- Representing data with the help of bars or rectangles of uniform width in a diagram is called a **bar graph or a bar diagram**.

- Each bar represents only one value of the data and hence there are as many bars as there are values in the data.

- The length of the bar indicates the value of the item. The width of the bar does not indicate anything.

- All bars should rest on the same line called the base.

- The bars may be drawn horizontally or vertically.

- A double bar graph helps us to compare two collections of data at a glance.

Collection and Tabulation of Data:

- The word data means information in the form of numerical figures or a set of given information.

- Data obtained in the original form is called a **raw data.**

- Arranging the numerical figures of a data in ascending or descending order is called an **array**.

- Arranging the data in a systematic tabular form is called tabulation or presentation of the data.

- Tabulated data is easy to understand and interpret.

- Each numerical figure in a data is called an **observation**.

- The number of times a particular observation occurs is called its **frequency**.

- The difference between the highest and the lowest values of the observations in a given data is called its **range**

- When the number of observations is large, we

make use of tally marks to find the frequencies.

- Tallies are usually marked in a bunch of five for the ease of counting.

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- **Mean, mode and median:**

- **Mean** in statistics is the same as average in arithmetic. Average is a number that shows the central tendency of a group of observations.

- For a raw data,

- **Mode:** The observation which occurs for a maximum number of times is called the mode of the given data.

$$\text{Mean} = \frac{\text{Sum of Observations}}{\text{Number of observatoins}};$$

$$\text{Mean of 'n' Numbers} = \frac{\text{Sum of numbers}}{\text{Number of addends}}$$

- **Median:** After arranging data in ascending or descending order of magnitudes the value of the middle term is called the median of the data.
  (i) When the number of observations is odd, there will be only one middle term and this term is the median.
  (ii) When the number of observations is even, there will be two middle terms. The average of these two middle terms is the median of the data.

- Some situations in our life happen certainly. Some are impossible and some that may or may not happen. This is called **chance or probability** of an event to occur.