

Detailed Design Document (Team 3)

The player spaceship movement:

The spaceship can move in the XYZ directions.

~~Idea 1: A=left(laterally) D=right(laterally) (W=forward S=back) restricted =↑ Z direction~~

~~(horizontally) = ↓ Z direction (horizontally)~~

Idea 2: Q: Accelerate E: Decelerate W: Upward Z direction S: Downward Z direction A: Left

D: Right

Mouse: Aiming

Spacebar: ~~fire weapons~~

Left Mouse Click: Lasers

Right Click: Fire Missiles

We will set up boundaries that the ship cannot go through so the ship is basically flying through a tunnel. ~~When the ship gets too close to the boundary it will get a warning like ("ENTERING asteroid belt explosion imminent) then boom.~~

We should make it so the player forward movement is restricted so they are always more or less flying forward. Boundaries stop player from crashing into environment.

Spaceship health:

(options are give the spaceship health or not we're going to have to figure it out because we'll need to make the bosses have health)

~~Could also not do health but instead give the player a certain number of lives and potentially have a powerup grant an extra life.~~ Spaceship starts at full health and full shields. Player will drain shields until gone then start to decay health afterwards.

Powerups will replenish health/shields. Enemies making contact with player will explode and damage shields/health.

Power-ups:

We have two basic options here; power-up randomly spawn. Power-up randomly appear after killing an enemy or asteroid.

Power-up could be increased rate of fire, increased damage, increased weapon spread, Give player health (unless full), give player shields(unless full).

(possible different types other than just a laser, like missile or bomb)

(possibly shield and health power-ups)

Enemy ships:

Enemy ships will be a basic AI that try to “predict” player’s movement and shoot at a constant rate. As the player progresses through the game, AI ship’s shoot at a faster rate.

Different enemy ships with different rates of fire/health(?)

Stationary targets will shoot at a “predicted” player position.

Enemy Movement:

(if we have the ship only moving in a tunnel then we can just have the ships move straight and fire randomly which would make the game much more playable because otherwise the enemy would pretty much kill you instantly)

Basically enemies would spawn and only move one direction.

Boss movement:

My thought for this would be to stop forward movement during the boss battle.

This will also make it clear that this is different from the other enemies. Bosses move slower than other enemies and hit harder. They are larger and have more health. After boss is destroyed, progress through the next level

Player Progression:

The player's goal is to fly through space, shoot or dodge incoming ships and asteroids (~~Levels? Score count? Time?~~). ~~Player starts and level 1 and a background timer counts up to a minute (or so). If player survives long enough, they reach level 2 etc. Each level increases difficulty. After x amount of levels distance then they reach a boss stage.~~
Player will destroy power core to progress to next level.

Environment:

Spawning asteroids move towards the player and either inflict damage ~~or instantly destroys the player if hit.~~ Player in tunnel will have to dodge obstacles in the way.
Destroy power cores to end the game.