

CSCI 410: Modeling and Simulation

Written Assignment 1 Redo

Due November 15th, 23:59:59PM.

1. Consider the single-server queueing system in Section 1.4. Suppose the list of inter-arrival times is the following:

1.7, 7.4, 3.2, 4.4, 1.8, 0.6, 1.9, 6.0, 8.9, 2.7

The first inter-arrival time is the time from the beginning to the arrival time of the first customer.

The list of service times is the following:

3.5, 8.0, 1.2, 1.3, 1.2, 4.5, 0.8, 1.3, 2.2, 3.5

Show the system state, simulation clock, event list and statistical counters as in Figure 1.7 after processing each event from the beginning until the departure of the 5th customer.

2. For the single-server queueing system in Section 1.4, suppose a customer leaves the system without being served after staying in the queue for 2 or more units of time. Use the inter-arrival times and server times in Problems 1. Show the system state, simulation clock, event list and statistical counters as in Figure 1.7 after processing each event from the beginning until 5 customers depart the server. Customers leaving the system without being served are not counted as departing the server. Provide the name of the new event at the beginning.