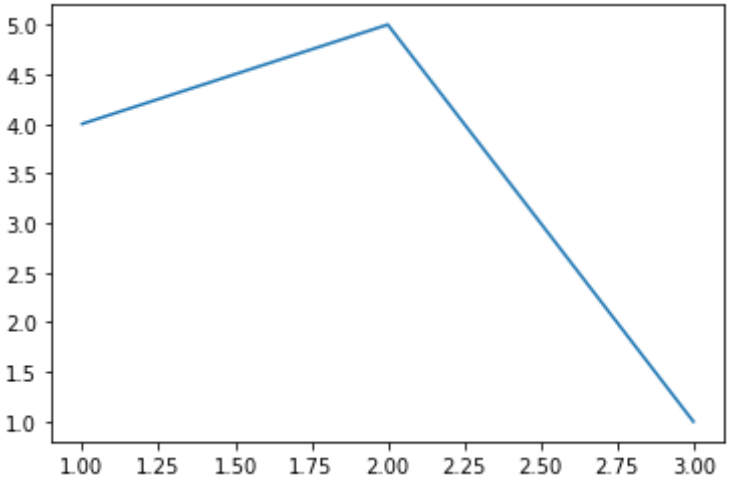
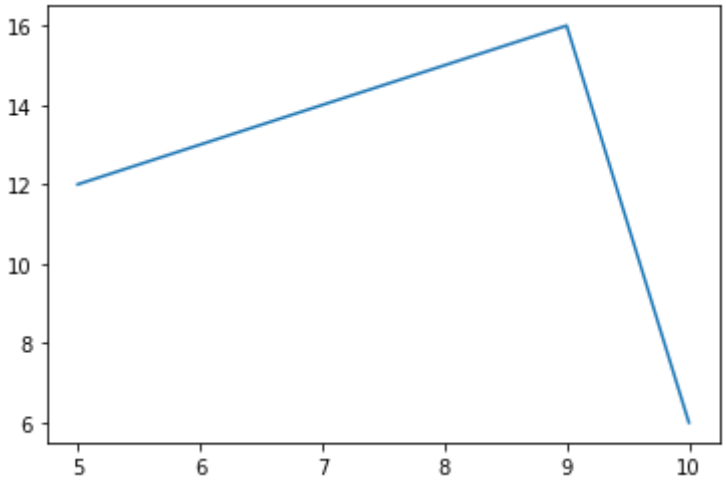
In [1]:
```
from matplotlib import pyplot as plt
```

