

Detailed Game Specification: Zombie Survival

Course: COMP 2659, Winter 2019
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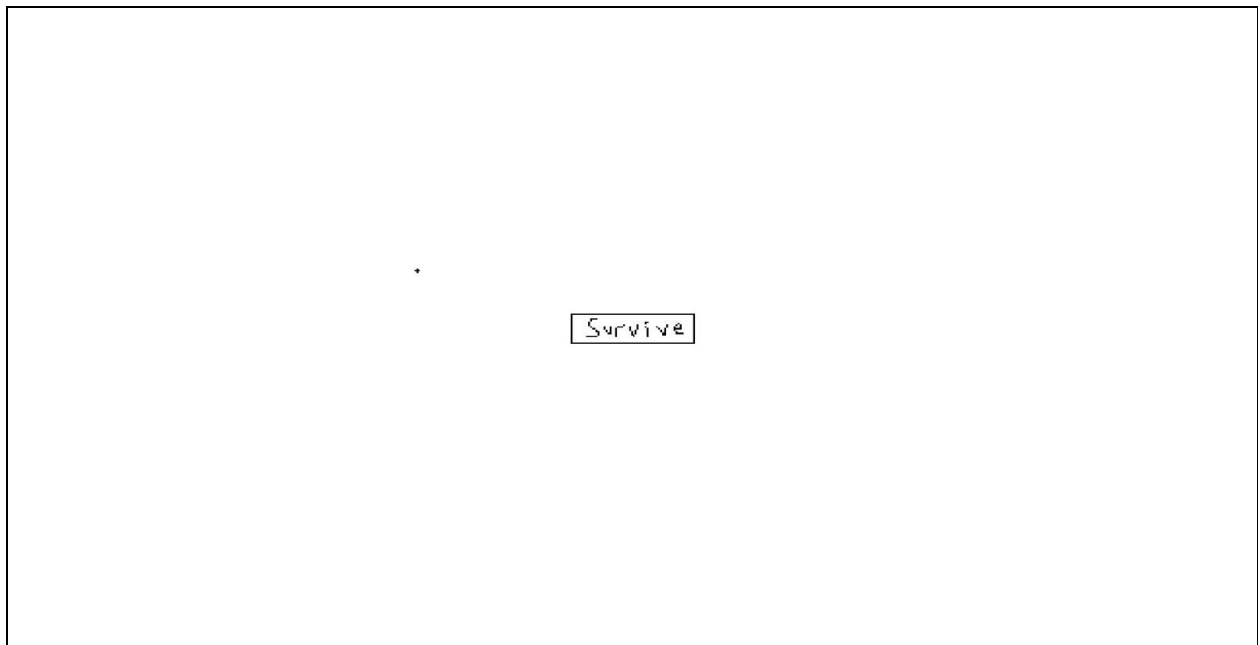
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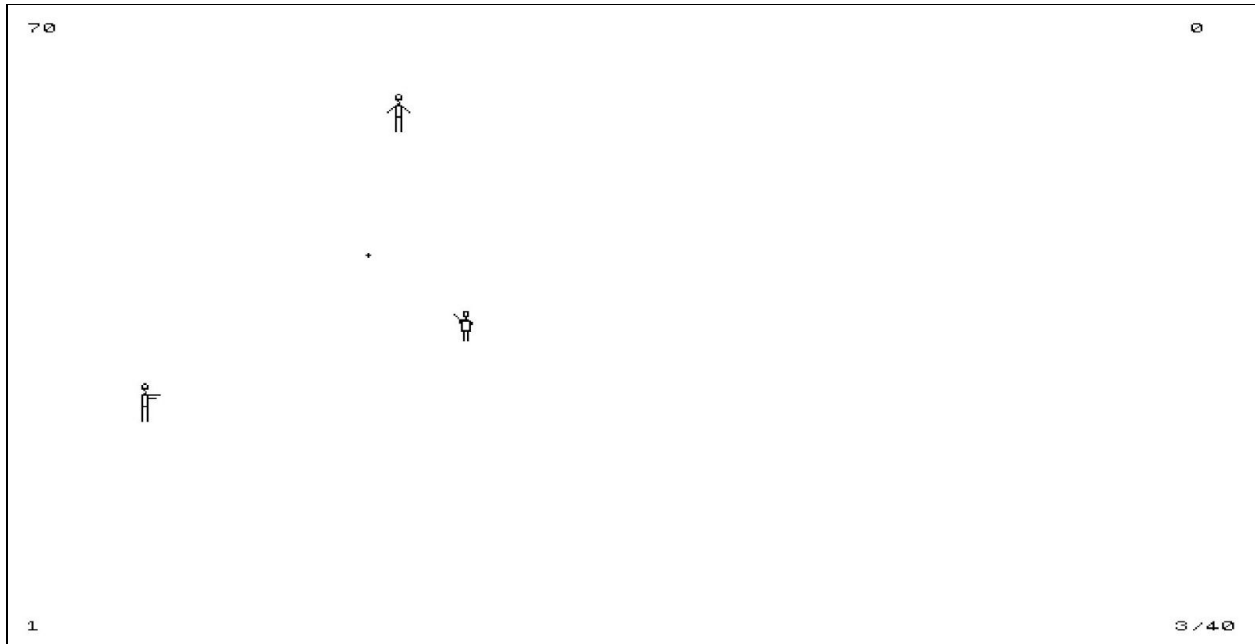
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1. General Game Overview

