Project Progress Report

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Overview

Imagine, waking up in a run down house with no memory of the past. You don't know your name or what happened, all you do know is that you must survive in this seemingly deserted city that has been taken over by zombies. In this zombie survival game, resources are crucial. The player must explore the abandoned city, entering buildings and fighting off zombies to collect food, medicine and other supplies needed for survival. However, surviving is not enough. The player must also look for clues and information to figure out what started the zombie epidemic and if there's anything they can do to stop it.

At the start, the player is in a small house with poor barricades, limited food and no weapons. The gameplay will be similar to Pokemon in the sense that you are a character walking around a town, entering each building which will be separate from the main screen. Using WASD to move and a combination of mouse clicks and the "F" key to interact with other objects, the player will try to collect anything that will help them survive the night. During the day, players will be able to walk around and explore, however they must make sure they make it home before nightfall where it becomes too dark to see. There are many ways to die, but the three main components players will have to watch will be the hunger, health and morale bars.

For this game we tried to combine our love of "The Walking Dead", "Pokemon", and resource driven survival games to get a hopefully original game that players will be immersed in.

Game Elements

Similar to most survival games the "player must continue playing for as long as possible in an uninterrupted session while the game presents them with increasingly difficult waves of challenges."(Wikipedia) In this game, players must explore the city in a quest for supplies to survive the treacherous conditions of life in a zombie apocalypse. Short term goals include finding food to maintain hunger, medicine to replenish health, recreational items to maintain morale, materials to build barricades and weapons to defend yourself from zombies. Players will be able to carry 12 items at a time plus one weapon to defend themselves with. They must find and use resources wisely since there is a limit of how much can be carried and once an item is dropped it is gone. Overall, the player will need to collect enough of the right resources so that they are able to survive any unexpected circumstances (rebuild house, wave of zombies, illness, etc). Long term goals include collecting information and figure out how the apocalypse/zombie epidemic started and to survive as long as possible. We want our game to be focused on survival. For this reason we are adding a rogue-like element of imminent death, however the players will want to survive for as long as possible.

The player must decide how they want to survive and which resources they would like to focus on. They must maintain their hunger, health, and morale, all while under a time constraint of nightfall. If they cannot find a perfect balance between all three factors, then death will win.

In the city, there will be numerous buildings, each with their own challenges and rewards. The player will not know what is inside each one until they check. The only clues we will try to provide are that the type of building will give some indication of what resources will be inside. Here is a list of buildings we plan to have (may change):

Buildings	Number	Items
Outside (Trees, Cars)	0	**Food:** Apples, Beef Jerky, Energy Bar, Nuts **Medicine:** Gauze **Recreation:** Cigarets **Weapon:** Baseball Bat, Pistol (car) **Materials:** Wood, Matches
House	1	**Food:** Apples, Soup, Candy Bar, Beef Jerky, Chilli, Old Sandwich, Energy Bar, Canned Meat, Nuts, Dried Fruit **Medicine:** Bandages, Pills, Strong Pills, Herbs, Gauze, First Aid Kit **Recreation:** Cigarets, Music, Books, Alcohol, Cards **Weapon:** Baseball Bat, Machete, Shotgun, Pistol **Materials:** Wood, Metal, Screws, Rope, Wire, Matches, Cloth
Hospital	2	**Food:** Soup, MRE, Energy Bar, Canned Meat, Nuts, Dried Fruit **Medicine:** Bandages, Pills, Strong Pills, Herbs, Gauze, First Aid Kit **Recreation:** Books, Cards **Weapon:** NONE **Materials:** Cloth
Grocery Store	3	**Food:** Apples, Soup, Candy Bar, Beef Jerky, Chilli, Old Sandwich, Energy Bar, Canned Meat, Nuts, Dried Fruit **Medicine:** Herbs **Recreation:** Cigarets, Music, Books, Alcohol, Cards **Weapon:** Baseball Bat, Police Baton, Crowbar, Machete, Shotgun **Materials:** Wood, Metal, Screws, Rope, Wire, Matches, Cloth
Police Station	4	**Food:** Candy Bar, Beef Jerky, MRE, Energy Bar **Medicine:** Bandages, Pills **Recreation:** Cigarets, Alcohol, Cards **Weapon:** Police Baton, Shotgun, Pistol **Materials:** Metal, Matches
Hardware Store	5	**Food:** Beef Jerky **Medicine:** NONE **Recreation:** Cigarets, Music, Books, Alcohol, Cards **Weapon:** Baseball Bat, Police Baton, Crowbar, Machete, Shotgun **Materials:** Wood, Metal, Screws, Rope, Wire, Matches, Cloth
Library	6	**Food:** Apples, Candy Bar **Medicine:** Bandages, Pills, Gauze **Recreation:** Music, Books **Weapon:** NONE **Materials:** NONE
Corner Store	7	**Food:** Apples, Soup, Candy Bar, Beef Jerky, Chilli, Old Sandwich, Energy Bar, Nuts, Dried Fruit **Medicine:** Bandages, Pills, Strong Pills, Gauze **Recreation:** Cigarets, Music, Alcohol, Cards **Weapon:** Crowbar, Machete, Shotgun, Pistol **Materials:** Rope, Wire, Matches, Cloth
Church	8	**Food:** Apples, Soup, Nuts, Dried Fruit **Medicine:** Bandages, Pills, Strong Pills, Herbs, Gauze, First Aid Kit **Recreation:** Cigarets, Music, Books, Alcohol, Cards **Weapon:** NONE **Materials:** Wood, Metal, Screws, Rope, Wire, Matches, Cloth
School	9	**Food:** Apples, Nuts, Dried Fruit **Medicine:** Bandages, Pills, Gauze, First Aid Kit **Recreation:** Music, Books **Weapon:** Baseball Bat **Materials:** Wood, Rope, Wire, Matches, Cloth

