

6.111 Final Project

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Abstract

The goal for this project is to create a game loosely inspired by *Asteroids*, or, more recently, *Geometry Wars*. The player's avatar will be a ship, with which the player has two primary ways of interacting. The ship is able to move and shoot, but is able to do so in independent directions. Movement is reasonable using discrete input, such as the arrow keys on the keyboard. However, a more analog control scheme is desirable for the direction of the shooting. At a basic level this could be accomplished using a mouse, but, given sufficient time, the game experience could be improved if the user was allowed to control shooting without a tactile controller, for instance by using either a theremin-like interface or visual input to communicate positional information. The player's goal is to survive as long as possible while a variety of enemy ships, each type having its own simple AI, spawn and try to destroy the avatar.

Graphically, the goal is to create visuals reminiscent of vector graphics. That is, all in game objects would be treated as 2D wireframes. This should permit an interesting aesthetic experience as well as permitting transforms on game objects such as scaling and rotation with a fair amount of ease compared to sprite based graphics.