Summary

- In this module, we have simulated random observations from discrete uniform distribution, Bernoulli distribution, binomial distribution, Poisson distribution, geometric distribution, negative binomial distribution and Hypergeometric distribution.
- To simulate the distribution, first we write the values taken by x. Then we find the corresponding probabilities using the probability mass function. In the next column we find the cumulative probabilities of x. That is the probability that X is less than or equal to x. It should be noted that the last cumulative frequency should be equal to 1 because, sum of probabilities of given pmf is 1. When we have value of x ranges from zero to infinity, we find probability and cumulative probabilities simultaneously so that at the end remaining probability we assign to the value of x as greater than or equal to that particular value. Using these cumulative probabilities, we write the range for random numbers so that we can simulate the observations from the particular distribution.
- We have found Mean and variance of the theoretical distribution and sampled distributions. And compared them.