Import some library

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

from pandas import Series, DataFrame
```

Construct new data frame

In [7]:
```
df_obj1 = DataFrame(np.arange(36).reshape(6,6))
df_obj1
```

Out[7]:

	0	1	2	3	4	5
0	0	1	2	3	4	5
1	6	7	8	9	10	11
2	12	13	14	15	16	17
3	18	19	20	21	22	23
4	24	25	26	27	28	29
5	30	31	32	33	34	35

In [8]:
```
df_obj2 = DataFrame(np.arange(20).reshape(5,4))
df_obj2
```

Out[8]:

	0	1	2	3
0	0	1	2	3
1	4	5	6	7
2	8	9	10	11
3	12	13	14	15
4	16	17	18	19

Concatenating Data

In [10]:
```
pd.concat([df_obj1, df_obj2])
```

Out[10]:

	0	1	2	3	4	5
0	0	1	2	3	4.0	5.0
1	6	7	8	9	10.0	11.0
2	12	13	14	15	16.0	17.0
3	18	19	20	21	22.0	23.0
4	24	25	26	27	28.0	29.0
5	30	31	32	33	34.0	35.0
0	0	1	2	3	NaN	NaN
1	4	5	6	7	NaN	NaN
2	8	9	10	11	NaN	NaN
3	12	13	14	15	NaN	NaN
4	16	17	18	19	NaN	NaN

In [11]:
```
pd.concat([df_obj1, df_obj2], axis = 1)
```

Out[11]:

	0	1	2	3	4	5	0	1	2	3
0	0	1	2	3	4	5	0.0	1.0	2.0	3.0
1	6	7	8	9	10	11	4.0	5.0	6.0	7.0
2	12	13	14	15	16	17	8.0	9.0	10.0	11.0
3	18	19	20	21	22	23	12.0	13.0	14.0	15.0
4	24	25	26	27	28	29	16.0	17.0	18.0	19.0
5	30	31	32	33	34	35	NaN	NaN	NaN	NaN

Transforming Data

Adding some data using 'join'

In [15]:
```
series_obj = Series(np.arange(6))
series_obj.name = 'tambahan'
series_obj
```

Out[15]:
```
0    0
1    1
2    2
3    3
4    4
5    5
Name: tambahan, dtype: int32
```

In [17]:
```
data_tambah = DataFrame.join(df_obj1, series_obj)
data_tambah
```

Out[17]:

	0	1	2	3	4	5	tambahan
0	0	1	2	3	4	5	0
1	6	7	8	9	10	11	1
2	12	13	14	15	16	17	2
3	18	19	20	21	22	23	3
4	24	25	26	27	28	29	4
5	30	31	32	33	34	35	5

Adding some data using 'append'

In [29]:
```
data_append = data_tambah.append(df_obj2, ignore_index = True)
data_append
```

Out[29]:

	0	1	2	3	4	5	tambahan
0	0	1	2	3	4.0	5.0	0.0
1	6	7	8	9	10.0	11.0	1.0
2	12	13	14	15	16.0	17.0	2.0
3	18	19	20	21	22.0	23.0	3.0
4	24	25	26	27	28.0	29.0	4.0
5	30	31	32	33	34.0	35.0	5.0
6	0	1	2	3	NaN	NaN	NaN
7	4	5	6	7	NaN	NaN	NaN
8	8	9	10	11	NaN	NaN	NaN
9	12	13	14	15	NaN	NaN	NaN
10	16	17	18	19	NaN	NaN	NaN

Sorting data using (.sort_values(by = x, ascending = y) where x is number, and y is boolean

In [41]:
```
data_sort = df_obj1.sort_values(by = 5, ascending = False)
data_sort
```

Out[41]:

	0	1	2	3	4	5
5	30	31	32	33	34	35
4	24	25	26	27	28	29
3	18	19	20	21	22	23
2	12	13	14	15	16	17
1	6	7	8	9	10	11
0	0	1	2	3	4	5