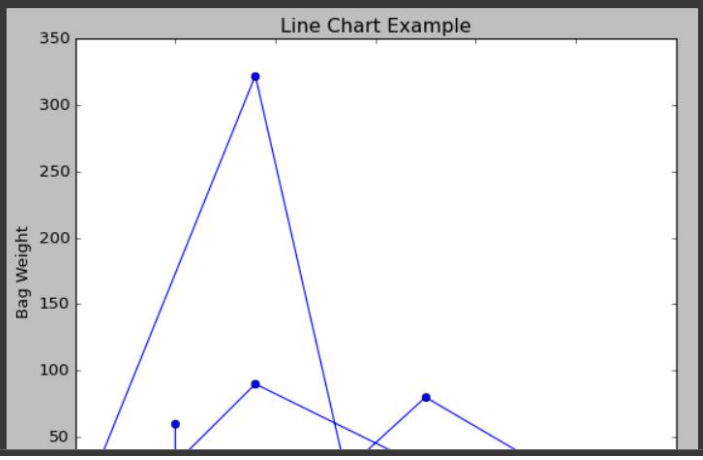
```
import matplotlib.pyplot as plt
import numpy as np

x = np.array([0,10])
y = np.array([0,100])

plt.plot(x,y)
plt.show()
```

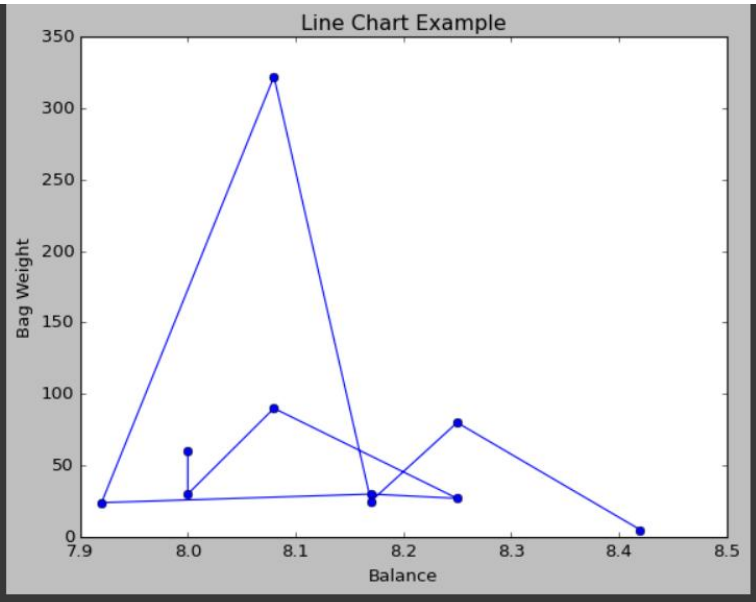


```python
import matplotlib.pyplot as plt
import numpy as np

y = np.array([35,80,25,22,24,30,27])
mylabels = ["Colombia","Taiwan","Laos","Costarica","Colombia","Guatemala","Taiwan"]

plt.pie(y,labels = mylabels)
plt.show()
```



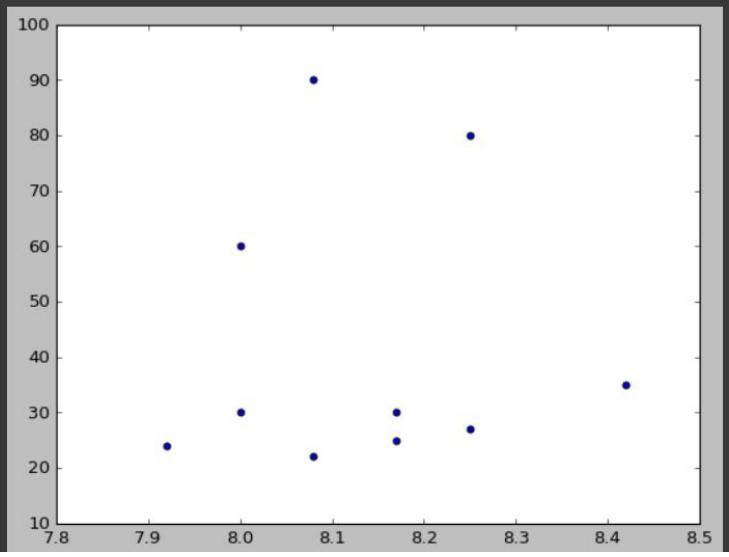

```python
import matplotlib.pyplot as plt
x = [8.42,8.25,8.17,8.08,7.92,8.17,8.25,8.08,8,8]
y = [5,80,25,322,24,30,27,90,30,60]

plt.plot(x,y,marker='o')

plt.title("Line Chart Example")
plt.xlabel("Balance")
plt.ylabel("Bag Weight")
plt.show()
```





