Mack Tang
May 2nd, 2018
Programming Projects
Project (Final Project Final Submission)

Link to Version Control: https://github.com/macktang/AtomJumper.git

Planned for Today's Assignment:

10		Add Menu functionality, including settings which can change player appearance (which unlock after certain high score is reached), or adjust sounds		
11		Add a scoreboard functionality, which shows and tracks player high scores	May 2 (Final Project) [2 weeks]	Code for final game with menu and unlock able appearances, and scoreboard

Actual Accomplished for Today's Assignment:

10		Read more in-depth about neural networks		
11		Setup the beginnings of mackNetwork.py, a standalone script which is a hello world type project for neural nets. The goal is to make and train a neural network to have the functionality of an XOR gate, without using any machine learning libraries.	May 2 (Final Project) [2 weeks]	Code for final game with menu and unlock able appearances, and scoreboard

Explanation of why what was accomplished deviates from plan:
Implementing a neural net for the last deadline turned out to be much more difficult that I thought. I was only able to read more about the theory and not actually implement any code. For that reason I didn't submit anything for the last deadline, but I gained a solid understanding of the theory, and now am using that knowledge in this submission to move towards actually implementing machine learning in code.

I still wanted to do something involving neural nets, even if it was much more simple than automating a game. After some research I found that a good hello world to neural networks would be to implement my own neural network using what I read about the theory, to do something simple such as an XOR gate.

The code I submitted today is the beginnings of that code. I am still planning to make it functional by my interview grading on Friday, so please try to run the latest commit if possible. I will update this document with what is actually finally accomplished and recommit it.

Resources/References used:
Overview of Neural Net math: https://www.youtube.com/watch?v=aircAruvnKk
Training a Neural Net: https://www.youtube.com/watch?v=IHZwWFHWa-w
Well Accepted book on NN: http://neuralnetworksanddeeplearning.com/chap1.html