

ASSIGNMENT 1

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TASK 1 :

Create a pandas dataframe (DataFrame name as 'df') (10 observation and 5 features)

Task- 2 Check the info of 'df'

Task 3- Check the descriptive statistics of 'df'

Task 4- check the 4th index observation with 'loc' slicing operator.

Task 5 - Check the null values in your 'df'

PROGRAM :

```
import pandas as pd
import numpy as np

# Creating a DataFrame
data = {
    'Feature1': np.random.rand(10),
    'Feature2': np.random.randint(0, 100, 10),
    'Feature3': np.random.choice(['A', 'B', 'C'], 10),
    'Feature4': np.random.randn(10),
    'Feature5': np.random.uniform(1, 10, 10)
}

df = pd.DataFrame(data)

# Displaying info of the DataFrame
print("Info of 'df':")
print(df.info())

# Displaying descriptive statistics
print("\nDescriptive statistics of 'df':")
print(df.describe())

# Accessing the 4th index observation using 'loc'
observation_4 = df.loc[4]
print("\n4th index observation:")
print(observation_4)

# Checking for null values
print("\nNull values in 'df':")
```

OUTPUT :

```
C:\Users\prana\PycharmProjects\pythonProject1\venv\Scripts\p
Info of 'df':
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10 entries, 0 to 9
Data columns (total 5 columns):
#   Column      Non-Null Count  Dtype
---  -
0   Feature1    10 non-null    float64
1   Feature2    10 non-null    int32
2   Feature3    10 non-null    object
3   Feature4    10 non-null    float64
4   Feature5    10 non-null    float64
dtypes: float64(3), int32(1), object(1)
memory usage: 488.0+ bytes
None
```

Descriptive statistics of 'df':

	Feature1	Feature2	Feature4	Feature5
count	10.000000	10.000000	10.000000	10.000000
mean	0.244161	53.800000	0.472278	3.966208
std	0.194795	29.954781	1.172794	1.733468
min	0.033881	13.000000	-0.924877	1.004526
25%	0.074794	26.250000	-0.223234	2.733735
50%	0.227942	54.000000	-0.038495	4.362205
75%	0.307157	80.500000	1.369415	5.121486
max	0.621329	91.000000	2.475029	6.243634

```
4th index observation:
```

```
Feature1    0.266326
```

```
Feature2         91
```

```
Feature3         A
```

```
Feature4   -0.924877
```

```
Feature5    4.455156
```

```
Name: 4, dtype: object
```

```
Null values in 'df':
```

```
Feature1    0
```

```
Feature2    0
```

```
Feature3    0
```

```
Feature4    0
```

```
Feature5    0
```

```
dtype: int64
```

```
Process finished with exit code 0
```
