```python
import pandas as pd

a=[1,3,5,7,9,2,4,6,8]
a1=pd.Series(a)
a1
```

```
0    1
1    3
2    5
3    7
4    9
5    2
6    4
7    6
8    8
dtype: int64
```

```python
a1=[1,3,5,7,9,2,4,6,8]
a2=['a','b','c','d','e','f','g','h','i']
a3=pd.Series(a1,a2)
print(a3)
a3['b']
```

```
a    1
b    3
c    5
d    7
e    9
f    2
g    4
h    6
i    8
dtype: int64

3
```

```python
Array1=[[1,3,5],[2,4,6]]
Array2=pd.Series(Array1)
Array2
```

```
0    [1, 3, 5]
1    [2, 4, 6]
dtype: object
```

```python
dict1={'Orang':3,'Apples':4,'Mangoes':2,'Banana':12}
dict2=pd.Series(dict1)
dict2
```

```
Orang      3
Apples     4
Mangoes    2
```

```
Banana      12
dtype: int64

type(dict2)

pandas.core.series.Series

data ={'age':[23,33,12,45],'name':['rahul','john','robert','sneha']}
data1=pd.DataFrame(data)
data1

    age     name
0   23    rahul
1   33     john
2   12   robert
3   45    sneha

data2=[[4,1900],[3,1600],[2,1100],[1,850]]
data3=pd.DataFrame(data2,columns=['No_of_bedrooms','Square_feet'])
data3

    No_of_bedrooms   Square_feet
0                4          1900
1                3          1600
2                2          1100
3                1           850

from google.colab import files
uploaded=files.upload()

<IPython.core.display.HTML object>

Saving League_of_Legends.csv to League_of_Legends (1).csv

from google.colab import files
uploaded=files.upload()

<IPython.core.display.HTML object>

Saving League_of_Legends.csv to League_of_Legends.csv

LOL=pd.read_csv('League_of_Legends.csv')
LOL

            gameId  blueWins   ...   redCSPerMin   redGoldPerMin
0       4519157822         0   ...          19.7          1656.7
1       4523371949         0   ...          24.0          1762.0
2       4521474530         0   ...          20.3          1728.5
3       4524384067         0   ...          23.5          1647.8
4       4436033771         0   ...          22.5          1740.4

...            ...       ...   ...           ...             ...
9874    4527873286         1   ...          22.9          1524.6
9875    4527797466         1   ...          20.6          1545.6
```

```
9876   4527713716           0  ...           26.1           1831.9
9877   4527628313           0  ...           24.7           1529.8
9878   4523772935           1  ...           20.1           1533.9

[9879 rows x 40 columns]

LOL.shape

(9879, 40)

LOL.mean()

gameId                        4.500084e+09
blueWins                      4.990384e-01
blueWardsPlaced               2.228829e+01
blueWardsDestroyed            2.824881e+00
blueFirstBlood                5.048082e-01
blueKills                     6.183925e+00
blueDeaths                    6.137666e+00
blueAssists                   6.645106e+00
blueEliteMonsters             5.499544e-01
blueDragons                   3.619800e-01
blueHeralds                   1.879745e-01
blueTowersDestroyed           5.142221e-02
blueTotalGold                 1.650346e+04
blueAvgLevel                  6.916004e+00
blueTotalExperience           1.792811e+04
blueTotalMinionsKilled        2.166996e+02
blueTotalJungleMinionsKilled  5.050967e+01
blueGoldDiff                  1.441411e+01
blueExperienceDiff           -3.362031e+01
blueCSPerMin                  2.166996e+01
blueGoldPerMin                1.650346e+03
redWardsPlaced                2.236795e+01
redWardsDestroyed             2.723150e+00
redFirstBlood                 4.951918e-01
redKills                      6.137666e+00
redDeaths                     6.183925e+00
redAssists                    6.662112e+00
redEliteMonsters              5.731349e-01
redDragons                    4.130985e-01
redHeralds                    1.600364e-01
redTowersDestroyed            4.302055e-02
redTotalGold                  1.648904e+04
redAvgLevel                   6.925316e+00
redTotalExperience            1.796173e+04
redTotalMinionsKilled         2.173492e+02
redTotalJungleMinionsKilled   5.131309e+01
redGoldDiff                  -1.441411e+01
redExperienceDiff             3.362031e+01
redCSPerMin                   2.173492e+01
```

```
redGoldPerMin                      1.648904e+03
dtype: float64

LOL.median()

gameId                             4.510920e+09
blueWins                           0.000000e+00
blueWardsPlaced                    1.600000e+01
blueWardsDestroyed                 3.000000e+00
blueFirstBlood                     1.000000e+00
blueKills                          6.000000e+00
blueDeaths                         6.000000e+00
blueAssists                        6.000000e+00
blueEliteMonsters                  0.000000e+00
blueDragons                        0.000000e+00
blueHeralds                        0.000000e+00
blueTowersDestroyed                0.000000e+00
blueTotalGold                      1.639800e+04
blueAvgLevel                       7.000000e+00
blueTotalExperience                1.795100e+04
blueTotalMinionsKilled             2.180000e+02
blueTotalJungleMinionsKilled       5.000000e+01
blueGoldDiff                       1.400000e+01
blueExperienceDiff                -2.800000e+01
blueCSPerMin                       2.180000e+01
blueGoldPerMin                     1.639800e+03
redWardsPlaced                     1.600000e+01
redWardsDestroyed                  2.000000e+00
redFirstBlood                      0.000000e+00
redKills                           6.000000e+00
redDeaths                          6.000000e+00
redAssists                         6.000000e+00
redEliteMonsters                   0.000000e+00
redDragons                         0.000000e+00
redHeralds                         0.000000e+00
redTowersDestroyed                 0.000000e+00
redTotalGold                       1.637800e+04
redAvgLevel                        7.000000e+00
redTotalExperience                 1.797400e+04
redTotalMinionsKilled              2.180000e+02
redTotalJungleMinionsKilled        5.100000e+01
redGoldDiff                       -1.400000e+01
redExperienceDiff                  2.800000e+01
redCSPerMin                        2.180000e+01
redGoldPerMin                      1.637800e+03
dtype: float64

LOL.std()

gameId                             2.757328e+07
blueWins                           5.000244e-01
```

```
blueWardsPlaced                  1.801918e+01
blueWardsDestroyed               2.174998e+00
blueFirstBlood                   5.000022e-01
blueKills                        3.011028e+00
blueDeaths                       2.933818e+00
blueAssists                      4.064520e+00
blueEliteMonsters                6.255265e-01
blueDragons                      4.805974e-01
blueHeralds                      3.907116e-01
blueTowersDestroyed              2.443692e-01
blueTotalGold                    1.535447e+03
blueAvgLevel                     3.051458e-01
blueTotalExperience              1.200524e+03
blueTotalMinionsKilled           2.185844e+01
blueTotalJungleMinionsKilled     9.898282e+00
blueGoldDiff                     2.453349e+03
blueExperienceDiff               1.920370e+03
blueCSPerMin                     2.185844e+00
blueGoldPerMin                   1.535447e+02
redWardsPlaced                   1.845743e+01
redWardsDestroyed                2.138356e+00
redFirstBlood                    5.000022e-01
redKills                         2.933818e+00
redDeaths                        3.011028e+00
redAssists                       4.060612e+00
redEliteMonsters                 6.264816e-01
redDragons                       4.924151e-01
redHeralds                       3.666584e-01
redTowersDestroyed               2.168999e-01
redTotalGold                     1.490888e+03
redAvgLevel                      3.053114e-01
redTotalExperience               1.198584e+03
redTotalMinionsKilled            2.191167e+01
redTotalJungleMinionsKilled      1.002788e+01
redGoldDiff                      2.453349e+03
redExperienceDiff                1.920370e+03
redCSPerMin                      2.191167e+00
redGoldPerMin                    1.490888e+02
dtype: float64
```

```
LOL.info(10)
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 9879 entries, 0 to 9878
Data columns (total 40 columns):
 #   Column              Non-Null Count  Dtype
---  ------              --------------  -----
 0   gameId              9879 non-null   int64
 1   blueWins            9879 non-null   int64
 2   blueWardsPlaced     9879 non-null   int64
 3   blueWardsDestroyed  9879 non-null   int64
```

```
4    blueFirstBlood                 9879 non-null    int64
5    blueKills                      9879 non-null    int64
6    blueDeaths                     9879 non-null    int64
7    blueAssists                    9879 non-null    int64