In [2]:
```
plt.plot([1,2,3],[4,5,1])
plt.show()
```

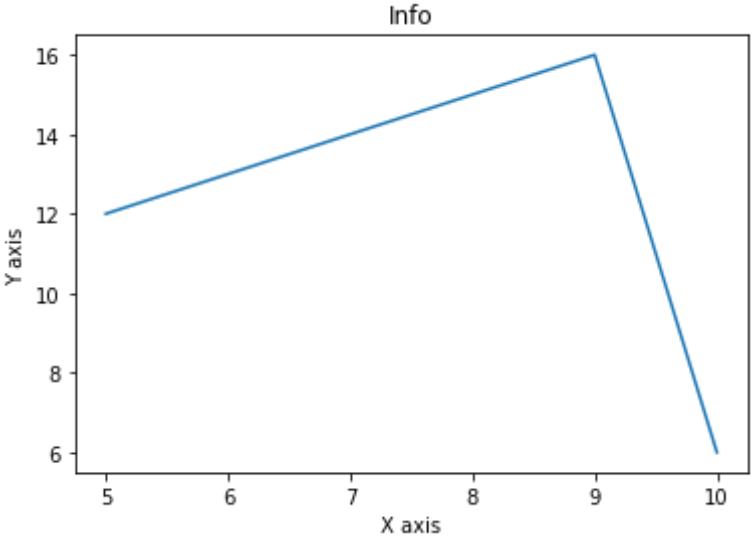


In [3]:
```
x=[5,9,10]
y=[12,16,6]
plt.plot(x,y)
plt.show()
```



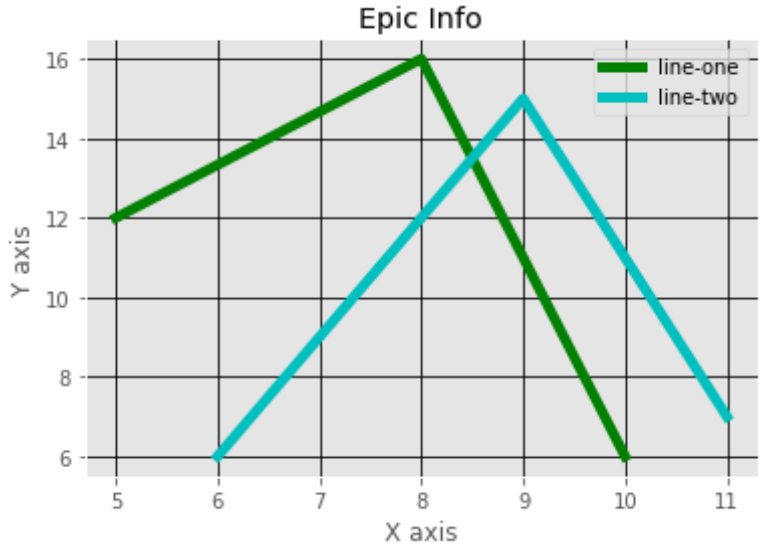
In [4]:

```
plt.plot(x,y)
plt.title('Info')
plt.xlabel('X axis')
plt.ylabel('Y axis')
plt.show()
```



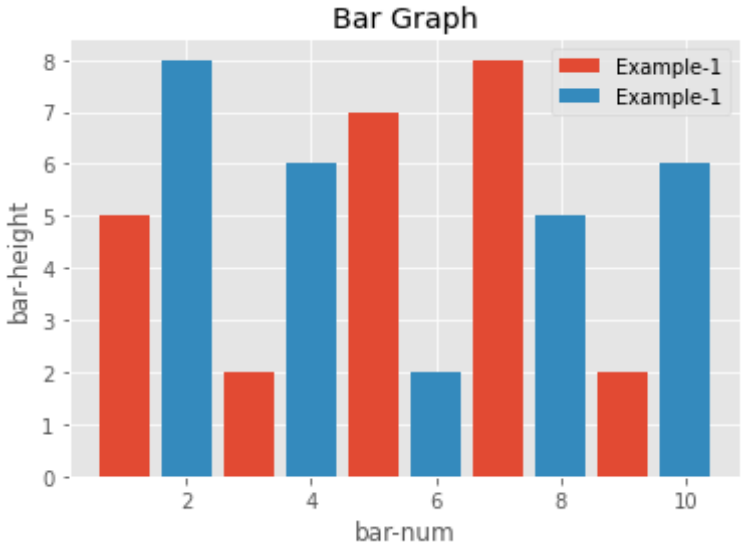
In [5]:
```
from matplotlib import style
```

In [6]:
```
style.use('ggplot')
x=[5,8,10]
y=[12,16,6]

x1=[6,9,11]
y1=[6,15,7]

plt.plot(x,y,'g',label='line-one',linewidth=5)
plt.plot(x1,y1,'c',label='line-two',linewidth=5)

plt.title('Epic Info')
plt.xlabel('X axis')
plt.ylabel('Y axis')

plt.legend()
plt.grid(True,color='k')
plt.show()
```



