

## CPSC 427 - Video Game Programming

### Individual Progress Report Milestone 3 – Nov. 22, 2021

- Summarize your own contribution to the milestone.
  - I implemented A\* pathfinding and behavior trees for this milestone, which were mostly based off of material from the lectures. I created prey entities with new assets that uses these features to roam around the map by randomly selecting valid tiles and navigating to them using A\*. When the player is within a certain threshold, the behavior tree will make the prey run away from the player, also using A\*.
- Did you go beyond a basic implementation?
  - I implemented all the common behavior tree control nodes, even some that I wasn't planning on using, including selector, sequencer, inverter, succeder, and various types of repeaters. These can be used in the future to expand the capabilities of the in-game AI.
- Does a feature need an explanation to appreciate its complexity?
  - I use pointers with the 'new' and 'delete' keywords to give better control over when child nodes should be created and destroyed. I also implemented A\* as a class, so it can be used outside of the behavior tree system if it's needed.
- Did something take more time than expected something that did not work?
  - The behavior tree was quite tricky to debug and I had to rewrite some parts multiple times to get it to work correctly.
- 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)
  - Not really.
- 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)
  - Nope.

**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.