8    blueEliteMonsters              9879 non-null    int64
9    blueDragons                    9879 non-null    int64
10   blueHeralds                    9879 non-null    int64
11   blueTowersDestroyed            9879 non-null    int64
12   blueTotalGold                  9879 non-null    int64
13   blueAvgLevel                   9879 non-null    float64
14   blueTotalExperience            9879 non-null    int64
15   blueTotalMinionsKilled         9879 non-null    int64
16   blueTotalJungleMinionsKilled   9879 non-null    int64
17   blueGoldDiff                   9879 non-null    int64
18   blueExperienceDiff             9879 non-null    int64
19   blueCSPerMin                   9879 non-null    float64
20   blueGoldPerMin                 9879 non-null    float64
21   redWardsPlaced                 9879 non-null    int64
22   redWardsDestroyed              9879 non-null    int64
23   redFirstBlood                  9879 non-null    int64
24   redKills                       9879 non-null    int64
25   redDeaths                      9879 non-null    int64
26   redAssists                     9879 non-null    int64
27   redEliteMonsters               9879 non-null    int64
28   redDragons                     9879 non-null    int64
29   redHeralds                     9879 non-null    int64
30   redTowersDestroyed             9879 non-null    int64
31   redTotalGold                   9879 non-null    int64
32   redAvgLevel                    9879 non-null    float64
33   redTotalExperience             9879 non-null    int64
34   redTotalMinionsKilled          9879 non-null    int64
35   redTotalJungleMinionsKilled    9879 non-null    int64
36   redGoldDiff                    9879 non-null    int64
37   redExperienceDiff              9879 non-null    int64
38   redCSPerMin                    9879 non-null    float64
39   redGoldPerMin                  9879 non-null    float64
dtypes: float64(6), int64(34)
memory usage: 3.0 MB

LOL.describe()

             gameId      blueWins   ...    redCSPerMin   redGoldPerMin
count   9.879000e+03   9879.000000  ...   9879.000000     9879.000000
mean    4.500084e+09      0.499038  ...     21.734923     1648.904140
std     2.757328e+07      0.500024  ...      2.191167      149.088841
min     4.295358e+09      0.000000  ...     10.700000     1121.200000
25%     4.483301e+09      0.000000  ...     20.300000     1542.750000
50%     4.510920e+09      0.000000  ...     21.800000     1637.800000
75%     4.521733e+09      1.000000  ...     23.300000     1741.850000
max     4.527991e+09      1.000000  ...     28.900000     2273.200000
```

[8 rows x 40 columns]

LOL.head()

```
       gameId  blueWins  ...  redCSPerMin  redGoldPerMin
0  4519157822         0  ...         19.7         1656.7
1  4523371949         0  ...         24.0         1762.0
2  4521474530         0  ...         20.3         1728.5
3  4524384067         0  ...         23.5         1647.8
4  4436033771         0  ...         22.5         1740.4
```

[5 rows x 40 columns]

LOL.tail()

```
          gameId  blueWins  ...  redCSPerMin  redGoldPerMin
9874  4527873286         1  ...         22.9         1524.6
9875  4527797466         1  ...         20.6         1545.6
9876  4527713716         0  ...         26.1         1831.9
9877  4527628313         0  ...         24.7         1529.8
9878  4523772935         1  ...         20.1         1533.9
```

[5 rows x 40 columns]

LOL.columns

```
Index(['gameId', 'blueWins', 'blueWardsPlaced', 'blueWardsDestroyed',
       'blueFirstBlood', 'blueKills', 'blueDeaths', 'blueAssists',
       'blueEliteMonsters', 'blueDragons', 'blueHeralds',
       'blueTowersDestroyed', 'blueTotalGold', 'blueAvgLevel',
       'blueTotalExperience', 'blueTotalMinionsKilled',
       'blueTotalJungleMinionsKilled', 'blueGoldDiff',
'blueExperienceDiff',
       'blueCSPerMin', 'blueGoldPerMin', 'redWardsPlaced',
'redWardsDestroyed',
       'redFirstBlood', 'redKills', 'redDeaths', 'redAssists',
       'redEliteMonsters', 'redDragons', 'redHeralds',
'redTowersDestroyed',
       'redTotalGold', 'redAvgLevel', 'redTotalExperience',
       'redTotalMinionsKilled', 'redTotalJungleMinionsKilled',
'redGoldDiff',
       'redExperienceDiff', 'redCSPerMin', 'redGoldPerMin'],
      dtype='object')
```

LOL.max()

```
