***Types of Statistics:***

Statistics is a field of mathematics focused on collecting, analyzing, interpreting, and presenting data. It is mainly divided into Descriptive Statistics and Inferential Statistics.

**1. Descriptive Statistics**

Descriptive statistics summarize and organize raw data into an understandable form. They provide simple summaries about the sample and the measures without making predictions or conclusions beyond the data.

Key Features of Descriptive Statistics:

* Measures of Central Tendency: Mean, Median, Mode
* Measures of Dispersion: Range, Variance, Standard Deviation
* Data Visualization: Tables, Charts, Graphs

Example:  
The average score of students in a class is 85%. This gives a clear summary of the data collected but does not generalize beyond the given class.

**2. Inferential Statistics**

Inferential statistics allow us to make predictions or inferences about a population based on data collected from a sample. It helps estimate population parameters and test hypotheses.

Key Techniques in Inferential Statistics:

* Hypothesis Testing: t-test, ANOVA, Chi-Square Test
* Confidence Intervals: Estimating population parameters
* Regression Analysis: Predicting relationships between variables
* Correlation Analysis: Measuring associations between variables

Example:  
Based on a survey of 500 people, it is predicted that 60% of the city's population prefers online shopping. This generalizes the survey findings to a larger population.

**Conclusion:**

* Descriptive statistics are used to describe and summarize data.
* Inferential statistics are used to make predictions and draw conclusions about a larger group from a sample.

Both are essential for making informed decisions in fields like business, healthcare, research, and social sciences.