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|  | **Rochester Institute of Technology**  **Golisano College of Computing and Information Sciences**  **School of Interactive Games and Media**  **2145 Golisano Hall – (585) 475-7680** |  |

**Data Structures & Algorithms for Games & Simulation II**

**IGME 309, 2015 Spring**

**A12 – Spatial Optimization**

Due: Wednesday May/11/2015 at 11:59pm

This homework assignment is meant to be completed in teams. The purpose of this homework assignment is to show how your spatial optimization code works outside of your final project.

As the data structure used to optimize your final project was open to any option there are not many restrictions for this assignment.

You should create a solution in which you are able to load any number of objects on the scene (preferably a large number of them) and showcase how your data structure optimizes the framerate of your application.

All objects need to be checked for collision and your spatial optimization data structure needs to be displayed. With the press of a button your spatial optimization should be switched to a brute force check and backwards (you should also include the framerate in display and whether your spatial optimization data structure is enabled or not).

As usual, feel free to use your own solution or base your deliverable on the ReEngine. There is an example binary under Assignment 12 in MyCourses

Your grade will be as follows:

10% Enable / Disable SO check (Brute Force / Spatial Optimization).

10% Enable / Disable Spatial Optimization visual representation.

10% Colliding objects highlight.

15% Recreate data structure on the fly.

55% Reduce FPS visibly by having SO check enabled.

Submit to the dropbox labeled A12 – Spatial optimization