

Start Up Screen

Data Types

Take Aways



Types of Data



Attribute

Variable

Locational

Definition of Attribute Data

- 👉 Aka Discrete data
- 👉 Whole numbers which are counted or attributed
- 👉 Answers questions like “how many”, “how often” or “what kind”
- 👉 Attribute Data also includes nominal and ordinal data

Definition of Variable Data

- 👍 Aka Continuous data
- 👍 Real numbers or values associated with physical measurements
- 👍 Equipment readings which involve decimals are continuous in nature
- 👍 Answers questions like “how long”, “what volume”, “how much time” & “how far”

Comparison of Attribute & Variable Data

Attribute	Variable
Useful in measuring performance of a product or service	Measured data is precise
May prove more useful	Provides more information than attribute data
May not be very difficult to collect	Can prove either difficult or expensive to collect

Conversion of Variable to Attribute Data

- 👉 It is easy to convert variable to attribute data
- 👉 However such conversion will lead to loss of information
- 👉 Variable data is grouped into buckets
- 👉 Count in each bucket is attribute data

Example:

- 👉 Data for distance travelled by employees to reach office is variable in nature
- 👉 If this data is grouped into 0-2 kms, 2-5 kms, 5-10 kms and > 10 kms then, the count of data in each bucket is attribute in nature

Conversion of Attribute to Variable Data

- 👍 Sometimes attribute data is converted into variable data to give a clearer picture
- 👍 Conversion makes it easy to compute values such as mean, standard deviation and other population estimates

Example:

- 👍 Like & dislike of a service can be converted to a rating scale of 1 - 10
- 👍 10 scratches represented as total scratch length of 8.37 inches
- 👍 25 paint runs represented as 3.2 sq.in of surface area of paint runs

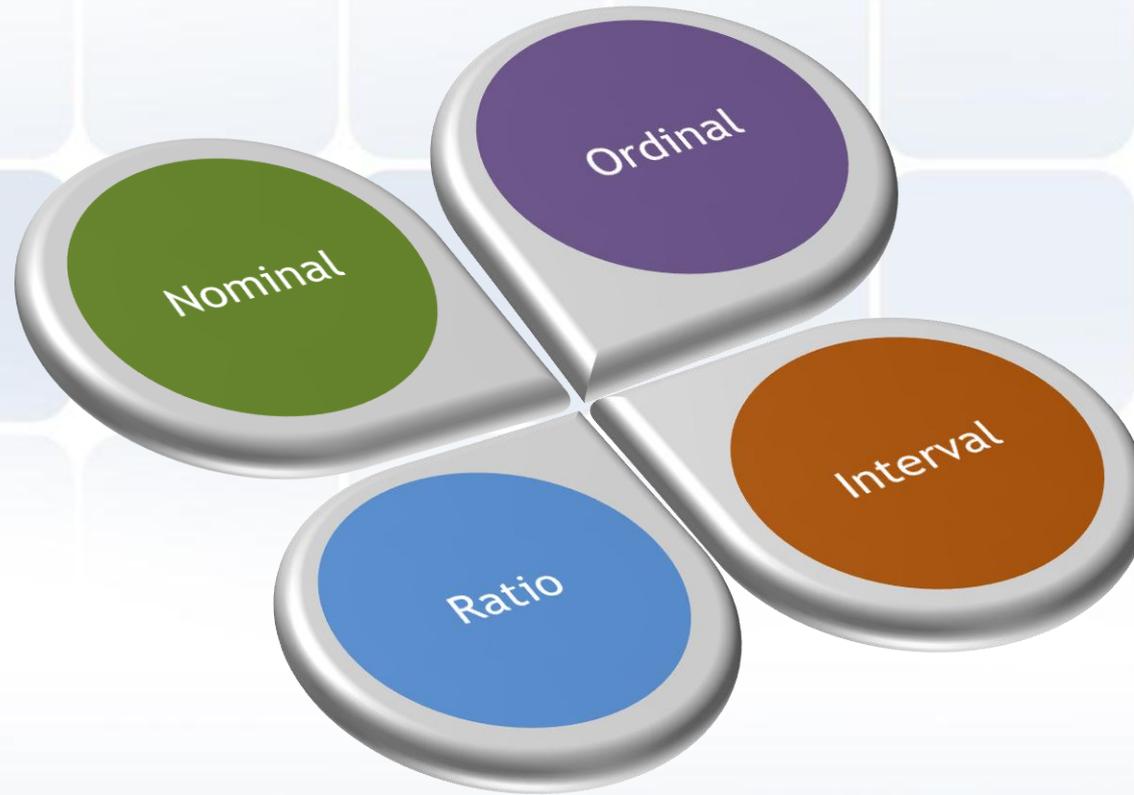
Definition of Locational

- 👉 Simply refers to location of data
- 👉 Simply answers the question “where”

Example:

- 👉 Map of a country showing all its retail locations
- 👉 Illustration of a product pointing out areas for development

Types of Measurement Scales



Definition of Nominal Scale

- 👉 Classified data with assigned names or categories
- 👉 Based on existence of certain characteristics
- 👉 Cannot be arranged in any order
- 👉 Cannot be used to compare any data

Definition of Ordinal Scale

- 👉 Set of data arranged in an order
- 👉 Reflects magnitude of the characteristic under study
- 👉 Cannot determine differences between data

Definition of Interval Scale

- 👍 Set of data arranged in some order with well defined differences
- 👍 Magnitude of a numerical value indicates magnitude of the characteristic under study
- 👍 Can be used to classify & compare data
- 👍 No natural starting point

Definition of Ratio Scale

- 👍 Set of data arranged in some order with well defined differences and a starting point
- 👍 Ratios are meaningful
- 👍 Zero on a ratio scale indicates a complete absence of the characteristic under study
- 👍 Can be used to classify & compare data

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