# Assignment

Roll: 1405065, Problem No: 2.29

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## 1 Event Graph

Figure 1: Event Graph

Start Simulation

Enter Service

Unsatisfied

Departure

Wait in queue

Satisfied

Find Simulation

## 2 Random Number Streams

- Stream-1: For calculating inter-arrival time, exponentially distributed
- Stream-2: For calculating service time, uniformly distributed
- Stream-3: For calculating Customer's satisfaction probability, uniformly distributed

### 3 Performance Metrics

- $\bullet\,$  Number of Servers 5
- Simulation Time 480 minutes
- Total Satisfied Customers 2422
- Maximum Queue Length 1
- $\bullet$  Average Queue Length 0.000042
- Average Customer Delay in Queue 0.000361
- $\bullet$  Average Utilization of Servers 0.028952

## 4 Language/Platform Used

Python 3.5.2