# Today's Agenda

1. Random Variable

- 2. Kinds of Variable
- 3. Variable Measurement Scale
- 4. Measure of Central Tendency (Mean, Median, Mode)

#### Random Variable:

A random variable is a property that can take any value

Example: Weight , Height etc

#### Kinds Of Variable

- 1. Qualitative Variable/ Categorical Variable
- 2. Quantitative Variable

### **Qualitative Variable:**

We have categories in Qualitative or categorical variable.

Here we can not do any measurement Like Addition Subtraction etc.

Example: Gender , Blood Group etc

#### Quantitative Variable:

It can be measured numerically Like Addition Subtraction etc

Example: Height Weight etc

### Example Scenario Qualitative Variable:

Let's we have some IQ classes

1-10 11-50 51-100

Less IQ Mid IQ High IQ

**Quantitative** 

Variable:

...

#### **Quantitative Variable**

Discrete Variable

Continuous Variable

# Examples of Discrete and Continuous Variable

#### Discrete Variable:

Bank Accounts, No of Children {2,3,4,5} etc

#### **Continuous Variable:**

Height, Weigh, Amount of Rainfall (in inches) {7.6, 5.2}

#### **Questions:**

1. What Kind of Variable Color is: 2. What Kind of Variable River Length is: 3. What Kind of Variable Population in city

#### Variable Measurement Scale:

There are Four Types of Variable measurement Scale

- 1. Nominal
- 2. Ordinal
- 3. Internal
- 4. Ratio

#### Continue....

#### Nominal Data:

These are basically categorical Data Like Gender, Color etc

Ordinal Data:

Order of the Data Matters but the value does not

#### Continue...

Example:

Suppose we have a data like:

**Marks Rank** 

85 1

76 2

54 4

65 3

44 5

### Continue...

Explanation

So in this case we doesn't care about marks we know the rank.. In this way we doesn't care about the value we care about order

#### Continue...

#### **Interval Data:**

Order matters value also matters but zero is not Present

#### Continue....

Suppose we have Data of Time:

12pm 1am 3pm 8am

But if we say 0pm or 0am it does not have any meaning. So in this case value matters order matters but Zero is not present

#### Continue...

Ratio Data

# Assignment Measure of Central Tendency

#### What is Central Tendency:

It refers to the measure used to determine the centre point of the data.

Whenever we want to find out the centre part of the data we use mean median and mode

#### Continue....

# Mean Continue....

# Median Continue....

## Mode