AI ML Assignment 1

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

Task 1

```
Data=np.random.rand(4,4)
df=pd.DataFrame(Data)
df
```

	0	1	2	3
0	0.527877	0.965996	0.689760	0.489585
1	0.802960	0.147662	0.904135	0.725686
2	0.884734	0.972514	0.750256	0.270657
3	0.153342	0.552805	0.968987	0.326859

Task 2

```
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	0.527877	0.965996	0.689760	0.489585
1	0.802960	0.147662	0.904135	0.725686
2	0.884734	0.972514	0.750256	0.270657
3	0.153342	0.552805	0.968987	0.326859

Task 3

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

	Random value 1	Random value 2	Random value 3	Random value 4
count	4.000000	4.000000	4.000000	4.000000
mean	0.592228	0.659744	0.828285	0.453197
std	0.330015	0.393818	0.130164	0.204007
min	0.153342	0.147662	0.689760	0.270657
25%	0.434243	0.451519	0.735132	0.312809
50%	0.665418	0.759401	0.827196	0.408222
75%	0.823404	0.967625	0.920348	0.548611
max	0.884734	0.972514	0.968987	0.725686

Task 4

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

```
print("\n")
print(data_types)
```

```
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

```
# Using location indexing
df.iloc[:,1:3]
```

```
   Random value 2  Random value 3
0        0.965996        0.689760
1        0.147662        0.904135
2        0.972514        0.750256
3        0.552805        0.968987
```

```
# Using column name (indexing)
second = df['Random value 2']
third = df['Random value 3']
print(second)
print(third)
```

```
0    0.965996
1    0.147662
2    0.972514
3    0.552805
Name: Random value 2, dtype: float64
0    0.689760
1    0.904135
2    0.750256
3    0.968987
Name: Random value 3, dtype: float64
```