

Team 3: GreenHouse

Midterm

GAME DOCUMENT: UPDATE

OBJECTIVES:

1. find radio tower
2. collect survivors
3. defend yourself from plant zombies
4. cross the river and defeat AI

EXPERIENCE: suspense, sense of adventure, heroism

OBJECTS:

River right before the mansion: set as a kill zone and will reset the game when the player touches the water

Zombie AI: chases and attacks player when in line of vision

Buildings: when the 'E' key is pressed the doors open

STORY:

You wake up in a mysterious house with no memory of who you are, and after a few altercations with some plant zombies you discover that you are an android. You must go out into the plant-zombie infested city and find and recruit survivors, finding out the origins of the zombie virus and, after a number of missions are completed, you must enter the laboratory/mansion of the mysterious mad scientist and put a stop to the vicious AI that is orchestrating the outbreak.

MECHANICS:

The player starts out with just the android, but as they collect more characters they can play as them as well. The characters will have a variety of attack depending on who they are. The game is set in an open world city, with new areas of the map unlocking throughout the game. The player will navigate to safe houses scattered throughout the city where they can heal, organize inventory, select missions, and choose the characters they wish to bring with them on each mission. The missions will have a time restraint element, as the player will ideally want to finish the mission before daybreak. Since the zombies are plantlike, they are much more powerful during the daytime. Health items will be scattered throughout the map. The player can attack, change characters, and interact with certain objects, such as doors and levers. The player can switch characters by hitting the 1, 2, or 3 keys on the keyboard, and can attack by shooting projectiles by clicking the left mouse button. The player can open doors by pressing E.

ART:

The art will be dark and acidic colors to keep with the tone, and low poly. The music will be industrial, for the android, city environment, and science, and woodwind-y and reed-y for the plant zombies. The android and AI will be voiced using robot-speech programs (Microsoft Sam, etc.)

TECH:

The game will be played on PC, and made using Unreal Engine. Most of the games assets will be made on blender, makehuman, or found on blendswap.

Balance:

The attack power and health of the zombies will start small and increase as the player gains more characters, and as the variety of player characters increases, so will the variety of zombies.

Emergent Properties:

The player will ideally have their own choice of which characters they bring with them on mission, and the variety will allow them multiple ways to finish each mission. For example, at the end, the player can choose between taking a stealthy route or a frontal assault route into the laboratory, and can choose their characters accordingly.

Interest Curve:

As the player progresses, the enemies will become relatively more difficult to defeat, and the missions will become more complex. Furthermore, more details about the AI, the scientist, and the android will be revealed throughout the game.

CHARACTERS:



(from left to right):

DR. CLOONEY: A doctor, stays in “sanctuary” buildings around the city and heals the characters, give info on the missions, etc. Non-playable

THE GARDENER: Mysterious survivor, very effective fighter against the plant monsters, gained later in the game, fights with weed spray, clippers etc.

MARTINEZ: a cop, wields a pistol

(not pictured) CHLOE: a boxer, punches, obviously

(not pictured) THE ANDROID: Main character, robot, punches, laser hands (maybe)



(from left to right)

