**Spike:** 7

**Title:** Emergent Group Behaviour

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**Goals / deliverables:**

The primary goal of this spike is to create some additional A.I. Behaviour such as adding Cohesion, Separation and Alignment. In some cases, as provided in the instructions, some blanks need to be filled in. Other functions are updated in order to use the additional steering behaviour in the program.

**Technologies, Tools, and Resources used:**

* Pycharm 3.1. for Microsoft computers
* Python 3.6, for separate testing.
* Additional research e.g. the python website.
* Microsoft word for the construction of this document.
* Refer to simple code A.I. in lab 6.
* This spike is known as Spike\_7\_report\_9718648.

**Tasks undertaken:**

This section should resemble a tutorial – the goal is to allow another coder to reproduce your work following these steps.

* Read through the criteria and go over the lab 6 code
* Find out what the blank spaces are (### - comment type hint) and fill them in.
* Compile sample code.
* Keep testing to make sure the program works and find out how it can possibly be extended.
* Read the source code.
* Run code.
* Write Spike Report.

**What we found out:**

The outcome was testing the program, Making sure the errors were corrected and what happened once the code was executed. We found out that some of the A.I. behaviour would conflict sometimes especially if the A.I. Behaviour is randomised.

**Open issues/risks:**

* I did have some trouble with the code prior because even though the comments specified what needed to be done with the program such as fill in some of the missing blanks but the issues I had was how to fill in those missing pieces.
* There was also the issue earlier on with what program to run it on whether it would be a browser, python or Pycharm. Getting those programs mixed up is not good for progress.
* I eventually figured out what the issue was and fixed it.

**Recommendations:**

* Make sure you use one program you are comfortable with and stick with it because performance varies on each program you come across when coding in them. My choice was Pycharm rather than python.
* Make sure you do the right kind of research because you need to make sure what those missing spaces are and try to find a good way to fill them without ripping another person off.
* The types of functions I mentioned earlier on were references to the second lab where we had to create a Smart A.I. which behaved according to how the player did. Those functions were supposed to actually get the program working properly not necessarily program an A.I. the errors were listed and acted on accordingly.