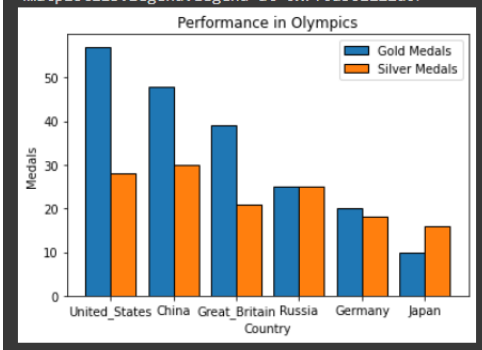
ASSIGNMENT 12

1.Create an adjucentbar graph showing information given below.

Country	Gold Medals	Silver Medals
United states	57	28
China	48	30
Great Britain	39	21
Russia	25	25
Germany	20	18
Japan	10	16

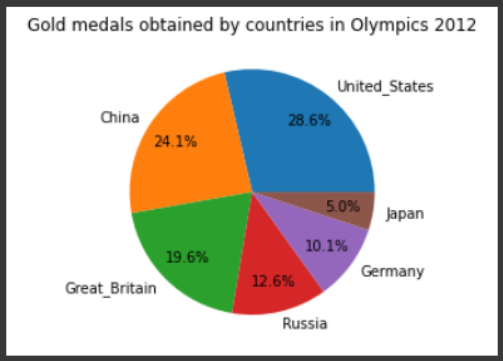
```
[ ]  import matplotlib.pyplot as plt
     import numpy as np
     barWidth=0.4
     x= ["United_States","China","Great_Britain","Russia","Germany","Japan"]
     y= [57,48,39,25,20,10]
     z= [28,30,21,25,18,16]
     # Set position of bar on X axis
     ticks=np.arange(len(x))
     print(ticks)
     plt.bar(ticks-barWidth/2, y, width=barWidth, edgecolor='black', label='Gold Medals')
     plt.bar(ticks+barWidth/2, z, width=barWidth, edgecolor='black', label='Silver Medals')
     plt.xticks(ticks,x)
     plt.title("Performance in Olympics")
     plt.xlabel("Country")
     plt.ylabel("Medals")
     plt.legend()
```

```
[0 1 2 3 4 5]
<matplotlib.legend.Legend at 0x7f0a361222d0>
```



2.Create a pie chart for datain above table. Use only 'Country'and 'Gold Medals'column.Give the title as 'Gold medals obtained by countries in Olympics 2012'. Use other suitable parameters of piechart to make it meaningful.

```
[ ]  g_medals= [57,48,39,25,20,10]
     countries= ["United_States","China","Great_Britain","Russia","Germany","Japan"]
     plt.axis('equal')
     plt.pie(g_medals, labels=countries,autopct='%0.1f%%',pctdistance=0.75,radius=1)
     plt.title('Gold medals obtained by countries in Olympics 2012')
     plt.show()
```



3.Create a histogram for a randomly generated 1000 datapoints between 0 to 100with following ranges [0-5, 5-10, 10-15, 15-20, ..., 95-100]. Use other suitable parameters to make the graph meaningful.

```
[ ]  import random
     import numpy as np
     x = np.random.normal(0,100,1000)
     plt.hist(x,bins=20,color='green', edgecolor='black')
```

```
(array([  3.,   2.,   6.,  21.,  26.,  48.,  77., 142., 108., 132., 114.,
        105.,  96.,  52.,  33.,  17.,  12.,   4.,   1.,   1.]),
 array([-316.04431128, -282.65998017, -249.27564906, -215.89131796,
        -182.50698685, -149.12265574, -115.73832463,  -82.35399353,
         -48.96966242,  -15.58533131,   17.7989998 ,   51.18333091,
          84.56766201,  117.95199312,  151.33632423,  184.72065534,
         218.10498645,  251.48931755,  284.87364866,  318.25797977,
         351.64231088]),
 <a list of 20 Patch objects>)
```