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Div: B

Roll Number: 17

## Practical No:1

In [7]:

```
import pandas as pd
df=pd.read_csv("Desktop/Iris.csv")
df
```

Out[7]:

	<b>Id</b>	<b>SepalLengthCm</b>	<b>SepalWidthCm</b>	<b>PetalLengthCm</b>	<b>PetalWidthCm</b>	<b>Species</b>
<b>0</b>	1	5.1	3.5	1.4	0.2	Iris-setosa
<b>1</b>	2	4.9	3.0	1.4	0.2	Iris-setosa
<b>2</b>	3	4.7	3.2	1.3	0.2	Iris-setosa
<b>3</b>	4	4.6	3.1	1.5	0.2	Iris-setosa
<b>4</b>	5	5.0	3.6	1.4	0.2	Iris-setosa
...	...	...	...	...	...	...
<b>145</b>	146	6.7	3.0	5.2	2.3	Iris-virginica
<b>146</b>	147	6.3	2.5	5.0	1.9	Iris-virginica
<b>147</b>	148	6.5	3.0	5.2	2.0	Iris-virginica
<b>148</b>	149	6.2	3.4	5.4	2.3	Iris-virginica
<b>149</b>	150	5.9	3.0	5.1	1.8	Iris-virginica

150 rows × 6 columns

In [8]:

```
df.head(5)
```

Out[8]:

	<b>Id</b>	<b>SepalLengthCm</b>	<b>SepalWidthCm</b>	<b>PetalLengthCm</b>	<b>PetalWidthCm</b>	<b>Species</b>
<b>0</b>	1	5.1	3.5	1.4	0.2	Iris-setosa
<b>1</b>	2	4.9	3.0	1.4	0.2	Iris-setosa
<b>2</b>	3	4.7	3.2	1.3	0.2	Iris-setosa
<b>3</b>	4	4.6	3.1	1.5	0.2	Iris-setosa
<b>4</b>	5	5.0	3.6	1.4	0.2	Iris-setosa

In [9]:

df.tail(5)

Out[9]:

	<b>Id</b>	<b>SepalLengthCm</b>	<b>SepalWidthCm</b>	<b>PetalLengthCm</b>	<b>PetalWidthCm</b>	<b>Species</b>
<b>145</b>	146	6.7	3.0	5.2	2.3	Iris-virginica
<b>146</b>	147	6.3	2.5	5.0	1.9	Iris-virginica
<b>147</b>	148	6.5	3.0	5.2	2.0	Iris-virginica
<b>148</b>	149	6.2	3.4	5.4	2.3	Iris-virginica
<b>149</b>	150	5.9	3.0	5.1	1.8	Iris-virginica

In [10]:

df.info()

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 150 entries, 0 to 149
Data columns (total 6 columns):
 #   Column            Non-Null Count  Dtype  
--- 
 0   Id                150 non-null    int64  
 1   SepalLengthCm     150 non-null    float64 
 2   SepalWidthCm      150 non-null    float64 
 3   PetalLengthCm     150 non-null    float64 
 4   PetalWidthCm      150 non-null    float64 
 5   Species           150 non-null    object  
dtypes: float64(4), int64(1), object(1)
memory usage: 7.2+ KB
```

In [11]:

df.describe()

Out[11]:

	<b>Id</b>	<b>SepalLengthCm</b>	<b>SepalWidthCm</b>	<b>PetalLengthCm</b>	<b>PetalWidthCm</b>
<b>count</b>	150.000000	150.000000	150.000000	150.000000	150.000000
<b>mean</b>	75.500000	5.843333	3.054000	3.758667	1.198667
<b>std</b>	43.445368	0.828066	0.433594	1.764420	0.763161
<b>min</b>	1.000000	4.300000	2.000000	1.000000	0.100000
<b>25%</b>	38.250000	5.100000	2.800000	1.600000	0.300000
<b>50%</b>	75.500000	5.800000	3.000000	4.350000	1.300000
<b>75%</b>	112.750000	6.400000	3.300000	5.100000	1.800000
<b>max</b>	150.000000	7.900000	4.400000	6.900000	2.500000

In [12]:

df.shape

Out[12]:

(150, 6)

In [15]:

```
import pandas as pd
import numpy as np
df = pd.DataFrame({'num_legs': [2, 4, 8, 0],
                   'num_wings': [2, 0, 0, 0],
                   'num_specimen_seen': [10, 2, 1, 8]},
                  index=['falcon', 'dog', 'spider', 'fish'])
df
```

Out[15]:

	num_legs	num_wings	num_specimen_seen
falcon	2	2	10
dog	4	0	2
spider	8	0	1
fish	0	0	8

In [16]:

```
import pandas as pd
df=pd.read_csv("Desktop/Iris.csv")
df.isnull()
```

Out[16]:

	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	False	False	False	False	False	False
1	False	False	False	False	False	False
2	False	False	False	False	False	False
3	False	False	False	False	False	False
4	False	False	False	False	False	False
...	...	...	...	...	...	...
145	False	False	False	False	False	False
146	False	False	False	False	False	False
147	False	False	False	False	False	False
148	False	False	False	False	False	False
149	False	False	False	False	False	False

150 rows × 6 columns

In [18]:

```
df.isna
```

Out[18]:

```
<bound method DataFrame.isna of
allLengthCm PetalWidthCm \

 0      1      5.1      3.5      1.4      0.2
 1      2      4.9      3.0      1.4      0.2
 2      3      4.7      3.2      1.3      0.2
 3      4      4.6      3.1      1.5      0.2
 4      5      5.0      3.6      1.4      0.2
 ..
 ..
145   146      6.7      3.0      5.2      2.3
146   147      6.3      2.5      5.0      1.9
147   148      6.5      3.0      5.2      2.0
148   149      6.2      3.4      5.4      2.3
149   150      5.9      3.0      5.1      1.8

      Species
 0      Iris-setosa
 1      Iris-setosa
 2      Iris-setosa
 3      Iris-setosa
 4      Iris-setosa
 ..
 ..
145   Iris-virginica
146   Iris-virginica
147   Iris-virginica
148   Iris-virginica
149   Iris-virginica

[150 rows x 6 columns]>
```

In [ ]: