In [1]:
```
#Operations on DataFrame1
#Creating DataFrame object by using CSV File and Perform Various Operations
```

In [2]:
```
import pandas as pd
df=pd.read_csv("D:\\Python-Workspace\\Pandas\\studentmarks1.csv")
print(df,type(df))
```

```
    htno     name  telugu  english  hindi  maths  science  social
0    100   Ramesh      50       60     66     98       66      55
1    101   Rajesh      45       67     34     67       66      78
2    102   Rossum      56       88     56     99       44      77
3    103     Raji      56       78     34     56       88      55
4    104   Kalyan      51       63     62     93       67      51
5    105  Karthik      48       62     39     68       65      88
6    106   Kambli      53       81     59     92       48      73
7    107  Praveen      46       88     74     86       78      45
8    108   Ganesh      53       62     76     88       76      35
9    109     Nags      55       77     44     77       86      58
10   110    Biswa      66       48     86     95       48      47
11   111   Ritchi      66       68     64     76       98      75
12   104   Kalyan      51       63     62     93       67      51
13   112  shareef      50       63     99     90       76      67
14   113     sonu      60       89     98     87       77      68
15   114   Rajesh      45       67     77     55       66      46
16   115   Rakesh      67       78     88     78       67      49 <class 'pan
das.core.frame.DataFrame'>
```

In [3]:
```
#Accessing the data from df----head()
df.head()
```

Out[3]:

	htno	name	telugu	english	hindi	maths	science	social
0	100	Ramesh	50	60	66	98	66	55
1	101	Rajesh	45	67	34	67	66	78
2	102	Rossum	56	88	56	99	44	77
3	103	Raji	56	78	34	56	88	55
4	104	Kalyan	51	63	62	93	67	51

In [4]:
```
df.head(3)
```

Out[4]:

	htno	name	telugu	english	hindi	maths	science	social
0	100	Ramesh	50	60	66	98	66	55
1	101	Rajesh	45	67	34	67	66	78
2	102	Rossum	56	88	56	99	44	77

In [5]:
```
#Accessing the data from df----tail()
df.tail()
```

Out[5]:

	htno	name	telugu	english	hindi	maths	science	social
12	104	Kalyan	51	63	62	93	67	51
13	112	shareef	50	63	99	90	76	67
14	113	sonu	60	89	98	87	77	68
15	114	Rajesh	45	67	77	55	66	46
16	115	Rakesh	67	78	88	78	67	49

In [6]:
```
df.tail(2)
```

Out[6]:

	htno	name	telugu	english	hindi	maths	science	social
15	114	Rajesh	45	67	77	55	66	46
16	115	Rakesh	67	78	88	78	67	49

In [7]:
```
df.shape
```

Out[7]:
```
(17, 8)
```

In [9]:
```
df.describe()
```

Out[9]:

	htno	telugu	english	hindi	maths	science	social
count	17.000000	17.000000	17.000000	17.000000	17.000000	17.000000	17.000000
mean	107.294118	54.000000	70.705882	65.764706	82.235294	69.588235	59.882353
std	4.687279	7.141428	11.671358	20.504662	13.917298	14.339887	14.696438
min	100.000000	45.000000	48.000000	34.000000	55.000000	44.000000	35.000000
25%	104.000000	50.000000	63.000000	56.000000	76.000000	66.000000	49.000000
50%	107.000000	53.000000	67.000000	64.000000	87.000000	67.000000	55.000000
75%	111.000000	56.000000	78.000000	77.000000	93.000000	77.000000	73.000000
max	115.000000	67.000000	89.000000	99.000000	99.000000	98.000000	88.000000

In [10]:
```
for record in df.iterrows():
    print(record)
```

```
(0, htno          100
name       Ramesh
telugu         50
english        60
hindi          66
maths          98
science        66
social         55
Name: 0, dtype: object)
(1, htno          101
name       Rajesh
telugu         45
english        67
hindi          34
maths          67
science        66
social         78
Name: 1, dtype: object)
(2, htno          102
```

In [11]:
```
print(df)
```

```
    htno     name  telugu  english  hindi  maths  science  social
0    100   Ramesh      50       60     66     98       66      55
1    101   Rajesh      45       67     34     67       66      78
2    102   Rossum      56       88     56     99       44      77
3    103     Raji      56       78     34     56       88      55
4    104   Kalyan      51       63     62     93       67      51
5    105  Karthik      48       62     39     68       65      88
6    106   Kambli      53       81     59     92       48      73
7    107  Praveen      46       88     74     86       78      45
8    108   Ganesh      53       62     76     88       76      35
9    109     Nags      55       77     44     77       86      58
10   110    Biswa      66       48     86     95       48      47
11   111   Ritchi      66       68     64     76       98      75
12   104   Kalyan      51       63     62     93       67      51
13   112  shareef      50       63     99     90       76      67
14   113     sonu      60       89     98     87       77      68
15   114   Rajesh      45       67     77     55       66      46
16   115   Rakesh      67       78     88     78       67      49
```

In [12]:
```
df[6:12]
```

Out[12]:

	htno	name	telugu	english	hindi	maths	science	social
6	106	Kambli	53	81	59	92	48	73
7	107	Praveen	46	88	74	86	78	45
8	108	Ganesh	53	62	76	88	76	35
9	109	Nags	55	77	44	77	86	58
10	110	Biswa	66	48	86	95	48	47
11	111	Ritchi	66	68	64	76	98	75

