

```
In [2]: import pandas as pd
import numpy as np
```

```
In [3]: df= pd.read_csv('./air.csv')
```

```
In [4]: df
```

```
Out[4]:
```

	month	year	Ozone	Solar	Wind	Temp
0	first	2023	41	190	7.4	67
1	second	2024	36	118	8.0	72
2	second	2024	12	149	12.6	74
3	first	2024	18	313	11.5	62
4	third	2024	22	297	14.3	56
5	fourth	2023	28	103	14.9	66
6	fourth	2024	23	299	8.6	65
7	first	2023	19	99	13.8	59
8	first	2023	8	19	20.1	61

```
In [5]: df1=df.drop(columns=["month","year"])
```

```
In [6]: df1.mean()
```

```
Out[6]: Ozone      23.000000
Solar      176.333333
Wind       12.355556
Temp       64.666667
dtype: float64
```

```
In [7]: df1.min()
```

```
Out[7]: Ozone      8.0
Solar      19.0
Wind       7.4
Temp      56.0
dtype: float64
```

```
In [8]: df1.median()
```

```
Out[8]: Ozone      22.0
Solar      149.0
Wind       12.6
Temp       65.0
dtype: float64
```

```
In [9]: df1.std()
```

```
Out[9]: Ozone      10.641898  
        Solar     105.317377  
        Wind       4.042620  
        Temp       5.873670  
        dtype: float64
```

```
In [10]: df1.max()
```

```
Out[10]: Ozone      41.0  
        Solar     313.0  
        Wind      20.1  
        Temp      74.0  
        dtype: float64
```

```
In [11]: np.std(df['Wind'])
```

```
Out[11]: 3.811418840831708
```

```
In [12]: gr1 = df.groupby('year')
```

```
In [13]: ye = gr1.get_group(2023)
```

```
In [14]: ye1=ye.drop(columns=["month","year"])
```

```
In [15]: ye1.min()
```

```
Out[15]: Ozone      8.0  
        Solar     19.0  
        Wind       7.4  
        Temp     59.0  
        dtype: float64
```

```
In [16]: ye1.max()
```

```
Out[16]: Ozone      41.0  
        Solar     190.0  
        Wind      20.1  
        Temp     67.0  
        dtype: float64
```

```
In [17]: gr2 = df.groupby('month')
```

```
In [18]: gr2.groups
```

```
Out[18]: {'first': [0, 3, 7, 8], 'fourth': [5, 6], 'second': [1, 2], 'third': [4]}
```

```
In [19]: y1=gr2.get_group('first')
```

```
In [21]: y1
```

```
Out[21]:
```

	month	year	Ozone	Solar	Wind	Temp
0	first	2023	41	190	7.4	67
3	first	2024	18	313	11.5	62
7	first	2023	19	99	13.8	59
8	first	2023	8	19	20.1	61

```
In [23]: import seaborn as sns
```

```
In [32]: df = sns.load_dataset('iris')
```

```
In [33]: df
```

```
Out[33]:
```

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

150 rows × 5 columns

```
In [29]: df.describe()
```

```
Out[29]:
```

	sepal_length	sepal_width	petal_length	petal_width
count	150.000000	150.000000	150.000000	150.000000
mean	5.843333	3.057333	3.758000	1.199333
std	0.828066	0.435866	1.765298	0.762238
min	4.300000	2.000000	1.000000	0.100000
25%	5.100000	2.800000	1.600000	0.300000
50%	5.800000	3.000000	4.350000	1.300000
75%	6.400000	3.300000	5.100000	1.800000
max	7.900000	4.400000	6.900000	2.500000

```
In [30]: gr = df.groupby('species')
```

```
In [31]: se = gr.get_group('setosa')  
ve = gr.get_group('versicolor')  
vi = gr.get_group('virginica')
```

```
In [36]: se.shape
```

```
Out[36]: (50, 5)
```

```
In [37]: ve.shape
```

```
Out[37]: (50, 5)
```

```
In [38]: vi.shape
```

```
Out[38]: (50, 5)
```

```
In [39]: se.describe()
```

```
Out[39]:
```

	sepal_length	sepal_width	petal_length	petal_width
count	50.00000	50.000000	50.000000	50.000000
mean	5.00600	3.428000	1.462000	0.246000
std	0.35249	0.379064	0.173664	0.105386
min	4.30000	2.300000	1.000000	0.100000
25%	4.80000	3.200000	1.400000	0.200000
50%	5.00000	3.400000	1.500000	0.200000
75%	5.20000	3.675000	1.575000	0.300000
max	5.80000	4.400000	1.900000	0.600000

```
In [40]: ve.describe()
```

```
Out[40]:
```

	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 [41]: vi.describe()
```

```
Out[41]:
```

	sepal_length	sepal_width	petal_length	petal_width
count	50.00000	50.000000	50.000000	50.00000
mean	6.58800	2.974000	5.552000	2.02600
std	0.63588	0.322497	0.551895	0.27465
min	4.90000	2.200000	4.500000	1.40000
25%	6.22500	2.800000	5.100000	1.80000
50%	6.50000	3.000000	5.550000	2.00000
75%	6.90000	3.175000	5.875000	2.30000
max	7.90000	3.800000	6.900000	2.50000

```
In [ ]:
```