In [7]:
```
plt.bar([1,3,5,7,9],[5,2,7,8,2],label='Example-1')
```

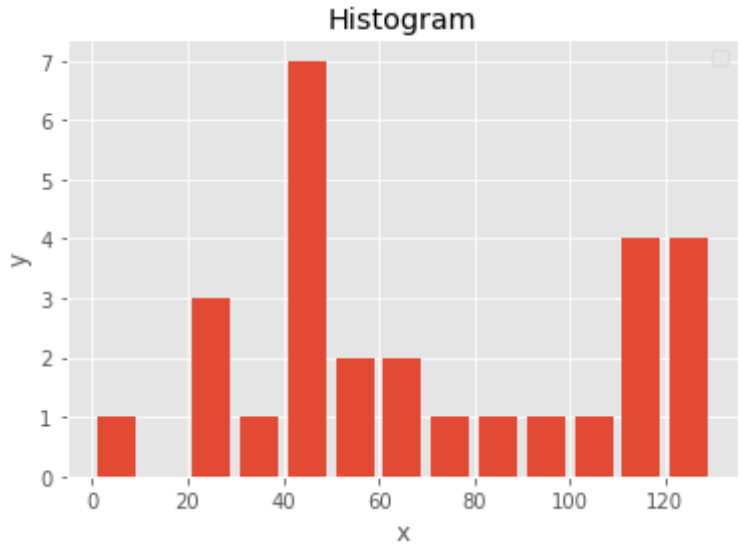
```
plt.bar([2,4,6,8,10],[8,6,2,5,6],label='Example-1')
plt.title('Bar Graph')
plt.xlabel('bar-num')
plt.ylabel('bar-height')
plt.legend()
plt.show()
```



In [8]:

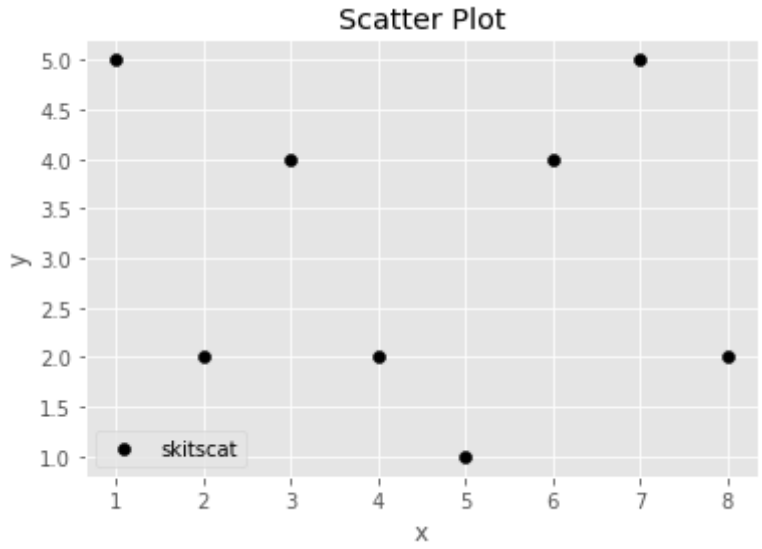
```
ages=[22,55,62,45,21,22,34,42,42,4,99,102,110,120,121,122,130,111,115,112,80,75,65,54,44,43,42,48]
bins=[0,10,20,30,40,50,60,70,80,90,100,110,120,130]
plt.hist(ages,bins,histtype='bar',rwidth=0.8)
plt.xlabel('x')
plt.ylabel('y')
plt.title('Histogram')
plt.legend()
plt.show()
```

```
No handles with labels found to put in legend.
```



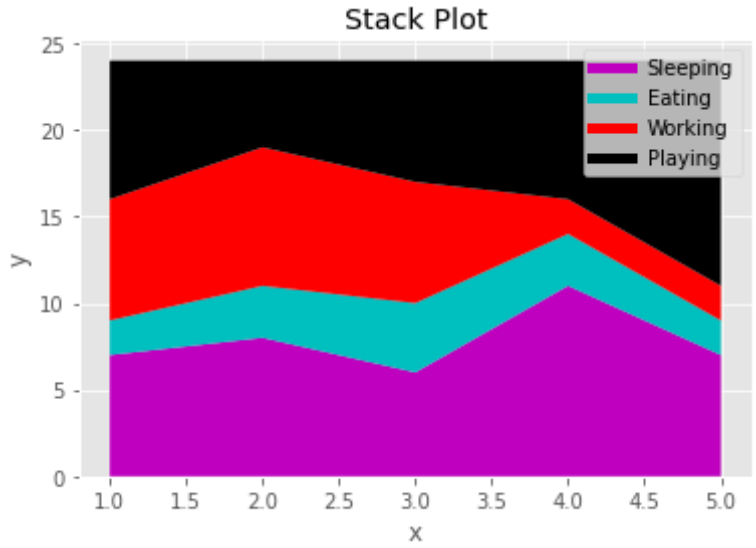
In [9]:

```
x=[1,2,3,4,5,6,7,8]
y=[5,2,4,2,1,4,5,2]
plt.scatter(x,y,label='skitscat',color='k')
plt.xlabel('x')
plt.ylabel('y')
plt.title('Scatter Plot')
plt.legend()
plt.show()
```



