In [2]:
```
import pandas as pd
weather_data = {
    'day':['1/1/2017','1/2/2017','1/3/2017','1/4/2017','1/5/2017','1/6/2017'],
    'temperature':[32,35,28,24,32,31],
    'windspeed':[6,7,2,7,4,2],
    'event':['rain','sunny','snow','snow','rain','sunny']
}
df=pd.DataFrame(weather_data)
print(df)
```

```
        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 [17]:
```
df.shape
df.head()
df.tail()
df.tail(1)
df[2:5]
df[-5:-1]
df.columns
df.day
df.event
df['event']
```

Out[17]:
```
0     rain
1    sunny
2     snow
3     snow
4     rain
5    sunny
Name: event, dtype: object
```

In [18]:
```
type(df['event'])
```

Out[18]:
```
pandas.core.series.Series
```

In [19]:
```
df[['event','day']]
```

Out[19]:

	event	day
0	rain	1/1/2017
1	sunny	1/2/2017
2	snow	1/3/2017
3	snow	1/4/2017
4	rain	1/5/2017
5	sunny	1/6/2017

In [23]:
```
df['temperature'].max()
df['temperature'].mean()
df['temperature'].std()
```

Out[23]: 3.8297084310253524

In [24]:
```
df.describe()
```

Out[24]:

	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 [25]:
```
df[df.temperature>=32]
```

Out[25]:

	day	temperature	windspeed	event
0	1/1/2017	32	6	rain
1	1/2/2017	35	7	sunny
4	1/5/2017	32	4	rain

In [26]:
```
df[df.temperature==df.temperature.max()]
```

Out[26]:

	day	temperature	windspeed	event
1	1/2/2017	35	7	sunny

In [27]:
```
df.index
```

Out[27]:
```
RangeIndex(start=0, stop=6, step=1)
```

In [30]:
```
df.set_index('day',inplace=True)
df
```

```
---------------------------------------------------------------------------
KeyError                                  Traceback (most recent call last)
~\Anaconda3\lib\site-packages\pandas\core\indexes\base.py in get_loc(self, ke
y, method, tolerance)
   2656                 try:
-> 2657                     return self._engine.get_loc(key)
   2658                 except KeyError:

pandas/_libs/index.pyx in pandas._libs.index.IndexEngine.get_loc()

pandas/_libs/index.pyx in pandas._libs.index.IndexEngine.get_loc()

pandas/_libs/hashtable_class_helper.pxi in pandas._libs.hashtable.PyObjectHas
hTable.get_item()

pandas/_libs/hashtable_class_helper.pxi in pandas._libs.hashtable.PyObjectHas
hTable.get_item()

KeyError: 'day'

During handling of the above exception, another exception occurred:

KeyError                                  Traceback (most recent call last)
<ipython-input-30-e53bd8c9b0f1> in <module>
----> 1 df.set_index('day',inplace=True)
      2 df

~\Anaconda3\lib\site-packages\pandas\core\frame.py in set_index(self, keys, d
rop, append, inplace, verify_integrity)
   4176                     names.append(None)
   4177                 else:
-> 4178                     level = frame[col]._values
   4179                     names.append(col)
   4180                     if drop:

~\Anaconda3\lib\site-packages\pandas\core\frame.py in __getitem__(self, key)
   2925             if self.columns.nlevels > 1:
   2926                 return self._getitem_multilevel(key)
-> 2927             indexer = self.columns.get_loc(key)
   2928             if is_integer(indexer):
   2929                 indexer = [indexer]

~\Anaconda3\lib\site-packages\pandas\core\indexes\base.py in get_loc(self, ke
y, method, tolerance)
   2657                     return self._engine.get_loc(key)
   2658                 except KeyError:
-> 2659                     return self._engine.get_loc(self._maybe_cast_indexer
(key))
   2660         indexer = self.get_indexer([key], method=method, tolerance=to
lerance)
   2661         if indexer.ndim > 1 or indexer.size > 1:

pandas/_libs/index.pyx in pandas._libs.index.IndexEngine.get_loc()

pandas/_libs/index.pyx in pandas._libs.index.IndexEngine.get_loc()

pandas/_libs/hashtable_class_helper.pxi in pandas._libs.hashtable.PyObjectHas
```

```
hTable.get_item()

pandas/_libs/hashtable_class_helper.pxi in pandas._libs.hashtable.PyObjectHas
hTable.get_item()

KeyError: 'day'
```

In [31]:
```
df
```

Out[31]:

day	temperature	windspeed	event
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 [32]:
```
df.loc['1/3/2017']
```

Out[32]:
```
temperature      28
windspeed         2
event          snow
Name: 1/3/2017, dtype: object
```

In [33]:
```
df.reset_index(inplace=True)
df
```

Out[33]:

	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