**Statistics:-** is a branch of mathematics dealing with the collection, analysis, interpretation, presentation, and organization of data.

**e.g:-** It was reported that violent crimes were down by 3.5% in 2010 in the world.

It was reported that the average student loan debt was about $28,000.

**Variable:-** is a characteristics or attribute that can assume different values.

**e.g:-** length, mass, time.

**Data:-**

The values that a variable can assume are called data.

**e.g:-** x=4, time=4sec.

**Population:-**

All members of a defined group that we are studying or collecting information on for data driven decisions.

**Sample:-** is a subset of population. (A part of the population is called sample).

**Random Variables:-**

Variables whose values are determined by chance are called random variables.

**e.g:-** Automobile insurance, claim suppose 5% every year.

**Types of statistics:**

Descriptive statistics, inferential statistics

**Descriptive Statistics:-** consists of the collection, organization, summarization, and presentation of data.

**Inferential Statistics:-** consists of generalizing from samples to populations, performing estimations and hypothesis tests, determining relationships among variables, and making predictions.

**Types of Variables:**

1) Qualitative 2) Quantitative

Further Qualitative variable are divided into two categories.

1) Discrete 2) Continuous