

GDD – HELIX AGENT

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Course:

Game Development

Instructor:

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Git Repository:

https://github.com/Pf0n1X/GameDevProj_V2

Game Trailer:

<https://youtu.be/0ZkgAiQQFqE>

Download Link:

<https://mega.nz/file/F9kETCwY#VFQ-1t85ArC1aZ-d4Qs-BvantGGi7eLWDxevxvLrNgw>

INTRODUCTION

The enemy is attacking.

Countless of armed androids are swarming the galaxy and you, the android known as “The Wraith” is the only one who can put an end to this war and save the galaxy.

Battle across mesmerizing locations such as a space station or a spaceship and save the universe!

It all depends on you, Wraith.

CONCEPT

- The player is an android traveling between several spaceships and planets.
- The player needs to eliminate all the enemies at every location.
- Once an entire location(level) is cleared, the player will be teleported to the next location.
- The player's goal is to clear as many levels as possible or clear all the levels and win the game.
- Each map will be filled with AI controller enemies that will patrol, chase, shoot and search for the player at the player's last known location after losing line of sight.



RULES

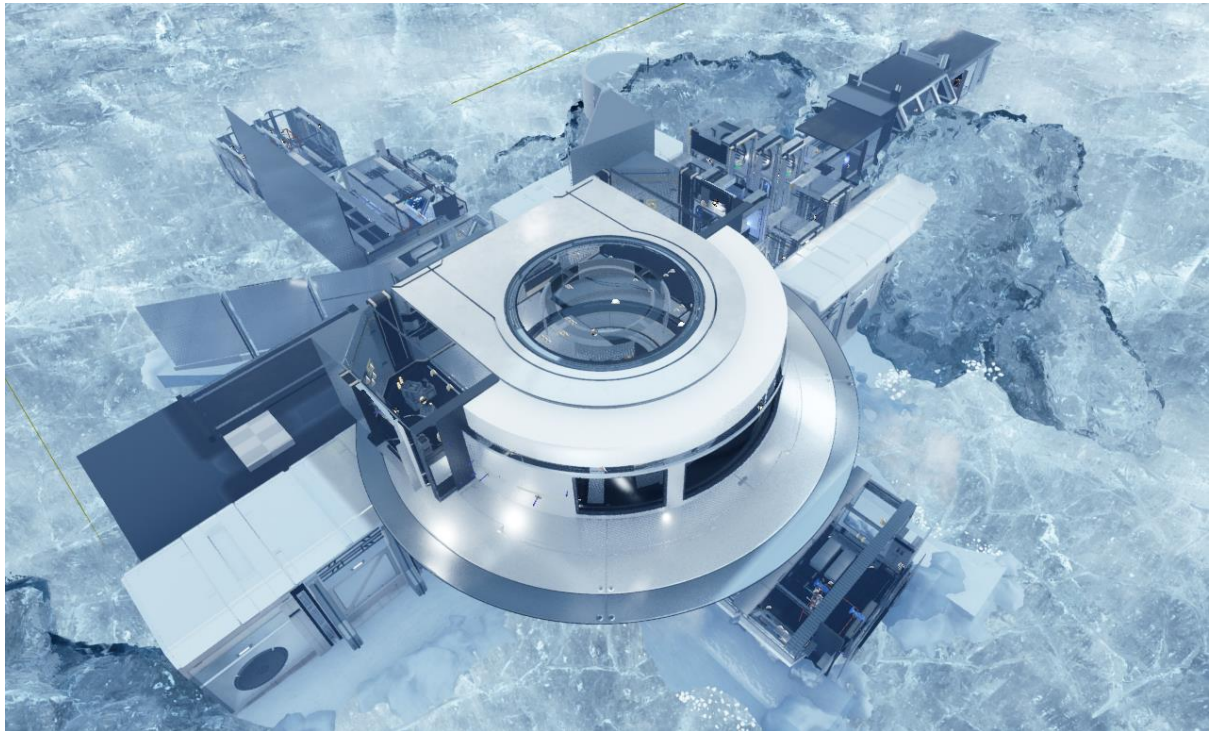
- The player has two guns: an assault rifle and a mini rocket launcher which can be switched by using the mouse wheel.
- The player can shoot the weapon using the left mouse button.
- The player can move using the w, a, s, d keys and jump using the space key.
- Each gun has a set amount of ammo which the player can use.
- Once the gun has no ammo the player will not be able to shoot using that gun.
- Ammo packs will be spread throughout each level that will refill the selected gun's ammo.
- Each time the player shoots a gun, the gun's ammo count will be reduced by 1 until it reaches 0.
- Each map will be filled with AI controlled enemies.
- The enemies will patrol through a predefined path.
- Once the player is spotted by an enemy, it will begin chasing the player and shooting him upon reaching a certain distance from the player.
- Once the enemy loses sight of the player it will move to the player's last known location and search there.
- Upon not finding the player at his last known location, the enemy will return to his original patrol path.
- Both the player and the enemies start the level with a certain amount of health.
- The enemies and the player lose health each time they get shot.
- Each gun can cause a different amount of damage to the hit player.
- Upon reaching a health count of 0, the enemy\player will die.
- If the player dies, the game will restart.
- Upon killing all the enemies in a level, the game will be paused, and the player will be met with a HUD screen that will inform him about clearing the level and about the next round which will soon start.
- There is a 5 second pause between restarts\levels.
- After the 5 second pause, the next level will begin.

