```
import pandas as pd
df=pd.DataFrame()
print(df)
```

```
Empty DataFrame
Columns: []
Index: []
```

```
import pandas as pd
import numpy as np
print("DataFrame.applyfunction:\n")
info=pd.DataFrame([[3,9]]*4,columns=['S','R'])
print("\n Original DataFrame:\n",info)
print("\n Squareroot of DataFrame:\n",info.apply(np.sqrt))
print("\n sum of each column:\n",info.apply(np.sum,axis=0))
print("\n sum of each row:\n",info.apply(np.sum,axis=1))
```

```
DataFrame.applyfunction:


 Original DataFrame:
    S  R
0  3  9
1  3  9
2  3  9
3  3  9

 Squareroot of DataFrame:
          S    R
0  1.732051  3.0
1  1.732051  3.0
2  1.732051  3.0
3  1.732051  3.0

 sum of each column:
 S    12
R    36
dtype: int64

 sum of each row:
 0    12
1    12
2    12
3    12
dtype: int64
```

```
 info=pd.DataFrame([[2,4,6],[1,3,5],[5,8,7]],columns=['x','y','z'])
print("\n Orginal DataFrame : \n",info)
print("\n Minimum and maximum of each colum:\n")
print(info.agg(['min','max']))
```

```
 Orginal DataFrame :
    x  y  z
0  2  4  6
1  1  3  5
2  5  8  7

 Minimum and maximum of each colum:

     x  y  z
min  1  3  5
max  5  8  7
```

```
print("\n DataFrame.Assign function : \n")
d2=pd.DataFrame([['Shyam',88],['Che Guvera',70]])
col=(['Emp','ID'])
print("\n Original DataFrame: \n",d2)
d2['Age']=[20,18]
print("\n Adding new column: \n",d2)
d=d2.assign(sex=['Male','Male'])
print("\n Adding new column: \n",d)
```

```
 DataFrame.Assign function :
```

```
 Original DataFrame:
              0   1
0       Shyam  88
1  Che Guvera  70

 Adding new column:
              0   1  Age
0       Shyam  88   20
1  Che Guvera  70   18

 Adding new column:
              0   1  Age   sex
0       Shyam  88   20  Male
1  Che Guvera  70   18  Male
```

```
 print("\n dataframe sort function:\n")
info=pd.DataFrame(np.random.randn(5,2),index=[3,2,0,4,1],columns=['A','B'])
print(info)
info2=info.sort_index()
print("\n sort index:\n",info2)
info3=info.sort_values(by='A')
print("\n sort values:\n",info3)
```

```
 dataframe sort function:

          A         B
3 -0.458956  1.685250
2 -0.517829  0.920689
0  0.294240 -1.722013
4  1.106856  0.769602
1 -1.437098 -0.309191

 sort index:
          A         B
0  0.294240 -1.722013
1 -1.437098 -0.309191
2 -0.517829  0.920689
3 -0.458956  1.685250
4  1.106856  0.769602

 sort values:
          A         B
1 -1.437098 -0.309191
2 -0.517829  0.920689
3 -0.458956  1.685250
0  0.294240 -1.722013
4  1.106856  0.769602
```

```
 print("\n dataframe merge function:\n")
left=pd.DataFrame({'id':[1,2,3,4],
 'name':['sai','ravi','poo','yash'],
 'sub':['sub1','sub2','sub4','sub3']})
right=pd.DataFrame({'id':[1,2,3,4],
 'name':['sanjay','ram','selvin','raju'],
 'sub':['sub1','sub4','sub3','sub2']})
print(left)
print(right)
print(pd.merge(left,right,on='id'))
```

```
 dataframe merge function:

   id  name   sub
0   1   sai  sub1
1   2  ravi  sub2
2   3   poo  sub4
3   4  yash  sub3
   id    name   sub
0   1  sanjay  sub1
1   2     ram  sub4
2   3  selvin  sub3
3   4    raju  sub2
   id name_x sub_x  name_y sub_y
0   1    sai  sub1  sanjay  sub1
1   2   ravi  sub2     ram  sub4
2   3    poo  sub4  selvin  sub3
3   4   yash  sub3    raju  sub2
```

Start coding or generate with AI.

+ Code + Text