## Task

## Sampling Techniques

Simple Random Sampling: Each member of the population has an equal chance of being selected.

Stratified Sampling: The population is divided into homogeneous subgroups, and a random sample is selected from each subgroup.

Cluster Sampling: The population is divided into clusters, and a random selection of clusters is made. Individuals within selected clusters are included in the sample.

Systematic Sampling: A starting point is selected randomly, and every kth individual is selected for the sample.

Quota Sampling: The population is divided into subgroups, and a specific number of individuals is selected from each subgroup to match predefined quotas.

Stratified Cluster Sampling: A combination of stratified and cluster sampling, where the population is divided into strata, clusters are formed within each stratum, and a random selection of clusters is made.

Randomized Response Technique: Used for studying sensitive or confidential topics by providing participants with a randomized response method for confidentially providing truthful answers. Panel Sampling: A fixed group of individuals or items is selected from a population, and data is repeatedly collected from them over time, commonly used in longitudinal studies of tracking consumer behavior.

Convenience Sampling: Individuals who are readily available or convenient for the researcher are selected.

Snowball Sampling: Initial participants are selected, and they help recruit additional participants from their social networks.

Purposive Sampling: Individuals are chosen deliberately based on their expertise, knowledge, or specific characteristics related to the research topic.

Multistage Sampling: Samples are selected in multiple stages, often beginning with cluster sampling, followed by the selection of subclusters, and then individuals within those subclusters.

Oversampling: Certain groups or subgroups of the population are intentionally oversampled to ensure sufficient representation.

Undersampling: Intentionally selecting a smaller sample size than what would be expected based on the proportion of the subgroup in the population.

Random Digit Dialing: Random phone numbers are generated and dialed to reach potential participants, commonly used in telephone surveys.

Time Interval Sampling: Data is collected from individuals or items within specific time intervals, often used for studying customer behavior or periodic observations.