Pandas Concatenate

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

india_weather = pd.DataFrame({  #import our  own data to dataframe
    "city": ["mumbai","delhi","banglore"],
    "temperature": [32,45,30],
    "humidity": [80, 60, 78]
})
india_weather
```

Out[2]:

	city	temperature	humidity
0	mumbai	32	80
1	delhi	45	60
2	banglore	30	78

Basic Concatenation

In [3]:
```
us_weather = pd.DataFrame({  #import our  own data to dataframe
    "city": ["new york","chicago","orlando"],
    "temperature": [21,14,35],
    "humidity": [68, 65, 75]
})
us_weather
```

Out[3]:

	city	temperature	humidity
0	new york	21	68
1	chicago	14	65
2	orlando	35	75

In [4]:
```
df = pd.concat([india_weather, us_weather]) #combine
df
```

Out[4]:

	city	temperature	humidity
0	mumbai	32	80
1	delhi	45	60
2	banglore	30	78
0	new york	21	68
1	chicago	14	65
2	orlando	35	75

In [5]:
```
li=[india_weather,us_weather]  # another method for concatenate b using list
pd.concat(li)
```

Out[5]:

	city	temperature	humidity
0	mumbai	32	80
1	delhi	45	60

	city	temperature	humidity
0	new york	21	68
1	chicago	14	65
2	orlando	35	75

Ignore Index

In [6]:
```
df = pd.concat([india_weather, us_weather],ignore_index=True ) # igone index it comes in
df
```

Out[6]:

	city	temperature	humidity
0	mumbai	32	80
1	delhi	45	60
2	banglore	30	78
3	new york	21	68
4	chicago	14	65
5	orlando	35	75

Concatenation And Keys

In [7]:
```
df = pd.concat([india_weather, us_weather], keys=["india", "us"]) # to identify data pert
df
```

Out[7]:

		city	temperature	humidity
india	**0**	mumbai	32	80
	1	delhi	45	60
	2	banglore	30	78
us	**0**	new york	21	68
	1	chicago	14	65
	2	orlando	35	75

In [8]:
```
df.loc["india"] # if some one ask i only want perticular data of  we use this
```

Out[8]:

	city	temperature	humidity
0	mumbai	32	80
1	delhi	45	60
2	banglore	30	78

In [9]:
```
df.loc["us"]
```

Out[9]:

	city	temperature	humidity
0	new york	21	68
1	chicago	14	65

Concatenation Using Index

In [11]:
```
temperature_df = pd.DataFrame({  # concatenate only temperature data using index
    "city": ["mumbai","delhi","banglore"],
    "temperature": [32,45,30],
}, index=[0,1,2])
temperature_df
```

Out[11]:

	city	temperature
0	mumbai	32
1	delhi	45
2	banglore	30

In [12]:
```
windspeed_df = pd.DataFrame({ # concatenate only windspeed data using index
    "city": ["delhi","mumbai"],
    "windspeed": [7,12],
}, index=[1,0])
windspeed_df
```

Out[12]:

	city	windspeed
1	delhi	7
0	mumbai	12

In [13]:
```
pd.concat([temperature_df,windspeed_df])
```

Out[13]:

	city	temperature	windspeed
0	mumbai	32.0	NaN
1	delhi	45.0	NaN
2	banglore	30.0	NaN
1	delhi	NaN	7.0
0	mumbai	NaN	12.0

In [14]:
```
df = pd.concat([temperature_df,windspeed_df],axis=1) #axis 1 or true it accesss coloumn w
df
```

Out[14]:

	city	temperature	city	windspeed
0	mumbai	32	mumbai	12.0
1	delhi	45	delhi	7.0
2	banglore	30	NaN	NaN

Concatenate dataframe with series

In [15]:
```
s = pd.Series([15.0,7.0,"NaN"], name="windspeed")
s
```

Out[15]:
```
0     15
1      7
```

```
2    NaN
Name: windspeed, dtype: object
```

In [16]:
```
se=pd.Series([74,78,87],name="humdity")
se
```

Out[16]:
```
0    74
1    78
2    87
Name: humdity, dtype: int64
```

In [17]:
```
df = pd.concat([temperature_df,s,se],axis=True)
df
```

Out[17]:

	city	temperature	windspeed	humdity
0	mumbai	32	15	74
1	delhi	45	7	78
2	banglore	30	NaN	87

In [19]:
```
a=df['windspeed']
```

In [20]:
```
for i in df['windspeed']:
    print(i)
```

```
15.0
7.0
NaN
```

In [ ]:
```

```