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```
import numpy as np
import pandas as pd
```

Task 1: Create a DataFrame with random values

```
data = np.random.rand(4, 4)
df = pd.DataFrame(data, columns=['RV 1', 'RV 2', 'RV 3', 'RV 4'])
df
```




	RV 1	RV 2	RV 3	RV 4
0	0.544791	0.618195	0.761170	0.549072
1	0.485159	0.577976	0.141229	0.926200
2	0.589473	0.497156	0.860753	0.177773
3	0.711062	0.731943	0.272173	0.656076



Task 2: Rename columns

```
df.columns=["Random value 1","Random value 2","Random value 3","Random value 4"]
df
```

	Random value 1	Random value 2	Random value 3	Random value 4
0	0.544791	0.618195	0.761170	0.549072
1	0.485159	0.577976	0.141229	0.926200
2	0.589473	0.497156	0.860753	0.177773
3	0.711062	0.731943	0.272173	0.656076



Task 3: Descriptive statistics

```
descriptive_stats=df.describe()
print(descriptive_stats)
```

	Random value 1	Random value 2	Random value 3	Random value 4
count	4.000000	4.000000	4.000000	4.000000
mean	0.582621	0.606317	0.508832	0.577280
std	0.095697	0.097711	0.355275	0.310030
min	0.485159	0.497156	0.141229	0.177773
25%	0.529883	0.557771	0.239437	0.456247
50%	0.567132	0.598085	0.516672	0.602574
75%	0.619870	0.646632	0.786066	0.723607
max	0.711062	0.731943	0.860753	0.926200

Task 4: Check for null values and data types

```
null_values = df.isnull().sum()
print(null_values)
```

```
Random value 1    0
Random value 2    0
Random value 3    0
Random value 4    0
dtype: int64
```

```
data_types = df.dtypes
print(data_types)
```

```
Random value 1    float64
Random value 2    float64
Random value 3    float64
Random value 4    float64
dtype: object
```

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

```
random_value_2_location = df.iloc[:, 1]
print(random_value_2_location)
```

```
0    0.618195
1    0.577976
2    0.497156
3    0.731943
Name: Random value 2, dtype: float64
```

```
random_value_3_location = df.iloc[:, 2]
print(random_value_3_location)
```

```
0    0.761170
1    0.141229
2    0.860753
3    0.272173
Name: Random value 3, dtype: float64
```

```
random_value_2_index_location = df['Random value 2']
print(random_value_2_index_location)
```

```
0    0.618195
1    0.577976
2    0.497156
3    0.731943
Name: Random value 2, dtype: float64
```

```
random_value_3_index_location = df['Random value 3']
print(random_value_3_index_location)
```

```
0    0.761170
1    0.141229
2    0.860753
3    0.272173
Name: Random value 3, dtype: float64
```