

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.

CREATOR NOTE:

Well, you probably noticed that there is a lot of text that is strikethrough. The reason for that is because I decided to change the scope of what I wanted this project to be.

Initially, I made this game super template-looking with levels of difficulty and pretty much just what I thought Dr. T wanted for this Capstone. Except from the choice of the game, this didn't really feel like it was my own.

I am changing that.

The part I had most fun with was making the different level mechanics. Hence, instead of **different difficulties**, this game is going to have **different levels** where each one is (hopefully) of increasing difficulty.

Hope you enjoy.

Dan Chiarlone.

CREATOR NOTE 2:

- What's changed?
 - 1) I drew and added all the art for the game.
 - 2) I implemented that if enemies hit the bottom side of the screen, it's game over.
- What's missing?
 - 1) I have to make and add all the sound for the game.
 - 2) I have to implement the point system and display.