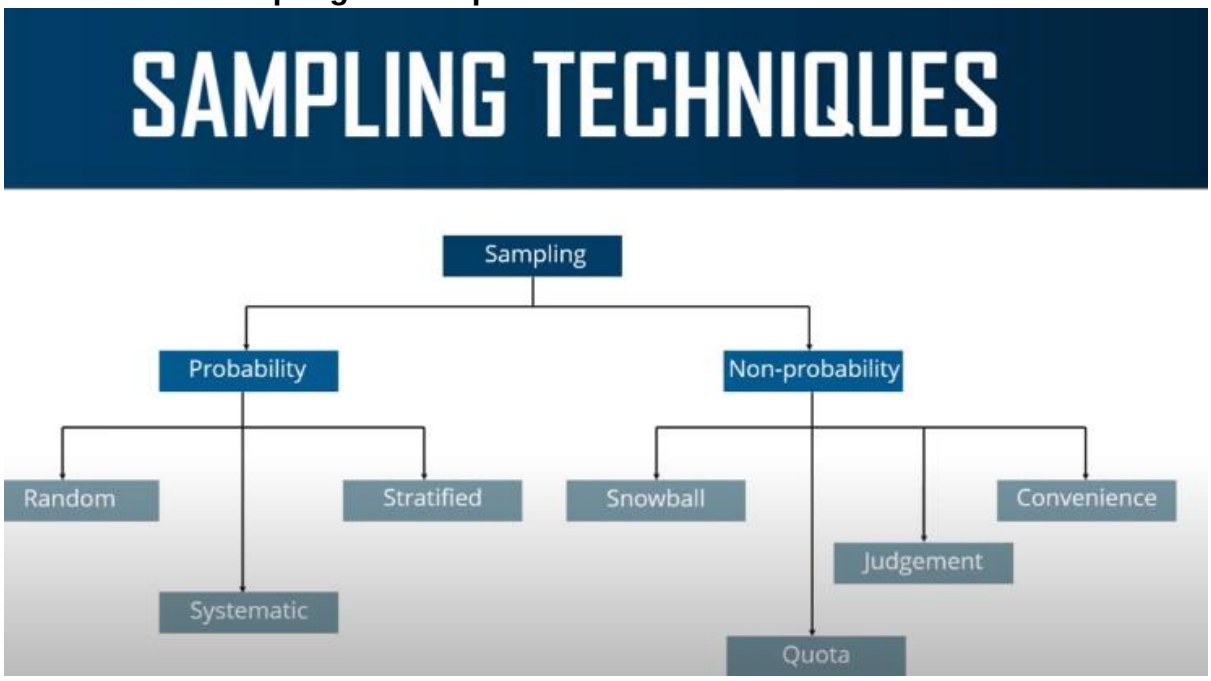
1. **What is Population and Sample?**

   Population: Total available data for the given problem. For example, need to find the average height in the given state? Here all the people height in the state is population. It is very difficult to go each person and ask the height. It is very difficult to find the height of all the people in the given state.

   Sample: Collect few records randomly from the population is called Sample. Sample is the subset of population. In the above problem, instated of collecting all the person height, we collect few persons height randomly that is called sample.
   Ex: Exit poll election results for the party is going to win.

2. **What are the Sampling Techniques?**



   Sampling Techniques are 2 types

   A. **Probability Sampling:** It is a sampling technique in which samples from large populations are chosen by using theory of probability (chance of getting selected)
      a. **Random Sampling:** Each member of the population has equal chance of being selected in the sample. That means randomly go and select individual.
      b. **Systematic Sampling:** Every nth record is chosen from the population to be a part of the sample
      c. **Stratified Sampling:** By using common characteristics divide population into groups(subsets). After grouping, apply random sampling on these groups to generate the sample data.

B. **Non-probability Sampling:** Non-probability sampling is defined as a sampling technique in which the researcher selects samples based on the subjective judgment of the researcher rather than random selection. It is a less stringent method. This sampling method depends heavily on the expertise of the researchers.

Non-probability sampling is a sampling method in which not all members of the population have an equal chance of participating in the study, unlike probability sampling. Each member of the population has a known chance of being selected. Non-probability sampling is most useful for exploratory studies like a pilot survey (deploying a survey to a smaller sample compared to pre-determined sample size). Researchers use this method in studies where it is impossible to draw random probability sampling due to time or cost considerations.