IE381/3081 – Modeling and Discrete Simulation Course

Marmara University, Istanbul, Turkey
October 07, 2018

Homework 3

Considering the Example 2.6 (named as "Able-Baker Call Center Problem") described in the lectures and given in the textbook, simulate a queue system with two servers. Use the same terminology given in the example.

1.) Build the simulation model and define the scenario with the given input values (e.g. arrival and service distributions). Analyze the system simulating the arrival and service of the customers. Measure the performance of the system.

2.) Replicate the model or build a new scenario with new arrival and service distributions. Values will be your own. Measure the performance of the new system.

3.) Compare two systems based on performance metrics. Make your comments on the performance results and their comparison.

Deliveries:

The following deliveries will be submitted via personal ***Turnitin*** account.

a) The ***model*** designed in *AnyLogic* latest version. Please use the link for "Homework-3 Code" in *Turnitin*.

b) A ***report*** including the following items. Please use the link for "Homework-3 Report" in Turnitin.

- Answers to the 7 questions given in the Example 2.5 ("Grocery Checkout").
- Outputs for the following performance measures for both scenarios:
  - Customer's average waiting time.
  - Proportion of time that the server is idle.
- Comparisons and discussion on the results.

If you have not have a ***Turnitin*** account yet, you will soon receive an email having your account credentials.

This is an individual homework for students. Group study, collaboration, and cooperation are not allowed.
Due date is October 29, 2018.

Ask any unclear matter to the lecturer. Good luck…

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