

## Different types of Quantitative analysis – Categorical variable

Quantitative Analysis specifically for **Univariate Categorical Features**. When we have categorical data (think groups or labels like colors, city names, or product types) and we want to analyze them quantitatively in a single variable, we primarily focus on counting and proportions. Here are the key types:

- **Frequency Counts:** This involves simply counting the number of occurrences for each category within the variable. It tells you how many times each distinct category appears in your dataset.
- **Proportions or Percentages:** This expresses the frequency of each category relative to the total number of observations. It's calculated by dividing the frequency of a category by the total number of observations. Percentages are just proportions multiplied by 100. This helps understand the relative importance or prevalence of each category.
- **Mode:** While also applicable to numerical data, the mode is particularly insightful for categorical data. It identifies the category that appears most frequently in the dataset. A categorical variable can have one mode, more than one mode (if multiple categories have the same highest frequency), or no mode (if all categories appear with the same frequency).