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Game Overview

Platform: PC/Web GL Build on itch.io
Genre: 2.5D side-scrolling shooter
Rating: (10+) ESRB
Target: Casual Gamer
Publisher: Student Name/GameDevHQ

Build a 2.5D side scrolling shooter as a team. Your game must contain a main menu and 1 game level. The game must be published to itch.io for credit. The player will control their ship from a side perspective and use the PC keyboard to determine their action. Enemies will spawn in waves and will either be simple 1-2 shot enemies, multiple shot mid-level enemies, and final bosses. Weapon power-ups will occur throughout the level, granting the player new armament and multipliers will drop based on performance with the higher performance leading to the best weapon drops. At the end of the level, the player will be given currency based on time completed, damage taken and upgrades gained.

Unique Selling Points

2.5D space adventure
Web game
Lots of exciting and varied gunplay

Competence Titles

Course 1 - 2d shooter is a minimum requirement. Recommend 2.5D, Cinematography, Mobile, 3D, and C# Survival Guide for optimal experience.

If the user has completed the courses, expect around a 2-3 day build of the complete game.

Game Objectives

In each level, the player must withstand waves upon waves of enemies before he reaches the final boss. During the level, the player can:
• Collect power ups
• Survive

Game Rules

- Player is locked into a specific path/speed during the duration of the level. Waves of enemies will attack the player. The level ends when the player defeats the end boss.
- There is 1 checkpoint per level.
- The player can move up, down, left and right using AWSD. Weapon fire can be automatic by holding the space bar down or firing with cool down.
- Weapon power ups sustainability is dependent damage taken by the player. If the player takes damage, the player's weapon level will be reset to the starting weapon level.
- If the player takes damage in standard weapon mode, their ship will explode and they will need to restart the level.
- The enemy will spawn using a wave system. For this wave system, the enemies will spawn from a unique location off the screen at a 1/2 to 1 second interval and fly in a pattern with at least 5 enemies per wave. As the enemies proceed through their loop, they randomly fire a projectile at the player. Add an enemy in every 2-3 waves that have 1 special enemy that is uniquely colored and drops a power-up. Look at Gradius as an example.
- Power ups are dropped by enemy fighters. These power ups must be picked up by the player in order to use. Each upgrade boosts their weapon to the next possible level.

- Once the player defeats the main boss of the level, they will be given a end-game screen and will then move back to the main menu.
- Player can sustain hits but each hit will drop them down to the base weapon level. If the player is hit at the base weapon level, the player will die and you will go back to the main menu.
- A player death and game over screen need to be added by students.

Game Structure

- Player starts game.
- Choose to start game
- Gameplay
- Defeat enemy boss
- Move on to next level

Main Menu

Must load first in sequence. Must allow player to start game and quit the application. Will also contain an options menu for sound and brightness adjustment. Must add audio sound effects as well as background music. **Optional ideas include a difficulty adjustment and animations on button presses.

Game Camera

This game will play as a 2.5D side scrolling shooter, player facing right at all times. Enemies will fly in through waves. They will drop power-ups which will adjust the strength/amount of damage the ship will produce. After surviving all waves, the player will fight the end boss. After winning, display a win screen and fade out to main menu screen.

HUD

Score	Current Weapon
Health/ lives	
	HUD warnings
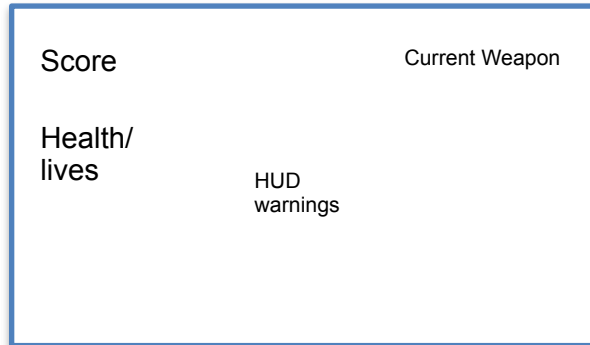
Shows score on top left
In-Game HUD warnings on the top center of the screen
Current weapon on top right

Player

Player Characters
Varies per project

Player Metrics
Speed: Varied based on WASD movement.
Attack Damage: Varied - see states below

Player States

- Idle: Idle state is a static of the ship in neutral position. Plays when the player is still.

- Move horizontally: As the player moves forward, show thrusters increase in strength. As the player moves back, reduce the thruster size.

- Move vertically: The ship pitches up or down based on if the player moves up or down.

- Power Up/Down: The player will flash multiple times as the player gets an upgraded weapon.

