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CS 347 Project 3

## Brainstorming Approach

We did not follow a formal brainstorming process. Instead, we opened up a google document and started writing in ideas. We eventually settled on making a multiplayer game. We decided this because we thought it was fun and wanted to see your reaction when we do a multiplayer game in this class. Once that was decided, we talked about whether we wanted a dungeon crawler, a free roam, if we wanted it 2D or 3D. We then left the brainstorming for a day to get a better idea on what each of us wanted to do individually and then came back the next day. After watching videos and looking at pictures that each of us wanted the others to look at, we settled for a version of speed halo, a custom infected game mode type in halo reach. We knew making this type of game would be able to have multiple rounds and be pretty enjoyable; we also knew we would be able to add in some random elements into the game mode to make it more unique in accordance to our touches.

Creation of the Game

To begin, we wanted a game that would have an “infected” type and a non infected type. The mechanics of the infected type was that they were supposed to use a gravity hammer type weapon (a weapon that lets out a spherical aoe ability around the user) to use to destroy vehicles that the other players would be driving. The non infected characters would be driving a vehicle and try to run over the infected people. Once the infected person kills a non infected person, the non infected person becomes another infected person. If by the end of the round there are non infected people alive, the non infected people win. If all the non infected people are killed, the infected win.

However as things progressed, a few ideas changed about what we were going to do. After the models were made for the game, the idea of gravity hammers and that type of theme went out the window. The game now has swords, more specifically the infected has swords. Thus the idea of an aoe ability around the infected player went away. Now the infected swing their swords and a projectile of slicing air come shooting forth from the swords swing. On top of that, there are degrees of how powerful the sword swing is. It depends on the charge up time; the longer the cast time, the stronger the ability. An interesting interaction appeared when we changed this aspect: the ability also traveled through the teleporter. It was an interesting twist to the game that allows for more diverse gameplay and more interesting gameplay. We also planned on making the vehicles have more than 1 passenger. We wanted three passengers: the driver, the passenger seat (which had no role in the vehicle besides being there), and the gunner. The passenger seat mechanic and the gunner mechanic, while nice to add some variety in the game, are not essential for the gameplay. So we opted out on doing that and wanted to focus on getting the core gameplay done before incorporating other aspects of the game. It is because of this that we decided to not let the player driving the vehicle get out of the vehicle once they are in it. By doing this, we were able to drive deep with the core concepts of hitting the enemy with your vehicle and if your vehicle dies, the driver dies. There are no crazy loops here.

There were some ideas that we wanted to keep from the idea of halo though. We wanted to make our sounds imitate halo. It is a sort of easter egg for players who played the game in halo. On top of this, we kept the general idea of how the vehicles should look, two front seats and a gunner (even though some of that was not implemented), a steep downward slope for more speed, and the craziness of going too fast and going out of control in the vehicle.

The randomness in the game has some implementation with the mechanics but mostly it is not noticeable and done in the behind the scenes loading. At the beginning of the game, a uniform distribution is used to choose a player at random to be infected and the skin of each player in the game, which affects the type of attributes of the player. Both the random aspects incorporate variety into the game, it is the infected type that makes the player want to play the game again considering that they may want to start the game as the infected type or not the infected type as it was in the time before. The other type of distribution being used is the normal distribution. This is used when the non infected character rams the infected character in the vehicle. There is a normalized chance based on the vehicle's velocity that the infected character will get sent flying with crazy speed instead of dying on the impact of the vehicle. However, this is only the case if the infected character is not on the ground. This aspect also incorporates both aspects of replayability and variety because it allows the player to experience more than one aspect of being.

Overall, we were pretty happy with how it came out. It kept the same fun elements from the halo game and added some more features to the game that helped keep the gamemode more fresh than it used to be. Thank you Mr. Diliberti for allowing us the opportunity to make this game. We all agree that this is the best project we’ve worked on in college.