In [10]:

```
days=[1,2,3,4,5]

sleep=[7,8,6,11,7]
eat=[2,3,4,3,2]
work=[7,8,7,2,2]
play=[8,5,7,8,13]

plt.plot([],[],color='m',label='Sleeping',linewidth=5)
plt.plot([],[],color='c',label='Eating',linewidth=5)
plt.plot([],[],color='r',label='Working',linewidth=5)
plt.plot([],[],color='k',label='Playing',linewidth=5)

plt.stackplot(days,sleep,eat,work,play,colors=['m','c','r','k'])

plt.xlabel('x')
plt.ylabel('y')
plt.title('Stack Plot')
plt.legend()
plt.show()
```

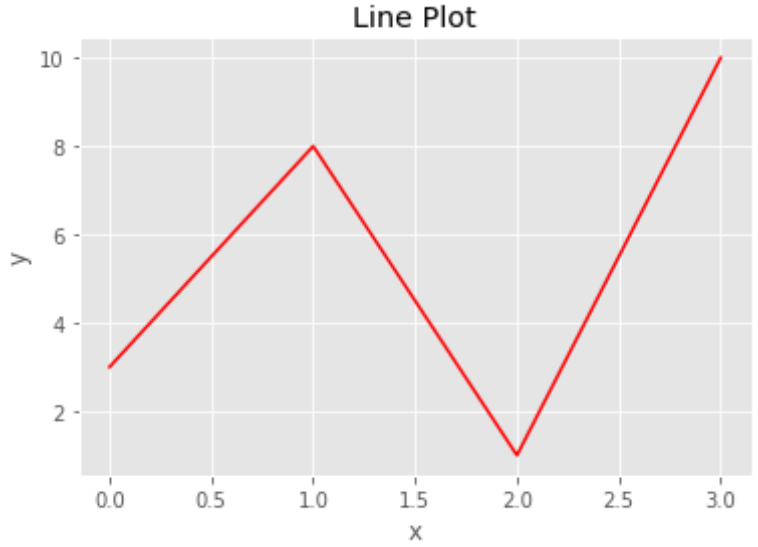


In [11]:

```
slices=[7,2,2,13]
activities=['Sleeping','Eating','Working','Playing']
cols=['c','m','r','b']
plt.pie(slices,labels=activities,colors=cols,startangle=90,shadow=True,explode=(0,0.1,0,0),autopct='%1.1f%%')
plt.title('Pie Plot')
plt.show()
```

In [12]:

