

```
In [55]: import numpy as np
import pandas as pd
```

```
In [56]: x=pd.read_csv(r"C:\Users\user\Downloads\4_drug200 - 4_drug200.csv")
print(x)
```

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	23	F	HIGH	HIGH	25.355	drugY
1	47	M	LOW	HIGH	13.093	drugC
2	47	M	LOW	HIGH	10.114	drugC
3	28	F	NORMAL	HIGH	7.798	drugX
4	61	F	LOW	HIGH	18.043	drugY
..
195	56	F	LOW	HIGH	11.567	drugC
196	16	M	LOW	HIGH	12.006	drugC
197	52	M	NORMAL	HIGH	9.894	drugX
198	23	M	NORMAL	NORMAL	14.020	drugX
199	40	F	LOW	NORMAL	11.349	drugX

[200 rows x 6 columns]

```
In [57]: x.mean()
```

```
Out[57]: Age      44.315000
Na_to_K    16.084485
dtype: float64
```

```
In [58]: x.median()
```

```
Out[58]: Age      45.0000
Na_to_K    13.9365
dtype: float64
```

```
In [59]: x.mode()
```

```
Out[59]:
```

	Age	Sex	BP	Cholesterol	Na_to_K	Drug
0	47.0	M	HIGH	HIGH	12.006	drugY
1	NaN	NaN	NaN	NaN	18.295	NaN


```
In [63]: x.count()
```

```
Out[63]: Age          200  
Sex          200  
BP           200  
Cholesterol  200  
Na_to_K      200  
Drug         200  
dtype: int64
```

```
In [64]: x.min()
```

```
Out[64]: Age          15  
Sex          F  
BP           HIGH  
Cholesterol  HIGH  
Na_to_K      6.269  
Drug         drugA  
dtype: object
```

```
In [65]: x.max()
```

```
Out[65]: Age          74  
Sex          M  
BP           NORMAL  
Cholesterol  NORMAL  
Na_to_K      38.247  
Drug         drugY  
dtype: object
```

```
In [86]: from numpy import cov  
from scipy.stats import pearsonr  
from scipy.stats import spearmanr
```

```
In [90]: d1=x["Na_to_K"]  
d2=x["Age"]  
cov(d1,d2)
```

```
Out[90]: array([[ 52.18553348, -7.54375153],  
                [-7.54375153, 273.71434673]])
```

```
In [92]: print(pearsonr(d1,d2))  
  
(-0.06311949726772592, 0.3745756399034559)
```

```
In [93]: print(spearmanr(d1,d2))  
  
SpearmanrResult(correlation=-0.047273882688479915, pvalue=0.5062200581387418)
```

```
In [ ]:
```