In [13]:
```
df[::2]
```

Out[13]:

	htno	name	telugu	english	hindi	maths	science	social
0	100	Ramesh	50	60	66	98	66	55
2	102	Rossum	56	88	56	99	44	77
4	104	Kalyan	51	63	62	93	67	51
6	106	Kambli	53	81	59	92	48	73
8	108	Ganesh	53	62	76	88	76	35
10	110	Biswa	66	48	86	95	48	47
12	104	Kalyan	51	63	62	93	67	51
14	113	sonu	60	89	98	87	77	68
16	115	Rakesh	67	78	88	78	67	49

In [14]:
```
df[::-1]
```

Out[14]:

	htno	name	telugu	english	hindi	maths	science	social
16	115	Rakesh	67	78	88	78	67	49
15	114	Rajesh	45	67	77	55	66	46
14	113	sonu	60	89	98	87	77	68
13	112	shareef	50	63	99	90	76	67
12	104	Kalyan	51	63	62	93	67	51
11	111	Ritchi	66	68	64	76	98	75
10	110	Biswa	66	48	86	95	48	47
9	109	Nags	55	77	44	77	86	58
8	108	Ganesh	53	62	76	88	76	35
7	107	Praveen	46	88	74	86	78	45
6	106	Kambli	53	81	59	92	48	73
5	105	Karthik	48	62	39	68	65	88
4	104	Kalyan	51	63	62	93	67	51
3	103	Raji	56	78	34	56	88	55
2	102	Rossum	56	88	56	99	44	77
1	101	Rajesh	45	67	34	67	66	78
0	100	Ramesh	50	60	66	98	66	55

In [15]:
```
df[10:11]
```

Out[15]:

	htno	name	telugu	english	hindi	maths	science	social
10	110	Biswa	66	48	86	95	48	47

In [16]:
```
print(df)
```

```
    htno     name  telugu  english  hindi  maths  science  social
0    100   Ramesh      50       60     66     98       66      55
1    101   Rajesh      45       67     34     67       66      78
2    102   Rossum      56       88     56     99       44      77
3    103     Raji      56       78     34     56       88      55
4    104   Kalyan      51       63     62     93       67      51
5    105  Karthik      48       62     39     68       65      88
6    106   Kambli      53       81     59     92       48      73
7    107  Praveen      46       88     74     86       78      45
8    108   Ganesh      53       62     76     88       76      35
9    109     Nags      55       77     44     77       86      58
10   110    Biswa      66       48     86     95       48      47
11   111   Ritchi      66       68     64     76       98      75
12   104   Kalyan      51       63     62     93       67      51
13   112  shareef      50       63     99     90       76      67
14   113     sonu      60       89     98     87       77      68
15   114   Rajesh      45       67     77     55       66      46
16   115   Rakesh      67       78     88     78       67      49
```

In [17]:
```
df["name"]
```

Out[17]:
```
0      Ramesh
1      Rajesh
2      Rossum
3        Raji
4      Kalyan
5     Karthik
6      Kambli
7     Praveen
8      Ganesh
9        Nags
10      Biswa
11     Ritchi
12     Kalyan
13    shareef
14       sonu
15     Rajesh
16     Rakesh
Name: name, dtype: object
```

In [18]:
```
df[["name","maths"]]
```

Out[18]:

	name	maths
0	Ramesh	98
1	Rajesh	67
2	Rossum	99
3	Raji	56
4	Kalyan	93
5	Karthik	68
6	Kambli	92
7	Praveen	86
8	Ganesh	88
9	Nags	77
10	Biswa	95
11	Ritchi	76
12	Kalyan	93
13	shareef	90
14	sonu	87
15	Rajesh	55
16	Rakesh	78

In [20]:
```
df[["name","maths","english"]]
```

Out[20]:

	name	maths	english
0	Ramesh	98	60
1	Rajesh	67	67
2	Rossum	99	88
3	Raji	56	78
4	Kalyan	93	63
5	Karthik	68	62
6	Kambli	92	81
7	Praveen	86	88
8	Ganesh	88	62
9	Nags	77	77
10	Biswa	95	48
11	Ritchi	76	68
12	Kalyan	93	63
13	shareef	90	63
14	sonu	87	89
15	Rajesh	55	67
16	Rakesh	78	78

In [21]:
```
df[["name","maths","english"]][10:15]
```

Out[21]:

	name	maths	english
10	Biswa	95	48
11	Ritchi	76	68
12	Kalyan	93	63
13	shareef	90	63
14	sonu	87	89

In [22]:
```
df[["name","maths","english"]][10:11]
```

Out[22]:

	name	maths	english
10	Biswa	95	48

In [23]:
```
df[["name","maths","english"]][::2]
```

Out[23]:

	name	maths	english
0	Ramesh	98	60
2	Rossum	99	88
4	Kalyan	93	63
6	Kambli	92	81
8	Ganesh	88	62
10	Biswa	95	48
12	Kalyan	93	63
14	sonu	87	89
16	Rakesh	78	78

In [ ]:
```
```