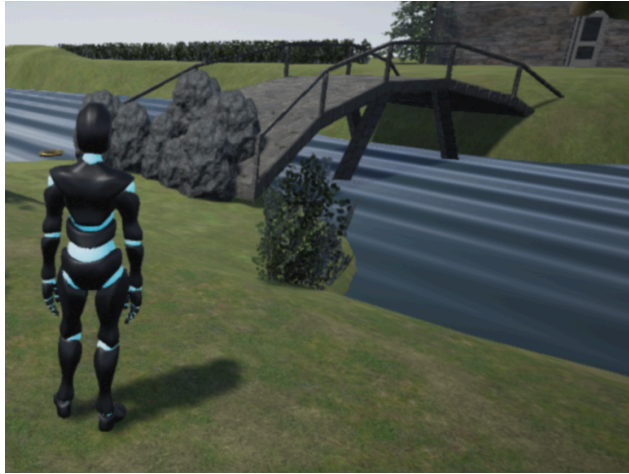
Boxer chick, The Robot, police guy



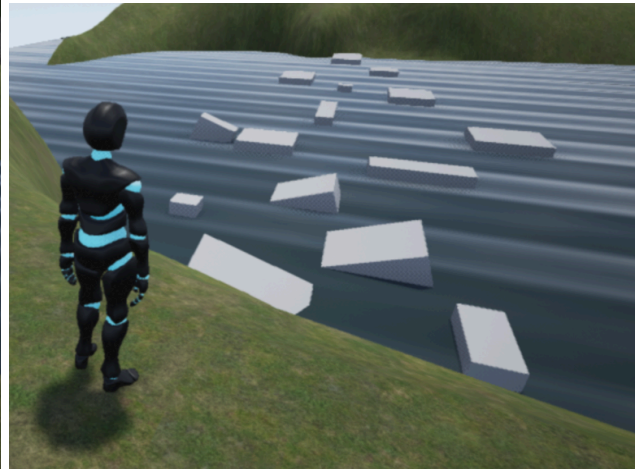
Zombie AI

PUZZLES:

The ruined bridge across a river that leads to the Mansion. The solution is jumping across debris (boxes) near the ruined bridge to reach the other bank.



Blocked Bridge



Floating boxes that the player must jump on

USE OF SPACE:

The game is open world. Buildings are placed around the world to show the player that the setting is in a city. Trees surround the area to remind the player of the plantlike origins of the zombies. The trees and buildings are placed in such a way to encourage exploration, for useful items can be found if the player looks around the trees and through the houses. The river is used to divide the normal play area from the endgame mansion. The two most important areas in the game, the radio tower and the Mansion, are given focus by isolation and hierarchy of scale. The Mansion sits alone in the middle of a group of trees on the other side of the river. The radio tower is easily found due to its height.

MUSIC AND SOUND:

The music used is electronic, reminding the player of the robotic nature of both the main character and the final boss. It is moderately paced and beat-heavy, which excites the player and encourages action and forward movement. We were not able to add any more music or sound effects before the end of the class.

PROPOSED ELEMENTS

NOTE:

Time constraints were the biggest cause of setback for this game. Obviously, anyone can do more with more time, but making even a small amount of progress meant that research had to be done,

tutorials had to be watched, and blueprints had to be debugged. On top of that, none of us had worked with unreal before, so the process of making even a simple blueprint was drawn out.

In the end, quite a number of elements were cut from our game.

For organizational purposes they are broken into three groups: AI, Player Character, User Interface/ Gameplay.

PROPOSED ELEMENTS - AI

Multiple types - We had planned on having multiple types of enemies. In the end, we ended up with one type, the basic 'zombie', who sees and chases. Because we rooted our enemy AI as a variation of thirdperson character, enemies that shoot projectiles are a matter of applying the projectile blueprint to the enemy, but these didn't fit the lore of a plant-zombie. One thing that we would have liked to see come to fruition is a nonviolent AI whose purpose is to alert nearby enemies of the player. Instead of attacking, they send out a signal, and any enemy within that signal would act as though they were the one to see the player.

Difficulty changes - Because our enemies are based on plants, in conjunction with our day/night cycle, we would have liked to implement a boost to enemies during daylight hours. This could be done by adding a boolean value to the enemy AI that checks for the position of the sun. If daylight, upgrade base health.

Final boss - The final boss ended up taking a backseat to more general gameplay. While we planned to have one, we never put too much thought into how the boss would be different from other enemies. Getting to the boss would be a challenge, but the boss itself might have ended up feeling like an overpowered 'generic' enemy.