- Upon killing all the enemies at the last level, a victory screen will be shown to the player.
- The victory screen will also inform the player about the game restarting after a pause.
- The game will restart after the victory screen.



THE LEVELS

- The Arctic Space Station



The journey begins and the arctic space station on planet earth. It is being controlled by the enemy androids. Will you be able to overcome them?

- The Hallway Of Doom



Prepare to face your enemies in the spaceship's hallway. But beware for it is packed with dangerous androids.

- The Mothership



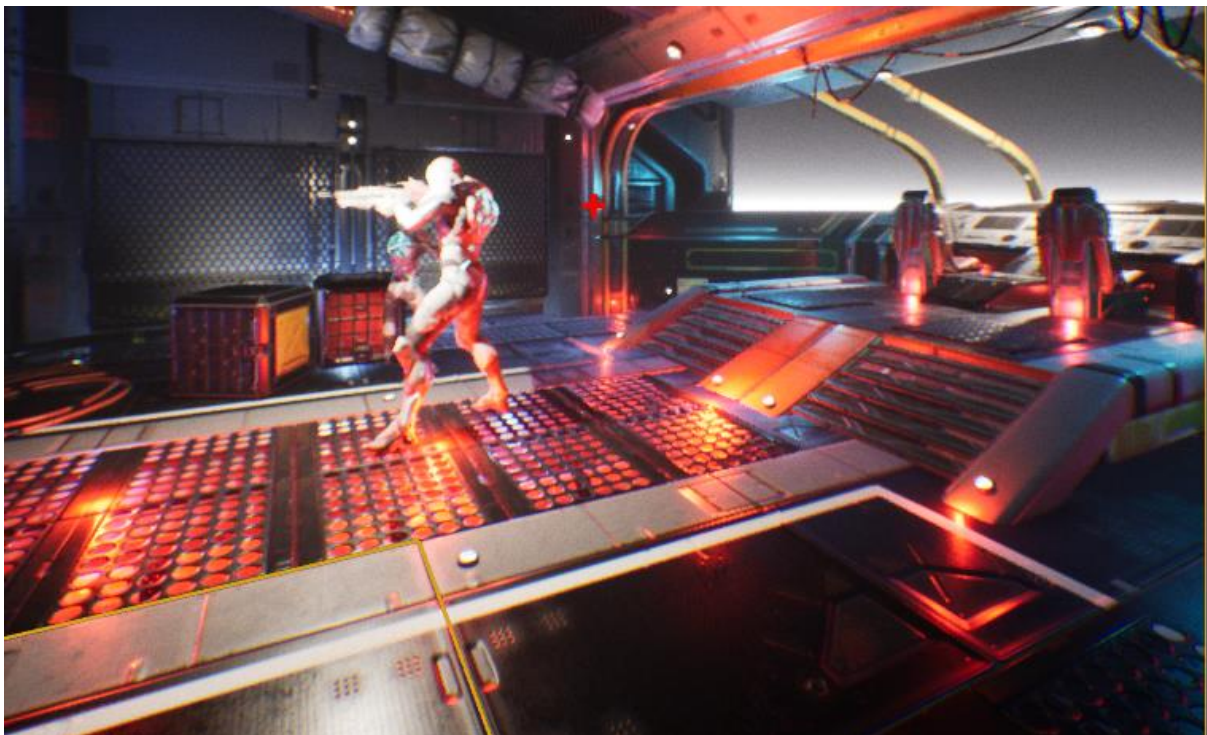
Encounter the android lord and save the galaxy in the game's final level.

REQUIREMENTS

- Static meshes and level assets.
- Player\enemy animations.
- Gun assets.
- Gun sounds.
- A behavior tree that will be used as an enemy's "brain".
- A blend of shoot, move, jump and rotation animations.
- An object(gamemode) that will save level and game-flow data between levels.

POTENTIAL TECHNICAL CHALLENGES

- Ray casting problems.
- Enemies might pick ammo up.
- The game needs to save controller data upon switching levels because a controller is created again at every level.
- Several camera angles might cause issues.
- The rocket launcher's projectile might hit the gun upon leaving it so it has to be placed a bit further.



EXTRA FEATURES

- Hinges.
- A static mesh with several LODs.
- Raycasting upon shooting the assault rifle,
- Usage of blender's Voronoi to "break" a static mesh into several pieces.
- A demonstration of the mesh that was broken by Voronoi upon moving onto a pressure plate.
- A mini map.
- Several camera angles(which can be switched between by pressing the "V" key on the keyboard).
- A physical actor with a mesh is shot from the mini rocket launcher with a particle trail.
- Shoot and hit sounds on every gun.
- Randomized hit sounds when using the assault rifle.
- A particle system follows the rocket launcher's projectile.
- Shoot and hit effects on every gun.
- Game music.
- 3D floating tutorial text with instructions.
- Camera shake is implemented when hitting something with the rocket launcher.
- A menu which lets the player start the game.
- The player can takedown an enemy from behind by pressing the "T" key without any ammo cost.

KEYS

- Left Click – Shoot
- Space – Jump
- Walk – W, A, S, D
- V – Camera Swap
- T – Takedown
- Esc – Quit Game