General Properties of Random Number

- Uniformity
  - The random numbers generated should be uniform. That means a sequence of random numbers should be equally probable every where.
  - If we divide all the set of random numbers into several numbers of class interval then number of samples in each class should be same.
  - If 'N' number of random numbers are divided into 'K' class interval, then expected number of samples in each class should be equal to $e_i = N / K$.
- Independence
  - Each random number R_t is an independent sample drawn from a continuous uniform distribution between 0 and 1.
  - The probability density function(pdf) is given by:

$$\text{pdf} : f(x) = \left\{ \begin{array}{c} 1 \; for \; 0 \leq x \leq 1 \\ 0 \; otherwise \end{array} \right\}$$