Double-click (or enter) to edit

```
import pandas as pd
ser = pd.Series([3,4,5,6,7])
ser
    0
         4
    1
    2
    3
    4
    dtype: int64
ser2 = pd.Series(['Apple','Mango','Grapes','Orange'])
ser2
    0
          Apple
8
    1
          Mango
    2
         Grapes
        0range
    dtype: object
ser2[1:3]
          Mango
    2 Grapes
    dtype: object
ser3 = pd.Series([5,6,7,8,9,1,3,5,18])
ser3
    0
    1
          6
    2
          8
    3
    4
    5
          1
    8
        18
    dtype: int64
ser3[2:7]
    2
    3
         8
    4
         9
    5
    6
    dtype: int64
ser4 = pd.Series([5,6,7,8,9,1,3,5],index= ['r1','r2','r3','r4','r5','r6','r7','r8'])
ser4
    r2
          6
    r3
    r5
          9
    r6
          1
    r7
          3
    r8
    dtype: int64
ser4['r2':'r7']
    r2
          6
    r3
          7
          8
    r4
    r5
          9
    r6
          1
    r7
          3
    dtype: int64
```

01234512345624589

**3** 6 2 3 4 8

**4** 1 2 9 4 3

**5** 1 7 3 4 5

**6** 6 2 7 0 1

**7** 4 2 3 4 5

**8** 1 2 3 4 5

9 1 8 3 0 9

```
df1.columns=['c1','c2','c3','c4','c5']
df1.index = ['r1','r2','r3','r4','r5','r6','r7','r8','r9','r10']
df1
```

```
c1 c2 c3 c4 c5
r1
   1 2 3 4 5
r2
      3
          4
            5
                6
r3
       5
          8
             9
                6
       2
          3
             4
                8
r4
          9
             4
                3
       7
r6
          3
            4
                5
r7
       2
          7
             0
                1
r8
       2
          3
             4
                5
r9
       2
          3
                5
r10
      8 3 0 9
```

import numpy as np

## df1.info()

```
<class 'pandas.core.frame.DataFrame'>
Index: 10 entries, r1 to r10
Data columns (total 5 columns):
# Column Non-Null Count Dtype
0 c1
           10 non-null
                          int64
   c2
           10 non-null
                          int64
1
2
   c3
           10 non-null
                          int64
                          int64
3 c4
           10 non-null
4 c5
           10 non-null
                          int64
dtypes: int64(5)
memory usage: 480.0+ bytes
```

## df1.describe()

	<b>c1</b>	c2	с3	c4	<b>c</b> 5
count	10.000000	10.000000	10.000000	10.000000	10.000000
mean	2.700000	3.500000	4.600000	3.800000	5.300000
std	2.110819	2.321398	2.412928	2.529822	2.263233
min	1.000000	2.000000	3.000000	0.000000	1.000000
25%	1.000000	2.000000	3.000000	4.000000	5.000000
50%	1.500000	2.000000	3.000000	4.000000	5.000000
75%	4.000000	4.500000	6.250000	4.000000	6.000000
max	6.000000	8.000000	9.000000	9.000000	9.000000

```
df1.c3.median()
    3.0
df1.c3.mean()
   4.6
df1.c3 = df1.c3.fillna(df1.c3.median())
        c1 c2 c3 c4 c5
     r1 1 2 3 4 5
     r2 2 3 4 5 6
     r3
        4 5 8 9 6
        6 2 3 4 8
     r5
           2
              9 4 3
        1 7
     r6
               3 4 5
        6 2 7 0 1
           2
              3 4 5
        1 2 3 4 5
     r9
        1 8 3 0 9
df1.c4.mode()
    Name: c4, dtype: int64
df1.head()
      c1 c2 c3 c4 c5
    r1 1 2 3 4 5
    r2 2 3 4 5 6
    r3 4 5 8 9 6
    r4 6 2 3 4 8
    r5 1 2 9 4 3
df1.loc['r4','c1':'c5']
    c2
        2
       3
    c3
    c4
        4
    c5
       8
    Name: r4, dtype: int64
df1.isnull().any()
        False
    c1
        False
    c2
    c3
        False
        False
    c4
    c5
       False
    dtype: bool
df1.isnull().sum()
    c2
        0
    с3
        0
    c4
    c5
       0
   dtype: int64
dfd = df1.drop('r3',axis=0)
dfd
```

	c1	c2	с3	c4	с5
r1	1	2	3	4	5
r2	2	3	4	5	6
r4	6	2	3	4	8
r5	1	2	9	4	3
r6	1	7	3	4	5
r7	6	2	7	0	1
r8	4	2	3	4	5
r9	1	2	3	4	5
r10	1	8	3	0	9

df1.head()

	c1	c2	с3	c4	с5
r1	1	2	3	4	5
r2	2	3	4	5	6
r3	4	5	8	9	6
r4	6	2	3	4	8
r5	1	2	9	4	3

• >