Jacob Gavin & James Harkins

Programming Paradigms

Final Project

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Tanks

I.   How to Run Game

The game is a two-player game, so the first requirement in running the game is finding a partner to play with. There are two python scripts that need to be run in order to play the game. The first is the server is called game_server.py. This script needs to be run on student00.cse.nd.edu. This script can be invoked with the command "python game_server.py". Next, both you and your opponent need to run the client script, game_client.py, on any machine you choose. That is, the script should be invoked twice on different machines. This script can be invoked with the command "python game_client.py". Ideally, this should be done on a machine in Fitzpatrick as operating remotely will cause performance degradation.

II.   How to Start the Game

When you and your opponent run the script game_client.py, a window will pop up, and you will see the start screen of the game. There you will see a set of simple controls. You can move your player by using the "a,s,w,d" keys, and shooting requires pointing the mouse to your target and clicking. The game starts when both players click on the start button in the middle of the screen. The first player to hit the button will receive a message that the server is waiting for the second player. Also, the first player to click the start button will be designated as player 1, and the second player will be designated as player 2. Make sure you have the volume on your computer turned on, as the game does have sound.

III. Gameplay Features

When the game is started, you will see that you and your opponent are in a desert environment. Player 1 controls the golden colored tank and shoots blue bullets. Player 2 controls the blue colored tank and shoots green bullets. Immediately, enemies will begin spawning at the corners of the screen. They can be killed by shooting them, or by running them over. You will see that they will shoot at you, and their bullets are red. Red bullets that hit you will decrease your health, which can be seen by looking at the health bars at the top of the screen. If you are hit by your opponent's bullets, you will not be hurt. You can see at the top of the screen that the game keeps track of how many enemies you have killed, as well as your opponent. Also, you can see a timer tick down from 60 seconds. When the timer reaches zero, the game will end. When you or your opponent run out of health, you will die, however, you will respawn in a random location 5 seconds later. The object of the game is to kill as many enemies as you can in 60 seconds.

IV. End of the Game

When the game ends after 60 seconds expire, you will be taken to an end of game screen. Here, the winner of the game (the player who killed the most enemies) will be displayed as well as the kill counts. If you want to play again, clicking on the "back to start" button will take you back to the start screen of the game. In order for another game to start, both players must go back to the start screen and click the "start game" button again. A game cannot be started without both players. However, if you are done playing the game, the game can be ended at any time by clicking on the 'x' at the corner of the window. When one player closes out of the game, both players' game windows will close.