

## CPSC 427 - Video Game Programming

### Individual Progress Report Milestone 4 – Dec. 6, 2021

- Summarize your own contribution to the milestone.
  - I implemented observer patterns for collision detection in WorldSystem using WorldSystem as the Observer and PhysicsSystem as the Subject.
- Did you go beyond a basic implementation?
  - No, it was a pretty standard implementation of observer pattern, except for one issue explained below.
- Does a feature need an explanation to appreciate its complexity?
  - Instead of having to loop through all Collision components every time WorldSystem calls step(), PhysicsSystem will notify all observers when they occur so that they can be handled as appropriate.
- Did something take more time than expected something that did not work?
  - It kept crashing after I initialized the game. After debugging for a really long time, I realized that when WorldSystem inherits any classes, it breaks the OpenGL callbacks that casts a GLFWwindow\* into a WorldSystem\*. I tried many ways to fix it and I ended up using a dummy KeyCallback class to redirect input into the WorldSystem methods.
- Anything else to report? Did you do more than the others in your team? (It can totally happen that everybody contributes a good part to the project but one person goes beyond our expectation. In such cases, we will not deduce points from the others but increase the multiplicative factor of the person doing extra work)
  - No.
- Is there an issue with teamwork? (Please try to articulate and resolve issues early! First internally and if that does not help reach out to a TA or Instructor or mention here)
  - No.

**Submission:** Please format your reports as PDF documents and submit with 'handin cs-427 progress#', with # the milestone number, e.g 'handin cs-427 progress1'. It is an individual submission.