

COMP9334 Revision Questions for Week 7

Question 1

We conducted five independent replications of the discrete event simulation of a queueing system and recorded the response time of the first 20,000 jobs in each replication. You can find these simulation results in 5 separate files `trace*` where $*$ = 1,2, ..., 5.

- (a) Program the transient removal procedure in Law and Kelton, Section 9.5.1 and find what the value of w should be. (A scanned copy of Section 9.5.1 can be found on the course web site.)
- (b) After removing the transient, compute the steady state mean response time obtained from these independent replications. Calculate also the 90% confidence interval.

Question 2

Three systems (Systems 1, 2 and 3) are tested. The mean response time of each system is measured 5 times. The results for the three systems are summarised below:

System 1	System 2	System 3
13.64	12.78	12.21
13.09	13.98	13.64
13.84	13.58	13.09
12.28	14.59	13.84
14.55	12.72	12.28

Can you conclude which system has the best performance with high confidence (say 95%)?