- Death Animation: The ship will explode using an explosion particle. This only occurs when the player either collided with a death collider while at base weapon level.
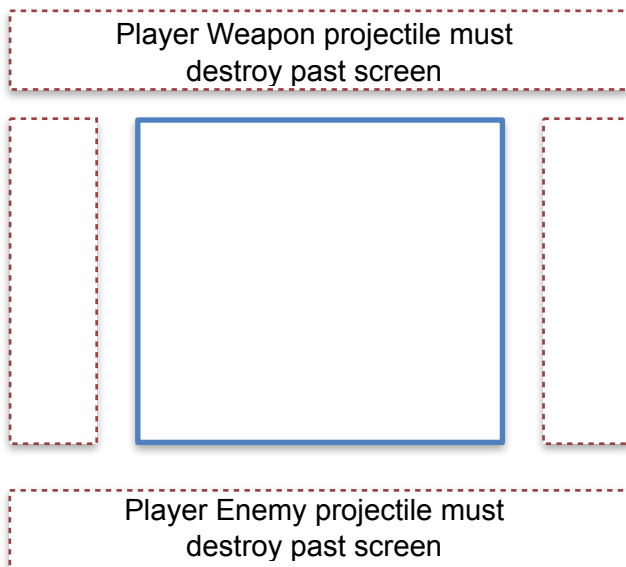
Player Weapons

Player will start with a base weapon/floor. Each upgrade will increase the weapon firing ability based on student in put. You are required to have at least 3 weapon upgrades but you are allowed to have more.

Enemy States

- Idle: enemy standing still
- Move: tilting left or right
- Attack: enemy attacking player
- Death: enemy dying at 0 health

Enemy Logic
Overall level zones

Player Weapon projectile must destroy past screen

Player Enemy projectile must destroy past screen

- Player projectile destroy once they reach past the screen. This will prevent power ups from spawning off screen.
- Enemies will become invulnerable once they leave screen space.
- Enemies will be controlled using a flight pattern. This pattern will be derived from Timeline for efficient development.
- Enemies will spawn in as single entities or with a spawn manager. Will need spawn manager script developed that will function on events in an animation timeline.
- Boss encounters may have multiple levels of complexity dependent on the student group

Enemy Waves

- This game must consist of 16 varied enemy waves and an end boss.
- Wave 1-6 - a variety of cloned enemy passes. Some of these enemies are colored differently and can drop power-ups.
- Wave 7 - A larger ship with unique pattern.
- Wave 8-12 - a variety of cloned enemy passes. Some of these enemies are colored differently and can drop power-ups.
- Wave 13 - 2 larger ships with unique pattern along with waves of enemies.
- Wave 14-16 - a variety of cloned enemy passes. Some of these enemies are colored differently and can drop power-ups.

- Final boss - Boss will fly a pattern and will have unique movements. As enemy takes damage, show smoke trails. Large multi-explosions on enemy boss death. **For certification, the enemy change attack pattern changes at least once as health reduces.

Art

Menu Navigation
This game will use a simple menu navigation system.

Audio
- You must gather audio from free sound.org
- Each game must have background music, sound effects for UI interface, weapons, explosions, and damage taken. Optional music/sfx is welcomed.

Minimum Viable Product

- One player character to choose from
- Built for PC, Upload to itch.io
- For Certification:
    - This is NOT a group project. This is meant for an individual to complete
    - This is NOT a long term project. You should be able to complete this entire game in about 3-5 days. If not, then you either haven't completed the courses or may need to refresh your knowledge. Don't cheat yourself. These courses were designed to help you walk through this with ease. If this is a challenge, take some time to go back through the course material.
    - Build 1 main menu and option menu
    - Main Game Level
        - Each level must contain a minimum of 12 unique waves of enemies that spawn in sequence. The next wave of enemies must spawn when all enemies in the wave have died or if the enemy pattern finishes - whichever comes first!
        - Add unique enemies with a different color hue that drops power-ups to the player. Must have some sort of visible/audio feedback when picked up.
        - Player must be able to upgrade their weapons a minimum of 2 levels
        - Each weapon tier not only uses a different animation/rate of fire/sound effect, but also a different damage level received by the enemy
        - Every enemy needs a hit indication via instantiated small explosion and color flash and must die with an explosion and sfx.
        - Add a health element to the player
        - Must contain 1 mid-tier boss and 1 enemy boss which have hit points
        - Enemy boss must have at least 2 unique attack patterns. The attack pattern changes after the enemy takes a certain amount of damage.   The enemy boss must also have visible damage received either through spawning smoke damage or altering the texture.
        - Must contain a pause menu to exit the game/restart level
        - Use Post Processing Stack for weapon glow/explosions/emission channel glows and color correction.
        - Must contain music/sfx/additional audio elements. Get audio clips from www.freesound.org
        - Must contain custom UI that has values adjust such as a score, total lives, and more.
        - Add a game over screen and a win state based on if the player either dies or completes the level, complete with audio change, UI button options to either restart or go to the main menu, and UI overlay
        - Publish game onto itch.io with a complete description of the game, screenshots, thumbnail artwork, and send a link to your game as a web GL build to certification@gamedevhq.com or review.
    - Certifications will only be given to current or former GameDevHQ Pro Members. The individual who publishes their game will need to send us the email that they used to sign up for our membership. The certificate will be sent to that address as well.

- Certifications will be given digitally upon completion for free. Once we receive a link to your game, we will play and review. We may send back notes on how you should update your game.
    - We will not send a certificate if the game does not meet the MVP
    - We may not send a certificate if the game barely meets the MVP - it needs to be well polished and complete
    - If the changes are not completed, a certificate may not be given
    - Only games with a high standard that satisfy the MVP will be awarded a certificate and is solely at the discretion of GameDevHQ
- If you would like a framed version of your certificate mailed to you, please visit our shop to purchase upon completing your certification.