**This lab is worth 5% of your final AI4Games grade.**

**Due date Friday October 3rd 5pm**

**Lab 3**

Building on your project from Lab 2.

Implement a swarming algorithm using the LJ-Potential function

To do:

1. Create a small NPC of your choice that moves in any random direction and continues to move.
2. Create 50 instances of this NPC to create a swarm
3. Write a swarm behaviour and assign it to each NPCs. You will need to implement the Lenard-Jones potential function and play with the constants A, B, n and m to get a good swarming behaviour.
4. Modify the code so that 100, 200, 300 copies of this NPC are produced and observe see how the program reacts.