

```
In [2]: import pandas as pd
```

```
In [7]: print(pd.__version__)#print version
```

2.0.3

```
In [16]: #create a series with index
a=[1,2,3,4,5,6]
s1=pd.Series(a,index=['i1','i2','i3','i4','i5','i6'])#print within a index
s2=pd.Series(a)#print without index
print(s1)
print(s2)
```

```
i1    1
i2    2
i3    3
i4    4
i5    5
i6    6
dtype: int64
0     1
1     2
2     3
3     4
4     5
5     6
dtype: int64
```

```
In [19]: print(s1['i1'])#print the series as a index
```

1

```
In [21]: #print the series in keyvalue pair
keyvalue={"tej":85,"smitt":86,"xyz":1,"abc":23}
newkey=pd.Series(keyvalue)
print(newkey)
```

```
tej      85
smitt    86
xyz       1
abc      23
dtype: int64
```

```
In [25]: #example of the Dataframe
student={'subject':['aiml','ccn','ws','cs'],
         'marks':[90,89,70,99]}
Sstude=pd.DataFrame(student)
print(Sstude)
```

```
  subject  marks
0    aiml    90
1     ccn    89
2      ws    70
3      cs    99
```

```
In [32]: #fetch sigle row in dattaframe
print(Sstude.loc[3])
```

```
subject    cs
marks      99
Name: 3, dtype: object
```

In [35]: *#read the data from the csv file*

```
studData=pd.read_csv('mlpdoc.csv')
print(studData)
```

	Sr.No	StudentName	Birthdate	Course	Percentage
0	1	Bhavdip	23-10-2002	MSCIT	64.0
1	2	Digvijay	15-11-2002	MSCIT	81.0
2	3	Smit	11-15-2002	MSCIT	86.0
3	4	Tejasv	10-06-2003	MSCIT	85.0
4	5	Uzzama	16-04-1997	MSCIT	87.0
5	6	Bhavesh	12-5-88888	NaN	NaN

In [38]: *#print the first five record from the file*

```
print(studData.head())
```

	Sr.No	StudentName	Birthdate	Course	Percentage
0	1	Bhavdip	23-10-2002	MSCIT	64.0
1	2	Digvijay	15-11-2002	MSCIT	81.0
2	3	Smit	11-15-2002	MSCIT	86.0
3	4	Tejasv	10-06-2003	MSCIT	85.0
4	5	Uzzama	16-04-1997	MSCIT	87.0

In [40]: *#print the last five records from file*

```
print(studData.tail())
```

	Sr.No	StudentName	Birthdate	Course	Percentage
1	2	Digvijay	15-11-2002	MSCIT	81.0
2	3	Smit	11-15-2002	MSCIT	86.0
3	4	Tejasv	10-06-2003	MSCIT	85.0
4	5	Uzzama	16-04-1997	MSCIT	87.0
5	6	Bhavesh	12-5-88888	NaN	NaN

In [43]: *#print the second number / Location of the record*

```
print(studData.loc[2])
```

```
Sr.No          3
StudentName    Smit
Birthdate      11-15-2002
Course         MSCIT
Percentage     86.0
Name: 2, dtype: object
```

In [45]: *# show the null, non-null values , datatypes and memory usage*

```
print(studData.info())
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 6 entries, 0 to 5
Data columns (total 5 columns):
#   Column          Non-Null Count  Dtype
---  ---
0   Sr.No           6 non-null      int64
1   StudentName     6 non-null      object
2   Birthdate       6 non-null      object
3   Course          5 non-null      object
4   Percentage      5 non-null      float64
dtypes: float64(1), int64(1), object(3)
memory usage: 372.0+ bytes
None
```

```
In [47]: #drop a null value data from the records
newStudData=studData.dropna()
print(newStudData)
```

	Sr.No	StudentName	Birthdate	Course	Percentage
0	1	Bhavdip	23-10-2002	MSCIT	64.0
1	2	Digvijay	15-11-2002	MSCIT	81.0
2	3	Smit	11-15-2002	MSCIT	86.0
3	4	Tejasv	10-06-2003	MSCIT	85.0
4	5	Uzzama	16-04-1997	MSCIT	87.0

```
In [49]: #replace value to the null values
filledStud=studData.fillna(30)
print(filledStud)
```

	Sr.No	StudentName	Birthdate	Course	Percentage
0	1	Bhavdip	23-10-2002	MSCIT	64.0
1	2	Digvijay	15-11-2002	MSCIT	81.0
2	3	Smit	11-15-2002	MSCIT	86.0
3	4	Tejasv	10-06-2003	MSCIT	85.0
4	5	Uzzama	16-04-1997	MSCIT	87.0
5	6	Bhavesh	12-5-88888	30	30.0

```
In [53]: #replace the null value according to the column
new=studData['Course'].fillna('MCA')
print(new)
```

```
0    MSCIT
1    MSCIT
2    MSCIT
3    MSCIT
4    MSCIT
5      MCA
Name: Course, dtype: object
```

```
In [56]: # update the null record from the file with respect to the column
studData['Course'].fillna('MCA',inplace=True)
print(studData)
```

	Sr.No	StudentName	Birthdate	Course	Percentage
0	1	Bhavdip	23-10-2002	MSCIT	64.0
1	2	Digvijay	15-11-2002	MSCIT	81.0
2	3	Smit	11-15-2002	MSCIT	86.0
3	4	Tejasv	10-06-2003	MSCIT	85.0
4	5	Uzzama	16-04-1997	MSCIT	87.0
5	6	Bhavesh	12-5-88888	MCA	NaN

```
In [59]: #mean.....  
mean=studData["Percentage"].mean()  
print(f"mean:{mean}")
```

mean:80.6

```
In [61]: #median.....  
median=studData['Percentage'].median()  
print(f"median:{median}")
```

median:85.0

```
In [64]: #mode.....  
mode=studData['Percentage'].mode()  
print(f"mode:{mode}")
```

mode:0 64.0
1 81.0
2 85.0
3 86.0
4 87.0
Name: Percentage, dtype: float64

```
In [ ]:
```