PROPOSED ELEMENTS - PLAYER CHARACTER

Multiple types - In the earliest days of the game, we envisioned a multitude of characters that would be available to add to the team, that could be found and picked up and switched out throughout the game world. We cut this number to three, and then to two. The character we cut was the gardener. In a finalized game, having an OP character like the Gardener was supposed to be would be awesome, but realistically, in our current implementation, he wouldn't have been much different from Rodriguez or Chloe. The core of the game didn't change because of his presence, so he was cut.

Melee attacks - All three player characters shoot a projectile. The damage system is in place and collision boxes are easy enough to create and implement. Animation limitations stopped this idea from going further; an additional melee attack would have been distracting.

Team follow - We have an implementation that allows for the two non-player, playable characters to follow the current player character, but in our executable we had an overlap problem where the other characters were following a little too closely and blocking the player

character and camera. We cut this feature because although it affected gameplay the core idea of the multi-character system was still present.

PROPOSED ELEMENTS - USER INTERACTION/ GAMEPLAY

Multiple levels - Our game was first designed as a turn-based strategy game, but as it was, we'd have to program the entirety of the game itself to implement this. We changed to third-person action once we realized this, but multiple levels (with puzzle designs reminiscent of turn-based games) would have remained. In line with the minimal viable product strategy, we decided to put all elements of the game into a single level. As a compromise, the level itself has staggered difficulty: in the very beginning, the enemies are purposely facing away so as not to overwhelm the player. In conjunction with the proposed player character element of multiple player characters, each level would offer an 'unlock' for one or more playable characters to add to the team roster.

Main menu - Noticeably missing from the game is a main menu. Implementations for a main menu were started but never finished. The quest bar feature sort of makes up for this by offering direction. Cutscenes were considered in early development stages but never implemented. Cutscenes were queued in with animations but had a lower priority than character animations. A similar effect could have been achieved with a one-time display to the hud for x amount of seconds that simulated dialog, but this was redundant to the quest bar.

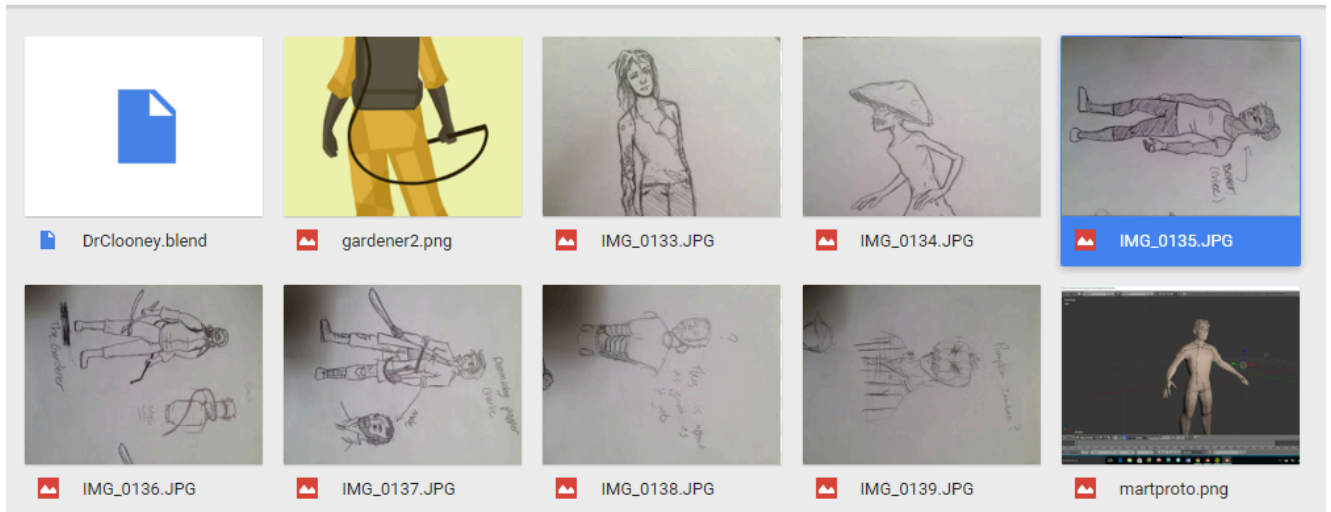
Health / stamina / ammo pickups - There is an implementation for health, stamina and ammo pickups: collide with a drop actor, receive x amount of health, stamina, or ammo. The level isn't particularly challenging, so this element was deemed clutter and removed from the final implementation.

