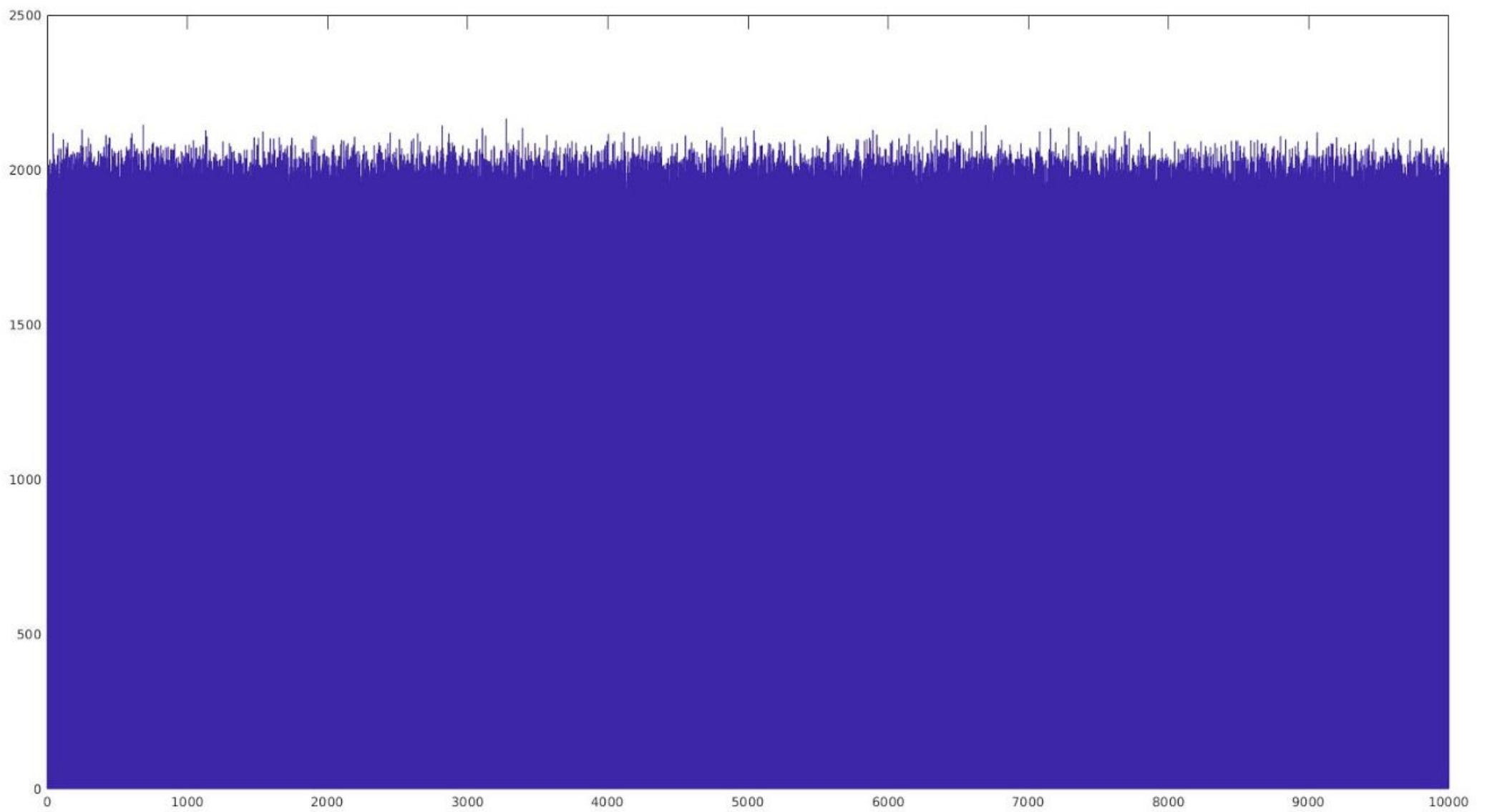


Lab 03 Observations

QNo. 1

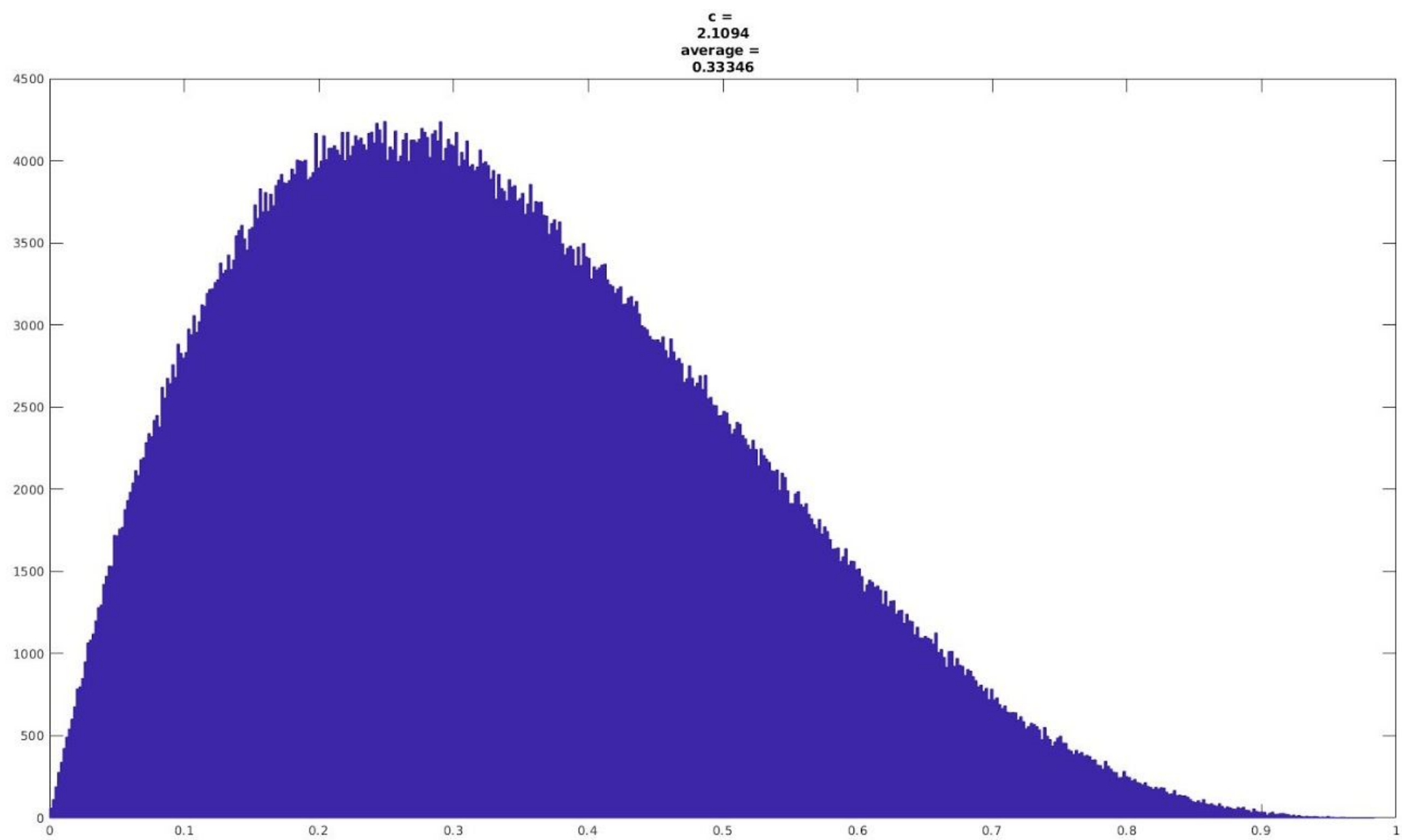
