edX

旁听访问入口过期 三月 20, 2020
。您已于 三月 20, 2020 失去课程访问权限，包括正在上的课程。

Lab: simulation of random variables
Week 1 Lab : simulation of random variables

In this first lab, we are going to introduce basics of random variables simulation, focusing on the simulation of <u>exponential</u> and <u>Poisson</u> distributions, that play a central role in mathematical modelling of queues. We will see how to draw samples from distributions by the <u>inverse transform sampling method</u>, or by using the *Statistics* <u>sublibrary of *Scipy*</u>.

We will use the inverse transform sampling method to draw samples from the exponential distribution. Then we will introduce the Poisson distribution and we will use the Statistics sublibrary to draw samples from this distribution.

As explained in the general introduction to the labs (Week 0), to complete a lab, you will have to fill in undefined variables in the code. Then, the code will generate some variables **Vi**, with **i=1,…** . You will find all the **Vi**s generated from your results by running the last code cell of the lab.

You can check your answers by answering to the exercise at the end of the lab section where you will be asked for the values of the **Vi**s you got.

The notebook containing the lab of week 1 is available here: <u>notebook</u>

The pdf version of the lab of week 1 is available here: <u>pdf version of the notebook</u>