With this in mind, players must decide what they need to collect and where they think they would find such items.

      Players must also choose how they want to prepare for nightfall. They have the choice to use the building at the start as their base, and upgrade it with barricades or find the nearest building and board up the doors and windows. There is a chance that their barriers aren't strong enough and zombies will get in. If this happens either the player will wake up and fight or if their health statistics were too low, they could die.

      Resources are a huge focus in this zombie survival game. The player will have to collect and manage the resources carefully because without them, there's no way to survive. We plan to have a few vital categories which we might expand on if time permits. These include food, medicine, recreational, material, and weapons. Here is the complete list of items and their use:

Items	Type	Health	Hunger	Morale	Damage	Use
Apples	Food		+10			
Soup Can	Food	+10	+20			
Candy Bar	Food		+5	+10		
Beef Jerky	Food		+15			
Chili	Food		+25			
Old Sandwich	Food	-10	+20	-5		
MRE	Food		+30			
Energy Bars	Food	+10	+15			
Canned Meat	Food		+25			
Nuts	Food		+5			
Dried Fruit	Food		+10			
Bandages	Medicine	+15				
Pills	Medicine	+20				
Strong Pills	Medicine	+25				
Herbs	Medicine	+5	+5	+5		
Gauze	Medicine	+10				
First Aid Kit	Medicine	+40				
Cigarets	Recreation	-5		+15		
Music	Recreation			+20		
Books	Recreation			+20		
Alcohol	Recreation	-15		+30		
Cards	Recreation			+10		
Baseball Bat	Weapon				10	
Police Baton	Weapon				10	
Crowbar	Weapon				20	

Items	Type	Health	Hunger	Morale	Damage	Use
Machete	Weapon				25	
Shotgun	Weapon				50	
Wood	Material					Build
Metal	Material					Build
Screws	Material					Build
Rope	Material					Trap
Wire	Material					Trap
Matches	Material			+10		Fire
Cloth	Material	?		?		???

As one can see, each category is important to the players survival. One cannot simply run around solely collecting food because their barricades won't be strong enough. Even if they manage to survive the night, there will be more zombies and they will eventually need a weapon. Resource management will be a challenge for the player, however we have given them enough options for them to make their own decisions to see what works.

Game So Far

The player is currently a bright green circle which can be moved using the "W, A, S, D" keys. "F" is used to interact with objects and "I" is used to show and hide the inventory which can be accessed using the mouse (LEFT to use, RIGHT to throw).

One of the biggest accomplishments we have completed so far is our tile system for creating maps and rooms. As you can see, so far the map isn't very large (we will make it bigger later) but all we have to do is create a text file of numbers separated by commas and the room will be altered accordingly. We have different types of tiles, such as wall, floor, container and door tiles which make up the room. The player will have to open and close doors to move from room to room, which may hold back the zombies, as well as search the containers for different items. Items will automatically appear in your inventory if there is space. Once you open the inventory, you can either consume the item or equip yourself with a weapon.

To ensure the player knows what's going on and to promote clarity in our game, we have a small update screen on the bottom. It is transparent so the player can still see the screen. It functions similarly to a chat box where new information will be shown on the bottom, moving the old stuff up. Here we will announce any changes in the game such as interacting with objects, equipping weapons, using items, and anything else the player needs to know. For example, the

first time a zombie is seen, first night warning, and random comments from the player. We will also try to add some comic relief and references from Zombieland.

We also have a HUD to communicate the game state with the player. The solid sidebar on the right displays the important information players need such as the number of days survived, the time left before nightfall, the health, hunger and morale status bars, as well as the weapon equipped and hot keys.

