SA421 – Simulation Modeling Fall 2017
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Final Project

The goal of this project is for you to conduct a simulation study to improve an existing real-world system for a hypothetical client.

You must submit 2 reports: (1) a **problem statement and plan**, and (2) a **final report**.

You must work in teams of 3 or 4. Detailed requirements for each of these reports are given below.

Problem statement and plan

The purpose of this report is for you to think about the real world system that you want to study and how you might improve it. In addition, you will receive some feedback on how to make your project successful: for example, suggestions on narrowing or expanding the scope of your problem, recommendations for other performance measures you might want to consider, ideas on how to collect the necessary data.

In 1 page, your report should contain:

- **Problem statement.** Your problem statement should address the following questions (from Lesson 7):
  - What is the system you are studying? How does the system currently operate?
  - What are the goals that your client wants to accomplish?
  - What is the purpose of your study? In particular:
    - What alternatives did you investigate?
    - What performance measures did you compute?
    - How do these alternatives and performance measures help the client with their objective?
- **Plan for data collection.** What data will you need? How will you collect it?
- **Timeline.** Provide a timeline describing when you will execute all of the necessary steps of your study:
  - collecting the input data,
  - analyzing the input data,
  - creating a simulation model and running the experiment,
  - analyzing the output of the simulation, and
  - writing the final report.

Final report

Based on your problem statement and plan (and any feedback you may receive), conduct a simulation study using what you learned this semester. Write a report that summarizes your simulation study. Your report should follow the guidelines in Lesson 7, and all of the guidelines for writing we've discussed over this past semester (e.g. comments to the class on assignments, individual feedback, etc.).