```
Div : 4
import pandas as pd
df=pd.read_csv('https://archive.ics.uci.edu/ml/machine-learning-
databases/iris/iris.data')
df
    5.1 3.5 1.4 0.2
                           Iris-setosa
    4.9 3.0 1.4 0.2
                           Iris-setosa
0
    4.7 3.2
              1.3 0.2
                           Iris-setosa
1
2
    4.6 3.1 1.5 0.2
                           Iris-setosa
3
    5.0 3.6
              1.4 0.2
                           Iris-setosa
4
    5.4 3.9
              1.7 0.4
                           Iris-setosa
    . . .
         . . .
              . . .
                   . . .
144 6.7 3.0 5.2 2.3 Iris-virginica
145 6.3 2.5 5.0 1.9 Iris-virginica
146 6.5 3.0 5.2 2.0 Iris-virginica
147
    6.2 3.4 5.4 2.3 Iris-virginica
    5.9 3.0 5.1 1.8 Iris-virginica
148
[149 rows x 5 columns]
df.columns=['sepal_length','sepal_width','petal_length','petal_width','Class'
]
df.head()
   sepal_length sepal_width petal_length petal_width
                                                             Class
0
                                                  0.2 Iris-setosa
           4.9
                        3.0
                                      1.4
           4.7
                        3.2
1
                                      1.3
                                                  0.2 Iris-setosa
2
           4.6
                        3.1
                                      1.5
                                                  0.2 Iris-setosa
3
           5.0
                        3.6
                                                  0.2 Iris-setosa
                                     1.4
4
           5.4
                        3.9
                                     1.7
                                                  0.4 Iris-setosa
df.shape
(149, 5)
df.info()
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 149 entries, 0 to 148
Data columns (total 5 columns):
                  Non-Null Count
#
    Column
                                  Dtvpe
                  -----
_ _ _
                                  ____
    sepal_length 149 non-null
                                 float64
```

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```
1
     sepal width
                   149 non-null
                                    float64
 2
     petal length 149 non-null
                                    float64
 3
                                    float64
     petal_width
                   149 non-null
 4
     Class
                   149 non-null
                                    object
dtypes: float64(4), object(1)
memory usage: 5.9+ KB
df.isna().sum()
sepal length
                0
sepal_width
                0
petal_length
                0
petal_width
                0
Class
                0
dtype: int64
df['sepal_length'].mean()
5.848322147651008
df['sepal_length'].mode()
0
     5.0
dtype: float64
df['sepal_length'].median()
5.8
print('Mean:',df['sepal_length'].mean())
print('Mode:',df['sepal_length'].mode())
print('Median:',df['sepal_length'].median())
print('Standard_Deviation:',df['sepal_length'].std())
Mean: 5.848322147651008
Mode: 0
           5.0
dtype: float64
Median: 5.8
Standard_Deviation: 0.8285940572656172
df.describe()
       sepal length sepal width
                                  petal length petal width
         149.000000
                      149.000000
count
                                     149.000000
                                                  149.000000
mean
           5.848322
                        3.051007
                                       3.774497
                                                    1.205369
                        0.433499
                                                    0.761292
std
           0.828594
                                       1.759651
min
           4.300000
                        2.000000
                                       1.000000
                                                    0.100000
25%
           5.100000
                        2.800000
                                       1.600000
                                                    0.300000
50%
           5.800000
                        3.000000
                                       4.400000
                                                    1.300000
75%
           6.400000
                        3.300000
                                       5.100000
                                                    1.800000
           7.900000
                        4.400000
                                       6.900000
                                                    2.500000
max
df['sepal_length'].describe()
```

```
149.000000
count
           5.848322
mean
std
           0.828594
min
           4.300000
25%
           5.100000
50%
           5.800000
75%
           6,400000
           7.900000
Name: sepal_length, dtype: float64
df.median()
/usr/local/lib/python3.7/dist-packages/ipykernel launcher.py:1:
FutureWarning: Dropping of nuisance columns in DataFrame reductions (with
'numeric_only=None') is deprecated; in a future version this will raise
TypeError. Select only valid columns before calling the reduction.
  """Entry point for launching an IPython kernel.
sepal_length
                5.8
sepal width
                3.0
petal_length
                4.4
petal width
                1.3
dtype: float64
df.mode()
   sepal_length sepal_width petal_length petal_width
                                                                    Class
                                                    0.2 Iris-versicolor
0
            5.0
                         3.0
                                       1.5
1
            NaN
                         NaN
                                       NaN
                                                    NaN
                                                           Iris-virginica
df.mean()
/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:1:
FutureWarning: Dropping of nuisance columns in DataFrame reductions (with
'numeric_only=None') is deprecated; in a future version this will raise
TypeError. Select only valid columns before calling the reduction.
  """Entry point for launching an IPython kernel.
                5.848322
sepal length
sepal width
                3.051007
petal_length
                3.774497
petal width
                1.205369
dtype: float64
```