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

```
# Measures of Central Tendency
```

Mean, Median, Mode Mean and Median applied on continous data Mode is applied on the discrete data

```
# Mean Sum of All data values /Totla number of data values
```

```
# Ppopulation mean and sample mean
```

```
df = pd.DataFrame({"x":[1,2,3,4,5]})
df
```

	x
0	1
1	2
2	3
3	4

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```
df["x"].mean()
```

```
np.float64(3.0)
```

```
df["x"].sum()/len(df)
```

```
np.float64(3.0)
```

```
# Median, refres to the data value that is positioned in the middle of an ordered dataset.
```

```
df = pd.DataFrame({"x":[2,4,1,9,16,10,4,8,7]})
df
```

	x
0	2
1	4
2	1
3	9
4	16
5	10
6	4
7	8

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```
df["x"].median()
```

```
7.0
```

```
df["x"].sort_values()
```

	x
2	1
0	2
1	4
6	4
8	7
7	8
3	9
5	10
4	16

```
# Mode – Most repeated value/Most frequent value
```

```
# Unimodel Data, Bimodel Data, Multimodel data
```

```
df = pd.DataFrame({"x":[1,1,2,3,4,5], "y":[1,1,2,3,4,4], "i":[1,2,3,4,5,6]})
df
```

	x	y	i
0	1	1	1
1	1	1	2
2	2	2	3
3	3	3	4
4	4	4	5

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```
df["x"].mode()
```

	x
0	1

```
df["y"].mode()
```

	y
0	1
1	4

dtype: int64

```
df["i"].mode()
```

	i
0	1
1	2
2	3
3	4
4	5
5	6

dtype: int64

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