

The Stitch and Rotten Woods

Project Team Members

Matthew Tucker
Zakkary Hucksby
Johnathan Terry

Project Summary

This project is making a mobile platform to play an original Zombie game. The game is home survival that can go on indefinitely. Waves of zombies will spawn and hunt the player down wherever the player goes. Can you survive the Zombie Apocalypse?

Goals and Objectives

The goal of this project is to make a mobile platform to play games on and a game to play. The game should be simple and not require to be plugged in or wifi so that in case of a power outage can give someone something to do to pass time.

GitHub Repository

This project's GitHub repository is located at: <https://github.com/Pupp3tt/2020CompSci.git>

Versions: 2 – one for just keyboard, one for platform

Name of game for keyboard: Game_Keyboard

Name of game for platform: Game_Platform

Bill of Materials

Hardware

Item name	Amount	Price total
Raspberry Pi B v3	1	\$35.00
SmartPi Touch 2	1	\$27.99
0.093" x 11" x 14" Clear Acrylic sheet	4	\$26.68
MCP3008	1	\$3.13
Wires multicolor	1	\$19.51
Joysticks	2	\$4.89
Battery	1	\$24.99
Buttons (pack)	1	\$7.90
USB to type C	2	\$7.99
USB Speaker	1	\$7.99
Wood Square dial	1	\$0.98
Screws	4	on hand
Nuts and bolts (packs)	2	\$2.56
Nylon Washer (pack)	4	\$2.32
Glue, Loctite Super glue	2	\$9.16
Tape double sided , Scotch mount Extreme	1	\$8.98
Paint (Blue, Red, Black, Yellow)	1	\$20.00
Brushes	1	\$5.00
Tools	many	on hand
Total		\$215.07

Software

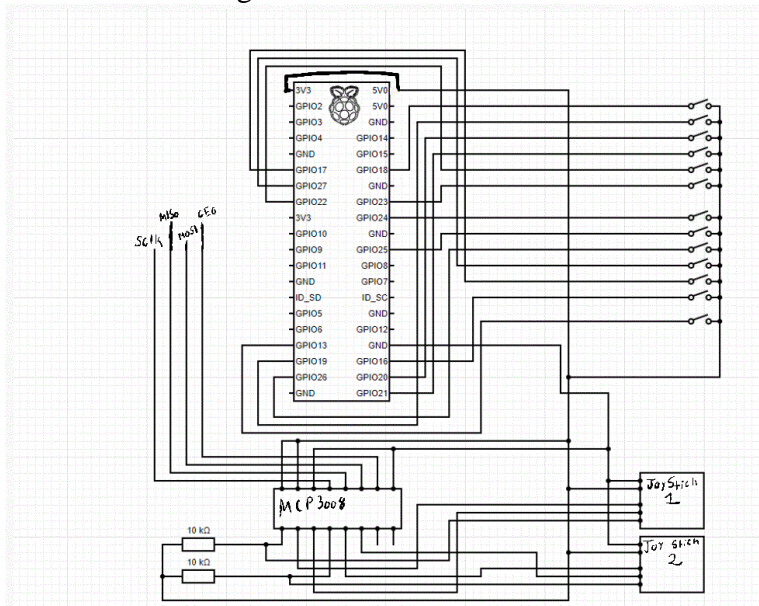
Python v2.7.9

Pygame v

GPIO and GUI

GPIO is done through breadboard and is connected with wires to buttons, MCP3008, and Joysticks.

Circuit diagram:



GUI is told to print an image and or abject in code to LCD touchscreen to provide images.

GUI from game:



Gantt Chart

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE
1	Project Title	Week 1 Apr 9-13					Week 2 Apr 16-20					Week 3 Apr 23-27					Week 4 Apr 30-May 4					Week 5 May 7-11					Week 6 May 14-18				
2																															
3	Research																														
4	Classes																														
5	Building																														
6	Coding																														
7	GUI																														
8	Testing																														
9	In-class Project Days																														
10	Final project presentation																														
11																															

Future Development Plans

Game:

- Fix/better scaling
- Fix doors
- Add weapons image
- More than one enemy
- Aiming system
- More levels
- Day night cycle
- Water/Hunger
- Item Drop
- Limited ammo
- Change zombie and player animation
- Add different zombies

Platform:

- Allow other games to be played
- GUI to select a game

Lessons Learned

Hardware:

- MCP3008 and joystick set up and code

Software:

- Print/load an image
- Animate movement

Relate to Living with Cyber:

- Needed to code a lot. The class and the project had to deal with GPIO, inputs, outputs, and GUI.

Problem solving experience:

- Needed to find ways around small problems such as:
 - Bullets changing to arrows when change weapons
 - When changing to GPIO quick changing weapons to fast

Sized down:

- Sized done the project once realized was trying for too much in short time

Future:

Know more about how not to over promise a project in short time

Hardware capabilities and need to do more research

How to do GUI better and simple game style.