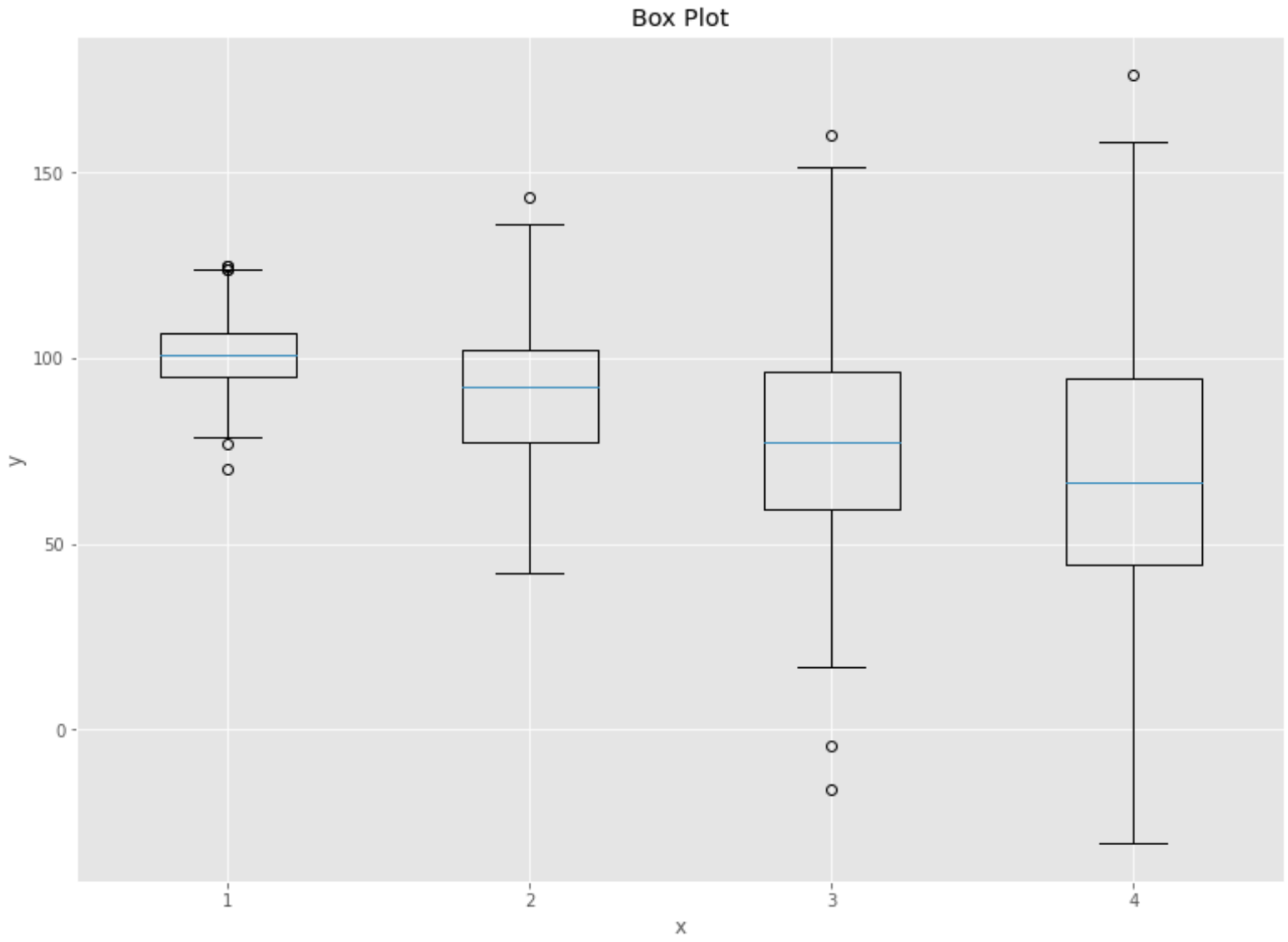
```
import numpy as np
points = np.array([3, 8, 1, 10])

plt.plot(points, color = 'r')
plt.xlabel('x')
plt.ylabel('y')
plt.title('Line Plot')
plt.show()
```



In [13]:

```
np.random.seed(10)

data_1 = np.random.normal(100, 10, 200)
data_2 = np.random.normal(90, 20, 200)
data_3 = np.random.normal(80, 30, 200)
data_4 = np.random.normal(70, 40, 200)
data = [data_1, data_2, data_3, data_4]

fig = plt.figure(figsize =(10, 7))
ax = fig.add_axes([0, 0, 1, 1])
bp = ax.boxplot(data)
plt.xlabel('x')
```

