

In [1]:

```
1 import pandas as pd
```

In [52]:

```
1 df = pd.read_csv("weather_data.csv")  
2 df
```

Out[52]:

	day	temperature	windspeed	event
0	1/1/2017	32	6	Rain
1	1/2/2017	35	7	Sunny
2	1/3/2017	28	2	Snow
3	1/4/2017	24	7	Snow
4	1/5/2017	32	4	Rain
5	1/6/2017	31	2	Sunny

In [12]:

```
1 df.head()
```

Out[12]:

	day	temperature	windspeed	event
0	1/1/2017	32	6	Rain
1	1/2/2017	35	7	Sunny
2	1/3/2017	28	2	Snow
3	1/4/2017	24	7	Snow
4	1/5/2017	32	4	Rain

In [15]:

```
1 df.tail(6)
```

Out[15]:

	day	temperature	windspeed	event
0	1/1/2017	32	6	Rain
1	1/2/2017	35	7	Sunny
2	1/3/2017	28	2	Snow
3	1/4/2017	24	7	Snow
4	1/5/2017	32	4	Rain
5	1/6/2017	31	2	Sunny

In [16]:

```
1 df.shape
```

Out[16]:

(6, 4)

In [17]:

```
1 rows, columns = df.shape
```

In [19]:

```
1 rows
```

Out[19]:

6

In [20]:

```
columns
```

Out[20]:

4

In [22]:

```
1 x , y = df.shape
```

In [23]:

```
1 x
```

Out[23]:

6

In [25]:

```
1 df[2:6]
```

Out[25]:

	day	temperature	windspeed	event
2	1/3/2017	28	2	Snow
3	1/4/2017	24	7	Snow
4	1/5/2017	32	4	Rain
5	1/6/2017	31	2	Sunny

In [26]:

```
1 df.columns
```

Out[26]:

```
Index(['day', 'temperature', 'windspeed', 'event'], dtype='object')
```

In [29]:

```
1 df.temperature
```

Out[29]:

```
0    32
1    35
2    28
3    24
4    32
5    31
Name: temperature, dtype: int64
```

In [30]:

```
1 df.day
```

Out[30]:

```
0    1/1/2017
1    1/2/2017
2    1/3/2017
3    1/4/2017
4    1/5/2017
5    1/6/2017
Name: day, dtype: object
```

In [31]:

```
1 df['day']
```

Out[31]:

```
0    1/1/2017
1    1/2/2017
2    1/3/2017
3    1/4/2017
4    1/5/2017
5    1/6/2017
Name: day, dtype: object
```

In [32]:

```
1 df.temperature.min()
```

Out[32]:

```
24
```

In [33]:

```
1 df.windspeed.max()
```

Out[33]:

7

In [34]:

```
1 df.temperature.std()
```

Out[34]:

3.8297084310253524

In [36]:

```
1 df.describe()
```

Out[36]:

	temperature	windspeed
count	6.000000	6.000000
mean	30.333333	4.666667
std	3.829708	2.338090
min	24.000000	2.000000
25%	28.750000	2.500000
50%	31.500000	5.000000
75%	32.000000	6.750000
max	35.000000	7.000000

In [37]:

```
1 # Conditional Selection
2 df.temperature.max()
```

Out[37]:

35

In [42]:

```
1 df.day[df.temperature == df.temperature.max()]
```

Out[42]:

```
1    1/2/2017
Name: day, dtype: object
```

In [50]:

```
1 df1 = df[df.event == "Sunny"]
```

In [49]:

```
1 df1.temperature.min()
```

Out[49]:

31

In [54]:

```
1 df.day[df.temperature > 28]
```

Out[54]:

0 1/1/2017

1 1/2/2017

4 1/5/2017

5 1/6/2017

Name: day, dtype: object

In [55]:

```
1 df.day[df.windspeed < 7]
```

Out[55]:

0 1/1/2017

2 1/3/2017

4 1/5/2017

5 1/6/2017

Name: day, dtype: object

In [56]:

```
1 df.index
```

Out[56]:

RangeIndex(start=0, stop=6, step=1)

In [57]:

```
1 df
```

Out[57]:

	day	temperature	windspeed	event
0	1/1/2017	32	6	Rain
1	1/2/2017	35	7	Sunny
2	1/3/2017	28	2	Snow
3	1/4/2017	24	7	Snow
4	1/5/2017	32	4	Rain
5	1/6/2017	31	2	Sunny

In [58]:

```
1 df.set_index('day', inplace=True)
```

In [59]:

```
1 df.index
```

Out[59]:

```
Index(['1/1/2017', '1/2/2017', '1/3/2017', '1/4/2017', '1/5/2017', '1/6/2017'], dtype='object', name='day')
```

In [60]:

```
1 df
```

Out[60]:

	temperature	windspeed	event
day			
1/1/2017	32	6	Rain
1/2/2017	35	7	Sunny
1/3/2017	28	2	Snow
1/4/2017	24	7	Snow
1/5/2017	32	4	Rain
1/6/2017	31	2	Sunny

In [62]:

```
1 df.loc['1/5/2017']
```

Out[62]:

```
temperature    32
windspeed      4
event          Rain
Name: 1/5/2017, dtype: object
```

In [66]:

```
1 df.reset_index(inplace=True)
```

In [67]:

```
1 df[0:1]
```

Out[67]:

	day	temperature	windspeed	event
0	1/1/2017	32	6	Rain

In [69]:

```
1 df.loc[0]
```

Out[69]:

```
day          1/1/2017
temperature    32
windspeed      6
event          Rain
Name: 0, dtype: object
```