Even though we didn't want to spend too much time focusing on the aesthetics of our game, we did create some images (floor tiles, food, weapons, etc) to make our toy feel more like a game. The images can be found in the data folder. We tried to have simple pixel art of different items just to give them more meaning and make the game feel more personal. Since our game focuses on collecting items, we figured it would be more meaningful to the player if they got to see the items they found.
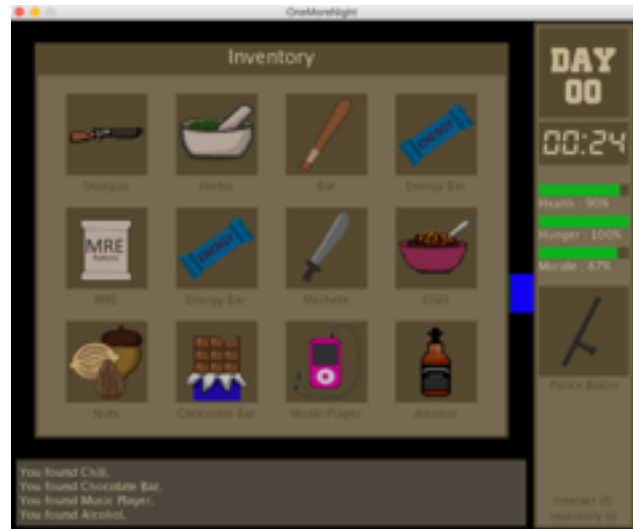
Evaluation of Prototype

We are proud of what we have accomplished so far. We still have some work to do but we have surpassed our previous timeline and have a good idea of how we will incorporate the rest of our ideas. At the moment we haven't implemented all of the gameplay such as zombies, night time and barricades but it wouldn't take much as we have the zombie code and just need to create the actual zombies and test it.

So far I think our design is exciting. Players are encouraged to keep searching and exploring the city with the hope of finding something better in the next room. Choice include which way to go, choosing which rooms to enter and which items should be used or thrown away. The number of choices will continue to increase as we add more features to our game.

Hopefully the objective is fairly clear just from the style of game we created. Will we need to add a main screen (probably using the one we crated for the assignment) as well as a story screen before the game actually begins, however we plan to add this once the game is almost complete as it won't take a lot of time. We also plan to have a lot of communication between the game to the players so that they are aware of everything. The rest of the controls will either be shown before the game starts or within the Hud with the hot keys.

This project definitely had it's own set of problems that we faced while working on it. One of the bugs we encountered is the players (and zombies) ability to walk through the wall if the run up to the corner and force it. The odds of this happening in real gameplay are low, however we wanted to fix it and succeeded. Also, the zombies sometimes get an index out of bounds problem which we will need to fix. Another difficulty we faced was the tile system and making sure each building has it's own set of tile images, each tile type has it's own variations, such as grass floor tiles for outside and wooden floor for the houses as well as grass tiles with rocks, or trees. The hardest part is loading them in with human readable file names. Even though we have had bugs, they are all fixed and there aren't any problems we can think of at the moment. We will need to do some more testing when we have added more functionality.

Remaining Tasks

The next task we need to complete is crating the entire map. This includes the outside area with multiple buildings and the inside of each building, possibly with more than one room for each. We hope to have trees and cars outside that players can search. Inside the building will be different depending on the type of building as listed above. We hope to have searchable items as well at decorations to ensure the building are distinct and have their own design and personality. Once we have that, we should introduce the zombies, spawning a lot outside and a few in each building as well. We will then need to have a way to be hurt by the zombies and how to kill them. Then we will need to create the survival element. The hunger and morale bars should go down over time, causing the need to collect resources. We also need to copy over our title screen from the previous assignment. We might want to make some changes to it such as have both a play and an instructions button. The screen should then shift into a brief description of the story. Then the player should wake up in a house where they are greeted with dialogue from the character which will show up in the chat box. Hopefully this will ensure that all of our story ideas get transferred to the player clearly and without any confusion.These are the most important parts that need to get done before the deadline.

Now some other things we hope to add include crafting and building barricades. This will allow players to create better items as well as create a bigger challenge to surviving. It also gives a lot more freedom to the player in choosing how they want to spend their resources. Another aspect that will help players feel immersed (submission) in the game, is the use of game music combined with sound effects. It's good to have a balance of visual and audio sensation for the players to enjoy. The difference that adding a few sounds effects makes is incredible and pulls a good game into a great game. The music helps the players stay focused and the sound effects alert the player of what had happened. For example, if zombies are approaching you should hear their groans. If you should, you should hear a gun shot but if you're all out of ammo you should hear the gun click. Adding these small details won't take a lot of time and they will improve the players experience while playing.

Finally we have some optional things we would like to include once we have everything else working. I think it would be cool if the screen slowly darkens in the last 10 seconds and stays dark during the night cycle. This wouldn't add much of a challenge, however it will add to the submissiveness of the game as players will feel as though they are really in the game because the world will adapt to the typical night experience. We also thought of maybe having NPC's that the player can interact with later on, possibly unlocking new abilities or another person to group up with.

Revised Timeline

Date:	Objective:	Group Member
March 2	- Zombies: Spawning them, killing them, increase number per night (A) - Day/Night: Have a timer, darken the screen as night approaches, death if outside at night, nightly report (B)	Kyle (A) Elisa (B)
March 9	- Building barricades and crafting	Kyle
March 16	- Title Screen: finish it, menu, story - Clarity: instructions, "speak" feature, write a story	Elisa
March 23	- Make it pretty: music, sound effects, character images, NPC's?	Elisa
March 30	**GAME DUE + FINAL PRESENATION**	:)