The game consists of a player situated on a battle area. The player can move freely around the map using the 'W', 'A', 'S', and 'D' keys. The player is also equipped with a weapon. The player uses the mouse to aim and the left mouse button to shoot. The game consists of a series of waves of zombies that attack the player by "biting". The player must kill the zombies in order to survive. As the waves progress so does the difficulty by increasing the number of zombies per wave. In theory, there can be infinitely many waves. The player cannot win the game, they can only beat a high score. The score is the number of zombies killed.

Screenshots:





2. Game Play Details for Core 1-Player Version

Objectives and Rules



The Game starts at the main menu, from there a player can select to 'SURVIVE' the game.

Once the user starts the game they are spawned in the battle area and equipped with a rifle. The current wave is located at the bottom left of the screen. Multiple zombie spawn points are scattered through the area. Zombies are spawned randomly throughout this points. Once the zombies are spawned they will follow the player and attack at close range. The player must kill all zombies in a wave in order to continue to the next wave. Each zombie killed gives the player 1 point.

Guns have limited ammunition, the player must keep an eye out on their ammo readings located at the bottom right of the screen. The player's ammo is refilled at the start of every wave. Health is divided into health units. A player has 70 health units.

Entities:

Entity	Properties	Behaviours	Graphical Image
Player	Health Moving Magazine	★ set_moving - Sets the moving flag of the player	

	Ammo Max Ammo Max magazine position_x position_y score	<ul style="list-style-type: none"> ★ take_damage - Induces damage to player reducing its health ★ set_direction - Sets the direction the player is looking at in degrees ★ reload - Reload magazine with available ammo ★ shoot - shoot weapon on hand and reduce magazine ★ set_position - Sets the position of the player 	
Zombie:	Health Speed Damage position_x position_y	<ul style="list-style-type: none"> <input type="checkbox"/> set_speed - Sets the speed of the zombie <input type="checkbox"/> take_damage - Induces damage to player reducing its health <input type="checkbox"/> bite_player - induces damage to the player <input type="checkbox"/> set direction - Sets the direction of the zombie in degrees <input type="checkbox"/> 	

Physics

- Collision detection
- Bullet movement

Asynchronous (Input) Events

<u>Event Name</u>	<u>Triggering Input Event</u>	<u>Description</u>
Move Forward	'W' is pressed	The player moves forward. Walking animation
Move Left	'A' is pressed	Player moves left. Walking animation
Move Backward	'S' is pressed	The player moves backward. Walking animation
Move Right	'D' is pressed	The player moves right. Walking animations
Aim / Look	Cursor position	Player rotates
Reload	'Space' is pressed	Player reload

Synchronous (Timed) Events

<u>Event Name</u>	<u>Trigger Timing</u>	<u>Description</u>
Zombie moves towards the player	Every 10//70th	Zombie moves towards the player at <i>speed</i> .

Condition-Based (Cascaded) Events

<u>Event Name</u>	<u>Triggering Condition</u>	<u>Description</u>
Zombie attacks player	Zombie gets close enough to the player to damage them	Zombie delivers <i>damage</i> to the player.
Bullet hits zombie	Bullet hits a zombie	Zombie receives <i>damage</i>

Hypothetical Gaming Session

The player starts off in the start position of the map. Equipped with a rifle and 4 bullets in the magazine and 40 bullets of extra ammunition.

1st wave of zombies come in. Player uses the rifle to kill the zombies. The player goes through the next wave moving around and receiving points.

The player reaches wave 8

Player gets overwhelmed by zombies and dies.

3. Game Play Details for Core 2-Player Version

With a 2 player game, the same rules apply. Players have a greater chance of survival if they work as a team. Moving together and covering all sides.

At the end of the game player with most kills 'wins' but they both died.

4. Sound Effects

<u>Sound Effect Name</u>	<u>Brief Description</u>	<u>Event which Triggers Playback</u>
Weapon shot	Weapon shot and <i>sound</i> plays	Every time the user uses the weapon.

Weapon shot
but empty

Empty sound plays

If the player shoots
their weapon and
there is no ammo on
the magazine

Zombie bites
player

A bite sound

When the zombie
bites the player