

Basics Of Data Frame

```
In [ ]: #Exp no.:3
```

```
In [2]: #Name:Sahil A. Bankar  
#Roll no:04  
#Sec:B  
#Subject:ET1  
#Date:07/08/2025
```

Creating Series

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

```
In [4]: Name=["Sahil","Vedant","Atharva","Yash","Kartik","Anand"]
```

```
In [5]: Name
```

```
Out[5]: ['Sahil', 'Vedant', 'Atharva', 'Yash', 'Kartik', 'Anand']
```

```
In [6]: Roll_list=pd.Series(Name,index=[1,2,3,4,5,6])
```

```
In [7]: print(Roll_list)
```

```
1    Sahil  
2    Vedant  
3    Atharva  
4     Yash  
5    Kartik  
6     Anand  
dtype: object
```

Creating Data Frame

```
In [8]: import pandas as pd
```

```
In [15]: df = pd.DataFrame([[10,12,45,60],[54,70,26,90],[78,89,45,24]], columns=["CD","DBMS",
```

```
In [17]: df
```

```
Out[17]:
```

	CD	DBMS	DSS	CAO
0	10	12	45	60
1	54	70	26	90
2	78	89	45	24

```
In [18]: df.shape
```

```
Out[18]: (3, 4)
```

```
In [20]: df.size
```

Out[20]: 12

In [21]: `df.ndim`

Out[21]: 2

Adding Record(Row) to the data Frame

In [22]: `import pandas as pd`

In [24]: `df2=pd.DataFrame([[10,12,45,60]],columns=["CD","DBMS","DSS","CAO"])`

In [25]: `df3 = pd.concat([df, df2], ignore_index=True)`

In [26]: `df3`

Out[26]:

	CD	DBMS	DSS	CAO
0	10	12	45	60
1	54	70	26	90
2	78	89	45	24
3	10	12	45	60

In [27]: `df3.shape`

Out[27]: (4, 4)

In [28]: `df3.size`

Out[28]: 16

In [29]: `df3.ndim`

Out[29]: 2

In [30]: `df3["DM"]=[12,15,90,85]`

In [31]: `df3`

Out[31]:

	CD	DBMS	DSS	CAO	DM
0	10	12	45	60	12
1	54	70	26	90	15
2	78	89	45	24	90
3	10	12	45	60	85

Deleting Record from df3 dataframe

In [32]: `df4=df3.drop(index=[1])`

```
In [33]: df4
```

```
Out[33]:
```

	CD	DBMS	DSS	CAO	DM
0	10	12	45	60	12
2	78	89	45	24	90
3	10	12	45	60	85

Deleting Attribute(Columns) from df3 dataframe

```
In [34]: df5=df3.drop(columns=["DM"])
```

```
In [35]: df5
```

```
Out[35]:
```

	CD	DBMS	DSS	CAO
0	10	12	45	60
1	54	70	26	90
2	78	89	45	24
3	10	12	45	60

```
In [36]: print("Mean of DSS:",df5["DSS"].mean())
```

Mean of DSS: 40.25

```
In [37]: print("Median of DSS:",df5["DSS"].median())
```

Median of DSS: 45.0

```
In [38]: print("Mode of DSS:",df5["DSS"].mode())
```

Mode of DSS: 0 45
dtype: int64

Conclusion :

In this experiment, I have explored the basics of DataFrames by creating Series and DataFrames, adding records and attributes, and performing deletion operations. This helped in understanding the structure and dynamic manipulation capabilities of pandas DataFrames.

```
In [ ]:
```