Python Game

A space shooter game written in Python with the Arcade Library

Introduction

To further expand my knowledge of Python and to see the language being used in a new way, I challenged myself to learn the game library and create a functional game in less than a month. I worked on this game mostly during the week for just a few hours a day.

The goal of the game was to create a space shooter type of game with randomization, weapon upgrades, different enemy types and a leaderboard which would displace at the end of the game. While I do not consider this "production ready". It is a functional game and it's really fun to play.

Controls

Based on user feedback, I have added support for both mouse and keyboard. For the keyboard controls, WASD moves the player and the enter key fires. For the Mouse controls, the mouse moves the player and the left click button fires the laser.

Objective

The objective of the game is simple. You must defeat as many enemies as possible without dying. The game is broken up into waves. Each wave has a number of different enemies. Each wave the enemies also get stronger, faster and their lasers do more damage to you. Your score, health and the number of enemies left in the wave are always displayed on screen for you to see. Keep in mind that each game is different due to the randomization. The only constants in the game are the damage the lasers do and the number of enemies each wave (it increases at a linear rate). The enemy speed, movement and fire rate are all randomized. A screenshot of the game is included for reference.
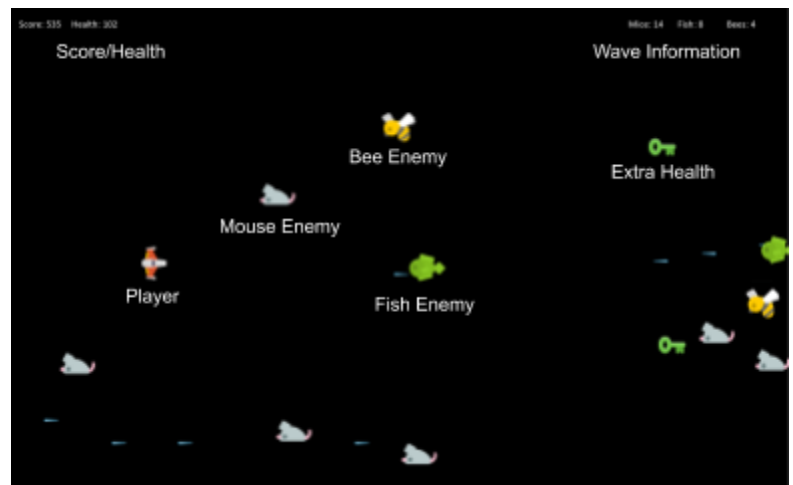
Enemies

There are three types of enemies in the game. I choose the sprites for the enemy types just by what was available by default in the library (see "Final Thoughts" for more on this). While all enemies fire with the same randomized logic. Each enemy type has a different move pattern and each enemy moves with a different speed within their movement type. The mouse enemy is the most basic and just moves in a straight line. The fish enemy is worth more points for defeating, has a bit more life and moves in a wave pattern. The Bees are the highest value enemy, have the most health and move in a random zig-zag pattern.
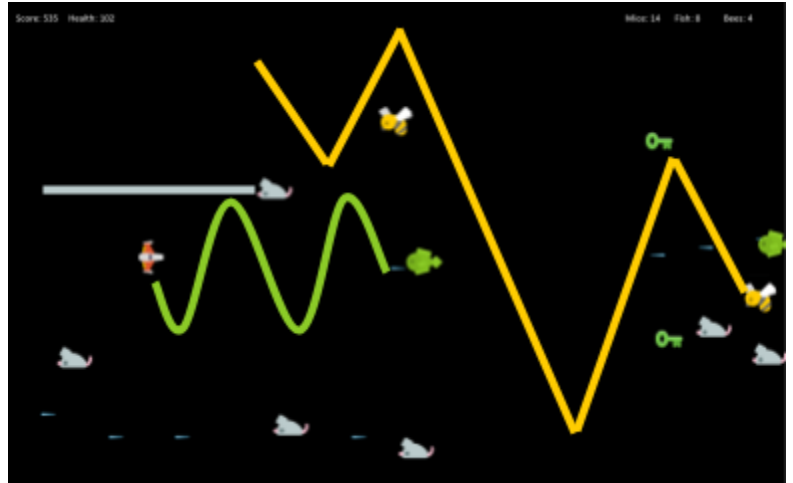
For defeating these enemies, there is a random chance the fish or bees will drop weapon upgrades. For more on this, please read the upgrades section.

Upgrades

To help defeat the waves of enemies faster, there are weapon upgrades dropped by the fish and the bees. The fish drop silver coins which provide the double laser upgrade and the bees drop the gold coins which provide the spread laser upgrade. Each upgrade only lasts for a short time and the coins are also on the playing field for a short time so act quickly to get the upgrade. Below are the screenshots of the double laser (left) and spread laser (right).
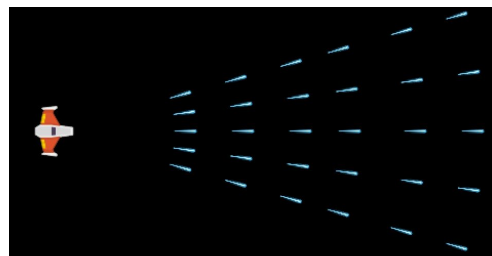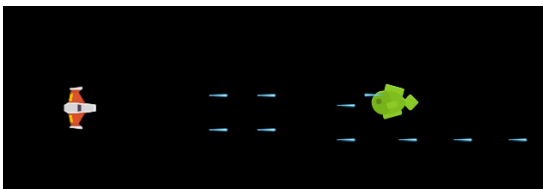
Final Thoughts

While this game was a blast to make, it is fun to play and it is completely functional (complete with leaderboard), I do not consider the game to be "done". This was a learning exercise for me which I plan to go back to and add more polish to it. I would like nicer images and I would like a cleaner user interface for the player. Some of the player feedback I have received is that the font should stand out more. Things like this are going to make it feel more done. This however, is a project for a different day.