

Design Document: Space Shooter

The premise of the game is a side-scrolling space shooter game whereby enemies and obstacles will come in from the right side and the player can shoot them down or choose to avoid them by moving sideways (up and down). It'll be a single player game and points are rewarded as the player destroys enemies as well as depending on how long the player survives for. I'm still deciding whether to let the game go on forever so the objective of the game would be to get the highest score possible or for the player to actually reach an end zone to reach a game won state. Game entities will include: 1) player ship 2) enemy ship that attempts to follow player 3) enemy ship that shoots 4) destructible obstacle 5) indestructible obstacle 6) Possibly items that powerup the player. The player will control the ship and can move up and down with the arrow keys, shoot with space, and possibly use items with "I."

Class PlayerShip will be controlled as described above. The class will also include attributes such as number of lives, position, current score, items they hold, image attribute, and so forth.

Class Enemy will be the parent class for the two enemy ships. The class will have attributes for position, image attribute, and speed. FollowEnemy will derive from Class Enemy and will try to move toward the player to try to crash towards them. ShootEnemy will also derive from Class Enemy and will move from right to left slowly and try to shoot the player down.

Class Obstacle will be the class for the two obstacles. It will have attributes for position, image attribute, speed, destructible or not, and angle of movement. Rather than moving straight from left to right, some will swerve at an angle.