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**Faculty of Engineering**

**Computer and Communications Program**

**Performance Evaluation Project**

**Call Center Simulation**

**Presented by:**

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Task 1:

Simulating of a call center with a proportion of impatient customers. Assuming that calls arrive according to a Poisson process with a mean rate of 220 call/hr. The mean service capacity of the call center is 230 call/hr. The service times of the call center agents are exponentially distributed. Assume that 10% of the arriving customers are impatient, who abandon the system if their waiting time exceeds 3 minutes. Use prioritized routing, where the customers are divided into two classes. The higher priority class comprises 20% of the arriving customers

System Simulation:

Diagram, engineering drawing

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**Client Generator(Entity Generator):**

Graphical user interface, text, application, email

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Graphical user interface, application, Word

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**Queue:**

Graphical user interface, text, application

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**SW**

**Server:**

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**Switch:**

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**Task 2:**

**Same simulation as task 1 but no impatient customers and we’re using the FCFS service discipline.**

**System Simulation:**

Diagram

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**Queue:**

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**Task 3:**

**We Use an M/M/INF\Infinity model, to estimate the number of agents (m) required to keep the probability that a customer has to wait does not exceed 0.05.**

**A piece of paper with writing

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**So we use a M/M/3 model**

Diagram, engineering drawing

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Graphical user interface

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