

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

```
A = np.random.randint(10,size=(4,4))
A
```

```
array([[7, 9, 9, 3],
       [0, 4, 5, 8],
       [1, 2, 3, 5],
       [6, 3, 7, 1]])
```

```
df = pd.DataFrame(A)
df
```

```
0  7  9  9  3
1  0  4  5  8
2  1  2  3  5
3  6  3  7  1
```

```
#task 2
df.columns = ['Random-1','Random-2','Random-3','Random-4']
df
```

```
Random-1 Random-2 Random-3 Random-4
0        7        9        9        3
1        0        4        5        8
2        1        2        3        5
3        6        3        7        1
```

```
#task 3
print(df.describe(include='all'))
```

```
## for a specific column
print(df['Random-1'].describe())
```

```
Random-1 Random-2 Random-3 Random-4
count  4.000000  4.000000  4.000000  4.000000
mean    3.500000  4.500000  6.000000  4.250000
std     3.511885  3.109126  2.581989  2.986079
min     0.000000  2.000000  3.000000  1.000000
25%     0.750000  2.750000  4.500000  2.500000
50%     3.500000  3.500000  6.000000  4.000000
75%     6.250000  5.250000  7.500000  5.750000
max     7.000000  9.000000  9.000000  8.000000
count    4.000000
mean     3.500000
std      3.511885
min      0.000000
25%      0.750000
50%      3.500000
75%      6.250000
max      7.000000
Name: Random-1, dtype: float64
```

```
#task 4
#Check for the null values in 'df' and find the data type of the columns.
print(df['Random-1'].isnull())
# data type of columns
print(df.dtypes['Random-1'])
print(df.dtypes['Random-2'])
print(df.dtypes['Random-3'])
print(df.dtypes['Random-4'])
```

```
0    False
1    False
2    False
3    False
Name: Random-1, dtype: bool
int64
int64
int64
int64
```

```
#task 5
#Display the 'Random value 2' & 'Random value 3' columns with location method and index location method
print(df.loc[:, 'Random-2'])
print(df.loc[:, 'Random-3'])
```

```
0    9
1    4
2    2
3    3
Name: Random-2, dtype: int64
0    9
1    5
2    3
3    7
Name: Random-3, dtype: int64
```

```
#columns with index location method
print(df.iloc[:,1])
print(df.iloc[:,2])
```

```
0    9
1    4
2    2
3    3
Name: Random-2, dtype: int64
0    9
1    5
2    3
3    7
Name: Random-3, dtype: int64
```