- The histogram of the generated sample from the sequence $\{1, 3, \dots, 9999\}$ with uniform discrete distribution function is:



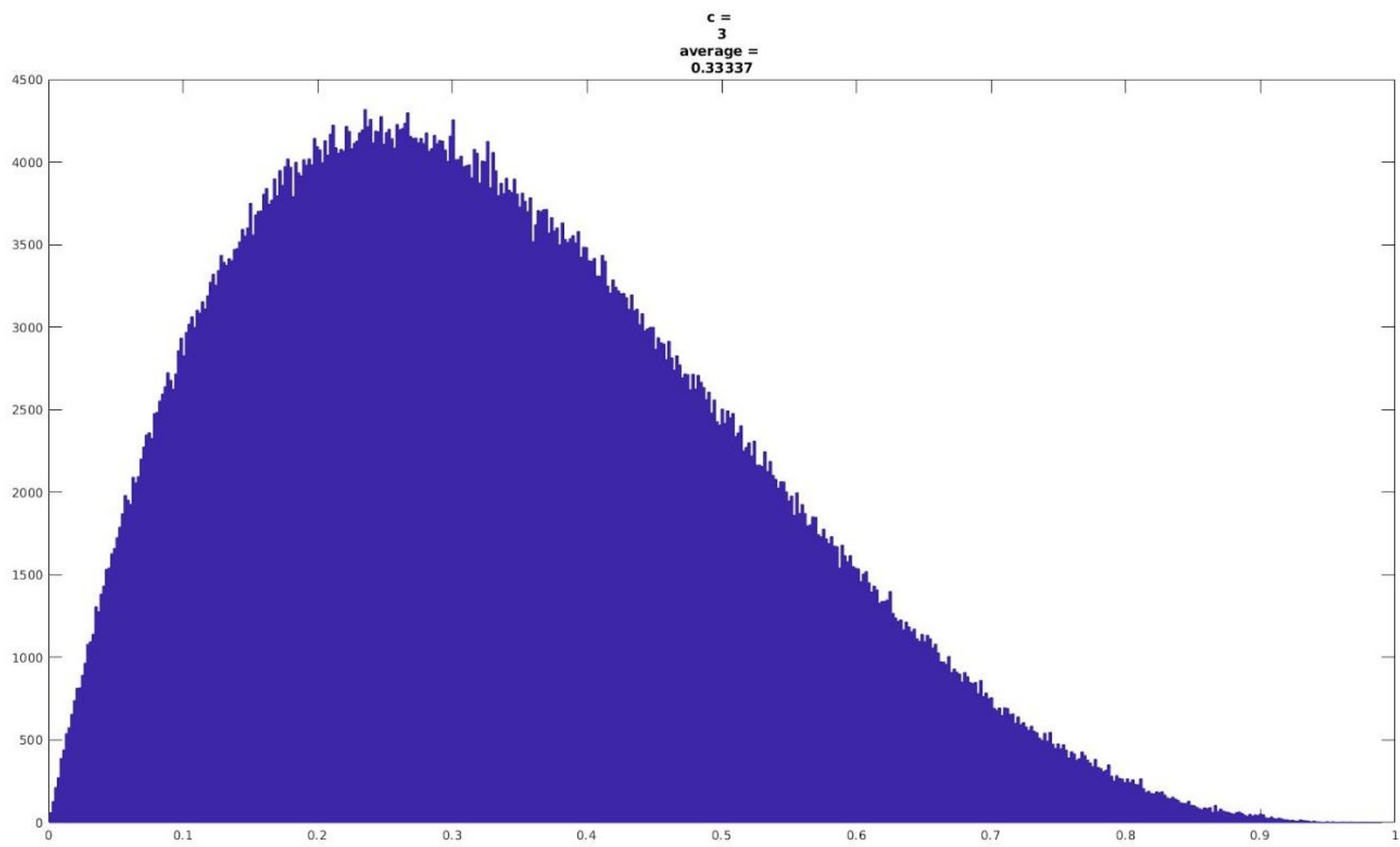
- From the above histogram plot we are able to see the uniform distribution of the samples generated.