gameId                          4.527991e+09
blueWins                        1.000000e+00
blueWardsPlaced                 2.500000e+02
blueWardsDestroyed              2.700000e+01
blueFirstBlood                  1.000000e+00
```

```
blueKills                        2.200000e+01
blueDeaths                       2.200000e+01
blueAssists                      2.900000e+01
blueEliteMonsters                2.000000e+00
blueDragons                      1.000000e+00
blueHeralds                      1.000000e+00
blueTowersDestroyed              4.000000e+00
blueTotalGold                    2.370100e+04
blueAvgLevel                     8.000000e+00
blueTotalExperience              2.222400e+04
blueTotalMinionsKilled           2.830000e+02
blueTotalJungleMinionsKilled     9.200000e+01
blueGoldDiff                     1.146700e+04
blueExperienceDiff               8.348000e+03
blueCSPerMin                     2.830000e+01
blueGoldPerMin                   2.370100e+03
redWardsPlaced                   2.760000e+02
redWardsDestroyed                2.400000e+01
redFirstBlood                    1.000000e+00
redKills                         2.200000e+01
redDeaths                        2.200000e+01
redAssists                       2.800000e+01
redEliteMonsters                 2.000000e+00
redDragons                       1.000000e+00
redHeralds                       1.000000e+00
redTowersDestroyed               2.000000e+00
redTotalGold                     2.273200e+04
redAvgLevel                      8.200000e+00
redTotalExperience               2.226900e+04
redTotalMinionsKilled            2.890000e+02
redTotalJungleMinionsKilled      9.200000e+01
redGoldDiff                      1.083000e+04
redExperienceDiff                9.333000e+03
redCSPerMin                      2.890000e+01
redGoldPerMin                    2.273200e+03
dtype: float64

LOL.min()

gameId                           4.295358e+09
blueWins                         0.000000e+00
blueWardsPlaced                  5.000000e+00
blueWardsDestroyed               0.000000e+00
blueFirstBlood                   0.000000e+00
blueKills                        0.000000e+00
blueDeaths                       0.000000e+00
blueAssists                      0.000000e+00
blueEliteMonsters                0.000000e+00
blueDragons                      0.000000e+00
blueHeralds                      0.000000e+00
blueTowersDestroyed              0.000000e+00
```

```
blueTotalGold                      1.073000e+04
blueAvgLevel                       4.600000e+00
blueTotalExperience                1.009800e+04
blueTotalMinionsKilled             9.000000e+01
blueTotalJungleMinionsKilled       0.000000e+00
blueGoldDiff                      -1.083000e+04
blueExperienceDiff                -9.333000e+03
blueCSPerMin                       9.000000e+00
blueGoldPerMin                     1.073000e+03
redWardsPlaced                     6.000000e+00
redWardsDestroyed                  0.000000e+00
redFirstBlood                      0.000000e+00
redKills                           0.000000e+00
redDeaths                          0.000000e+00
redAssists                         0.000000e+00
redEliteMonsters                   0.000000e+00
redDragons                         0.000000e+00
redHeralds                         0.000000e+00
redTowersDestroyed                 0.000000e+00
redTotalGold                       1.121200e+04
redAvgLevel                        4.800000e+00
redTotalExperience                 1.046500e+04
redTotalMinionsKilled              1.070000e+02
redTotalJungleMinionsKilled        4.000000e+00
redGoldDiff                       -1.146700e+04
redExperienceDiff                 -8.348000e+03
redCSPerMin                        1.070000e+01
redGoldPerMin                      1.121200e+03
dtype: float64

LOL.sum()

gameId                             4.445633e+13
blueWins                           4.930000e+03
blueWardsPlaced                    2.201860e+05
blueWardsDestroyed                 2.790700e+04
blueFirstBlood                     4.987000e+03
blueKills                          6.109100e+04
blueDeaths                         6.063400e+04
blueAssists                        6.564700e+04
blueEliteMonsters                  5.433000e+03
blueDragons                        3.576000e+03
blueHeralds                        1.857000e+03
