***Team No Name 2***

**Design Document for:**

# Wrath

**No amount of 0’s and 1’s will save them**

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Version # 1.0

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# **Design History**

Initial concepting and planning the various aspects of the game.

## **Version 1.**0**0**

Version 1.0 is the initial design of the game.

## Version 1.1

Version 1.1 alpha build.

# **Game Overview**

## **Philosophy**

### **Philosophical point #1**

Inspired by the Doom series with plans for power ups/pick ups, in a first person shooter genre. Power ups are able to increase elements such as weapon attributes and health/shields.

### **Philosophical point #2**

Our game is only designed to run on Windows machines. The reason for this is that we all own Windows machines and will only be tested on Windows machines.

### **Philosophical point #3**

We want to make a game that will do better than just pass the unit, but also, to be able to be used in a portfolio to assist in future employment prospects.

## **Common Questions**

### **What is the game?**

Doom clone where the objective is to hunt down a Rogue AI which is tearing apart Murdoch. The traversal of portals and search for secrets in order to create a final showdown between you and the final boss.

### **Why create this game?**

We are creating this game as we all enjoy FPS games especially doom and wanted to create a game that we will enjoy making. Furthermore, to experiment with our personal ideas to create something we would play.

### **Where does the game take place?**

The game starts at Murdoch University and will then progress to the interior of a ship in outer space, where portals are able be incorporated into the level design to reach checkpoints.

### **What do I control?**

The player is in control of the character and aspects of power, including shields and improvements to the weapon. Potential features including fire rate, player speed and damage are able to be altered.

### **How many characters do I control?**

You control one character which is the only playable character in the game. all other characters are robots, controls include mouse movement for look direction and WASD keys for player position.

### **What is the main focus?**

The focus of the game is to save the world by eradicating the dangerous space robots from within their own ship.The overall appeal comes from you being the one hunting down the enemies, instead of hiding.

# **Feature Set**

## **General Features**

* Linear Story
* Boss Room with potential mechanics
* Portal Traversal
* 3D graphics
* 32-bit color
* Enemy AI

## **Gameplay**

* Hunting down the rogue AI while collecting power ups and stepping through portals into new areas. THis culminates into collecting new to enter the final boss room, all the while shooting oyur way past other robot enemies.

# **The Game World**

## **Overview**

The game world is set at murdoch university in which the player can walk around murdoch university before entering the bookshop and entering a new world.

## **World Feature**

Portals, which allow the player to traverse vast distances in either Shay’s or the game world, allowing this to be incorporated into level design.

## **The Physical World**

### **Overview**

Describe an overview of the physical world. Then start talking about the components of the physical world below in each paragraph.

### **Key Locations**

Bush Court, Bookshop Stairs, Ship Boss Room

### **Travel**

Boots on the ground movement and portal teleportation.

### **Scale**

Based on real world images and consistency with sizes of rooms.

### **Time**

Time is relative in space, set at any time the player wants.

## **Rendering System**

### **Overview**

Rendering displays are changed based upon the world the player is currently in, the traversal between the worlds will alter the textures and objects which are rendered.

### **2D/3D Rendering**

OpenGL

## 

## 

## **Camera**

### **Overview**

The camera is a traditional FPS camera that is controlled by the mouse and keyboard. Mouse hover movement is used for look direction, instead of key presses.

### **Camera Detail #1**

The camera will move forward and backwards and strafe left and right using the ‘wasd’ keys and will rotate in the respective direction using the mouse.

## **Game Engine**

### 

### **Overview**

Refactored Shay’s World code that we have added our own classes and features too in order to create a game engine that we believe will suit our needs.

### **Collision Detection**

* Utilises plains for collision of floor/stairs, where the x,y,z components are changed based upon player interaction.

## **Lighting Models**

### **Overview**

Shay’s World has no lighting, however it is a potential feature that might be incorporated into objects such as portals, and certain areas within the game world, such as power ups or checkpoints.