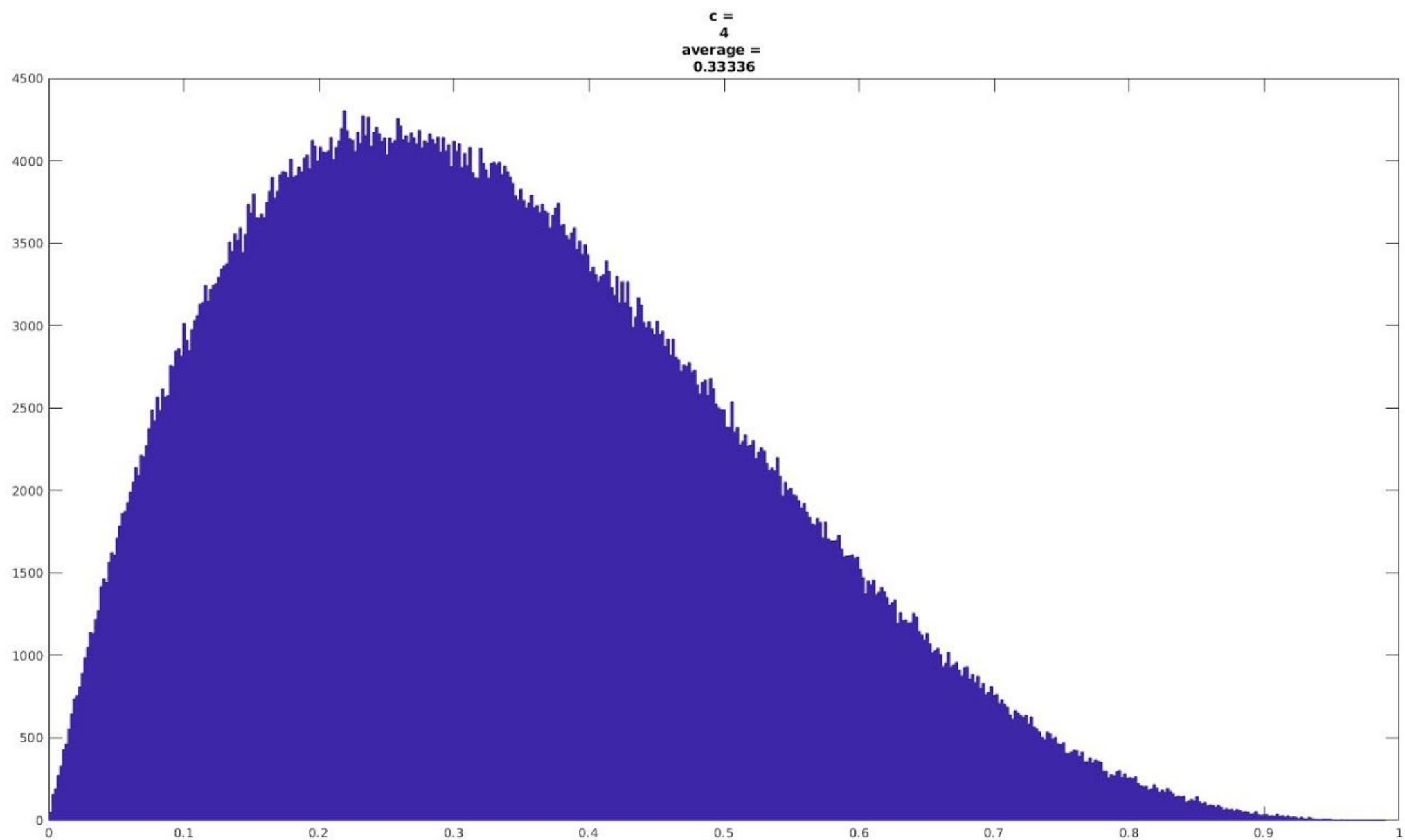
QNo. 2

- The smallest value of the constant c such that $f(x) \leq cg(x)$ is : 2.1094
- The histogram of the values generated with the value of $c = 2.1094$ is:

