William Sanders

Design Documents

The game that I designed is a tower defense. When the program first runs, the start screen is the first thing that appears. The interface has two boxes you can click to play the game, or to go to the help screen. You can also either press ‘s’ or ‘h’. You are able to press r at any time to reset the game and return to the start screen, and also hit h at any time. You can also pause the game with p.

The first problem I encountered, was having a board being randomly generated. This is done in the makePath function, which starts from the first column and moves right. The next problem I had was when having enemies spawn, and I created creatingEnemiesRolls function that will generate either one of the three enemies. I also had trouble shooting enemies, so I made shootEnemies which when an enemy is within the radius of the tower, will have the tower be fired. The projectile is then moved on onTimerFired. I also had trouble with figuring out how to choose between different towers, but this is done in displayTowerSelection, which is a very long function, but that lets you click on the different towers.

<https://www.dropbox.com/sh/pk7xtv61x4nppo6/AADB9qkeIFVsLSqk1oq5k3haa?dl=0>

Watch my game

**Design Documents**  
In your top-level project directory, include a directory named "design", and in that directory place all your design documents. At a minimum, this must include a paragraph or two describing the problem you are solving and the general approach your code takes to solve it. After reading this, another programmer (or a CA!) should be able to make sense out of the module or modules you designed and the most important functions they contain. Also, you should discuss your user interface (assuming you have one, as most of you will), explaining not just what your program looks like but why it does so. For example, many of you started your projects by studying similar programs on the web -- you should list those here and explain what was good and bad about those programs and how they influenced your design. You should also include any other supporting design documents you might have (particularly from earlier deliverables), such as storyboards or any other materials you made in the course of designing your project.