

# Capstone Project Planning Document

## Game Title

Earth Invaders

## Estimated Total Time to Develop

64~80 hours

## Intermediate Object-Oriented Programming for Unity Games Information

Total Time Spent Developing "Oh, Shmup!":	24~30 hours
Estimated Time or Actual Time?	Estimated
Followed Detailed Instructions?	Yes

## Earth Invaders Requirements Specification

Earth Invaders is inspired by the game *Space Invaders*, where enemies will spawn and move down the screen approaching the player. Instead of the normal *Space Invaders*, where after winning over one batch of enemies they just spawn again, I want to make the game with different levels where there will be different configurations of barriers to protect you, different configurations of attackers, etc.

Attackers:

1. Protectors. They are worth 100 point. They do not attack, they just protect the other attackers and move down.
2. Soldiers. They are worth 200 points. They attack with normal, one at a time, shots that deal 100 damage and move down. Once all protectors are gone, their speed doubles.
3. Commanders. They are worth 400 points. They attack with several shots at a time that deal 10 damage each. Once all protectors and attackers are gone, their speed quadruples.

The barriers that protect the player will be partially destroyed every time the attackers move down a row.

The game will keep track and display the player's score and the player's health through a health bar.

The game ends after the player has beaten three all levels.

The game will have three different difficulties:

1. Easy: more protectors than soldiers and more soldiers than commanders. Players shoots fast projectiles.
2. Medium: same number of protectors and soldiers but less commanders. Players shoot normal-speed projectiles.
3. Hard: less protectors than soldiers and same number of soldiers and commanders. Players shoot normal-speed projectiles.

The game will have the following menus:

1. Main menu: play and help buttons.
2. Difficulty menu: easy, medium and hard buttons.
3. Help menu: instructions and a go back button.
4. Pause menu: resume, help and quit buttons.
5. Game over: quit buttons.

There will be sound effects for when enemies move down a row, for shooting (from player and enemies), getting hit or hitting an enemy, for losing, for winning, for clicking a button or hovering over it. There will also be a soundtrack for the main menu scene.