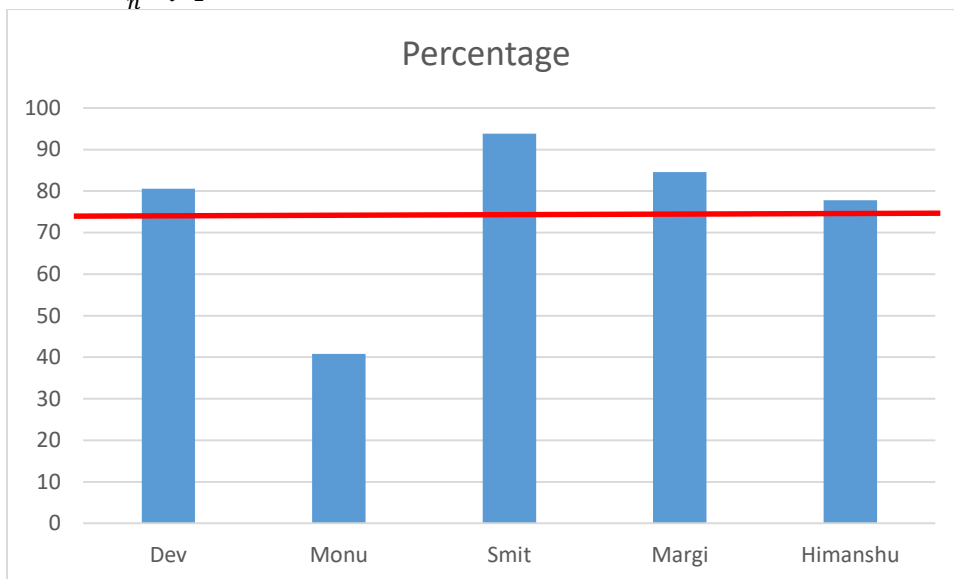


Mean: (Average) Mean is a measure of the central tendency of a dataset.

Name	Percentage
Dev	80.6
Monu	40.8
Smit	93.8
Margi	84.6
Himanshu	77.8

Mean / Average = 75.52

$$\text{Mean } \mu = \frac{1}{n} \sum_{i=1}^n x_i$$



Variance: It measures the dispersion of a dataset, indicating how much the values differ from the mean.

Standard Deviation: It is the square root of the variance, providing a measure of the spread of the dataset in the same units as the data.

Name	Data	Deviation	Square of Deviation
Dev	4.00	-1.50	2.25
Monu	8.00	2.50	6.25
Smit	6.00	0.50	0.25
Margi	5.00	-0.50	0.25
Himanshu	3.00	-2.50	6.25
Prem	7.00	1.50	2.25

variance $\sigma^2 =$ **2.92**

Mean / Average μ = 5.50 standard deviation $\sigma =$ **1.71**

Standard Deviation	Variance
Standard Deviation is defined as the square root of the variance.	Variance is defined as the average of the squared differences from the mean.
Standard deviation provides a measure of the typical distance between data points and the mean.	Variance provides a measure of the average squared distance between data points and the mean.
It is represented by the symbol σ .	It is represented by a square of the symbol sigma i.e. σ^2 .
It has the same unit as the data set.	Its unit is the square of the unit of the data set.

Median: It is the middle value in a set of numbers that have been arranged in order from smallest to largest.

Example 1:

```
import statistics
dataset = [5, 11, 3, 17, 31]

meanData = statistics.mean(dataset)
print("Mean is :", meanData)
medianData = statistics.median(dataset)
print("Median is :", medianData)
```

Output 1:

Mean is : 13.4
Median is : 11

Example 2:

```
import statistics
dataset = [10, 25, 1, 47]

meanData = statistics.mean(dataset)
print("Mean is :", meanData)
medianData = statistics.median(dataset)
print("Median is :", medianData)
```

Output 2:

Mean is : 20.75
Median is : 17.5 **[Average of 10 and 25]**

Example 3:

```
import numpy as np
dataset = [10, 25, 1, 47]

meanData = np.mean(dataset)
print("Mean is :", meanData)
medianData = np.median(dataset)
print("Median is :", medianData)
variance = np.var(dataset)
print("Variance is :", variance)
standardDeviation = np.std(dataset)
print("Standard Deviation is :", standardDeviation)
```

Output 3:

Mean is : 20.75
Median is : 17.5
Variance is : 303.1875
Standard Deviation is : 17.41228014936585