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

```
In [2]: df= pd.read_csv('Downloads/student data.csv')
        df
```

Out[2]:

	Roll	Name	Class	Marks	Age
0	101	Aarav Sharma	SE	78	19
1	102	Isha Verma	TE	85	20
2	103	Rohan Iyer	BE	67	21
3	104	Nidhi Patil	SE	90	19
4	105	Karan Mehta	TE	74	20
5	106	Pooja Deshmukh	BE	81	22
6	107	Aditya Joshi	SE	76	18
7	108	Sneha Kulkarni	TE	89	21
8	109	Vikram Nair	BE	72	22
9	110	Ananya Choudhary	SE	95	19
10	111	Rajat Bansal	TE	68	20
11	112	Priya Sinha	BE	79	22
12	113	Akash Kapoor	SE	83	19
13	114	Simran Malhotra	TE	91	21
14	115	Manish Reddy	BE	70	23
15	116	Tanya Ghosh	SE	87	18
16	117	Suresh Menon	TE	75	20
17	118	Kavita Pillai	BE	80	22
18	119	Devendra Chauhan	SE	65	19
19	120	Meenal Saxena	TE	92	21
20	121	Harsh Gupta	BE	78	22
21	122	Swati Srivastava	SE	85	18
22	123	Arjun Thakur	TE	88	21
23	124	Bhavana Shetty	BE	90	22
24	125	Rohit Yadav	SE	77	19
25	126	Deepika Banerjee	TE	82	20
26	127	Mohit Rao	BE	66	22
27	128	Sakshi Mishra	SE	84	19
28	129	Tarun Singh	TE	79	21
29	130	Nikhil Das	BE	88	23
30	131	Riya Paul	SE	92	18
31	132	Gautam Bhat	TE	73	20
32	133	Neha Khanna	BE	69	22
33	134	Varun Agrawal	SE	80	19
34	135	Aditi Nanda	TE	94	21
35	136	Yashwant Pillai	BE	75	23
36	137	Supriya Borkar	SE	89	18
37	138	Ramesh Prabhu	TE	76	20
38	139	Pallavi Mukherjee	BE	91	22
39	140	Vishal Khatri	SE	72	19
40	141	Shruti Rao	TE	83	21
41	142	Kunal Bhardwaj	BE	77	23
42	143	Meera Nair	SE	86	18
43	144	Sumit Saxena	TE	79	20
44	145	Aniket Joshi	BE	93	22

45	146	Priyanshi Tiwari	SE	70	19
46	147	Dhruv Malhotra	TE	82	21
47	148	Karishma Shah	BE	74	22
48	149	Rahul Sethi	SE	90	19
49	150	Anushka Sharma	TE	88	20

In [3]:
```python
df['Marks'].mean()
```

Out[3]: 80.94

In [4]:
```python
df['Age'].median()
```

Out[4]: 20.0

In [11]:
```python
df['Marks'].std()
```

Out[11]: 8.2348438395166

In [6]:
```python
df.min()
```

Out[6]:
```
Roll                    101
Name         Aarav Sharma
Class                   BE
Marks                   65
Age                     18
dtype: object
```

In [7]:
```python
df.max()
```

Out[7]:
```
Roll                     150
Name         Yashwant Pillai
Class                     TE
Marks                     95
Age                       23
dtype: object
```

In [8]:
```python
np.std(df['Marks'])
```

Out[8]: 8.152079489308234

In [9]:
```python
gr1 = df.groupby('Class')
```

In [12]:
```python
te = gr1.get_group('TE')
te
```

Out[12]:

