

- Task 1 - Create a pandas dataframe (DataFrame name as 'df') with numpy random values (4 features and 4 observation)

```
import pandas as pd
```

```
data = {
    'Feature1' : [5,10,15,20],
    'Feature2' : [2,4,6,8],
    'Feature3' : [2.4,6.7,4.5,8.9],
    'Feature4' : [10,20,30,40]
}
```

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

	Feature1	Feature2	Feature3	Feature4
0	5	2	2.4	10
1	10	4	6.7	20
2	15	6	4.5	30
3	20	8	8.9	40

- Task 2 - Rename the task - 1 'df' dataframe column names to 'Random value 1', 'Random value 2', 'Random value 3' & 'Random value 4'

```
df.rename(columns = { "Feature1" : "Random value 1", "Feature2" : "Random value 2", "Feature3" : "Random value 3", "Feature4" : "Random value 4" })
df
```

	Random value 1	Random value 2	Random value 3	Random value 4
0	5	2	2.4	10
1	10	4	6.7	20
2	15	6	4.5	30
3	20	8	8.9	40

- Task 3 - Find the descriptive statistics of the 'df' dataframe.

```
df.describe()
```

	Random value 1	Random value 2	Random value 3	Random value 4
count	4.000000	4.000000	4.000000	4.000000
mean	12.500000	5.000000	5.625000	25.000000
std	6.454972	2.581989	2.801636	12.909944
min	5.000000	2.000000	2.400000	10.000000
25%	8.750000	3.500000	3.975000	17.500000
50%	12.500000	5.000000	5.600000	25.000000
75%	16.250000	6.500000	7.250000	32.500000
max	20.000000	8.000000	8.900000	40.000000

- Task 4 - Check for the null values in 'df' and find the data type of the columns.

```
df.isnull().any()
```

```
Random value 1    False
Random value 2    False
Random value 3    False
Random value 4    False
dtype: bool
```

```
df.dtypes
```

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

- Task 5 - Display the 'Random value 2' & 'Random value 3' columns with location method and index location method.

```
#LocationMethod
```

```
df.loc[:,['Random value 2','Random value 3']]
```

	Random value 2	Random value 3
0	2	2.4
1	4	6.7
2	6	4.5
3	8	8.9

```
#IndexLocation
```

```
df.iloc[:,[1,2]]
```

	Random value 2	Random value 3
0	2	2.4
1	4	6.7
2	6	4.5
3	8	8.9