Zombie Quest Documentation

Introduction

Students have often encountered difficulties while studying for exams. Some get stressed out, others get bored, and still others get frustrated while studying. Studying itself cannot be tossed aside. However, the method through which students study can be exchanged for a more fun, interesting, and engaging study method.

Zombie Quest is a game that utilizes Virtual Reality (VR) technology to enhance the studying process and learning experience. With Zombie Quest, students can:

- Enjoy a change of environment/scenery
- Enjoy playing an immersive FPS game
- Play around with interactive props
- Learn and study for courses using the built-in question and answering engine UI
- Be trained for a zombie apocalypse

Zombie Quest is built to be fun and interesting which can help students stay focused and engaged. With the increased levels of focus and engagement, students can learn and study more efficiently and effectively. Students can then score higher on exams and absorb more content from the course in a way that may assist them further down the road.

Zombie Quest does all this through the use of VR technology, specifically the Head Mounted Display (HMD) and Touch controllers called the Oculus Rift with Touch, provided by Oculus. Although the entry requirements may be high, the adoption rate of VR technology will help bring down the entry requirements allowing for easier access to VR technology. The use of such HMD allows for an incredible level of presence and immersion. Combined with the included (or separate, depending on the package) Touch controllers and Touch sensors, the experience is breath-taking and guaranteed to catch and keep your focus and attention.
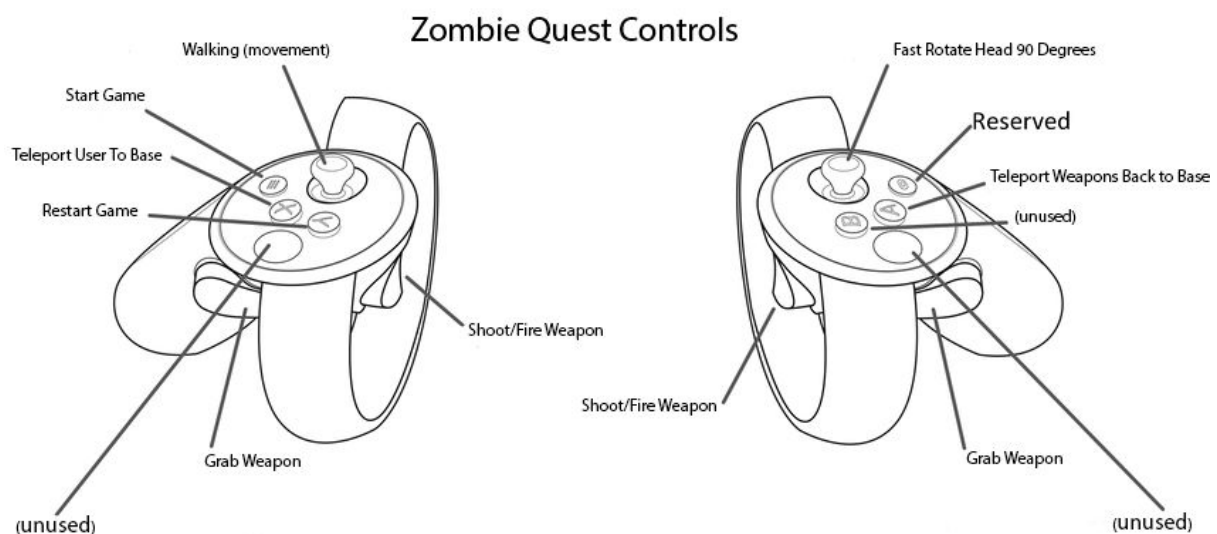
Getting started

System Requirements:

- A Windows 10 Computer that is VR capable
- Oculus Rift with Touch and Touch Sensors
- At least 3 USB 3.0 ports and 1 HDMI port from the Graphics Card
- Enough Space to play VR (Roughly 1.5 meters by 1.5 meters in area)

Controls

- Left Joystick controls movement for walking
- Right Joystick allows you to rotate 90 degrees in the direction that you wish
- The middle finger trigger on the Touch Controller allows you to pick up objects (weapons)
- The index finger trigger on the Touch Controller allows you to fire/shoot the objects (weapons)
- The "A" Button teleports the guns back to their starting position
- The "X" Button teleports you back to your starting position
- The "Y" Button restarts the game.
- The Start Button start the game

Zombie Quest Controls

Walking (movement)
Start Game
Teleport User To Base
Restart Game
Shoot/Fire Weapon
Grab Weapon
(unused)

Fast Rotate Head 90 Degrees
Reserved
Teleport Weapons Back to Base
(unused)
Shoot/Fire Weapon
Grab Weapon
(unused)

Quick Start Setup Guide:

1. Download the .zip file from the releases section of the GitHub page for the project.
2. Unzip the release in a folder of your choice for where you wish to store the game.
3. Clear a good play area and make sure there are not any obstacles that could injure or harm you during your game play. A good play area is usually around 1.5 meters by 1.5 meters in space. Bigger is better.
4. Setup the Oculus VR gear as per the instructions given in the Oculus software
5. Make sure the Oculus software is running so that Oculus Rift will be recognized by the game
6. Launch the ZombieQuest.exe file to play the game
7. Now enter VR by putting the Oculus Rift headset on and begin playing the game.
8. To start the game press the start button and the game will begin.

Using the Main Menu

During the loading of the game a startup screen will populate the view of the user upon which when the user is confident that they know what the controls are they can press the start button to begin the game.

Answering a question

Picking up a weapon

Use the left joystick to move towards the weapon. Once close to the gun, physically move your hand towards the gun and press the middle finger trigger. Keep this pressed down to continue to hold the weapon.

Reading the question

Look at the large panel to read the question at the top and the four multiple choice options below it. Make not of the letter beside the answer you believe is correct. Then in game, go and attempt to kill that zombie and that zombie alone.

Moving around

Use the left joystick to move your character around. While moving you may rotate your head to look around or use the right joystick to quickly look in a direction.

Shooting the weapon

With a weapon in hand and while continuing to hold the middle finger trigger, press the pointer finger trigger to fire. The gun will fire in the direction the muzzle is aimed and the ninja start will fire in the direction indicated by the purple dot.

Correct answers

When you kill zombie for the correct answer, all other zombies with a letter above them will die. However, any extra zombies that have been added due to a previous incorrect answer will not die. You must kill all remaining zombies before the next question will appear.

Incorrect answers

When you kill the zombie for the incorrect answer, extra zombies will be spawned. You do not need to kill these before killing the correct answer but you must kill them all before the next question will be displayed.

Improvements since Usability test

We have improved the game a fair amount following the usability test. For one, we have completely redone the terrain to make it more interesting and visually appealing. Additionally, we have sped up the zombies to make the game difficult and more fast-paced. There has overall been a significant amount of refinement of scripting and controls, allowing for greater use of the buttons on the touch controllers. Finally, we have added a proper start screen and instructions.

Additions outside of the original proposal

A feature not originally in our proposal that we implemented is the ability to hold two weapons at the same time, one in each hand that both fire independently. Additionally, the ability to pass a weapon between hands was a significant challenge that we were able to implement into our game.

Note: If there are any issues with the attached files that are provided then download the latest release from the GitHub project page
https://github.com/brittishsnow/CMPT401_Learned_Owls/releases