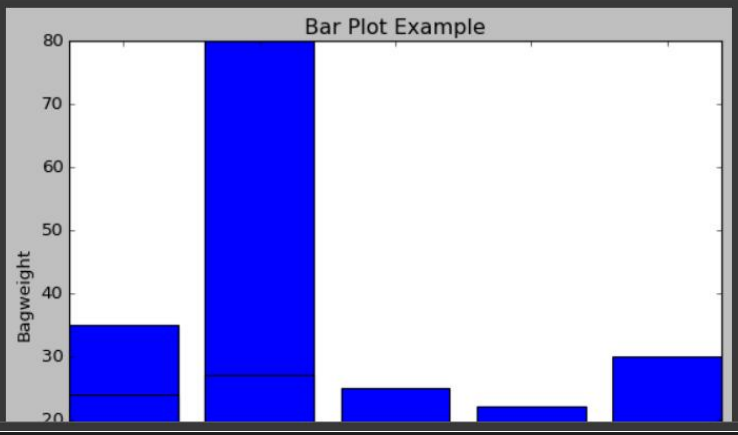
5.This graph is about aftertaste and bag weight.

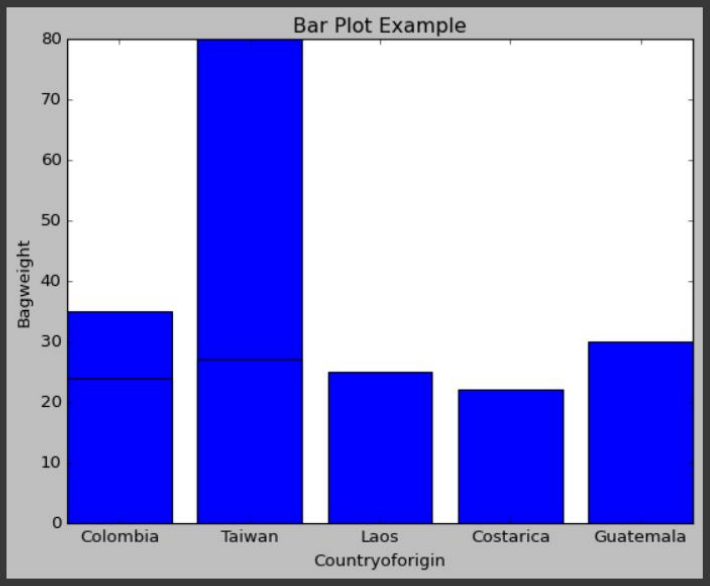
```
import matplotlib.pyplot as plt
import numpy as np

x = np.array([8.42,8.25,8.17,8.08,7.92,8.17,8.25,8.08,8,8])
y = np.array([35,80,25,22,24,30,27,90,30,60])
plt.scatter(x,y)
plt.show()
```



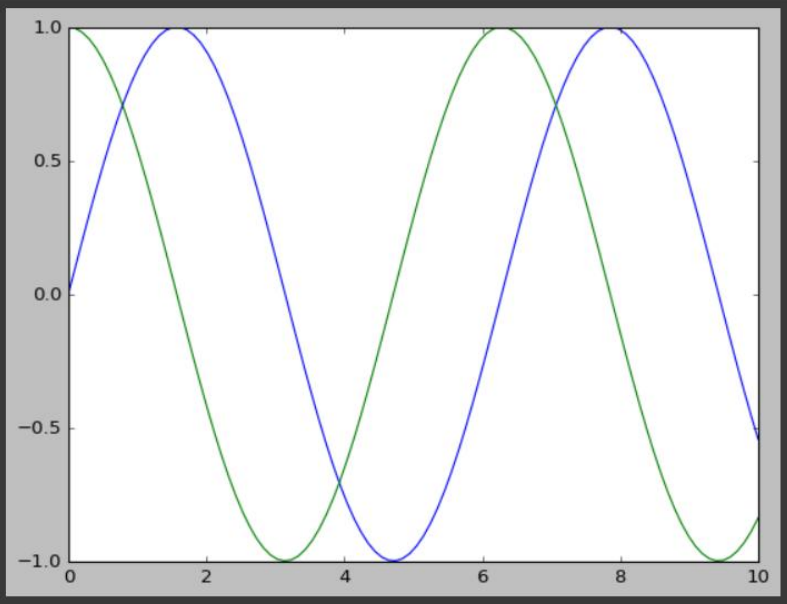
6.This bar plot is about country name and bag weight.

```
import matplotlib.pyplot as plt
Countryoforigin =["Colombia","Taiwan","Laos","Costarica","Colombia","Guatemala","Taiwan"]
Bagweight = [35,80,25,22,24,30,27]

plt.bar(Countryoforigin,Bagweight)
plt.title("Bar Plot Example")
plt.xlabel("Countryoforigin")
plt.ylabel("Bagweight")
plt.show()
```





