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Assignment-1

Assignment-1.ipynb ☆

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```
import pandas as pd
import numpy as np
data = np.random.randint(1, 101, size=(4, 4))
df=pd.DataFrame(data,columns=['1st', '2nd', '3rd', '4th'])
print(df)
```

	1st	2nd	3rd	4th
0	76	58	22	89
1	49	91	59	42
2	92	60	80	15
3	62	62	47	62

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```
[5] column_mapping = {
    '1st': 'Random value 1',
    '2nd': 'Random value 2',
    '3rd': 'Random value 3',
    '4th': 'Random value 4'
}
df.rename(columns=column_mapping, inplace=True)

print(df)
```

	Random value 1	Random value 2	Random value 3	Random value 4
0	76	58	22	89

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[5]

	Random value 1	Random value 2	Random value 3	Random value 4
0	76	58	22	89
1	49	91	59	42
2	92	60	80	15
3	62	62	47	62

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

Random value 1 Random value 2 Random value 3 Random value 4

count	4.000000	4.000000	4.000000	4.000000
mean	69.750000	67.750000	52.000000	52.000000
std	18.481973	15.585784	24.207437	31.294302
min	49.000000	58.000000	22.000000	15.000000
25%	58.750000	59.500000	40.750000	35.250000
50%	69.000000	61.000000	53.000000	52.000000
75%	80.000000	69.250000	64.250000	68.750000
max	92.000000	91.000000	80.000000	89.000000

```
[7] null_values = df.isnull().sum()
data_types = df.dtypes
print("Null Values:")
print(null_values)
print("\nData Types:")
print(data_types)
```

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```
data_types = df.dtypes
print("Null Values:")
print(null_values)
print("\nData Types:")
print(data_types)
```

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

```
Data Types:
Random value 1    int64
Random value 2    int64
Random value 3    int64
Random value 4    int64
dtype: object
```

```
selected_columns_loc = df.loc[:, ['Random value 2', 'Random value 3']]
selected_columns_iloc = df.iloc[:, [1, 2]]
print("Using .loc[":)
print(selected_columns_loc)
print("\nUsing .iloc[":)
print(selected_columns_iloc)
```

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```
[7] Random value 1    int64
Random value 2    int64
Random value 3    int64
Random value 4    int64
dtype: object
```

```
selected_columns_loc = df.loc[:, ['Random value 2', 'Random value 3']]
selected_columns_iloc = df.iloc[:, [1, 2]]
print("Using .loc[]:")
print(selected_columns_loc)
print("\nUsing .iloc[]:")
print(selected_columns_iloc)
```

```
Using .loc[:]:
  Random value 2  Random value 3
0             58             22
1             91             59
2             60             80
3             62             47

Using .iloc[:]:
  Random value 2  Random value 3
0             58             22
1             91             59
2             60             80
3             62             47
```

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