In [1]:
```
import pandas as pd
import numpy as np
```

Create Dictionary

In [2]:
```
a={'Game':(['COC','LOL','Mario','GI','GTA']),'Rating':([8,9,10,10,9.4]),'Total playe
```

Convert dict to table

In [3]:
```
b=pd.DataFrame(a)
b
```

Out[3]:

	Game	Rating	Total players
0	COC	8.0	1024
1	LOL	9.0	2034
2	Mario	10.0	5045
3	GI	10.0	5674
4	GTA	9.4	3456

Sum

In [4]:
```
print(b.sum())
```

```
Game             COCLOLMarioGIGTA
Rating                       46.4
Total players               17233
dtype: object
```

Only required col and perform med,mode,sd,var,min,max,describe

In [7]:
```
c=b[["Rating","Total players"]]
print(c.mean())
print(c.median())
print(c.std())
print(c.var())
print(c.min())
print(c.max())
```

```
Rating              9.28
Total players    3446.60
dtype: float64
Rating              9.4
Total players    3456.0
dtype: float64
Rating              0.831865
Total players    1960.912492
```

```
dtype: float64
Rating                0.692
Total players    3845177.800
dtype: float64
Rating              8.0
Total players    1024.0
dtype: float64
Rating             10.0
Total players    5674.0
dtype: float64
```

In [8]:
```
print(c.describe())
```

```
          Rating  Total players
count   5.000000       5.000000
mean    9.280000    3446.600000
std     0.831865    1960.912492
min     8.000000    1024.000000
25%     9.000000    2034.000000
50%     9.400000    3456.000000
75%    10.000000    5045.000000
max    10.000000    5674.000000
```

Correlation and covariance

In [9]:
```
from numpy import mean,std
from numpy.random import randn,seed
from matplotlib import pyplot
```

In [11]:
```
seed(21)
d1=10*randn(50)+100
d2=d1+(20*randn(50)+50)
d1
d2
```

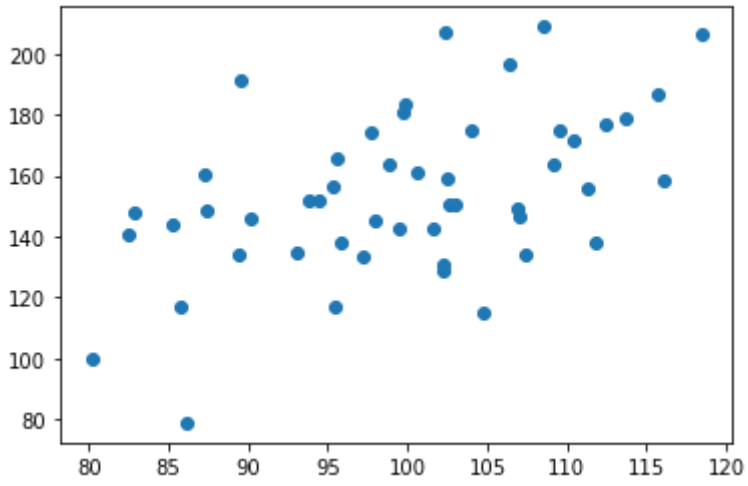
Out[11]:
```
array([142.81502913, 163.83420935, 171.62256056, 148.90678579,
       133.83626644, 148.18246406, 145.25365651, 174.1470406 ,
       155.75288752, 183.46475997, 152.17123461, 178.69051708,
       158.25931164, 134.98123584, 149.20231767, 165.53688752,
       142.66977603, 150.25061097, 160.62573371, 160.95232342,
       134.22408921, 145.80723234, 117.33096073,  99.97653677,
       143.92173668, 207.41809554, 196.65744891, 208.91919426,
       156.76856433, 146.44145587, 187.04328485, 137.89469468,
        78.9666716 , 141.01080256, 174.6994906 , 176.54889953,
       180.76693695, 174.83406602, 159.37581506, 131.16462529,
       150.37703664, 128.57884469, 138.39038794, 206.51094973,
       163.40529018, 151.95489391, 133.26903359, 191.64359922,
       115.13813769, 117.18895078])
```

Plot

In [12]:
```
print(mean(d1),std(d1))
print(mean(d2),std(d2))
```

```
99.82915173529105 9.53339014480697
154.34766669105917 26.290634398137684
```

In [13]:
```
pyplot.scatter(d1,d2)
pyplot.show()
```



Covariance

In [15]:
```
from numpy import cov
print(cov(d1,d2))
```

```
[[ 92.74033434 126.59545157]
 [126.59545157 705.30352761]]
```

Correlation

In [17]:
```
from scipy.stats import pearsonr
print(pearsonr(d1,d2))
```

```
(0.49498922544959245, 0.0002578429567261139)
```

In [19]:
```
from scipy.stats import spearmanr
print(spearmanr(d1,d2))
```

```
SpearmanrResult(correlation=0.4486434573829532, pvalue=0.001084095855253755)
```

In [ ]:
```

```