

Introduction to Simulation

Assignment 3: Adding a Second Counter in the Bank

1. Start from the model of the single-server queue in the bank, which you can download from the ItS website.
2. Simulate the model up to (at least) $T=10000$.
3. What is the average queue length?
4. What is the probability that the server is busy?
5. Add a second server to the model whose characteristics are identical to those of the original server.
6. If you were not careful when designing your model, you will get a run-time error when you start the simulation.
 - If you got an error: What has gone wrong, and why? Suggest two different solutions to this problem and implement one of them.
 - If your simulation ran first time: What did you add to the model, and why? Is this realistic? Can you think of an alternative modification?
7. What is the average queue length now?
8. What is the probability that each of the two servers is busy now?