Quick Guideline for Running Simulation

- Make sure you run the simulation long enough to produce enough data.
- Run the simulation with different combinations of x and y values, where x refers to a system variable (e.g., arrival rate), y refers to a specified performance measure (e.g., average delay).
- For each scenario (a scenario refers to a particular combination of system variables), run the simulations with at least five different random seeds.
- For each run, collect the stats results.
- With the data from multiple runs (i.e., cross-replication data), compute the final point estimation and the confidence interval for each of the performance metrics, with confidence level set as 95% (i.e, $\boldsymbol{\alpha}$=0.05).

Quick Guideline for Writing Report

Write the report in the following format:

–Brief problem (Project) Description, the goal of the simulation study

–The simulation model (for example, the problem mapping to an equivalent priority queueing model)

–Simulation parameters (your need to explain why these parameter settings help achieve the goal of the simulation goal)

–Methodology:

•How is your simulation build? (e.g., explaining the main flow of your simulation)

•How did you setup the simulation parameters?

•How did you collect the stats?

–Analysis

•For each run, report the collected statistics.

•For each scenario, find the average stats across at least five different runs using different initial random seeds.

–Conclusion

- Quantitatively summarize your simulation results.
- Draw conclusions based on simulation study.
- Make suggestions (e.g., improving the system, fixing potential problems, and so on).