In [1]:
```
#DataFrame Examples1
#Creating DataFrame object for Organizing the data in the form of Rows and Col
#Syntax: varname=pandas.DataFrame(object,index,columns,dtype)
```

In [2]:
```
lst=[[10,20,30,40],["RS","DR","TR","MC"]]
print(lst)
```

```
[[10, 20, 30, 40], ['RS', 'DR', 'TR', 'MC']]
```

In [3]:
```
import pandas as pd
df=pd.DataFrame(lst)
print(df,type(df))
```

```
    0   1   2   3
0  10  20  30  40
1  RS  DR  TR  MC <class 'pandas.core.frame.DataFrame'>
```

In [4]:
```
lst=[[10,"RS"],[20,"DR"],[30,"TR"],[40,"MC"]]
print(lst)
```

```
[[10, 'RS'], [20, 'DR'], [30, 'TR'], [40, 'MC']]
```

In [5]:
```
df=pd.DataFrame(lst)
print(df,type(df))
```

```
    0   1
0  10  RS
1  20  DR
2  30  TR
3  40  MC <class 'pandas.core.frame.DataFrame'>
```

In [6]:
```
df=pd.DataFrame(lst,columns=["ID","NAME"])
print(df,type(df))
```

```
   ID NAME
0  10   RS
1  20   DR
2  30   TR
3  40   MC <class 'pandas.core.frame.DataFrame'>
```

In [7]:
```
df=pd.DataFrame(lst,index=["Rec1","Rec2","Rec3","Rec4"],columns=["ID","NAME"])
print(df,type(df))
```

```
      ID NAME
Rec1  10   RS
Rec2  20   DR
Rec3  30   TR
Rec4  40   MC <class 'pandas.core.frame.DataFrame'>
```

In [8]:
```
lst=[(10,"RS"),(20,"DR"),(30,"TR"),(40,"MC")]
print(lst)
```

```
[(10, 'RS'), (20, 'DR'), (30, 'TR'), (40, 'MC')]
```

In [9]:
```
df=pd.DataFrame(lst,index=["Rec1","Rec2","Rec3","Rec4"],columns=["ID","NAME"])
print(df,type(df))
```

```
      ID NAME
Rec1  10   RS
Rec2  20   DR
Rec3  30   TR
Rec4  40   MC <class 'pandas.core.frame.DataFrame'>
```

In [11]:
```
d1={"IDs":[100,200,300,400],"NAMES":["Rossum","Travis","Kinney","Ritche"],"AGE
print(d1,type(d1))
print("-"*40)
df=pd.DataFrame(d1)
print(df,type(df))
```

```
{'IDs': [100, 200, 300, 400], 'NAMES': ['Rossum', 'Travis', 'Kinney', 'Ritch
e'], 'AGES': [60, 70, 80, 65]} <class 'dict'>
----------------------------------------
   IDs   NAMES  AGES
0  100  Rossum    60
1  200  Travis    70
2  300  Kinney    80
3  400  Ritche    65 <class 'pandas.core.frame.DataFrame'>
```

In [12]:
```
df=pd.DataFrame(d1,index=["Rec1","Rec2","Rec3","Rec4"])
print(df,type(df))
```

```
      IDs   NAMES  AGES
Rec1  100  Rossum    60
Rec2  200  Travis    70
Rec3  300  Kinney    80
Rec4  400  Ritche    65 <class 'pandas.core.frame.DataFrame'>
```

In [13]:
```
d1={"IDs":[100,200,300,400],"NAMES":["Rossum","Travis","Kinney","Ritche"],"AGE
print(d1,type(d1))
print("-"*40)
s=pd.Series(d1)
print(s,type(s))
```

```
{'IDs': [100, 200, 300, 400], 'NAMES': ['Rossum', 'Travis', 'Kinney', 'Ritch
e'], 'AGES': [60, 70, 80, 65]} <class 'dict'>
----------------------------------------
IDs                  [100, 200, 300, 400]
NAMES    [Rossum, Travis, Kinney, Ritche]
AGES                     [60, 70, 80, 65]
dtype: object <class 'pandas.core.series.Series'>
```

In [14]:
```
df=pd.DataFrame(s)
print(df,type(df))
```

```
                                      0
IDs                [100, 200, 300, 400]
NAMES  [Rossum, Travis, Kinney, Ritche]
AGES                   [60, 70, 80, 65] <class 'pandas.core.frame.DataFrame'>
```

In [16]:
```
df=pd.DataFrame(s,columns=["Information"])
print(df,type(df))
```

```
                               Information
IDs                [100, 200, 300, 400]
NAMES  [Rossum, Travis, Kinney, Ritche]
AGES                   [60, 70, 80, 65] <class 'pandas.core.frame.DataFrame'>
```

In [17]:
```
import numpy as np
lst=[(10,"RS"),(20,"DR"),(30,"TR"),(40,"MC")]
print(lst)
a=np.array(lst)
print(a,type(a))
```

```
[(10, 'RS'), (20, 'DR'), (30, 'TR'), (40, 'MC')]
[['10' 'RS']
 ['20' 'DR']
 ['30' 'TR']
 ['40' 'MC']] <class 'numpy.ndarray'>
```

In [18]:
```
df=pd.DataFrame(a)
print(df,type(df))
```

```
    0   1
0  10  RS
1  20  DR
2  30  TR
3  40  MC <class 'pandas.core.frame.DataFrame'>
```

In [19]:
```
s1={10,20,30,40,50}
print(s1,type(s1))
```

```
{50, 20, 40, 10, 30} <class 'set'>
```

In [20]:
```
df=pd.DataFrame(s1)
print(df,type(df))
```

```
    0
0  50
1  20
2  40
3  10
4  30 <class 'pandas.core.frame.DataFrame'>
```

In [27]:
```
#Creating DataFrame by using CSV files
#To create DataFrame by using CSV file, we use read_csv("Absolute Path")
#Syntax: varname=pandas.read_csv("Absolute Path of the CSV file")
df=pd.read_csv("C:\\Users\\nishi\\PycharmProjects\\CSV\\student.csv")
print(df,type(df))
```

```
   sno     sname  marks
0  100    Rossum  44.44
1  200    Travis  55.55
2  300    Kinney  33.33
3  400  Kernigan  11.11
4  500      Stup  55.55 <class 'pandas.core.frame.DataFrame'>
```

In [28]:
```
df.set_index("sno")
```

Out[28]:

sno	sname	marks
100	Rossum	44.44
200	Travis	55.55
300	Kinney	33.33
400	Kernigan	11.11
500	Stup	55.55

In [29]:
```
df=pd.read_csv("C:\\Users\\nishi\\PycharmProjects\\CSV\\emp.csv")
print(df,type(df))
```

```
   empno ename    sal        dsg
0     10    RS   3.40     Author
1     20    TR   4.40  Scientist
2     30    DR   1.40         SE
3     40    ST   2.40         TL
4     50    GS   1.40         HR
5     60   KVR   0.00    Trainer
6     70   SVW  56.78        STE
7     80    TE  89.90        Eng <class 'pandas.core.frame.DataFrame'>
```

In [ ]:
```

```