	Roll	Name	Class	Marks	Age
1	102	Isha Verma	TE	85	20
4	105	Karan Mehta	TE	74	20
7	108	Sneha Kulkarni	TE	89	21
10	111	Rajat Bansal	TE	68	20
13	114	Simran Malhotra	TE	91	21
16	117	Suresh Menon	TE	75	20
19	120	Meenal Saxena	TE	92	21
22	123	Arjun Thakur	TE	88	21
25	126	Deepika Banerjee	TE	82	20
28	129	Tarun Singh	TE	79	21
31	132	Gautam Bhat	TE	73	20
34	135	Aditi Nanda	TE	94	21
37	138	Ramesh Prabhu	TE	76	20
40	141	Shruti Rao	TE	83	21
43	144	Sumit Saxena	TE	79	20
46	147	Dhruv Malhotra	TE	82	21
49	150	Anushka Sharma	TE	88	20

In [13]:
```python
te.min()
```

```
Out[13]:  Roll              102
          Name     Aditi Nanda
          Class             TE
          Marks             68
          Age               20
          dtype: object
```

In [14]:
```
te.max()
```

```
Out[14]:  Roll              150
          Name     Tarun Singh
          Class             TE
          Marks             94
          Age               21
          dtype: object
```

In [16]:
```
gr2 = df.groupby('Age')
gr2.groups
```

```
Out[16]:  {18: [6, 15, 21, 30, 36, 42], 19: [0, 3, 9, 12, 18, 24, 27, 33, 39, 45, 48], 20: [1, 4, 10, 16, 25, 31, 37, 43,
          49], 21: [2, 7, 13, 19, 22, 28, 34, 40, 46], 22: [5, 8, 11, 17, 20, 23, 26, 32, 38, 44, 47], 23: [14, 29, 35, 4
          1]}
```

In [17]:
```
tw = gr2.get_group(20)
tw
```

Out[17]:

	Roll	Name	Class	Marks	Age
1	102	Isha Verma	TE	85	20
4	105	Karan Mehta	TE	74	20
10	111	Rajat Bansal	TE	68	20
16	117	Suresh Menon	TE	75	20
25	126	Deepika Banerjee	TE	82	20
31	132	Gautam Bhat	TE	73	20
37	138	Ramesh Prabhu	TE	76	20
43	144	Sumit Saxena	TE	79	20
49	150	Anushka Sharma	TE	88	20

In [18]:
```python
import seaborn as sns
```

In [20]:
```python
df = sns.load_dataset('iris')
df
```

Out[20]:

	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 [21]:
```python
gr = df.groupby('species')
```

In [23]:
```python
se = gr.get_group('setosa')
ve = gr.get_group('versicolor')
vi = gr.get_group('virginica')
se
```

Out[23]:

	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

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
5	5.4	3.9	1.7	0.4	setosa
6	4.6	3.4	1.4	0.3	setosa
7	5.0	3.4	1.5	0.2	setosa
8	4.4	2.9	1.4	0.2	setosa
9	4.9	3.1	1.5	0.1	setosa
10	5.4	3.7	1.5	0.2	setosa
11	4.8	3.4	1.6	0.2	setosa
12	4.8	3.0	1.4	0.1	setosa
13	4.3	3.0	1.1	0.1	setosa
14	5.8	4.0	1.2	0.2	setosa
15	5.7	4.4	1.5	0.4	setosa
16	5.4	3.9	1.3	0.4	setosa
17	5.1	3.5	1.4	0.3	setosa
18	5.7	3.8	1.7	0.3	setosa
19	5.1	3.8	1.5	0.3	setosa
20	5.4	3.4	1.7	0.2	setosa
21	5.1	3.7	1.5	0.4	setosa
22	4.6	3.6	1.0	0.2	setosa
23	5.1	3.3	1.7	0.5	setosa
24	4.8	3.4	1.9	0.2	setosa
25	5.0	3.0	1.6	0.2	setosa
26	5.0	3.4	1.6	0.4	setosa
27	5.2	3.5	1.5	0.2	setosa
28	5.2	3.4	1.4	0.2	setosa
29	4.7	3.2	1.6	0.2	setosa
30	4.8	3.1	1.6	0.2	setosa
31	5.4	3.4	1.5	0.4	setosa
32	5.2	4.1	1.5	0.1	setosa
33	5.5	4.2	1.4	0.2	setosa
34	4.9	3.1	1.5	0.2	setosa
35	5.0	3.2	1.2	0.2	setosa
36	5.5	3.5	1.3	0.2	setosa
37	4.9	3.6	1.4	0.1	setosa
38	4.4	3.0	1.3	0.2	setosa
39	5.1	3.4	1.5	0.2	setosa
40	5.0	3.5	1.3	0.3	setosa
41	4.5	2.3	1.3	0.3	setosa
42	4.4	3.2	1.3	0.2	setosa
43	5.0	3.5	1.6	0.6	setosa
44	5.1	3.8	1.9	0.4	setosa
45	4.8	3.0	1.4	0.3	setosa
46	5.1	3.8	1.6	0.2	setosa
47	4.6	3.2	1.4	0.2	setosa
48	5.3	3.7	1.5	0.2	setosa
49	5.0	3.3	1.4	0.2	setosa

```
In [24]: se.shape
```

```
Out[24]:  (50, 5)
```

```
In [25]:  se.describe()
```

