```
## create pandas DataFrame
import pandas as pd


## 10 observations and 5 features
d = {'mark1' : [1,2,3,4,5,6,7,8,9,10], 'mark2':[2,3,4,5,6,7,8,9,10,11],'mark3':[3,4,5,6,7,8,9,10,11,12],'mark4':[4,5,6,7,8,9,10,11,12,13]
d
```

```
{'mark1': [1, 2, 3, 4, 5, 6, 7, 8, 9, 10],
 'mark2': [2, 3, 4, 5, 6, 7, 8, 9, 10, 11],
 'mark3': [3, 4, 5, 6, 7, 8, 9, 10, 11, 12],
 'mark4': [4, 5, 6, 7, 8, 9, 10, 11, 12, 13],
 'mark5': [5, 6, 7, 8, 9, 10, 11, 12, 13, 14]}
```

```
## convert dictionary to dataframe
df = pd.DataFrame(d)
df
```

	mark1	mark2	mark3	mark4	mark5
0	1	2	3	4	5
1	2	3	4	5	6
2	3	4	5	6	7
3	4	5	6	7	8
4	5	6	7	8	9
5	6	7	8	9	10
6	7	8	9	10	11
7	8	9	10	11	12
8	9	10	11	12	13
9	10	11	12	13	14

```
## check the info of 'df'
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 10 entries, 0 to 9
Data columns (total 5 columns):
 #   Column  Non-Null Count  Dtype
---  ------  --------------  -----
 0   mark1   10 non-null     int64
 1   mark2   10 non-null     int64
 2   mark3   10 non-null     int64
 3   mark4   10 non-null     int64
 4   mark5   10 non-null     int64
dtypes: int64(5)
memory usage: 528.0 bytes
```

```
## check discriptive status of 'df'
df.describe()
```

	mark1	mark2	mark3	mark4	mark5
count	10.00000	10.00000	10.00000	10.00000	10.00000
mean	5.50000	6.50000	7.50000	8.50000	9.50000
std	3.02765	3.02765	3.02765	3.02765	3.02765
min	1.00000	2.00000	3.00000	4.00000	5.00000
25%	3.25000	4.25000	5.25000	6.25000	7.25000
50%	5.50000	6.50000	7.50000	8.50000	9.50000
75%	7.75000	8.75000	9.75000	10.75000	11.75000
max	10.00000	11.00000	12.00000	13.00000	14.00000

```
## check 4th index observation
df.loc[4]
```

```
mark1    5
mark2    6
mark3    7
mark4    8
```

```
mark5    9
Name: 4, dtype: int64
```

```
## check the null values in 'df'
df.isnull().any()
```

```
mark1    False
mark2    False
mark3    False
mark4    False
mark5    False
dtype: bool
```

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