Sampling

Sampling is a technique of selecting a subset or sample of the population to make a statistical decision from the sample and estimating the whole population's characteristics.

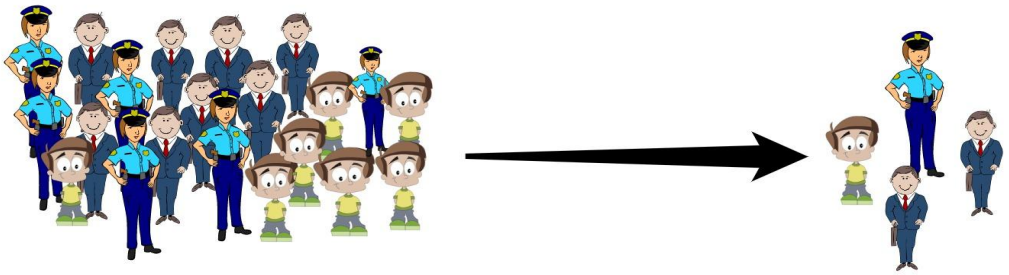
1. Simple Random Sampling :

A simple random sample is a subset of a statistical population in which each data point of the sample has an equal probability of being chosen. For example, you pick some chit from the bowel to select a few from the 500 people in any event. This method of sampling saves time and is a reliable method of sampling.

There is two way to select a random sample :

-> Lucky draw method, in this method, every data point has given a name or number for identification and then selected through a lottery system randomly.

-> By selecting through a number, you select the set of numbers to be in the sample.



Population **Random Sampling**

Let's understand this through an example:

In a school event, to understand the population of the school. A teacher used a random sampling method where she gave the number to the student from 1 to 100. And management selects the 25 random numbers from the 100.

So what was the advantage here, that the management was able to do **that quickly**, with no need of understanding the dataset or **knowing the dataset before selection** and also **saved the other resources** of the school—these are the **advantage** of the random sample method.

But what if in selected students (25) all are the boys. (in 100, 30 are boys and 70 are girls) So when they perform statistics on the sample, it will not give correct results as the sample does not have all types of available data points. And this is the **disadvantage** of this method.