Series ¶

In [11]:
```
import pandas as pd
x=[1,7,4,5]
var=pd.Series(x,index=['a','s','d','f'],dtype="float",name="yogesh")
print(var)
print(type(var))
print(var[3])
```

```
a    1.0
s    7.0
d    4.0
f    5.0
Name: yogesh, dtype: float64
<class 'pandas.core.series.Series'>
5.0
```

In [16]:
```
dic={"Name":['Python','c','c++'],"Por":[12,13,14],"Rank":[1,2,3]}
var1=pd.Series(dic)
print(var1)
```

```
Name    [Python, c, c++]
Por         [12, 13, 14]
Rank           [1, 2, 3]
dtype: object
```

In [24]:
```
s=pd.Series(12,index=[1,2,3,4,5,6,7,8])
print(s)
print(type(s))
```

```
1    12
2    12
3    12
4    12
5    12
6    12
7    12
8    12
dtype: int64
<class 'pandas.core.series.Series'>
```

In [25]:
```
s1=pd.Series(12,index=[1,2,3,4,5,6,7])
s2=pd.Series(12,index=[1,2,3,4])
print(s1+s2)
```

```
1    24.0
2    24.0
3    24.0
4    24.0
5     NaN
6     NaN
7     NaN
dtype: float64
```

DataFrame

In [32]:
```
import pandas as pd
y=[1,7,4,5,6,8]
va=pd.DataFrame(y)
print(va)
print(type(va))
```

```
   0
0  1
1  7
2  4
3  5
4  6
5  8
<class 'pandas.core.frame.DataFrame'>
```

In [49]:
```
d={"Name":['C#','C','C++'],"por":[12,13,14],"Rank":[1,2,3]}
#va1=pd.DataFrame(d,columns=["Name"],index=["a","b","c"])
#va1=pd.DataFrame(d)
print(va1["Name"],[1])
print(va1)
print(type(va1))
```

```
a     C#
b      C
c    C++
Name: Name, dtype: object [1]
  Name
a   C#
b    C
c  C++
<class 'pandas.core.frame.DataFrame'>
```

In [50]:
```
list_1 = [[1,2,3,4,5],[7,8,9,6,5]]
va2 = pd.DataFrame(list_1)
print(va2)
```

```
   0  1  2  3  4
0  1  2  3  4  5
1  7  8  9  6  5
```

In [52]:
```
sr = {"s":pd.Series([1,2,3,4]),"r":pd.Series([1,2,3,4])}
va3 = pd.DataFrame(sr)
print(type(va3))
print(va3)
```

```
<class 'pandas.core.frame.DataFrame'>
   s  r
0  1  1
1  2  2
2  3  3
3  4  4
```

Arithmetic Operations

In [53]:
```
import pandas as pd
v=pd.DataFrame({"A":[1,2,3,4],"B":[5,6,7,8]})
v
```

Out[53]:

	A	B
0	1	5
1	2	6
2	3	7
3	4	8

In [70]:
```
v["C"] = v["A"]-v["B"]
v
```

Out[70]:

	A	B	C	Add	Sub
0	1	5	-4	6	-4
1	2	6	-4	8	-4
2	3	7	-4	10	-4
3	4	8	-4	12	-4

In [72]:
```
v["MUl"] = v["A"]*v["B"]
print(v)
```

```
   A  B   C  Add  Sub  MUl
0  1  5   5    6   -4    5
1  2  6  12    8   -4   12
2  3  7  21   10   -4   21
3  4  8  32   12   -4   32
```

In [76]:
```
v1=pd.DataFrame({"A":[10,20,30,40],"B":[50,60,70,80]})
v1
```

Out[76]:

	A	B
0	10	50
1	20	60
2	30	70
3	40	80

In [78]:
```
v1["Python"]=v1["A"] <= 20
v1["Python1"]=v1["B"] >= 50
v1
```

Out[78]:

	A	B	Python	Python1
0	10	50	True	True
1	20	60	True	True
2	30	70	False	True
3	40	80	False	True