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P2 Summary

Example 2_5:

This program simulates a single server checkout queue. It runs 1000 trials of 100 customers and outputs the average wait time, probability of waiting, probability the server is idle, average service time, average inter arrival time, average wait time for waiting customers, and average time spent in the system. The overall outputs are as follows:

Average wait time = 2.507 minutes

Probability of waiting = 0.937

Probability the server is idle = 0.137

Average service time = 1.284 minutes

Average inter arrival time = 6.458 minutes

Average wait time for waiting customers = 2.676 minutes

Average time spent in the system = 3.791 minutes

Example 2_6:

This program simulates a dual server checkout queue. It runs 1000 trials of 100 customers and outputs the average wait time, probability of waiting, probability the server is idle, average service time for Able, average service time for Baker, average inter arrival time, average wait time for waiting customers, and average time spent in the system. The overall outputs are as follows:

Average wait time = 0.691 minutes

Probability of waiting = 0.410

Probability the server is idle = 0.085

Average service time for Able = 0.544 minutes

Average service time for Baker = 0.553 minutes

Average inter arrival time = 2.840 minutes

Average wait time for waiting customers = 1.678 minutes

Average time spent in the system = 1.787 minutes