



Triads of Hell

Game Engine 4 – Game Design Document

Version #1.0.0

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Version History

Ver. 0.1: Game Overview, Mechanics, Dynamics, Character details and Camera have been added.

Ver. 0.2: Game Title and protagonist name was finalized.

Ver. 0.3: Game Camera, updated dynamics and added Controls.

Ver. 0.4: Added Aesthetics, Game World, Levels and Game Progression.

Ver. 0.5: Finalized the character model of James and 3 zombie enemies.

Ver 0.6: Added a Flow Diagram with Level, Game Progression Character, Enemies Hazards, Weapons and Pickup info.

Ver 1.0: Added possible future features and design notes.

Ver 2.0: Final updates for the assignment submission

I. Game Overview

The game is a 3D Zombie Third Person Shooter for the PC platform. The player controls protagonist James Johnson whose goal is to reach the only remaining stronghold base of humanity. To achieve this, he must survive against the horde of zombies for a particular duration in the level and also destroy a burning truck which will eventually give way to the next phase of the game or in this case open doors to humanity.

II. Gameplay Mechanics

- Character Controls:

Player can move, strafe, sprint, and jump in different directions using Keyboard input. Jump will be limited to the player's height. Jump will also be possible during movement so that continuous movement is maintained.

- Camera Controls:

Player can use the camera controls to “Look” in different directions, which affects the direction of the character. This is done by using the Mouse axis input and hence is referred to as Mouse Look.

Weapon Controls:

The player must equip a weapon to use it. Using the assigned buttons, the player can shoot, and reload and change weapons. AK47 uses raycast and Grenade Launcher uses a Physics based projectile that explodes on impact.

- Take Damage:

If James is attacked by an enemy, he will immediately take damage. Amount of damage will be different for different enemies. So, in this case Firefighter zombies give more damage as compared to Hazmat and Police zombies.

- Objective Guidance and Prompts:

There is a prompt and objective system in the UI which helps players guide through the current objective and what needs to be done to proceed to the next one. The prompt also triggers at various events such as a new wave of zombies, out of ammo or pick up weapon/medikit and a lot more.

III. Dynamics

- The player must complete the objective within the stipulated time and without being killed by the zombies: Destroy the blocking vehicle and exit the city.
- The player must collect different weapons when proceeding in a level to kill the zombie enemies.
- The inventory will have consumables (Medikits) and all weapons along with C4.

IV. Camera

- There will be two cameras for the player character
- Look Camera: This camera will have higher FOV, sensitivity and controls the “Look” of the player. Rotating this camera, will rotate the player also.

V. Controls

Standard Keyboard + Mouse controls for movement and combat.

- Movement: **WASD** for moving forward, backward, strafe left and right
- Jump: **Spacebar** for jump
- Sprint: **LShift** for sprinting (increased movement speed)
- Reload: **R** for reloading weapon
- Fire weapon: **Left Mouse Button**
- C4: **3** to equip/unequip C4 (*shortcut in case not visible in inventory*)
- Interact: **E** for interacting with the environment
- Toggle Inventory: **Tab** will open/close inventory
- Pause Menu: **ESC** will toggle the pause menu

VI. Aesthetics

- The game’s visual aesthetics are based on a dark atmosphere inspired by games such as World War Z, Left 4 Dead 2 and Resident Evil.
- The UX is catered towards the concept of “odds being stacked against” the player with a fair chance of survival based on skill.
- Overall, the objective is to utilize whatever is available to get over the wave of zombies and come out alive on the other side.

VII. Game World

- The Game World consists of an abandoned metropolitan city during the evening.
- The timeline is of the modern era.

VIII. Game Progression

- 4 Objectives must be completed by James.
- 1st Objective is to inspect the burning vehicle that is blocking the city exit
- 2nd Objective is to acquire the C4 which is somewhere on the map
- 3rd Objective is to Plant the C4 and wait for it to explode
- 4th Objective is to exit the city from that point
- ALL the objectives must be completed within 3 minutes.
- Also, every minute a new wave of zombie get spawned making it more challenging

IX. Characters

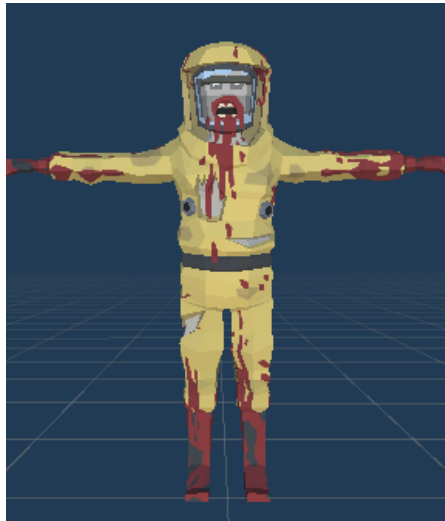
- **James:** James is the protagonist who is stranded in an abandoned metropolitan city. The only hope for survival is to reach humanity's last-remaining stronghold.



Character Model for James

X. Enemies

- Hazmat suit zombie:



- Will chase James at a fixed speed
- Any gun damage will kill hazmat suit zombie
- Slower than others

- Firefighter zombie:



- Faster than any other zombie
- Takes more damage to kill than other zombies
- Gives more damage as compared to any other zombie

- **Police zombie:**



- AK47 cannot damage this zombie
- Only Grenade Launcher can kill this zombie
- Normal speed

XI. Weapons

- Rifle (Referred to as Machine gun in game) has Yellow Light



- Grenade Launcher F2000-N has Orange Light



- Nades/ Grenades for F2000-N

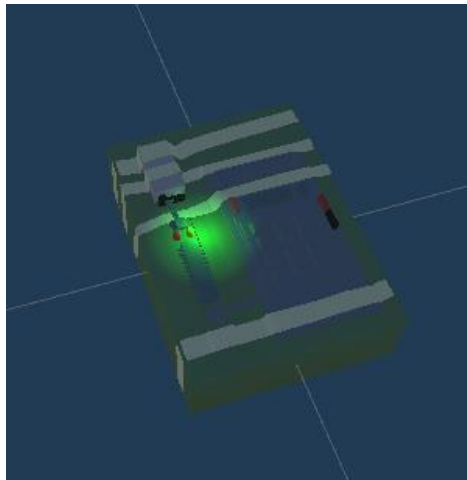


XII. Pickups

- Medikit has Blue Light



- C4 has Green Light



XIII. Future Features

- Weapon Upgrades
 - Sniper
 - Katana (more damage than knife)
- Implement Indoor levels
- Assassin Zombie: Jumps from the top of building on James and damages him severely. If James dodges, he gets the buffer time of (x) seconds to shoot before the assassin zombie climbs up (invulnerable when climbing) and repeats