

CSS 450 Computer Graphics
Final Project Proposal
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1-player ship battle game

Purpose: to destroy the starbase to advance to next level.

Technical minimums:

Players control their ship with the keyboard

Weapons are simple primitives that destroy other ships on contact

Weapon objects have inertia & fly freely through space until colliding with something

Weapon objects do damage to ships upon collision (trigger sound effect)

Weapon objects expire upon exiting the world boundaries

Ships have inertia & drift freely in space

Ships collide with other ships & obstacles (triggers sound effect)

Enemy ships have extremely simple behavior (eg: turn & fly towards player & shoot)

1-3 damaging obstacles (planet, moon, asteroid, etc) for the player to avoid

World is a black screen with randomly distributed “stars” and 1-3 obstacles

World Window is centered on player’s ship

World window may be zoomed to show more/less of space around player

World window will stop scrolling at the edges of the world

Ships will wrap to the far edge of the world upon passing a boundary

Player has a small secondary display that is a “radar” or map of the world & all objects

Player ships has a GUI object displaying health & ammo

Entire simulation may be paused & resumed at any time