# **The World Layout**

## **Overview**

The world starts at Murdoch University bush court, where then the player will need to enter the courtyard and find the portal located at the top of the bookshop stairs, in order to enter the game world.

## **World Layout Detail**

The game will then progress to the interior of a ship in space where the core of the game will be played. This ship will have corridors and rooms to navigate.

# **Game Characters**

## **Overview**

Our main Character is you. Your motivation is that you have encountered enemies that are evil robots from the future that want to destroy your way of life. You must save your university by traveling to their command ship and destroying them from the source.

## **Enemies and Monsters**

Standard Robot - Simple geometric shape controlled by AI. Will be textured to look like an evil robot from the future. Will shoot and damage you, and will take damage when you shoot it. Will be controlled by an AI system implemented as a finite state machine switching between basic steering behaviours such as patron, seek, flee ext.

Boss Robot - Same as above but with an increased difficulty. This is likely to be implemented by having a larger size, increased health, and a more powerful weapon.

# **User Interface**

## **Overview**

Plans for the UI involve extending the starting menu to be able to exit the game, and have an unstuck feature. The controls of the game are presented, along with the exit splash screen for finishing the game (fail or win).

## **User Interface Detail**

Health and Shields bars. To allow the player to monitor their vital signs, where incorporations of a regen animated effect can be added, otherwise jumps up to fill the bar based upon pickups.

## **User Interface Detail #2**

Ammo count and potential power up time/notification, ammo count will be capped, but can be altered with specific power ups, as well as an icon or texture representing that an active effect is currently on the player.

# **Weapons**

## **Overview**

The character will have a fixed weapon which will always be equipped. This will look like a semi-automatic rifle. The weapon will have visual cues when firing such as muzzle flash and recoil. There will also be an audio cue for weapon firing. Stretch goal to implement visual and audio cues for out of ammo/reloading

## Fire Rate

The weapon will be semi automatic with a small delay between presses. there will be pickups that allow brief windows of full auto fire.

## 

## Weapon Mechanics

The weapon is going to be hitscan meaning that when the user shoots it will destroy whatever is in front of it without launching a projectile. this works well for close range games as there is less math involved compared to an actual projectile leaving the weapon and should provide a much smoother system.

# **Musical Scores and Sound Effects**

### 

## **Overview**

Our sound effects are going to be mainly weapon sounds and walking sounds. We also might add a backing track for while the user is playing the game

## **3D Sound**

We haven't decided which sound API we are going to use quite yet. However we have made the decision not to use the sound API that Shay used when he originally created the program.

## **Sound Design**

Charlie is also a sound design student so if time allows he is going to record custom sounds for all of our sound effects. If we don't have time we will look at online royalty free sound effects.

# **Single-Player Game**

## **Overview**

The game will be entirely single player with a linear story, where the player is the sole focus and controllable character within the game.

## **Story**

A Rogue AI has torn a path of destruction across Murdoch University, sending a chunk into space. You need to travel through the portals, collect power ups and hunt down the AI to stop it once and for all.

## **Hours of Gameplay**

We aim to have 10 minutes of solid gameplay with hidden easter eggs that would take a completionist more time to find.

## **Victory Conditions**

The game is won when the player defeats the final boss. this triggers the ending splash screen that ends the game.

# **Character Rendering**

## **Overview**

Only the protagonist's arm and weapon will be rendered. The enemies will likely all share the same look, with simple geometric shapes, such as spheres or cubes.

## **Character Rendering Detail #1**

The player will never see himself so there is no point in rendering anything other than the arm and weapon.

## **Character Rendering Detail #2**

The robots will be rendered as simple boxes to assist with the collision detection. As we don’t have any artistic ability we will find a royalty free texture online to wrap the box with. The look we are going for is an evil robot from the future.

# **Extra Miscellaneous Stuff**

## **Overview**

Collectables for trophies.

Secret Easter Eggs within the game.

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