CSE-411- Simulation and Modeling - July 2017

Assignment 2:

Simulating a Dry Cleaner (*ex-2.26*)

Event graph, Random numbers streams, Performance metrics, and Language for coding

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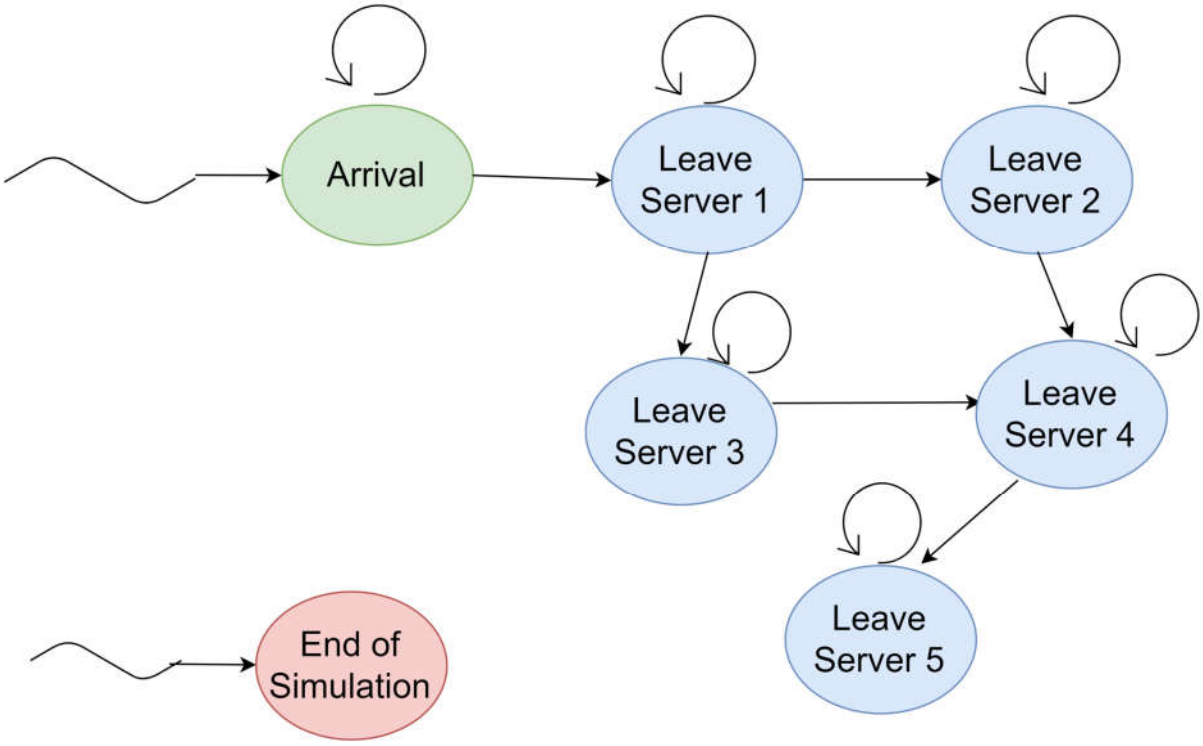
1. Description

We will simulate a dry cleaner. Two-piece suits are processed by a dry cleaner. Suits can get damaged during the process.

2. Event Graph



3. Random Numbers Streams

*The time variables are given in minutes.

Stream	Description	Distribution	Mean Value
1	Server 1 service time	Exponential	6
2	Server 2 service time	Exponential	4
3	Server 3 service time	Exponential	5
4	Server 4 service time (undamaged)	Exponential	5

5	Server 4 service time (damaged)	Exponential	8
6	Server 5 service time	Exponential	12
7	Interarrival time	Exponential	10
8	Jacket damaged	Bernoulli	0.05
9	Pants damaged	Bernoulli	0.1

4. Performance Metrics

We will compute the following performance metrics:

a. Average time to process suits
b. Average length of each queue
c. Utilization of each server

5. Language for coding

Python