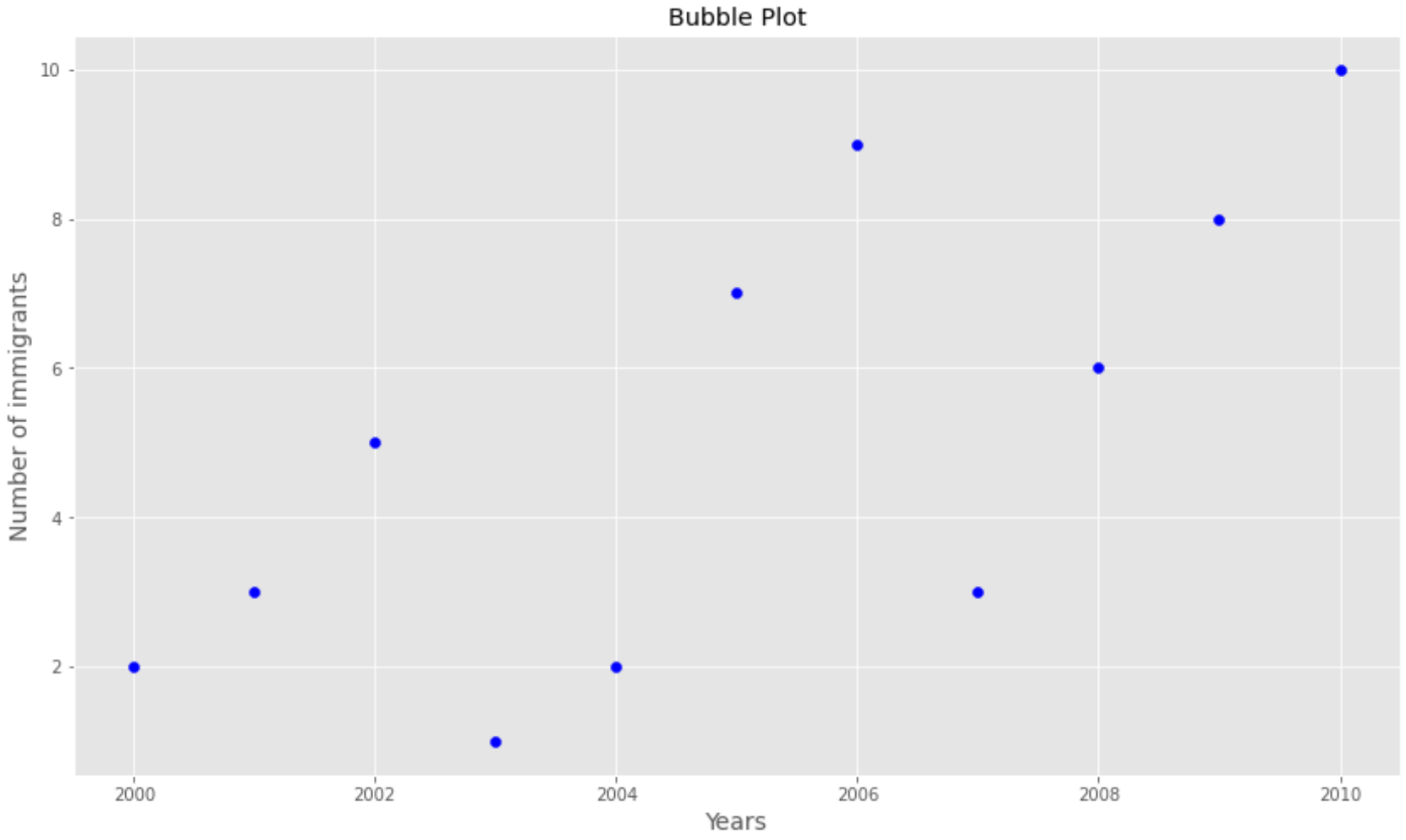
```
plt.ylabel('y')
plt.title('Box Plot')
plt.show()
```



In [14]:

```
plt.figure(figsize=(14, 8))
```

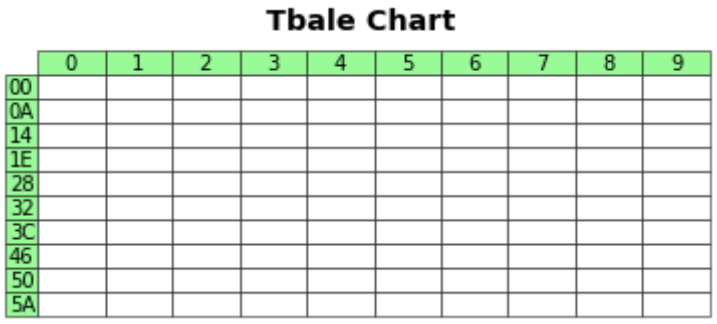
```
plt.scatter([i for i in range(2000,2011)],[2,3,5,1,2,7,9,3,6,8,10], color='blue')
plt.xlabel("Years", size=14)
plt.ylabel("Number of immigrants", size=14)
plt.title('Bubble Plot')
plt.show()
```



