```
# Task 1 - Create a pandas dataframe with numpy random values (4 features and 4 observations)
import numpy as np
import pandas as pd

np.random.seed(10)
data = np.random.rand(4, 4)
df = pd.DataFrame(data, columns=['Feature1', 'Feature2', 'Feature3', 'Feature4'])
df
```

	Feature1	Feature2	Feature3	Feature4
0	0.771321	0.020752	0.633648	0.748804
1	0.498507	0.224797	0.198063	0.760531
2	0.169111	0.088340	0.685360	0.953393
3	0.003948	0.512192	0.812621	0.612526

```
#Task 2 - Rename the Task 1 data frame columns to Random value 1, Random value 2, Random value 3,Random value 4.
col_names = ['Random value 1', 'Random value 2', 'Random value 3', 'Random value 4']
df.columns = col_names
df
```

	Random value 1	Random value 2	Random value 3	Random value 4
0	0.771321	0.020752	0.633648	0.748804
1	0.498507	0.224797	0.198063	0.760531
2	0.169111	0.088340	0.685360	0.953393
3	0.003948	0.512192	0.812621	0.612526

```
#Task 3 - Find the descriptive statistics of the dataframe
stats = df.describe()
stats
```

	Random value 1	Random value 2	Random value 3	Random value 4
count	4.000000	4.000000	4.000000	4.000000
mean	0.360722	0.211520	0.582423	0.768814
std	0.342334	0.217674	0.267048	0.140196
min	0.003948	0.020752	0.198063	0.612526
25%	0.127820	0.071443	0.524752	0.714734
50%	0.333809	0.156568	0.659504	0.754667
75%	0.566710	0.296646	0.717175	0.808746
max	0.771321	0.512192	0.812621	0.953393

```
#Task 4- Check for null values in df and find the data type of the columns
null_values = df.isnull().sum()
print(null_values)
data_type = df.dtypes
print(data_type)
```

```
Random value 1    0
Random value 2    0
Random value 3    0
Random value 4    0
dtype: int64
Random value 1    float64
Random value 2    float64
Random value 3    float64
Random value 4    float64
dtype: object
```

```
#Task 5 - Display Random value 2 and Random value 3 columns with location method and index location method
print('LABEL METHOD\n')
label = df.loc[:,['Random value 2', 'Random value 3']]
print(label)
print('\nINDEX METHOD\n')
```

```
index = df.iloc[:,[1,2]]
print(index)
```

```
LABEL METHOD

   Random value 2  Random value 3
0        0.020752        0.633648
1        0.224797        0.198063
2        0.088340        0.685360
3        0.512192        0.812621

INDEX METHOD

   Random value 2  Random value 3
0        0.020752        0.633648
1        0.224797        0.198063
2        0.088340        0.685360
3        0.512192        0.812621
```