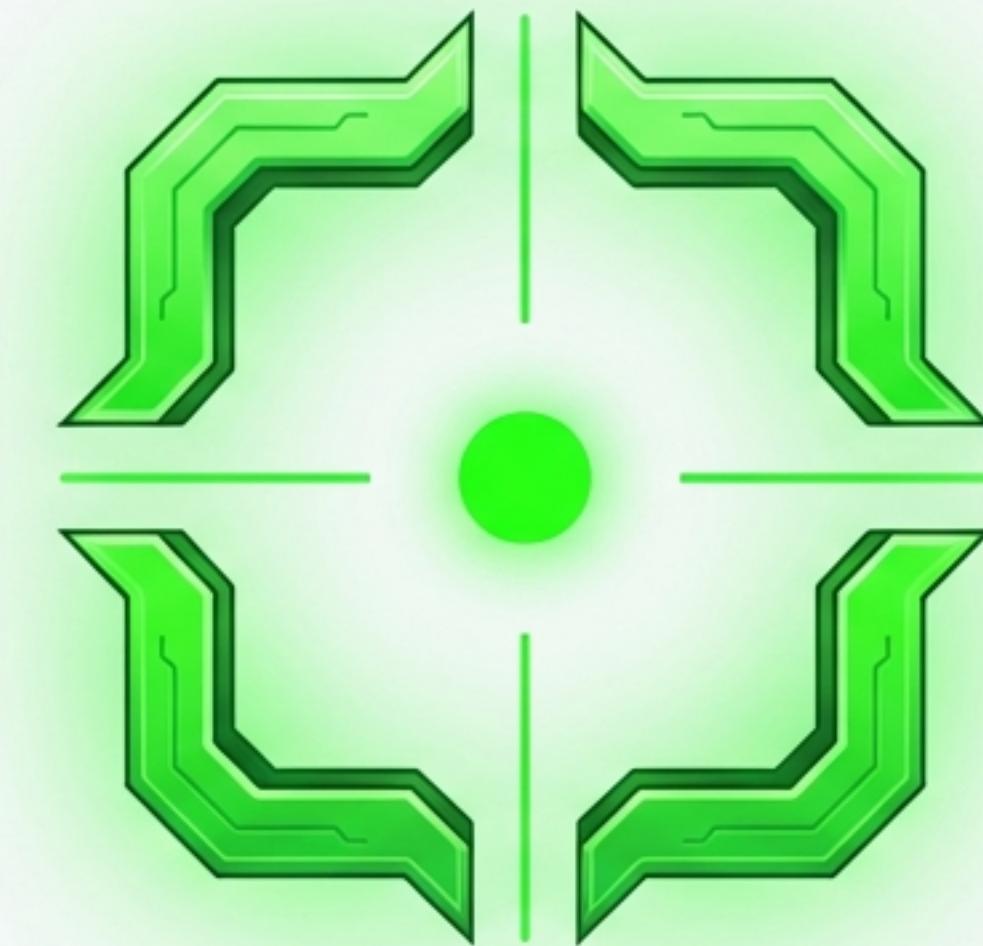


BATTLE FORCE

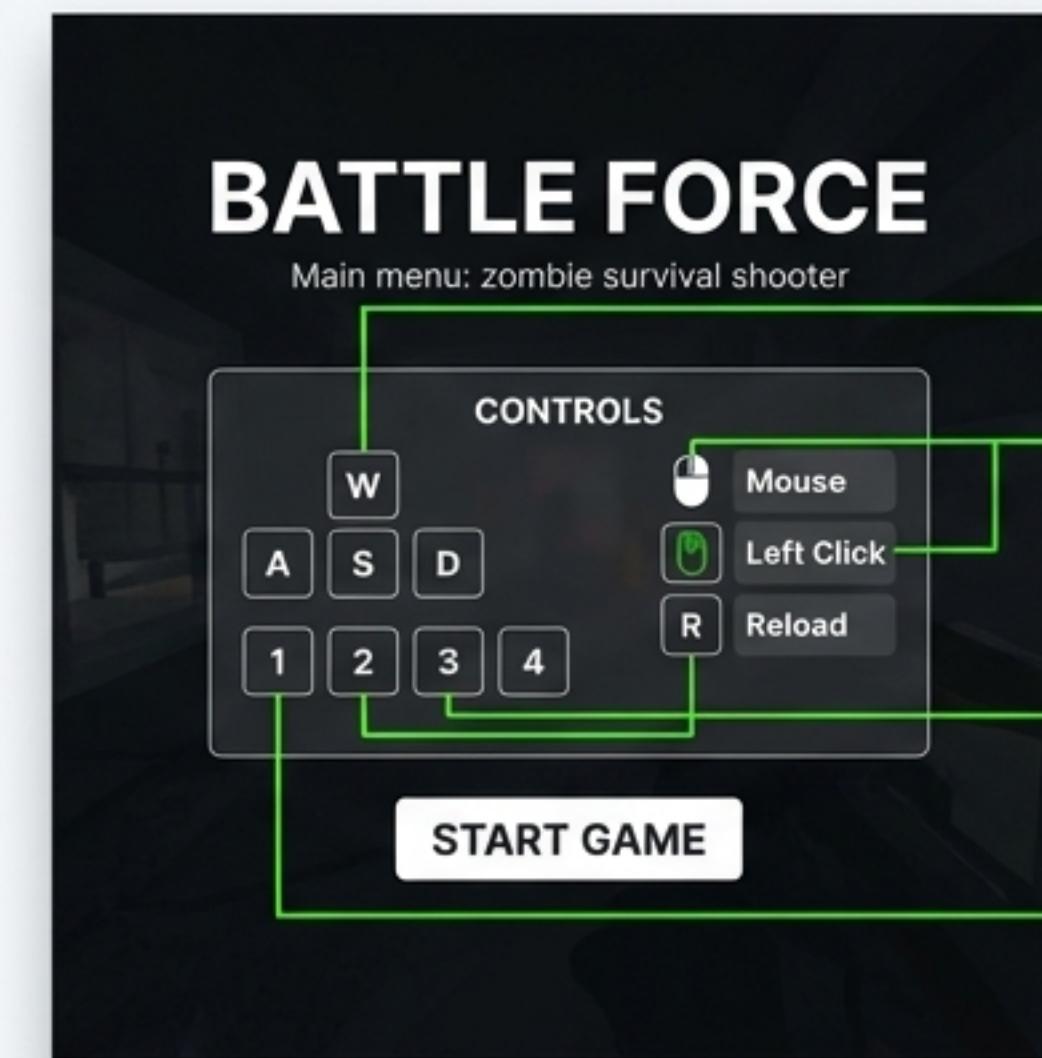


A Project Showcase: Zombie Survival Shooter

Answer the Call: The Mission is Survival

The Premise

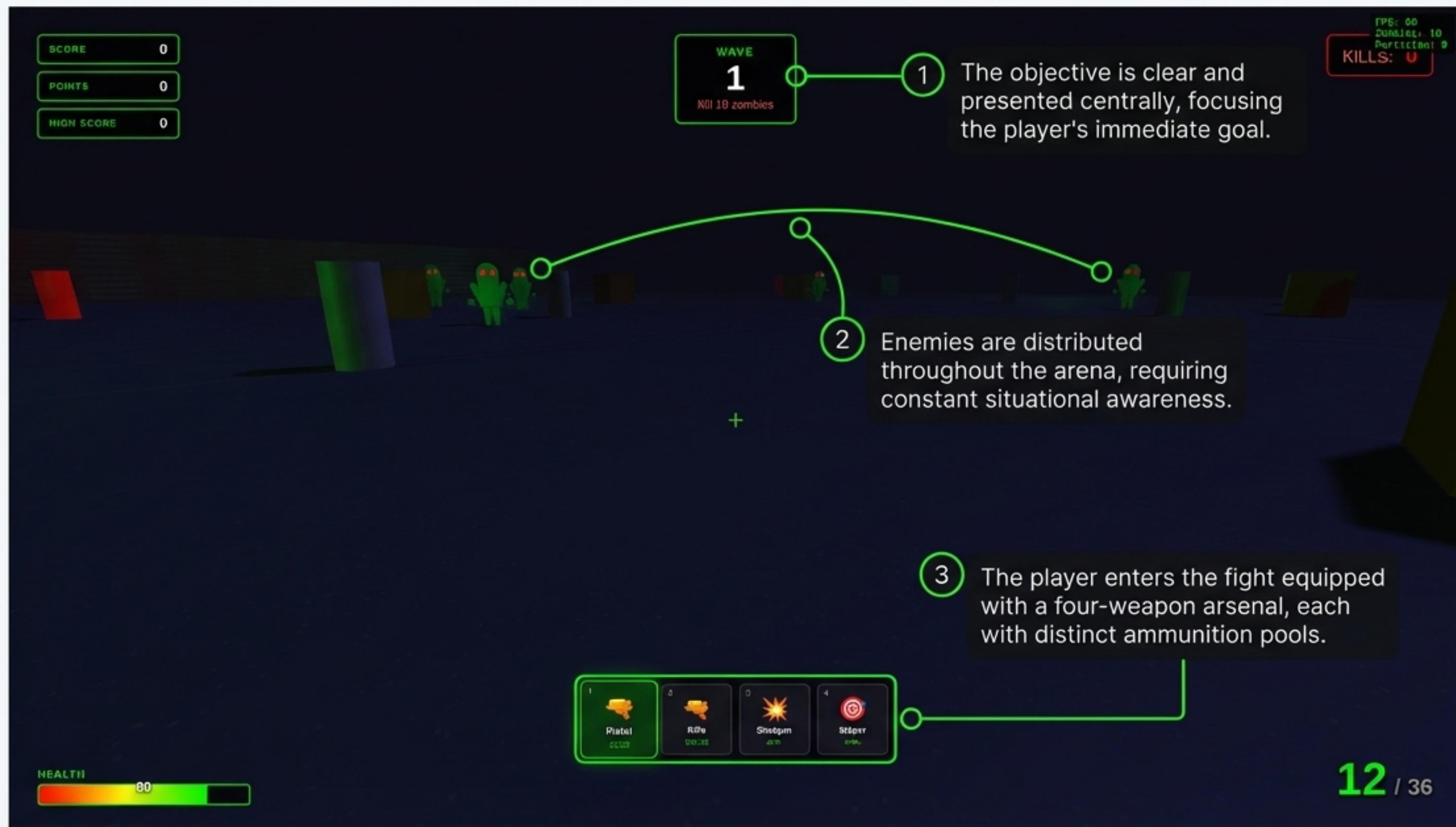
BATTLE FORCE is a wave-based zombie survival shooter built with Three.js. The player's objective is to survive against endless, progressively difficult waves of zombies.



Player Controls

- Movement:** W, A, S, D
- Combat:** Mouse Aim, Left Click Shoot, R Reload
- Arsenal:** 1, 2, 3, 4 to Switch Weapons
- System:** ESC to Pause

Enter the Arena: Wave 1 Begins



The Heads-Up Display: A Tactical Overview

SCORE 0
POINTS 0
HIGH SCORE 0

SCORE 0
POINTS 0
HIGH SCORE 0

WAVE
1
1.0 comb

FPS: 60
Zombies: 10
Particles: 0

KILLS: 0

Zombie: 10
Particle: 0
KILLS: 0

Tracks player performance and the currency used for mid-game progression.

Provides critical real-time data on wave progress and technical game performance.

HEALTH

80



20

10

0

A clear, color-coded bar for at-a-glance assessment of player health.



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0



20

10

0

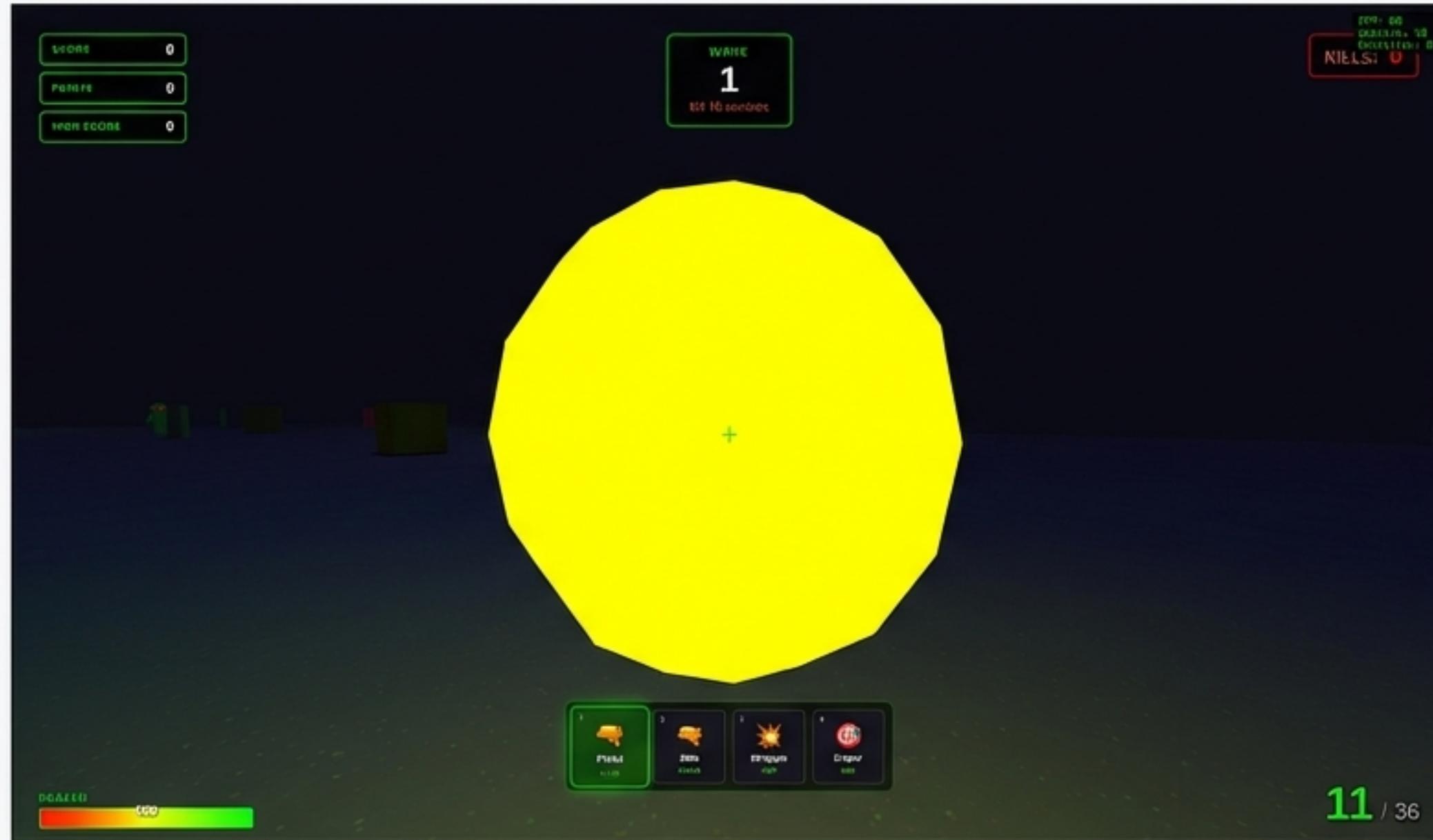


20

10

0

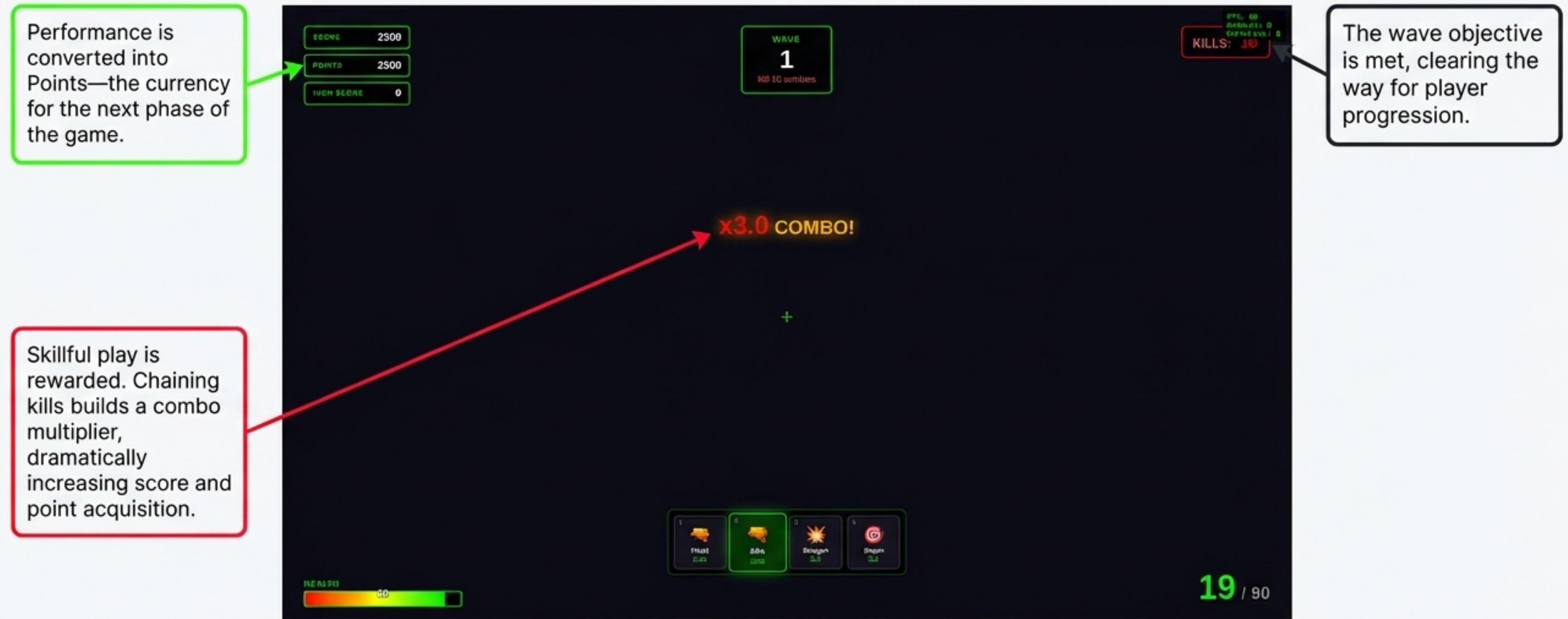
Unleash the Arsenal: Impactful Visual Feedback



Combat is enhanced with real-time visual feedback to create a responsive and satisfying experience.

Dynamic particle effects for muzzle flashes and impacts are crucial for player immersion and confirming successful hits in a fast-paced environment.

Victory and Reward: Surviving the Wave



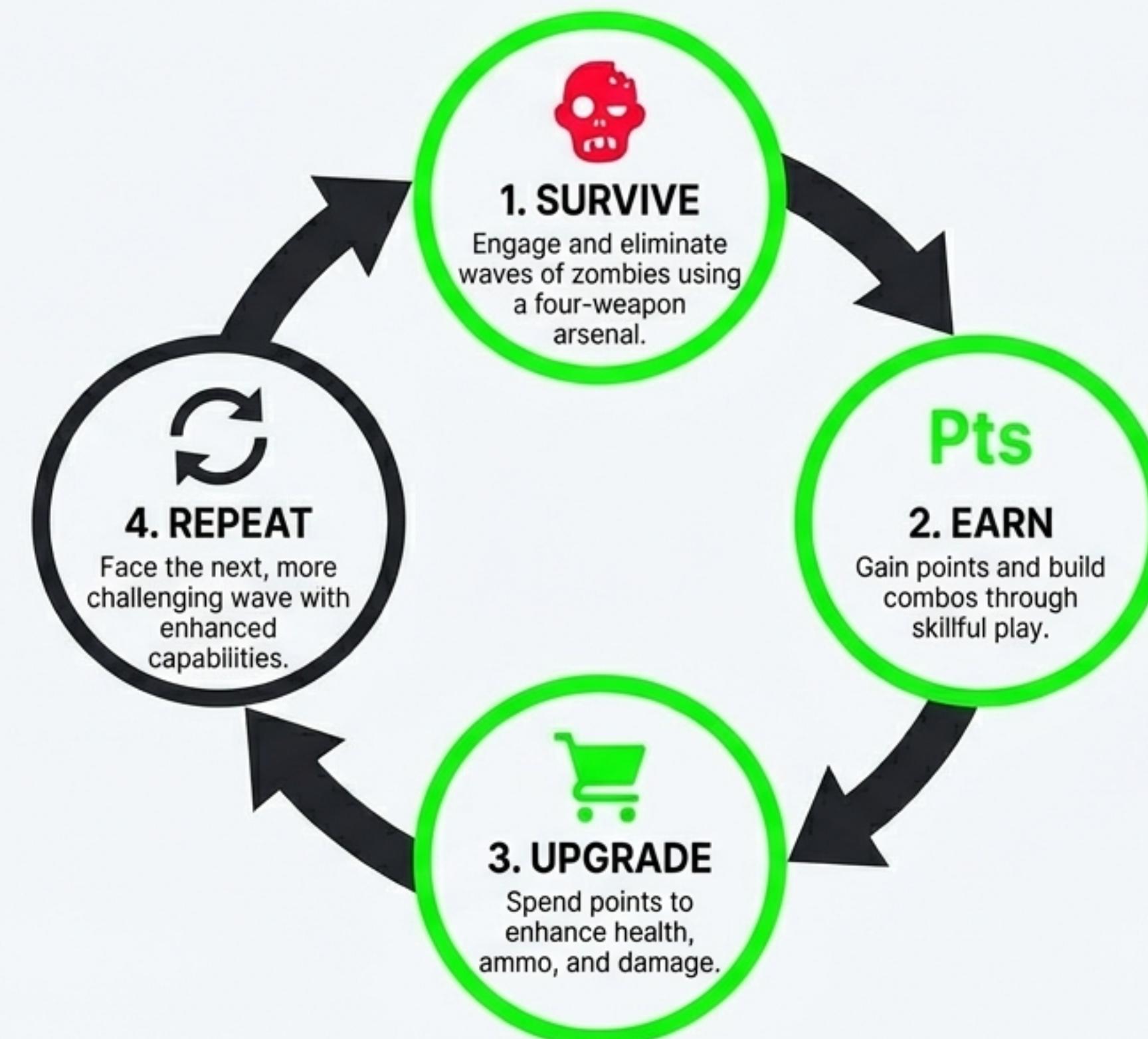
Evolve and Adapt: The Upgrade Shop



Between waves, players spend their earned Points to gain a crucial edge. Strategic choices in the shop are key to surviving later, more difficult waves.

- ❤️ **Health Upgrade (100 pts)**: Increase maximum survivability.
- ✚ **Full Heal (50 pts)**: A low-cost tactical recovery.
- 📦 **Extra Ammo (75 pts)**: Restock the entire arsenal.
- ⚡ **Damage Boost (150 pts)**: A temporary power-up to overcome tough enemies.

The Core Gameplay Loop: Survive, Earn, Upgrade



Technical Foundation: 3D Graphics on the Web

BATTLE FORCE was developed entirely in JavaScript using the **Three.js** library, delivering a real-time 3D experience directly in the browser.

Key technical features include:

- A custom rendering loop for game state management.
- Particle systems for dynamic combat effects.
- A reactive HUD rendered with HTML and CSS, overlayed on the 3D canvas.



Project Context and Credits

BATTLE FORCE was created as the final project for the **Computer Graphics** course (Fall 2025/2026).

The project demonstrates the practical application of 3D rendering principles, game loop architecture, and UI/UX design within a web-native environment.

Developers

Ahmed Metebah Ahmed
Ziad Ahmed Ali - Junaidi