blueTowersDestroyed                5.080000e+02
blueTotalGold                      1.630376e+08
blueAvgLevel                       6.832320e+04
blueTotalExperience                1.771118e+08
blueTotalMinionsKilled             2.140775e+06
blueTotalJungleMinionsKilled       4.989850e+05
blueGoldDiff                       1.423970e+05
blueExperienceDiff                -3.321350e+05
```

```
blueCSPerMin                     2.140775e+05
blueGoldPerMin                   1.630376e+07
redWardsPlaced                   2.209730e+05
redWardsDestroyed                2.690200e+04
redFirstBlood                    4.892000e+03
redKills                         6.063400e+04
redDeaths                        6.109100e+04
redAssists                       6.581500e+04
redEliteMonsters                 5.662000e+03
redDragons                       4.081000e+03
redHeralds                       1.581000e+03
redTowersDestroyed               4.250000e+02
redTotalGold                     1.628952e+08
redAvgLevel                      6.841520e+04
redTotalExperience               1.774439e+08
redTotalMinionsKilled            2.147193e+06
redTotalJungleMinionsKilled      5.069220e+05
redGoldDiff                     -1.423970e+05
redExperienceDiff                3.321350e+05
redCSPerMin                      2.147193e+05
redGoldPerMin                    1.628952e+07
dtype: float64

LOL.mode()

          gameId  blueWins  ...  redCSPerMin  redGoldPerMin
0     4295358071       0.0  ...         21.5         1607.4
1     4296004784       NaN  ...          NaN            NaN
2     4296036692       NaN  ...          NaN            NaN
3     4296354535       NaN  ...          NaN            NaN
4     4297209068       NaN  ...          NaN            NaN
...          ...       ...  ...          ...            ...
9874  4527898486       NaN  ...          NaN            NaN
9875  4527908858       NaN  ...          NaN            NaN
9876  4527909697       NaN  ...          NaN            NaN
9877  4527960459       NaN  ...          NaN            NaN
9878  4527990640       NaN  ...          NaN            NaN

[9879 rows x 40 columns]

LOL.head(16)

          gameId  blueWins  ...  redCSPerMin  redGoldPerMin
0     4519157822         0  ...         19.7         1656.7
1     4523371949         0  ...         24.0         1762.0
2     4521474530         0  ...         20.3         1728.5
3     4524384067         0  ...         23.5         1647.8
4     4436033771         0  ...         22.5         1740.4
5     4475365709         1  ...         22.1         1520.1
6     4493010632         1  ...         16.4         1446.3
7     4496759358         0  ...         15.7         1792.0
```

```
8    4443048030            0  ...         24.0          1838.0
9    4509433346            1  ...         24.7          1660.5
10   4452162573            0  ...         21.6          1514.3
11   4453038156            0  ...         18.8          1820.0
12   4515594785            1  ...         24.0          1459.1
13   4524924257            0  ...         22.9          1839.3
14   4516505202            1  ...         24.2          1619.2
15   4482120064            0  ...         23.7          1701.1

[16 rows x 40 columns]

LOL.tail(15)
            gameId   blueWins  ...   redCSPerMin   redGoldPerMin
9864   4527898486          1  ...          20.2          1524.0
9865   4527885240          1  ...          21.5          1672.2
9866   4527780032          1  ...          19.7          1393.3
9867   4527908858          0  ...          25.1          1563.4
9868   4527960459          1  ...          20.3          1393.6
9869   4527875317          0  ...          18.7          1831.9
9870   4527811425          1  ...          20.2          1494.9
9871   4527715781          0  ...          24.8          1585.8
9872   4527650398          1  ...          21.6          1639.9
9873   4527878058          1  ...          19.7          1593.4
9874   4527873286          1  ...          22.9          1524.6
9875   4527797466          1  ...          20.6          1545.6
9876   4527713716          0  ...          26.1          1831.9
9877   4527628313          0  ...          24.7          1529.8
9878   4523772935          1  ...          20.1          1533.9

[15 rows x 40 columns]
```

New Section