```
In [ ]: # Statistics

        Statistics is the branch of science which helps to understand the analaying, s
        for making the decision.
```

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In [ ]: types of statistics

        1 -Descritive statistics -  we use this to analyze and summarization of the da
                                    even we can use other form as well, like table, pi
                                    avaialble

        2- Inferntial statistics - to make a decision based on small sample of data, f
                                   eg. election poll, blood group identify etc
```

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In [ ]: # Measure of central tendency

        1- mean
        2- median
        3- mode
```

```
In [3]: name = [3,5,7,8]

        #mean = Total number of records /total count
        mean = (3+5+7+8)/4
        mean
```

Out[3]: 5.75

```
In [4]: import numpy as np
        import statistics as s
```

```
In [5]: np.mean(name)
```

Out[5]: 5.75

```
In [6]: s.mean(name)
```

Out[6]: 5.75

In [ ]:
```python
## Median

1,2,3,4,5,6,7
## odd  N + 1 /2

1,2,3,4,5,6
# Even N/2 + 1
```

In [12]:
```python
lst2 = [1,2,3,4,5,6,7]

if len(lst) % 2 ==0 :
    print("even")
else:
    print("Odd")
```

Odd

In [13]:
```python
np.median(lst2)
```

Out[13]: 4.0

In [14]:
```python
lst3 = [1,2,3,4,5,6]
np.median(lst3)
```

Out[14]: 3.5

Mode

In [21]:
```python
#lst4 = [1,2,3,4,5,5,6,77,7,77,7,7]
lst4 = [7,2,3,4,5,6,7]
s.mode(lst4)
```

Out[21]: 7

In [24]:
```python
(6+7+8+9+10)/5
```

Out[24]: 8.0

```python
### Measure of Dispersion

# Variance

s2 = summation
 X =

# Standard Deviation
```

```python
In [25]: s.variance([6,7,8,9,10])
```

Out[25]: 2.5

```python
In [ ]: ##
```

```python
In [28]: s.stdev([6,7,8,9,10])
```

Out[28]: 1.5811388300841898

```python
In [29]: import math
```

```python
In [30]: math.sqrt(2.5)
```

Out[30]: 1.5811388300841898

```python
In [ ]:
```