Robot vs Aliens

Created By

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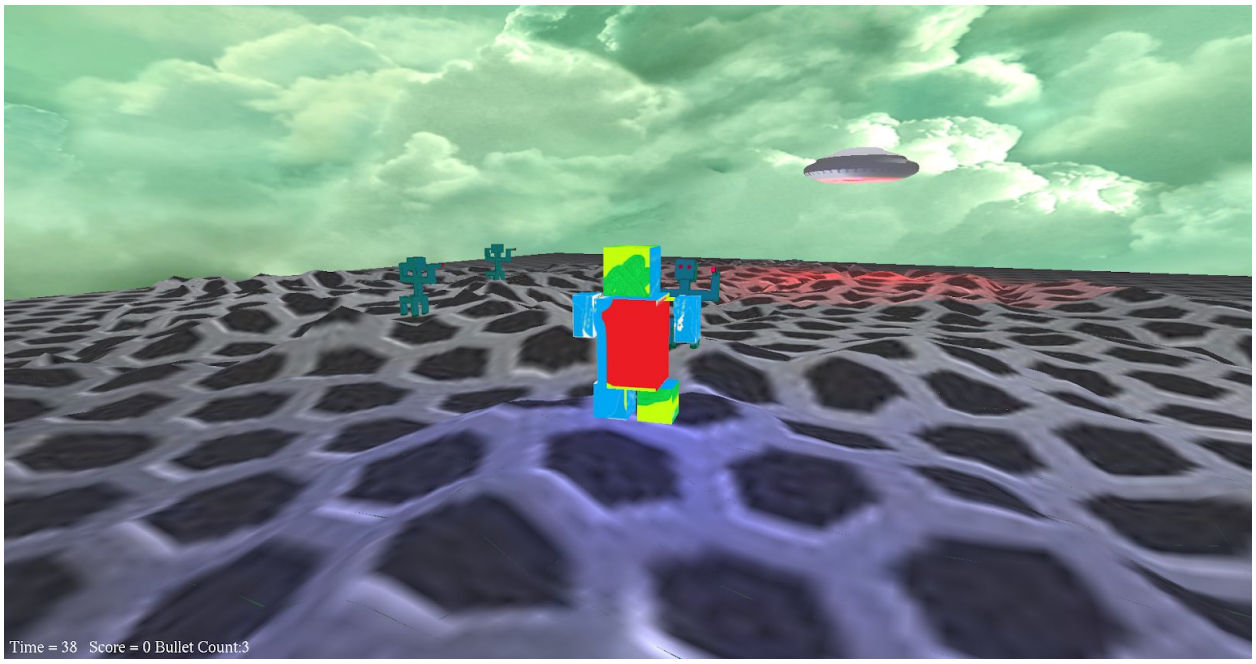
Game Image



How to Compile and Run:

How to Play:

★ The goal of the game is to score 20 points on the scoreboard by killing the aliens chasing you.

★ Press **SpaceBar** to activated the ability to fire bullets and throw grenades at the aliens. You only have 3 bullets at a time and they recharge over time.

Game Controls:

★ To begin attacking, press **SpaceBar**

★ To control the avatar, keyboard buttons **W and S** will control the forward and backward movements of the avatar. **A and D** will control the direction which the avatar is facing.

★ To control the orbit camera, the **Arrow keys** will control them.

★ Press **F** to fire the bullets.

★ Press **G** to throw grenade

★ Press **T** to turn on/off the avatar lights.

Scripting Use:

★ Parameters of the game world can be changed with the use of scripting such as:
- Orbit camera elevation control speed
- Orbit camera rotation control speed
- Player avatar location can be changed by entering in new x, y, and z values

Game Summary:

This is a survival sci-fi game in which the goal the the players is to kill as many aliens as possible. It is a 3 dimensional 3rd person shooter game. Take aim and the aliens and try to defeat them.

Requirements:

External Models:

The Robot Avatar, Alien Monsters. The UFO is adapted from a free source

Networking:

Two players on seperate computers can connect to on another.

Scripting:

Various variables for the game can be can be changed while the program is running by editing the variables located in files in the scripts folder.

Skybox and Terrain:

There is a skybox and there is rough terrain. The objects in the scene will follow the height of the terrain.

Lighting:

Two point lights used on the avatar and the UFO. Point looked better than Spot/Directional in our game.

3D Sound:

The game has a alien theme background sound and a throwing sound. There is also a monster sound for the alien.

HUD:

The HUD tells you the elapsed time, score(killed aliens), Bullet Count, and once you reach 20 points on scoreboard it changes to “YOU WIN!!!”.

Hierarchical Scenegraph:

The big UFO in the scene is a parent node while the smaller UFOs orbiting it are child nodes of the bigger UFO.

Animations:

The robot avatar has a throwing animation.

NPCs:

All the Aliens are NPCs. They are controlled by a Behavior Tree that checks if the player is near. If the player is near then it will look at the player and then move towards the player.

Physics:

We have bullet physics and grenade physics. Both are thrown at different velocities. The grenade will bounce on the terrain. Bullet flies further so it doesn't touch the ground often. Collision detection of bullets and aliens.

Incomplete Requirements:

Fullscreen exclusive mode

Team Member Contribution:

Vang Thao:

- Model Creation
- Terrain
- Scripting
- Network Multiplayer
- Npc Creation
- Physics
- Lights

Nicolas Zhang:

- Model Creation
- Skybox
- Animation
- Lights
- Sound
- HUD

Permissions:

SkyBox:https://opengameart.org/content/interstellar-skybox-png
Throwing Sound: http://soundbible.com/1622-Spear-Throw.html
Background Sound: http://soundbible.com/2213-Alien-Spaceship-UFO.html
Monster Sound: http://soundbible.com/1084-Slime.html
UFO Model: https://free3d.com/3d-model/ufo-98006.html

Lab Computers Used:

Tetris and Warcraft in RVR 5029