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import pandas as pd

import numpy as np

# Create a pandas DataFrame with random values

data = np.random.rand(4, 4)

df = pd.DataFrame(data, columns=['Random value 1', 'Random value 2', 'Random value 3', 'Random value 4'])

# Display descriptive statistics of the DataFrame

descriptive_stats = df.describe()

# Check for null values and data types of columns

null_values = df.isnull().sum()

data_types = df.dtypes

# Display 'Random value 2' & 'Random value 3' columns using location and index methods

random_value_2_location = df.iloc[:, 1]
random_value_3_location = df.iloc[:, 2]
random_value_2_index = df['Random value 2']
random_value_3_index = df['Random value 3']

# Print the results

print("DataFrame:")
print(df)
print("\nDescriptive Statistics:")
print(descriptive_stats)
print("\nNull Values:")
print(null_values)
print("\nData Types:")
print(data_types)
print("\nRandom value 2 (Location Method):")
print(random_value_2_location)
print("\nRandom value 3 (Location Method):")
print(random_value_3_location)
print("\nRandom value 2 (Index Method):")
print(random_value_2_index)
print("\nRandom value 3 (Index Method):")
print(random_value_3_index)

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DataFrame:
   Random value 1  Random value 2  Random value 3  Random value 4
0      0.955620      0.004887      0.095983      0.525968
1      0.921455      0.091684      0.980831      0.252532
2      0.996927      0.307757      0.785166      0.755914
3      0.847024      0.133189      0.173609      0.556298

Descriptive Statistics:
   Random value 1  Random value 2  Random value 3  Random value 4
count      4.000000      4.000000      4.000000      4.000000
mean       0.930257      0.134379      0.508897      0.522678
std       0.063491      0.127348      0.440440      0.206977
min       0.847024      0.004887      0.095983      0.252532
25%       0.902847      0.069985      0.154203      0.457609
50%       0.938538      0.112436      0.479388      0.541133
75%       0.965947      0.176831      0.834083      0.606202
max       0.996927      0.307757      0.980831      0.755914

Null Values:
Random value 1      0
Random value 2      0
Random value 3      0
Random value 4      0
dtype: int64

Data Types:
Random value 1      float64
Random value 2      float64

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Random value 3    float64
Random value 4    float64
dtype: object
```

```
Random value 2 (Location Method):
0    0.004887
1    0.091684
2    0.307757
3    0.133189
Name: Random value 2, dtype: float64
```

```
Random value 3 (Location Method):
0    0.095983
1    0.980831
2    0.785166
3    0.173609
Name: Random value 3, dtype: float64
```

```
Random value 2 (Index Method):
0    0.004887
1    0.091684
2    0.307757
3    0.133189
Name: Random value 2, dtype: float64
```

```
Random value 3 (Index Method):
0    0.095983
1    0.980831
2    0.785166
3    0.173609
```

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