CS359 Computer Networks Lab
Lab Excercises 2

Indian Institute of Technology, Patna

January 24, 202

Instructions: This assignment is in continuation to Assignment 1. But you have to submit the solutions separately. The submission date is 31.01.2022

Consider the packet switching case of the problem given in Assignment 1. In this assignment rather than using a constant packet generation rate, we will now use a Poisson distribution and observe its effects. We now assume that the packet generation at each source i follows a Poisson distribution with a given rate λ_i, which is equivalent to the fact that the generation time between two consecutive packets at each source follows an exponential distribution. You are now supposed to show the following results:

1. Assuming λ_i to be same for each source, plot the average delay for each packet with respect to λ
2. Assuming λ_i to be same for each source, plot the average queue size with respect to λ
3. Assuming unique λ_i values for each source, using a box plot show the average delay for each packet for each source.
4. Assuming unique λ_i values for each source, using a box plot show the average packet drop for each source.