VIT Chennai - Samrtbridge externship AI,ML

Soma Anirudh -21BCE5537
soma.anirudh2021@vitstudent.ac.in
VIT Chennai - Computer Science and Engineering (Core)

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

Q1. Pandas Dataframe with numpy random values (4 features and 4 observations)

In [9]:
```
#Random values using numpy- 4 features and 4 observations
data = np.random.randint(1,10,size=(4,4))
#Convert to dataframe
df=pd.DataFrame(data)
df
```

Out[9]:

	0	1	2	3
0	6	4	6	2
1	2	4	8	7
2	9	8	5	2
3	5	8	9	9

Q2. Renaming df columns to RandomValue 1, RandomValue 2, RandomValue 3 and RandomValue 4

In [12]:
```
df.columns=["RandomValue 1","RandomValue 2","RandomValue 3","RandomValue 4"]
df
```

Out[12]:

	RandomValue 1	RandomValue 2	RandomValue 3	RandomValue 4
0	6	4	6	2
1	2	4	8	7
2	9	8	5	2
3	5	8	9	9

Q3. Descriptive statistics of the dataframe

In [13]:
```
stats=df.describe()
print(stats)
```

```
       RandomValue 1  RandomValue 2  RandomValue 3  RandomValue 4
count       4.000000       4.000000       4.000000       4.000000
mean        5.500000       6.000000       7.000000       5.000000
std         2.886751       2.309401       1.825742       3.559026
min         2.000000       4.000000       5.000000       2.000000
25%         4.250000       4.000000       5.750000       2.000000
50%         5.500000       6.000000       7.000000       4.500000
75%         6.750000       8.000000       8.250000       7.500000
max         9.000000       8.000000       9.000000       9.000000
```

Q4. Check for null vlaues and datatypes of the columns

In [29]:
```
#Checking null values
b=df.isnull().sum()
print(b)
df.isnull()
```

```
RandomValue 1    0
RandomValue 2    0
RandomValue 3    0
RandomValue 4    0
dtype: int64
```

Out[29]:

	RandomValue 1	RandomValue 2	RandomValue 3	RandomValue 4
0	False	False	False	False
1	False	False	False	False
2	False	False	False	False
3	False	False	False	False

In [30]:
```
# Datatypes
df.dtypes
```

Out[30]:
```
RandomValue 1    int32
RandomValue 2    int32
RandomValue 3    int32
RandomValue 4    int32
dtype: object
```

Q5. Display Random values 2 and Random values 3 columns with location and index location method

In [35]:
```
#Index location method
df.iloc[:,1:3]
```

Out[35]:

	RandomValue 2	RandomValue 3
0	4	6
1	4	8
2	8	5
3	8	9

In [42]:
```
#Location method
df.loc[:,["RandomValue 2","RandomValue 3"]]
```

Out[42]:

	RandomValue 2	RandomValue 3
0	4	6
1	4	8
2	8	5
3	8	9