# Sumo Digital Rising Star Submission Documentation

## Initial Plan

### Objective

I held off on coming up with specific ideas for the game before inspecting the provided base project. Based on my inspection of said project, I decided to mould it into a zombie horde survival game, as I believed the pre-existing systems would fit well into such gameplay:

"**A Grave Disturbance** sees you, a lone police officer, investigating reports of noise and stench at the local graveyard. Expecting a simple case of vandalism or grave robbery, you are instead met with hordes of the undead. Can you hold out until reinforcements arrive?"

Of course, the pre-existing systems would still have to be modified in some ways in order to create the desired game, while the following systems would have to be added:

- **Enemy Spawner** – Spawns a certain amount of enemies each "wave". Stronger enemies begin appearing in later waves.
- **Score Manager** – Keeps track of the player's score. Will integrate this into the existing UI Manager.
- **Pickup Spawner** – Spawns in ammunition and health pickups.

## The Process

### Wait… What?

Although it's completely backwards, I like beginning work by nailing the visuals of a project. That's why I began by searching for suitable assets first, then coming up with a name and logo for the game second. Only once I was satisfied with the game's identity did I move on to programming the gameplay.

### The Necessary Changes

I had to extensively modify the premade classes to better mesh with the game concept. For example:

- I removed the aggro range from the **AI Controller**, as I thought the zombies could probably scent the player character and would thus always be shambling towards him!
- I removed the **DeathTrigger** script completely, as it did not fit with what I had in mind.
- I added in an animation updater to the controls. This changes the characters' animations based on their current state.

- I revised the **UI Manager** to include the current wave number, the player's current score, a game over screen, a pause menu, etc.

I also created a parent **Controller** class, as I noticed that the **AI Controller** and **Player Controller** shared a lot of the same functionality that could be inherited.

## The New Classes in Town

As I set out in my initial plan, I added in a general **Object Spawner** class from which I derived an **Enemy Spawner** and **Pickup Spawner** class. I created a **MedikitLogic** script as I wanted to have health pickups for the player to collect. The creation of these went by without much of a fuss.

# Final Thoughts

For **A Grave Disturbance**, I primarily focused on implementing gameplay systems and a clear UI/UX experience. I achieved the goals I set for myself in my initial plan. However, given more time, I would have liked to dabble with the enemy AI, especially pathfinding. Other than that, I would've liked to add a greater variety of weapon types and destructible objects in the environment, as I believe they could further enhance the gameplay experience.

# Assets

## 3D

### Characters

- **Toony Tiny People Demo** by Polygon Blacksmith - https://assetstore.unity.com/packages/3d/characters/toony-tiny-people-demo-113188

### Environment

- **Nature Pack** by Kenney (Asset Jesus) - https://www.kenney.nl/assets/nature-pack
- **Graveyard Kit** by Kenney (Asset Jesus) - https://www.kenney.nl/assets/graveyard-kit

## 2D

### UI

- **Health Bar Asset Pack** by adwitr - https://adwitr.itch.io/pixel-health-bar-asset-pack

### Fonts

- **Overload Burn** by Typodermic Fonts - https://www.fontspring.com/fonts/typodermic/overload
- **Luckiest Guy** by Astigmatic - https://fonts.google.com/specimen/Luckiest+Guy

### Other

- **Farland Skies - Cloudy Crown** by Borodar - https://assetstore.unity.com/packages/2d/textures-materials/sky/farland-skies-cloudy-crown-60004

## Sounds

- **Dark Ceremony** by PlayOnLoop.com - https://www.playonloop.com/2018-music-loops/dark-ceremony/
- **Foggy Woods** by PlayOnLoop.com - https://www.playonloop.com/2015-music-loops/foggy-woods/
- **Zombie Vocalization General** from INFECTED ZONE by MatiasMacSD - https://sonniss.com/gameaudiogdc2016/
- **Gun Semi Auto Rifle Cock 02** from Gun Sound Pack by Gamemaster Audio - https://sonniss.com/gameaudiogdc2017/
- **Male Ahhhh** by manchesterprod2 - https://freesound.org/people/manchesterprod2/sounds/245788/
- **Grunt_Pain_Male_BB_10** from Scream by Bottle Rocket FX - https://sonniss.com/gameaudiogdc2016/
- **gore - large metal blade wet stab slash**… from Gorification by Timothy McHugh - https://sonniss.com/sound-effects/free-download-game-audio/