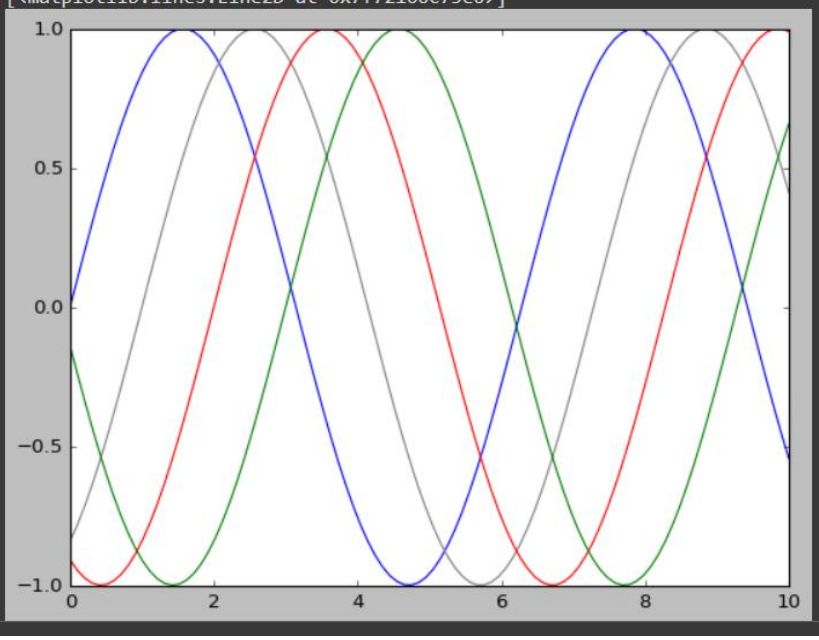
```
x= np.linspace(0,10,100)
fig=plt.figure()
plt.plot(x,np.sin(x))
plt.plot(x,np.cos(x))
fig.savefig('graph1.png')
```



8.This graph also reprents the sin graph with different color.

```
plt.plot(x,np.sin(x-0),color='blue')
plt.plot(x,np.sin(x-1),color='grey')
plt.plot(x,np.sin(x-2),color='red')
plt.plot(x,np.sin(x-3),color='green')
```

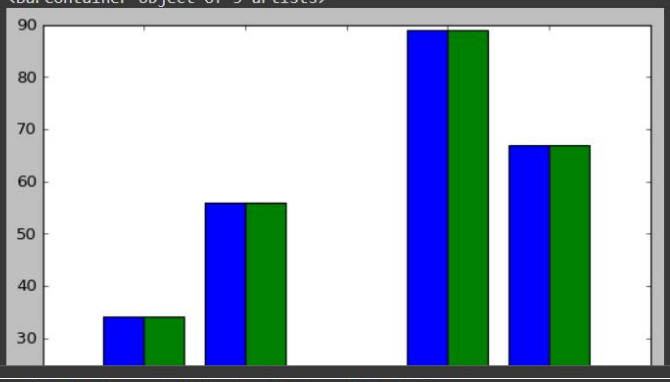
```
[<matplotlib.lines.Line2D at 0x7f72100c75e0>]
```



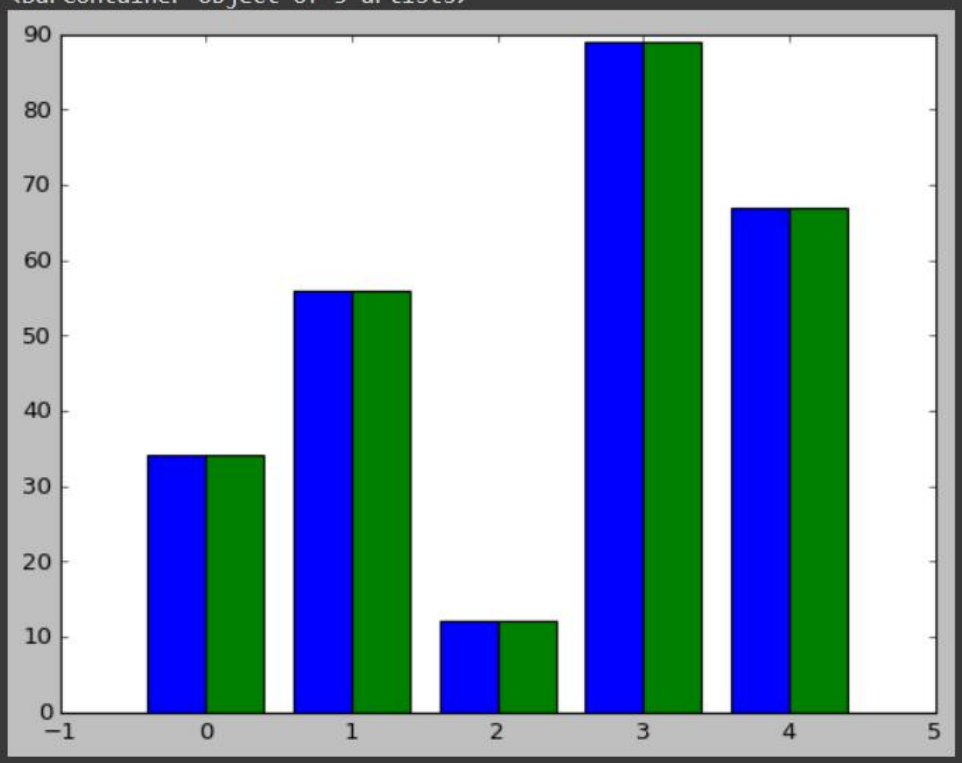
9.This graph is about bar plot of country.

```
import matplotlib.pyplot as plt
import numpy as np

x = np.arange(5)
y1 =[34,56,12,89,67]
y2 = [12,56,78,45,90]
width=0.40

plt.bar(x-0.2,y1,width)
plt.bar(x+0.2,y1,width)
```

```
<BarContainer object of 5 artists>
```



<BarContainer object of 5 artists>



10.This is the histogram graph .

```
import matplotlib.pyplot as plt
import numpy as np

x = np.random.normal(160,10,240)
print(x)

plt.hist(x)
plt.show()
```

```
[157.39570279 164.52116611 160.42475478 170.29857898 176.85777926
 159.49048399 164.32363142 159.69900375 164.14131806 163.37285659
 143.80264116 162.95824541 149.08278978 172.57577744 171.6709603
 151.16681692 153.05749514 159.96876535 167.01236114 160.87586118
 152.46082862 163.59877133 154.77938159 167.30635398 166.7724231
 169.1998555  158.10744774 154.41274934 167.47425453 177.69559283
 148.77223529 164.13859155 157.17602733 155.5193606  164.58794378
 150.4322968  168.20669667 163.83774301 163.57217027 157.82570727
 187.43132661 154.7392417  176.23519926 154.68518641 164.8351911
 169.3816617  152.62764245 152.8034816  150.06747137 157.8624091
 184.83752156 154.34714154 164.96344247 166.32813326 181.88500528
 155.21884632 152.53152316 162.24403732 147.10432549 169.61935666
 156.46424593 163.50468857 155.93396831 171.62839835 145.86481131
 161.2458637  156.69226827 163.58227767 148.7009562  138.72113159
 155.70316285 143.11489041 152.5578973  164.41621354 154.51676213
 172.19719573 172.34198828 180.92734782 159.55512478 158.60947955
 165.58682917 158.54058706 153.48828527 171.53578424 156.62610391
 146.38522322 153.11264966 152.00753414 168.29574031 152.10365466
 157.88911516 127.79593806 152.7965022  159.5284116  170.82015592
 141.13082268 178.44222834 158.20765271 145.5634772  173.55484783
```

```
157.94451908 177.56049199 153.95359716 168.23319493 159.215373
162.35432898 157.55640559 166.10863437 146.13710757 154.18552222
173.16050547 169.43639574 163.10464297 170.37744722 149.04231079
157.44298876 153.42741828 159.69889344 169.52339584 153.95654322
165.48339939 176.63370809 147.00342818 165.17118468 166.46803806
167.86236674 155.70814853 163.03659301 158.11990678 161.61584493
176.67346383 173.42636673 158.39065911 148.44340079 136.73449741
166.93082636 163.52459109 154.66837862 167.94018769 161.71459884]
```