Respawn after death - A player death restarts the game. A respawn is preferable over a restart.

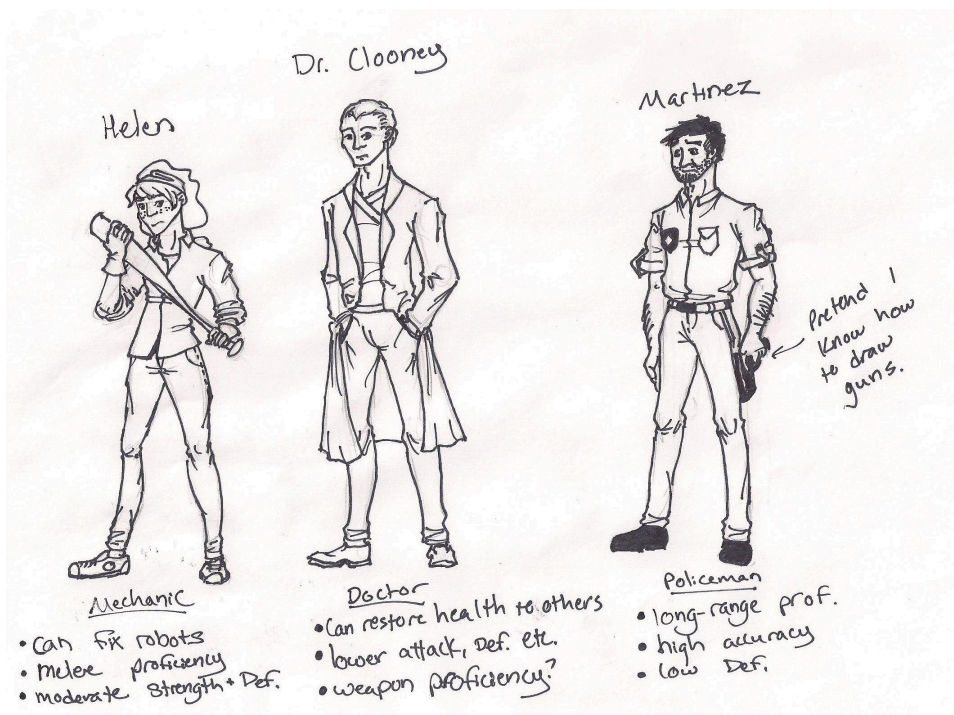
Art style - A low-poly game with simple blocked colors was the original vision, but with the need to import the majority of our actors and materials, it wasn't viable.

In addition to the cut elements listed above, there was an issue with having multiple huds/ health stats for multiple playable characters in the executable. The fastest fix was to remove this feature and to scale back on the damage that enemies deal. Even without unique stats/huds and a follow feature, playable characters that aren't the current player character will not take damage. It's perfectly okay to abandoned a swarmed character.

