CMPS 5333 - Simulation - Data Collection Report

Due: Monday, November 24

All data collected is to be shared among the group members. A minimum of 100 interarrival times and completed services are required. This is a project grade. Turn in to Dr. Halverson a copy of the original data collection sheets with names on each one (who collected that data). As discussed in class, the WORD reports must ALSO be emailed to Dr. Halverson as an attachment. Any file containing indications or grammar, punctuation, or spelling errors will be returned to the student for correction, 5 points off per day late.

Part 1 - Initial Report (Word) - 50 points
Except for the original data sheets, all work must be competed in Word and Excel. The report is to be a thorough analysis of the system being observed, such as you might present to a client hiring you to evaluate their system. Therefore everything is to be typewritten and in Very Professional and Formal form. Use a cover sheet with the system (business) name and your name.

Include (at least) the following information in the report:

- Team members and how the work was distributed among the team
- Name, address, & description of the observed system, with diagram
- Description of observation plan and rationale for the times observed, location of observer, observation schedule with names
- Summary of data -
  - average, maximum & minimum of
    - Interarrival time
    - Service time
    - Wait time in Queue
  - Server(s) utilization
- Conclusions regarding the system - potential problems and solutions - base conclusions on data, not opinion
- Attach original data collection sheets; on each sheet write date & time of collection and name of persons collecting

Part 2 - Analysis of Data (Total of 2 Chi Square Tests in Excel) - 50 points
For the interarrival times complete the following analysis:

- Graph the data twice, using different ranges (categories) - at least 10 categories
- Based on the "Look" of the graphs, complete a Chi Square test for comparison to uniform, exponential or normal - state null hypothesis and results

For the service times complete the following analysis:

- Graph the data twice, using different ranges (categories) - at least 10 categories
- Based on the "Look" of the graphs, complete a Chi Square test for comparison to uniform, exponential or normal - state null hypothesis and results

Turn in a brief written summary (in WORD) of your results and attach the spreadsheets containing all the details. Be sure the spreadsheets are well labeled and documented.