Out[25]:

	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 [26]:  se['sepal_length'].min()
          vi
```

Out[26]:

	sepal_length	sepal_width	petal_length	petal_width	species
100	6.3	3.3	6.0	2.5	virginica
101	5.8	2.7	5.1	1.9	virginica
102	7.1	3.0	5.9	2.1	virginica
103	6.3	2.9	5.6	1.8	virginica
104	6.5	3.0	5.8	2.2	virginica
105	7.6	3.0	6.6	2.1	virginica
106	4.9	2.5	4.5	1.7	virginica
107	7.3	2.9	6.3	1.8	virginica
108	6.7	2.5	5.8	1.8	virginica
109	7.2	3.6	6.1	2.5	virginica
110	6.5	3.2	5.1	2.0	virginica
111	6.4	2.7	5.3	1.9	virginica
112	6.8	3.0	5.5	2.1	virginica
113	5.7	2.5	5.0	2.0	virginica
114	5.8	2.8	5.1	2.4	virginica
115	6.4	3.2	5.3	2.3	virginica
116	6.5	3.0	5.5	1.8	virginica
117	7.7	3.8	6.7	2.2	virginica
118	7.7	2.6	6.9	2.3	virginica
119	6.0	2.2	5.0	1.5	virginica
120	6.9	3.2	5.7	2.3	virginica
121	5.6	2.8	4.9	2.0	virginica
122	7.7	2.8	6.7	2.0	virginica
123	6.3	2.7	4.9	1.8	virginica
124	6.7	3.3	5.7	2.1	virginica
125	7.2	3.2	6.0	1.8	virginica
126	6.2	2.8	4.8	1.8	virginica
127	6.1	3.0	4.9	1.8	virginica
128	6.4	2.8	5.6	2.1	virginica
129	7.2	3.0	5.8	1.6	virginica
130	7.4	2.8	6.1	1.9	virginica
131	7.9	3.8	6.4	2.0	virginica
132	6.4	2.8	5.6	2.2	virginica
133	6.3	2.8	5.1	1.5	virginica
134	6.1	2.6	5.6	1.4	virginica
135	7.7	3.0	6.1	2.3	virginica

136	6.3	3.4	5.6	2.4	virginica
137	6.4	3.1	5.5	1.8	virginica
138	6.0	3.0	4.8	1.8	virginica
139	6.9	3.1	5.4	2.1	virginica
140	6.7	3.1	5.6	2.4	virginica
141	6.9	3.1	5.1	2.3	virginica
142	5.8	2.7	5.1	1.9	virginica
143	6.8	3.2	5.9	2.3	virginica
144	6.7	3.3	5.7	2.5	virginica
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

In [27]:
```python
vi.shape
```

Out[27]: (50, 5)

In [28]:
```python
vi.describe()
```

Out[28]:

	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 [29]:
```python
vi['sepal_length'].min()
```

Out[29]: 4.9

In [ ]: