COMP 395

Simulation Design

# Project 1 - Simulation

Worth 25% of your final mark

# Instructions:

In groups of 3-4, develop a simulation of your choice. Your simulation must represent a task or scenario and replicate it as closely as possible. Interaction by the user must be kept to a minimum. Only specific controls (such as sliders, toggles, etc) should be made available that allow the simulation to change. Controls must alter important variables present in the simulation. Give your group and simulation a name.

Examples of Simulations:

* Retail check-out simulator (Grocery store)
* Class-student distribution simulator
* Celestial object simulation
* Terminal check-in simulator
* Stadium evacuation simulator
* *Your choice* (**Note:** Please sent me a message on Slack describing what your group is going as soon as possible).

# Part 1 - Simulation Pitch (5%)

Create a 5 - 10 minute presentation outlining the simulation your group will develop. Describe what your simulation is and why it is important (your model). Touch upon technical information such as any algorithms you may use to implement your simulation, structure of your program (UML), etc. Provide visual aids (sketches, flowcharts, diagrams) to emphasis your development. Use **slide 31** of the week 3 lecture as a guide!

### Submission:

* Presentation material
* Visuals used in presentation
* Planning documents

**Due: Week 4**

# Part 2 - Pre-final Presentation (5%)

Create a 5 - 10 minute presentation showcasing your work on the simulation at this point. **You must have a runnable build for this presentation**. Describe the implementation of the components within your simulation and justify your implementation. Describe any challenges faced during development. Mention any remaining features that will be implemented over the final week of development.

During presentations, **all other groups** are asked to create a **Slack Post** with the name of the group presenting as the title. Provide feedback to the group on their simulation (not presentation). Feedback should include what you like about the simulation and what you recommend for improvement.

### Submission:

* Presentation material
* Video demonstration of your build (can host on YouTube and provide a link).
* Link to GitHub repository.

**Due: Week 6**

# Part 3 - SimShowcase 2017 (15%)

Upon entering the (Thursday) class, divide yourselves evenly throughout the classroom and have at least 1 instance of your simulation running on a machine (more instances are better). Have a least 1 member of your group present at the simulation at all times. (Note: **Bonus marks will be considered for booth appearance**)

We will be holding **“SimShowcase 2017”** whereby each group will host a booth showcasing their simulations. You are encouraged to visit other booths and try/observe each other’s simulations. Each group will receive an evaluation sheet for the other groups which must be filled out and submitted.

### Submission:

* Link to Github repository
* Zip of your simulation (TESTED PRIOR TO SUBMISSION)
* Development documentation
* Evaluation (1 per group)

**Due: Week 7**