

Simulation - Assignment 1

Anton Roth

April 20, 2017

1 Task 1

The system with two queues was implemented with the *Event-Scheduling* approach. As model verifications the following was controlled graphically:

- Inter-arrival times $\rightarrow 0$:
 - Length of Q1 $\rightarrow 10$.
 - Rejection ratio of Q1 $\rightarrow 1$.
- Inter-arrival times $\rightarrow \infty$:
 - Length of Q1 $\rightarrow 0$.
 - Rejection ratio of Q1 $\rightarrow 0$.

Measurements were made with time-differences exponentially distributed with a mean of 5 s. 10000 measurements were taken. The results of task 1 is presented in Table 1.

Table 1: My caption

Inter-arrival times Q1 (s)	Mean length Q2	StdDev length Q2	Mean rejection ratio Q1	StdDev rejection rate Q1
1	11	13	0.52	0.02
2	4.4	3.0	0.070	0.009
5	0.43	0.55	0	0

2 Task 2