In [15]:

```
val1 = ["{:X}".format(i) for i in range(10)]
val2 = ["{:02X}".format(10 * i) for i in range(10)]
val3 = [["" for c in range(10)] for r in range(10)]
```

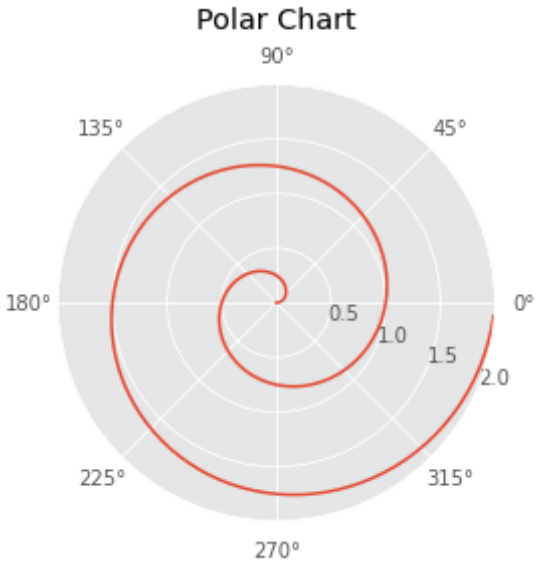
```
fig, ax = plt.subplots()
ax.set_axis_off()
table = ax.table(
    cellText = val3,
    rowLabels = val2,
    colLabels = val1,
    rowColours =["palegreen"] * 10,
    colColours =["palegreen"] * 10,
    cellLoc ='center',
    loc ='upper left')

ax.set_title('Tbale Chart',
             fontweight ="bold")

plt.show()
```



In [16]:

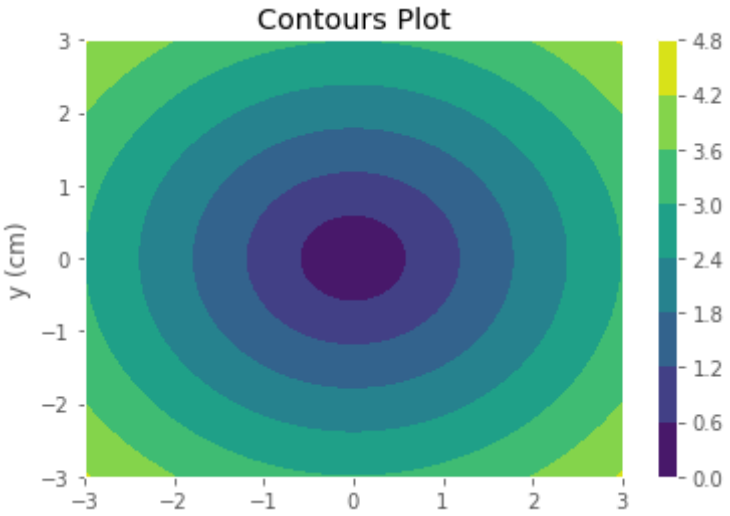
```
r = np.arange(0, 2, 0.01)
theta = 2 * np.pi * r

fig, ax = plt.subplots(subplot_kw={'projection': 'polar'})
ax.plot(theta, r)
ax.set_rmax(2)
ax.set_rticks([0.5, 1, 1.5, 2])
ax.set_rlabel_position(-22.5)
```

```
ax.grid(True)

ax.set_title("Polar Chart", va='bottom')
plt.show()
```



In [17]:

```
xlist = np.linspace(-3.0, 3.0, 100)
ylist = np.linspace(-3.0, 3.0, 100)
X, Y = np.meshgrid(xlist, ylist)
Z = np.sqrt(X**2 + Y**2)
fig,ax=plt.subplots(1,1)
cp = ax.contourf(X, Y, Z)
fig.colorbar(cp)
ax.set_title('Contours Plot')

ax.set_ylabel('y (cm)')
plt.show()
```



In [ ]: