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TASKS

Task - 1 Create a pandas dataframe (DataFrame name as 'df') (10 observation and 5 features)

```
#Task -1 Create a pandas dataframe (dataframe name as ‘df’) (10 observation and 5 features)
import pandas as pd
import numpy as np

# Creating the DataFrame with 10 observations and 5 features
data = {
    'LaptopID': np.arange(1, 11),
    'Brand': ['Dell', 'HP', 'Lenovo', 'Apple', 'Asus', 'Acer', 'Microsoft', 'Samsung', 'Sony', 'Toshiba'],
    'Processor': ['Intel i5', 'AMD Ryzen 7', 'Intel i7', 'Apple M1', 'Intel i5', 'AMD Ryzen 5','Intel i5','Intel i7','AMD Ryzen 7','Intel i5'],
    'RAM_GB': [8, 16, 16, 8, 12, 8, 16, 32, 16, 12],
    'Storage_GB': [512, 1024, 512, 256, 512, 256, 512, 1000, 512, 256]
}

# Creating the DataFrame 'df'
df = pd.DataFrame(data)

# Displaying the DataFrame
print(df)
```

```
   LaptopID      Brand    Processor  RAM_GB  Storage_GB
0         1       Dell     Intel i5       8         512
1         2         HP  AMD Ryzen 7      16        1024
2         3     Lenovo     Intel i7      16         512
3         4      Apple     Apple M1       8         256
4         5       Asus     Intel i5      12         512
5         6       Acer  AMD Ryzen 5       8         256
6         7  Microsoft     Intel i5      16         512
7         8    Samsung     Intel i7      32        1000
8         9       Sony  AMD Ryzen 7      16         512
9        10    Toshiba     Intel i5      12         256
```

Task- 2 Check the info of 'df'

```
# Checking the info of 'df'
print("Info of 'df':")
print(df.info())
```

```
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   LaptopID    10 non-null     int64 
 1   Brand       10 non-null     object
 2   Processor   10 non-null     object
 3   RAM_GB      10 non-null     int64 
 4   Storage_GB  10 non-null     int64 
dtypes: int64(3), object(2)
memory usage: 528.0+ bytes
None
```

Task 3- Check the descriptive statistics of 'df'

```
# Checking the descriptive statistics of 'df'
print("\nDescriptive statistics of 'df':")
print(df.describe())
```

```
Descriptive statistics of 'df':
       LaptopID     RAM_GB   Storage_GB
count  10.00000  10.000000    10.000000
mean    5.50000  14.400000   535.200000
std     3.02765   7.105553   277.190989
min     1.00000   8.000000   256.000000
25%     3.25000   9.000000   320.000000
50%     5.50000  14.000000   512.000000
75%     7.75000  16.000000   512.000000
max    10.00000  32.000000  1024.000000
```

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

```
# Checking the 4th index observation using 'loc' slicing
print("\n4th index observation:")
print(df.loc[4])
```

```
4th index observation:
LaptopID            5
Brand            Asus
Processor     Intel i5
RAM_GB              12
Storage_GB         512
Name: 4, dtype: object
```

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

```
# Checking null values in 'df'
print("\nNull values in 'df':")
print(df.isnull().sum())
```

```
Null values in 'df':
LaptopID      0
Brand         0
Processor     0
RAM_GB        0
Storage_GB    0
dtype: int64
```

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