In [1]:
```
import pandas as pd
```

In [2]:
```
#specifies the version
print(pd.__version__)
```

```
1.4.2
```

In [7]:
```
a=[2,3,4,5]
s1=pd.Series(a,index=["A","B","C","D"
print(s1)
```

```
A    2
B    3
C    4
D    5
dtype: int64
```

In [9]:
```
print(s1["A"]);
```

```
2
```

In [12]:
```
key={"Maths":4,"CCN":4,"WS":3,"ECO":4
val=pd.Series(key);
print(val);
```

```
Maths      4
CCN        4
WS         3
ECO        4
1        One
dtype: object
```

In [13]:
```
print(val[1])
```

```
One
```

In [15]:
```
student = {
    "subject":["maths","ccn","ws","fl
    "marks":[90,89,75,80]
}
dfStud = pd.DataFrame(student)
print(dfStud)
```

```
   subject  marks
0    maths     90
1      ccn     89
2       ws     75
3  flutter     80
```

In [16]:
```
#to print single row
print(dfStud.loc[0])
```

```
subject    maths
marks         90
Name: 0, dtype: object
```

In [17]:
```
print(dfStud.loc[2])
```

```
subject    ws
marks      75
Name: 2, dtype: object
```

In [22]:
```
#excel data
stuData = pd.read_csv('records.csv')
print(stuData)
```

```
   SrNo StudentName BirthDate  Cours
e  Percentage
0     1      Poojan  20/02/02  Msc.I
T        85.0
1     2        Prem  05/06/01     MC
A        80.0
2     3    Abhishek  11/10/02    Bco
m        86.0
3     4       Vinay       NaN     Na
N        70.0
4     5      Aakash  15/05/02     MC
A         NaN
```

In [23]:
```
#head for first 5
print(stuData.head())
#tail for last 5
print(stuData.tail())
```

```
   SrNo StudentName BirthDate  Cours
e  Percentage
0     1      Poojan  20/02/02  Msc.I
T        85.0
1     2        Prem  05/06/01     MC
A        80.0
2     3    Abhishek  11/10/02    Bco
m        86.0
3     4       Vinay       NaN     Na
N        70.0
4     5      Aakash  15/05/02     MC
A         NaN
   SrNo StudentName BirthDate  Cours
e  Percentage
0     1      Poojan  20/02/02  Msc.I
T        85.0
1     2        Prem  05/06/01     MC
A        80.0
2     3    Abhishek  11/10/02    Bco
m        86.0
3     4       Vinay       NaN     Na
N        70.0
4     5      Aakash  15/05/02     MC
A         NaN
```

In [24]:
```
#print particular index record
print(stuData.loc[2])
```

```
SrNo                  3
StudentName    Abhishek
BirthDate      11/10/02
Course             Bcom
Percentage          86.0
Name: 2, dtype: object
```

In [25]:
```
#info will information for the excel
print(stuData.info())
```

```
<class 'pandas.core.frame.DataFram
e'>
RangeIndex: 5 entries, 0 to 4
Data columns (total 5 columns):
 #   Column       Non-Null Count  Dt
ype
---  ------       --------------  --
---
 0   SrNo         5 non-null      in
t64
 1   StudentName  5 non-null      ob
ject
 2   BirthDate    4 non-null      ob
ject
 3   Course       4 non-null      ob
ject
 4   Percentage   4 non-null      fl
oat64
dtypes: float64(1), int64(1), object
(3)
memory usage: 328.0+ bytes
None
```

In [26]:
```
# if do not want any data which conta
# drop all columns which have null va
newStuData = stuData.dropna()
print(newStuData)
```

```
   SrNo StudentName BirthDate  Cours
e  Percentage
0     1      Poojan  20/02/02  Msc.I
T        85.0
1     2        Prem  05/06/01     MC
A        80.0
2     3    Abhishek  11/10/02    Bco
m        86.0
```

if we have to drop any null value

In [27]:
```
#it will fill all the null data
fillData = stuData.fillna(50)
print(fillData)
```

```
   SrNo StudentName BirthDate  Cours
e  Percentage
0     1      Poojan  20/02/02  Msc.I
T        85.0
1     2        Prem  05/06/01     MC
A        80.0
2     3    Abhishek  11/10/02    Bco
m        86.0
3     4       Vinay        50      5
0        70.0
4     5      Aakash  15/05/02     MC
A        50.0
```

In [28]:
```
specificData = stuData["Course"].fill
print(specificData)
```

```
0    Msc.IT
1       MCA
2      Bcom
3    Msc.IT
4       MCA
Name: Course, dtype: object
```

In [29]:
```
#if we have to do changes in original
#inplace is used to change the origin

stuData["Course"].fillna("Msc.IT",inp
print(stuData)
```

```
   SrNo StudentName BirthDate  Cours
e  Percentage
0     1      Poojan  20/02/02  Msc.I
T        85.0
1     2        Prem  05/06/01     MC
A        80.0
2     3    Abhishek  11/10/02    Bco
m        86.0
3     4       Vinay       NaN  Msc.I
T        70.0
4     5      Aakash  15/05/02     MC
A         NaN
```

In [30]:
```
stuData["Percentage"].fillna(75,inpla
print(stuData)
```

```
   SrNo StudentName BirthDate  Cours
e  Percentage
0     1      Poojan  20/02/02  Msc.I
T        85.0
1     2        Prem  05/06/01     MC
A        80.0
2     3    Abhishek  11/10/02    Bco
m        86.0
3     4       Vinay       NaN  Msc.I
T        70.0
4     5      Aakash  15/05/02     MC
A        75.0
```

In [33]:
```
#to find mean
mean = stuData["Percentage"].mean()
print(f"Mean : {mean}")
```

```
Mean : 79.2
```

In [34]:
```
#to find median
median = stuData["Percentage"].median
print("Median : ",median)
```

```
Median :  80.0
```

In [36]:
```
#to find mode we have to specify inde
mode = stuData["Percentage"].mode()
print("Mode : ",mode[0])
```

```
Mode :  70.0
```

In [ ]:
```

```