

Implement a Random Number Generator of uniform distribution (0 to 1) using Midsquare method. Plot a histogram using the generated random numbers.

1. First use 4 digit seed and generate random numbers upto 4 decimal places.

Example:

Seed: 1234

Squared value: 01522756 (1234^2)

First random number: 0.5227

Squared value: 27321529 (5227^2)

Second random number: 3215

2. Generalize the above process. Take two inputs, n (number of decimal places to report for each random number) and the seed.

Example:

n: 6

Seed: 123456

Squared value: 015241383936 (123456^2)

First random number: 0.241383

Squared value: 058265752689 (241383^2)

Second random number: 0.265752

Histogram sample for 2nd case:

