

INFECTED

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MM806 COURSE PROJECT

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Introduction

INFECTED, is originally a classic zombie shooting survival game in VR. The first person view. The objective of this game is to survive attacks by infected zombies and get to the safe area with the main player and his family. We want to make the game known for art, motion, gameplay, interface, and physics. The objective of this game is to enjoy real like experience with horror and excitement. The user will be able to run, shoot and kill the zombies. VR device used in Oculus in which hand controllers will act as guns and hands of the player. The game will be having 3D sounds for a more realistic experience.

Market Research

We have examined two distinct games with a similar concept. First game i.e. Left 4 Dead is a single player or multiplayer game depending on the player interests and objective of the game is to kill the dead. The game is based on the city named Pennsylvania which is infected by dead by a disease called "Green Flu". Day Z is another similar game and objective is to kill zombies and survival of the player. The player needs supplies such as food, water and clothes. The player is able to store the supplies for later use.

1. Left 4 Dead / Left 4 Dead 2

Left 4 Dead and its quickly released sequel are too similar in quality and characteristics to separate. Remove the zombie element and you still have the best squad shooters yet to exist. Add in the most convincingly realized videogame zombie apocalypse, one that's as legitimately scary and tense as the best [horror movies](#), and one that has also influenced almost every zombie game since (see the proliferation of Boomer and Hunter style enemies), and you have the best zombie games ever made. Top it off with a pitch-black sense of humor and a warm humanity that

most games don't even attempt and then you can debate if the word "zombie" is even needed in that last accolade.
—Garrett Martin

2. Day Z (2012)

Day Z started out as a mod, a user-made add-on for the PC military shooter *ArmA II* by Bohemia Interactive. It has become one of the most successful mods ever, growing in scope and popularity until it was announced that *Day Z* would become a standalone game. In gamer jargon, *Day Z* is a FPS MMO with permadeath; which simply means it has guns, everybody plays together, and losing hurts a hell of a lot more than usual. You can think of it as *The Walking Dead* meets *Call of Duty* meets Pier Paolo Pasolini's *Salò*. Personally, I'd described it as a demented psychological experiment to find out how a group of people would react if a zombie apocalypse broke out in the harsh Russian countryside. The answer has been with looting, killing, backstabbing and cruelty of all kinds.—Jason Johnson



Left: Left 4 Dead



Right: Day Z

Story line

This is a first-person shooting game, where the player can navigate along the scene, shoot, change weapon, use grenades and drive vehicles. There will be infected zombies, who will try to kill the player. The player needs to do whatever necessary to do to save himself and try to reach his family.



The player can navigate through the stage with the joystick of Oculus Rift controller, shoot with the button and throw grenades or other projectiles with the motion of hand movement. There will be different variations of zombies, which will act differently. The player would be able to drive a car for traveling. In the final scene, the player will go to a helicopter and flee from the woods.

Technical Feature and Hardware Requirements

1. Navigating through the environment
 2. Shooting
 3. The health bar for the player and enemy
 4. Driving a car
 5. Categories of Zombies
- **Target Platform:** Oculus Rift VR for PC where the player will use a native controller for gameplay.
 - **Development Tools:** The main game engine that we will use is Unity3D, where the programming language will be c#. We will also use Autodesk Maya software for modelling and animation. For body animation, we hope to use MoCap that is available in the University of Alberta.

Game Flow

Stage 0:

- Front page / loading page [Logo, Name , brief explanation]
- Back story / Cinematic [People are getting **infected** fast! John's little girl is too. They need to flee town before it's too late to save her from this **Infection**! They just need to survive a day so his friends can pick them up in their helicopter and get them to a safe place where she can be **cured**. John remembers a family cabin way up the hills and outside of the city. They will surely be safe there he thinks to himself! But to be sure he'll pack his guns.]

Stage 1:

- Countdown to start[opening scene in the cabin]
- Shooting
 - Scenes [Top(showing the location of the cabin and zombies) + Person view(cabin Interior) + You lost! (dark scene/zombie eating sounds)]
 - UI [zombie count, person health bar, Timer, gun change]
 - Sounds [Zombies pounding on the fence, zombie Roar, Zombies pounding on the door, shooting sound, zombie eating sounds]
 - Models [cabin interior(old, rusty & wooden), Cabin surrounding(foggy, trees, ...), hand holding the gun, gun]
 - Zombies [killed by exploding, fall down]
 - Zombie 1 [number of shots to kill, speed, all come towards the house]

- Cinematic [It's too Late! There is too many of them. We'll take the car in the back.]

How you pass this stage? Kill 20 zombies or last 5 min

Stage Time: [9 min (5 min play + 4 min intro & cinematic)]

Stage 2:

- Countdown to start [player behind the wheels]
- Car chase
 - Scenes[Roadmap, player behind the wheel]
 - UI [[zombie count, person health bar, Timer]
 - Sounds[zombie Roar, shooting sound, zombie eating sounds, car sound]
 - Model[car, road, rain, fog, almost night, hands in the wheel, hands with gun]
 - Zombies [killed by gun and ran over by the car]
 - Zombie 2 [come from different directions, jump on the road]
- Cinematic [We almost made it. I can see them from here. Just need to run to them and we will be fine.]

How you pass this stage? Run over 20 zombies or last 7 minutes

Stage Time: [9 minutes (7 min game + 2 min cinematic and countdown)]

Final Stage:

- You made it!! + Score[the health condition, how many zombies you killed]

Game Usability studies

System-related event		
Functionality	7.3	An event is related to prototype's functionality when it is the result of the user activating a control item and it is related to one specific action.
Layout/UI	7.3	An event is related to layout/UI when the user makes a wrong assumption about what a control does, or when the user does not know how to do something (negative events). It is also a layout/UI positive event when a user appreciates the design (figures, attempts, colors, etc.) or having specific information displayed.
Gameflow	7.3	An event that is caused not by a single specific interaction, but as a consequence of the game sequences interactions and outputs and the specific gameplay design of the game.
Content	7.3	A content event is related to text blurbs and other forms of textual information provided by the game.
Technical error	7.3	A technical error event is related to a nonintentional glitch in the system that must be corrected.

User-related event		
Learning	8	The user figures out how to perform an action that was unclear before (learn to play), or when the user is actively engaging in consuming content (learn content).
Reflecting	8	The user pauses or wonders what to do next. Unlike when the user is confused and does not know what to do, reflecting events indicate pause to create action plans within the game space.
Satisfied/ excited	8	The user displays a remarkably positive reaction.
Pleasantly frustrated	8	The user expresses frustration in a positive manner. A pleasantly frustrating moment urges the user to try to overcome the obstacle again.
Frustrated	8	The user voices or displays negative feelings at not being able to complete the game or not knowing how to do something. A frustrating moment urges the player to stop playing.

Confused	8	The user does not know how to perform an action, misinterprets instructions, and/or does not know what he/she is supposed to do.
Annoyed	8	The user performs properly a task in the game (knows how to do it), but feels negatively about having to do it.
Unable to continue	8	This is usually the consequence of one or more of the above, or of a fatal technical error. An event is related to when the user becomes definitely stuck and/or cannot continue without the help of the researcher.
Suggestion/ comment	8	The user verbalizes a comment or a suggestion that is not related to a specific interaction or event.

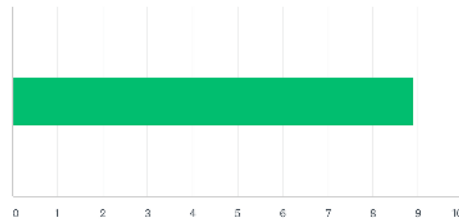
Game Analysis

To gather feedback from the users of this game we created a questionnaire available in this link:

Survey Link: <https://www.surveymonkey.com/r/9QZP6ZP>

Game Functionality

Answered: 10 Skipped: 0

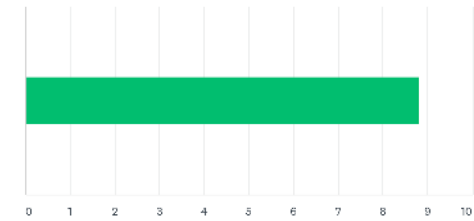


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Responses	9	89	10

Total Respondents: 10

Layout/UI

Answered: 10 Skipped: 0

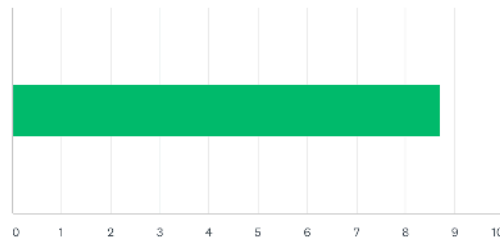


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Responses	9	88	10

Total Respondents: 10

Gameflow

Answered: 10 Skipped: 0

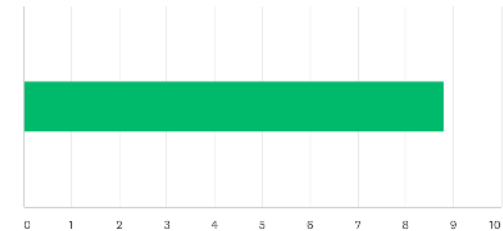


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Responses	9	87	10

Total Respondents: 10

Content

Answered: 10 Skipped: 0

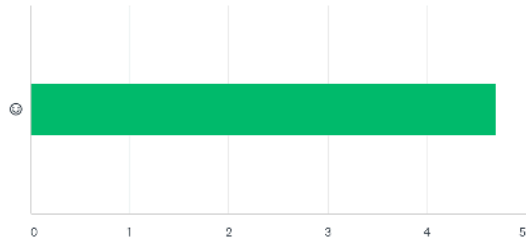


ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Responses	9	88	10

Total Respondents: 10

How quickly can you learn to interact?

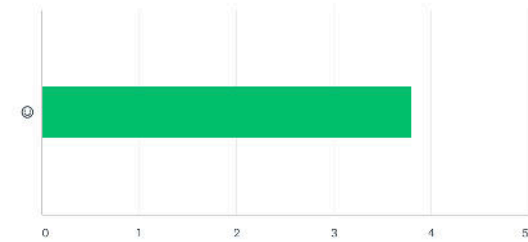
Answered: 10 Skipped: 0



	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
☺	0.00% 0	0.00% 0	0.00% 0	30.00% 3	70.00% 7	10	4.70

How much planning do you require to survive in the game?

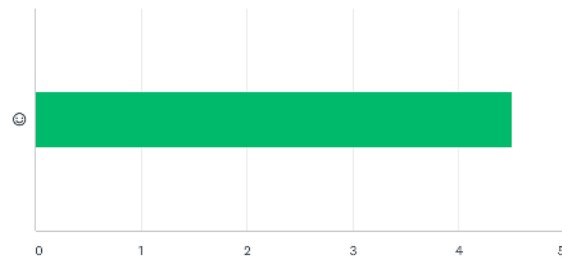
Answered: 10 Skipped: 0



	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
☺	10.00% 1	0.00% 0	10.00% 1	60.00% 6	20.00% 2	10	3.60

Excitement level

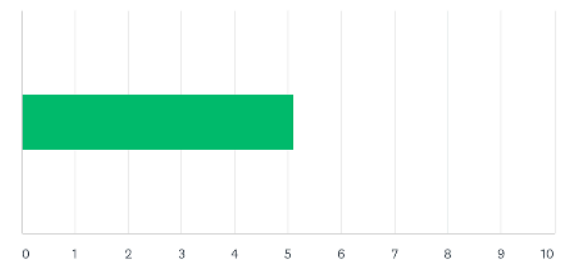
Answered: 10 Skipped: 0



	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
☺	0.00% 0	0.00% 0	10.00% 1	30.00% 3	60.00% 6	10	4.50

Confused

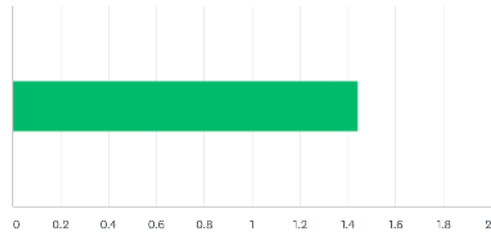
Answered: 10 Skipped: 0



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Responses	5	51	10
Total Respondents: 10			

Annoyed

Answered: 9 Skipped: 1



ANSWER CHOICES	AVERAGE NUMBER	TOTAL NUMBER	RESPONSES
Responses	1	13	9
Total Respondents: 9			

Future Scope

In the future, several improvements can be done on this project such as:

1. Using different kinds of weapons like swords, rods and multiple types of shooting guns based on their range.
2. Multiple camera views for the player so a player would be able to see a front camera or back camera while driving the car.
3. Multi-Player option to compete within teams.
4. Better graphics quality.