In [3]:
```python
import pandas as pd
```

In [7]:
```python
import warnings
warnings.simplefilter(action='ignore', category=FutureWarning)
```

In [8]:
```python
df=pd.read_csv('IRIS.csv')
```

In [9]:
```python
df
```

Out[9]:

|  | sepal_length | sepal_width | petal_length | petal_width | species |
|---|---|---|---|---|---|
| 0 | 5.1 | 3.5 | 1.4 | 0.2 | Iris-setosa |
| 1 | 4.9 | 3.0 | 1.4 | 0.2 | Iris-setosa |
| 2 | 4.7 | 3.2 | 1.3 | 0.2 | Iris-setosa |
| 3 | 4.6 | 3.1 | 1.5 | 0.2 | Iris-setosa |
| 4 | 5.0 | 3.6 | 1.4 | 0.2 | Iris-setosa |
| ... | ... | ... | ... | ... | ... |
| 145 | 6.7 | 3.0 | 5.2 | 2.3 | Iris-virginica |
| 146 | 6.3 | 2.5 | 5.0 | 1.9 | Iris-virginica |
| 147 | 6.5 | 3.0 | 5.2 | 2.0 | Iris-virginica |
| 148 | 6.2 | 3.4 | 5.4 | 2.3 | Iris-virginica |
| 149 | 5.9 | 3.0 | 5.1 | 1.8 | Iris-virginica |

150 rows × 5 columns

In [10]:
```python
df.mean()
```

Out[10]:
```
sepal_length    5.843333
sepal_width     3.054000
petal_length    3.758667
petal_width     1.198667
dtype: float64
```

In [11]:
```python
df.median()
```

Out[11]:
```
sepal_length    5.80
sepal_width     3.00
petal_length    4.35
petal_width     1.30
dtype: float64
```

In [12]: 
```python
df.min()
```

Out[12]: 
```
sepal_length          4.3
sepal_width           2.0
petal_length          1.0
petal_width           0.1
species       Iris-setosa
dtype: object
```

In [13]: 
```python
df.max()
```

Out[13]: 
```
sepal_length            7.9
sepal_width             4.4
petal_length            6.9
petal_width             2.5
species       Iris-virginica
dtype: object
```

In [14]: 
```python
df.std()
```

Out[14]: 
```
sepal_length    0.828066
sepal_width     0.433594
petal_length    1.764420
petal_width     0.763161
dtype: float64
```

In [ ]: 

In [22]: 
```python
iris_grp=df.groupby(by='species')
```

In [25]: 
```python
iris_grp.get_group('Iris-setosa').describe()
```

Out[25]:

|       | sepal_length | sepal_width | petal_length | petal_width |
|-------|--------------|-------------|--------------|-------------|
| count | 50.00000     | 50.000000   | 50.000000    | 50.00000    |
| mean  | 5.00600      | 3.418000    | 1.464000     | 0.24400     |
| std   | 0.35249      | 0.381024    | 0.173511     | 0.10721     |
| min   | 4.30000      | 2.300000    | 1.000000     | 0.10000     |
| 25%   | 4.80000      | 3.125000    | 1.400000     | 0.20000     |
| 50%   | 5.00000      | 3.400000    | 1.500000     | 0.20000     |
| 75%   | 5.20000      | 3.675000    | 1.575000     | 0.30000     |
| max   | 5.80000      | 4.400000    | 1.900000     | 0.60000     |

In [26]: `iris_grp.get_group('Iris-versicolor').describe()`

Out[26]:

|  | sepal_length | sepal_width | petal_length | petal_width |
|---|---|---|---|---|
| count | 50.000000 | 50.000000 | 50.000000 | 50.000000 |
| mean | 5.936000 | 2.770000 | 4.260000 | 1.326000 |
| std | 0.516171 | 0.313798 | 0.469911 | 0.197753 |
| min | 4.900000 | 2.000000 | 3.000000 | 1.000000 |
| 25% | 5.600000 | 2.525000 | 4.000000 | 1.200000 |
| 50% | 5.900000 | 2.800000 | 4.350000 | 1.300000 |
| 75% | 6.300000 | 3.000000 | 4.600000 | 1.500000 |
| max | 7.000000 | 3.400000 | 5.100000 | 1.800000 |

In [27]: `iris_grp.get_group('Iris-versicolor' ).describe()`

Out[27]:

|  | sepal_length | sepal_width | petal_length | petal_width |
|---|---|---|---|---|
| count | 50.000000 | 50.000000 | 50.000000 | 50.000000 |
| mean | 5.936000 | 2.770000 | 4.260000 | 1.326000 |
| std | 0.516171 | 0.313798 | 0.469911 | 0.197753 |
| min | 4.900000 | 2.000000 | 3.000000 | 1.000000 |
| 25% | 5.600000 | 2.525000 | 4.000000 | 1.200000 |
| 50% | 5.900000 | 2.800000 | 4.350000 | 1.300000 |
| 75% | 6.300000 | 3.000000 | 4.600000 | 1.500000 |
| max | 7.000000 | 3.400000 | 5.100000 | 1.800000 |

In [ ]: