

A spreadsheet simulation for single-server queueing system is to be done for output data analysis.

- (1) Consider ρ is 0.9 (if interarrival times has 60 seconds as mean, then the service time has a mean of 54 seconds) and simulate for at least $n = 1000$ replications (runs) and each replications with at least $m = 500$ customers.
- (2) The starting conditions should be varied with the number of customers, $s = 0, 5, 10, 12, 15$. Here s represents the number in system at time zero.
- (3) For each starting condition, show the plot of $E(D_i)$ for $n = 250, 500, 750, 1000$ replications in a single graph considering $m = 500$ customers.
- (4) Finally, show the plot of $E(D_i)$ for $n = 1000$ replications and $m = 500$ customers for different starting conditions s in a single graph.