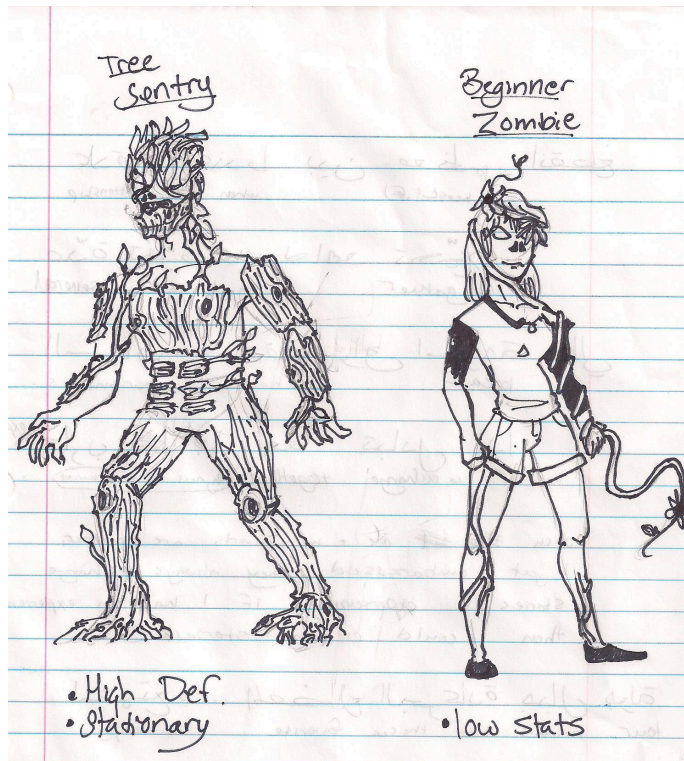
ADDITIONAL ART and SCREENSHOTS:



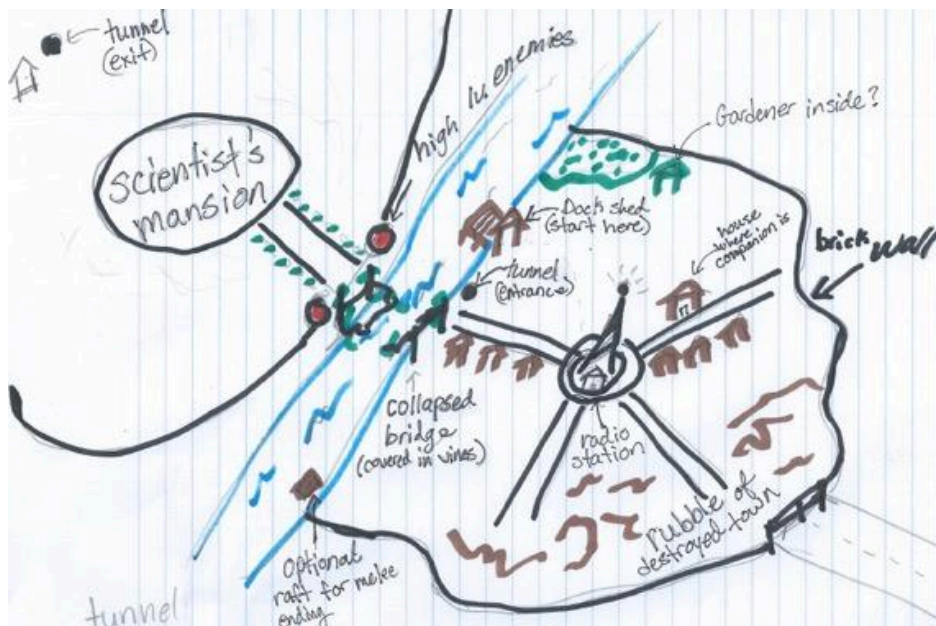
Screenshots of Character designs



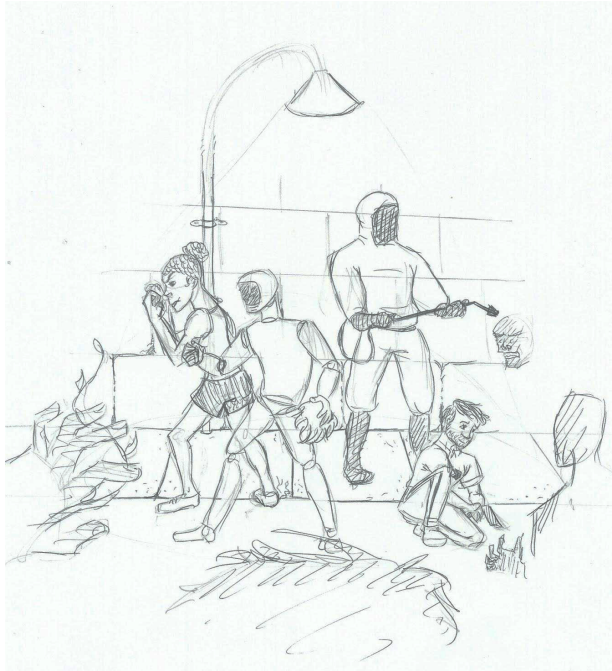
Character design concepts



Character designs



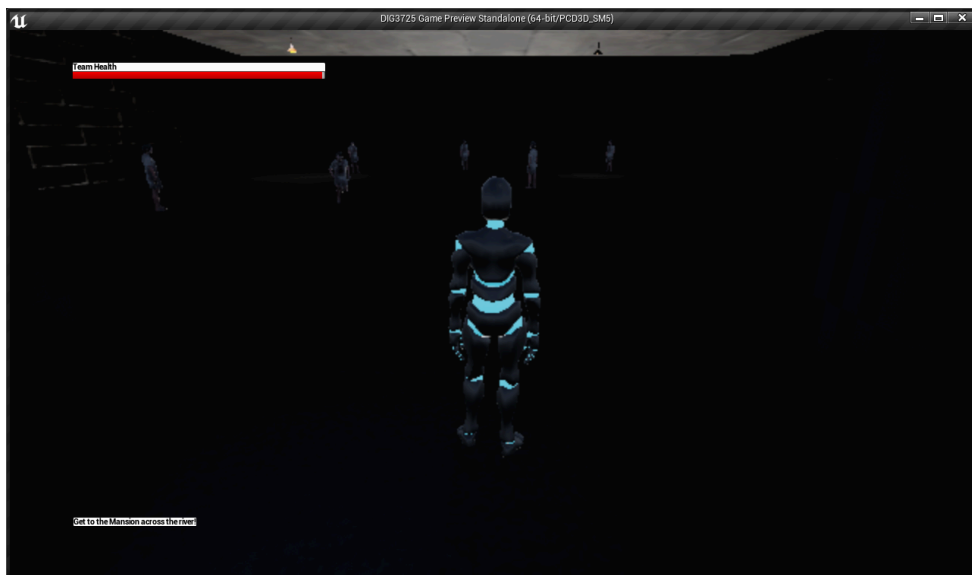
Original concept of the game world.



First concept design of the Game poster.



Final design of the game poster.



Screenshot of the HUD: team health is in the top left and objectives are shown in the bottom left



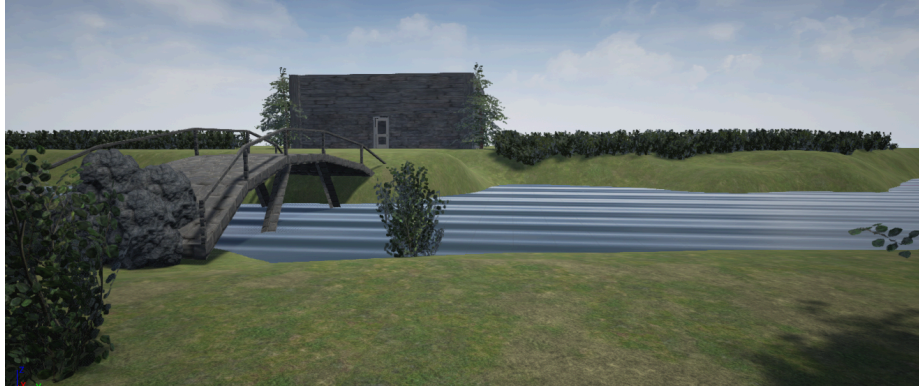
Town where the player starts the game.



Radio tower that the player must find as an objective



Warehouse the player must find



Screenshot of the Mansion from across the river that the player must cross for the final battle.