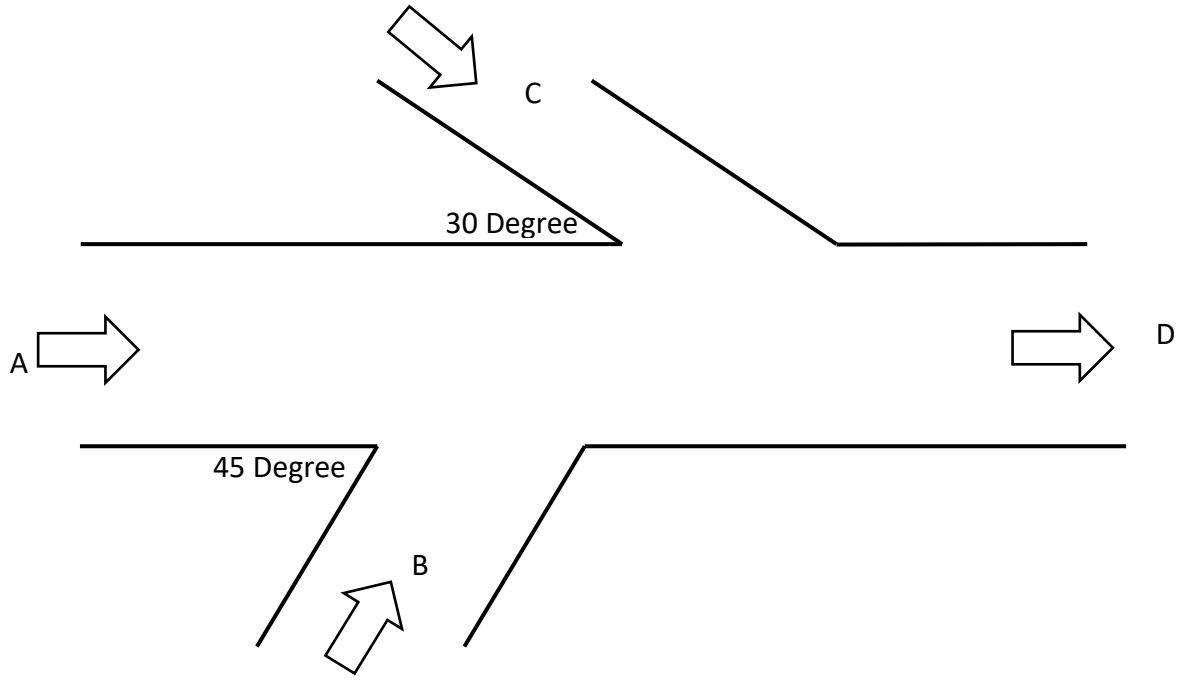
Assignment

Detection of Stampede Using Discrete Event Simulation



Description

1. Human traffic enters from Road-A, Road-B and Road-C
2. Human Traffic Exit from Road-D
3. Width of the roads can be assumed of any practical size
4. Inclination of roads is shown as 30 Degree and 45 Degree
5. Human Traffic may include Young Male, Young Female, Kids, Old people etc.

Requirement

1. A real-life scenario needs to be created and simulated (Discrete event simulation) on the graphical application (Use OpenGL preferably). OpenGL based simulation application is required to be developed
2. Pressure created during the human crowd need to be measured
3. Based on the human traffic pressure, stampede need to be decided and declared once threshold crossed
4. Use Priority queue data structure for creating human traffic entities
5. Documentation for each activity (Detailed document of the requirements and Design of the simulation application)
6. Work report

Phase-1 (5 Days)

Prepare detailed requirement specification

Phase-2 (10 days)

Prepare detailed design document

Phase-3 (40 days)

Implement the design and complete the testing

Phase-4 (5 days)

Prepare report and demonstrate

Learning Outcome

1. Discrete event simulation
2. Implementation of priority queue data structure
3. OpenGL
4. Modeling and designing real world problem
5. Software documentation (SRS & SDD)