INFO6017 - Artificial Intelligence

Project #2

Due Date: Friday, March 16th,11:59 pm

This is an individual assignment. One submission is expected per person.

The submitted code must compile. If it does not compile, then the mark assigned will be zero.

# Basic steering behaviors and decision making.

You will create a program that demonstrates the steering behaviors (Pursuit, Flocking, etc.) and state machines

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|  | Item | Marks |
| 1 | Player Controlled object, with health that they lose if they touch.(Simple circle overlap is fine for “touch”). | 5 |
| 2 | There are three kinds of opponents: "Angry", "Curious", and “Follower”  The opponents' decision making is:  If you are outside of the **attention radius**, they don't react to you, except “Angry” which will charge on low hp.  Else  If you are facing them, they will **Evade**  If you are facing away, they will **Pursue** if "Angry" or **Arrive** if "Curious"  ***- proper implementation includes rotation***  The opponents' type and state is easily visible (maybe by color, or model)  For example:  Angry opponents could be Teapots that have the following colors:  (Pursuit : Red, Evade: Orange, Other: White)  Curious opponents could be Bunnies that have the following colors:  (Approach: Blue, Evade: Purple, Other: Gray) | 25 |
| 3 | Opponents properly implement two states based on conditions revolving the player.. | 10 |
| 4 | There is an external file that defines the scene. The following are configurable:  - The player's initial position, and speed  - The number of opponents, and their average speed  - The camera's offset  - The dimensions of the playable area | 5 |
| 5 | Deal with the "playable area": have some boundaries that limit the region everything can happen in.  Eg 1: Hard borders: some hard boundaries you just can't get past.  Eg 2: Portal borders: your world repeats... if go past the right border, you'll come out on the left side.  Eg 3: Respawn borders: if you cross a border, your state gets reset and you respawn at some random spot in the playable area. | 10 |
| 8 | BONUS: Enemies of the same state will flock together | 5 |
|  | TOTAL: | 55 + 5 |