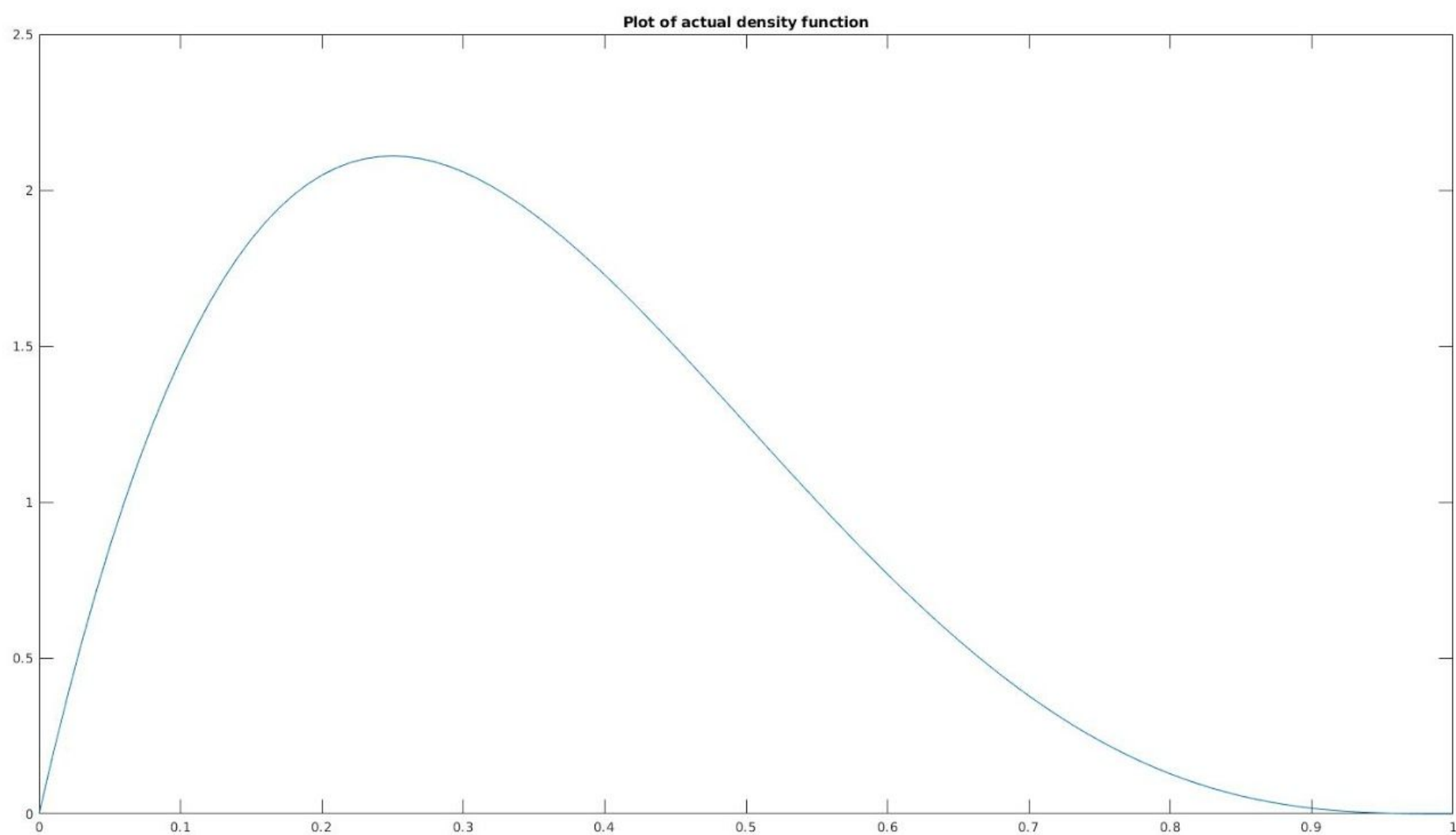


- The histogram plots for $c = 3$ and $c = 4$ are:





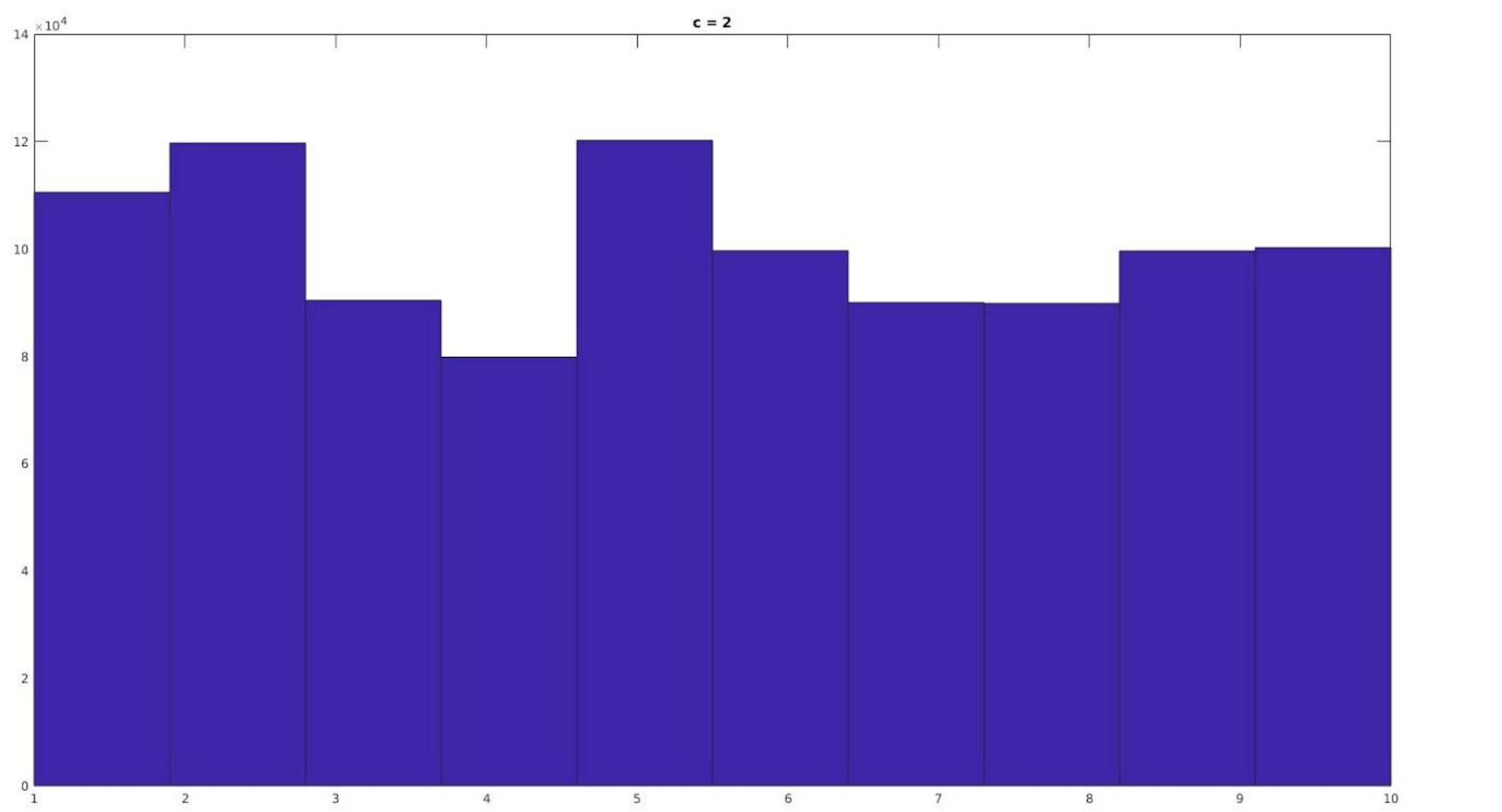
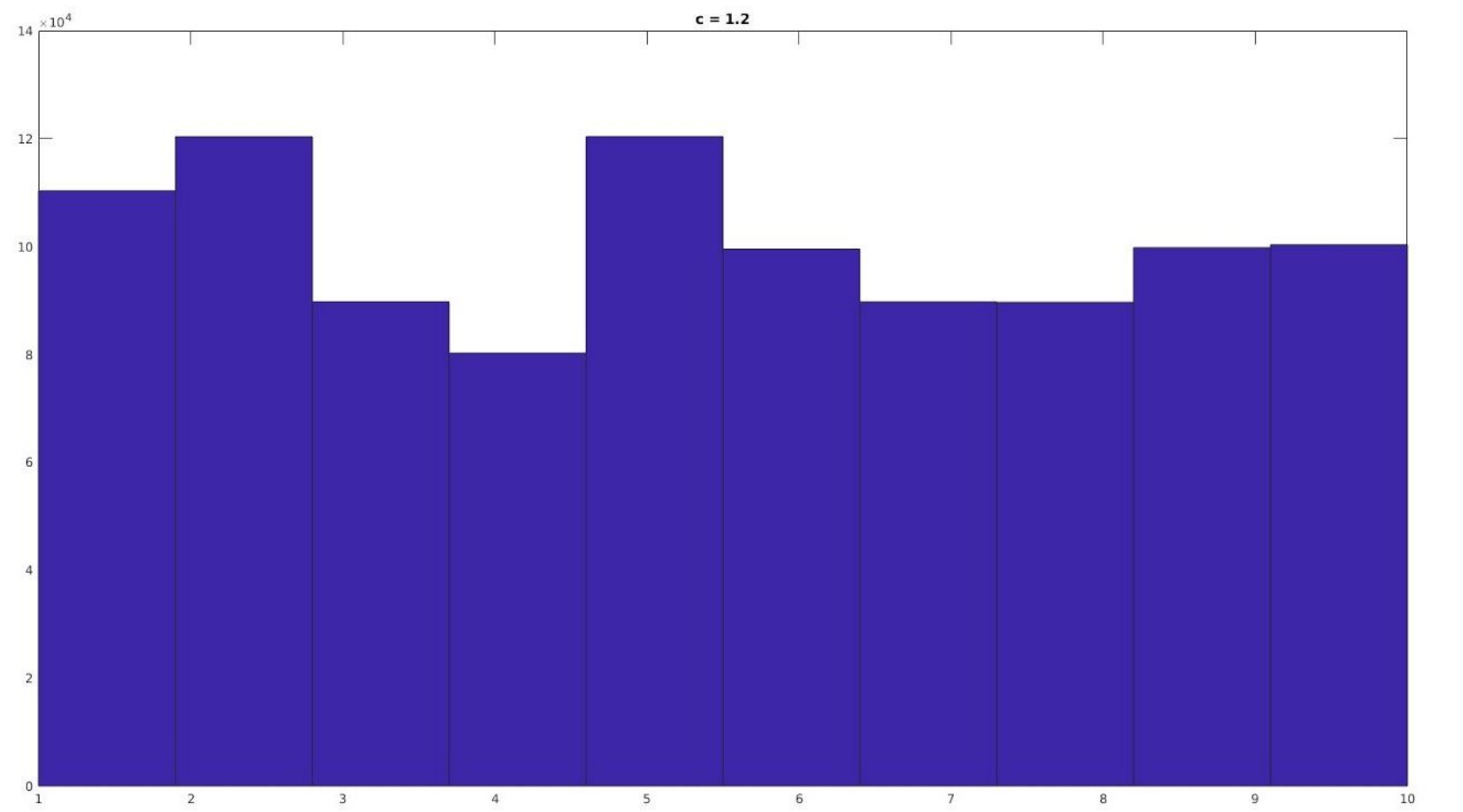
- The value of the average in all the three cases (for $c = 2.1094$, $c = 3$ and $c = 4$) are 0.33346, 0.33337 and 0.33336 respectively
- The plot of actual density function is:

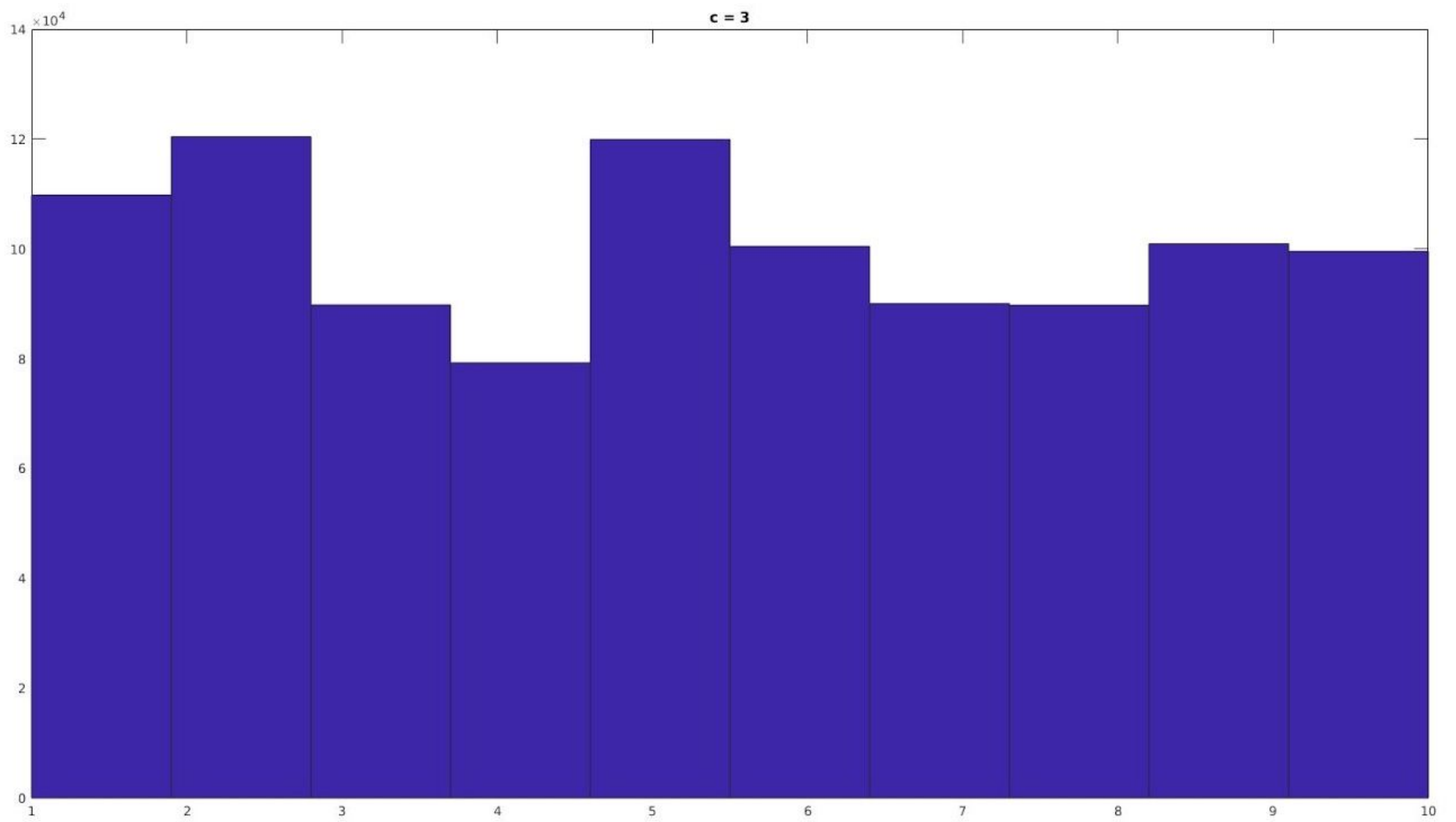


- By the above plot we observe that the histogram plots are similar to the actual density function and the plotted histograms and averages for the different cases are independent of the value of c .

QNo. 3

- The histograms plotted for the generated sequences for the values of $c = 1.2, 2$ and 3 are:





- From the histograms plotted above we observe that the distribution of the samples is independent of the value of c considered