# Project LogBook

## Tuesday, September 19th, 2017

1. Created a quick prototype of the game in Unity, implementing character movement and camera angle. This allowed me to give a better idea of the style of the game to Ross.

## Friday, September 22nd, 2017

1. Drew up a quick sketch of what I imagine the main character to look like.
2. Was able to create a rough 3D model using Blender.

## Monday, September 25th, 2017

1. Created a more detailed main character model.
2. Was able to create a rig for the model which fit the purpose of the game.
3. Created some animations for the character
   1. Idle
   2. Move Forward / Backwards / Sideward
   3. Reload Mini-Gun
   4. Equip Secondary Weapon
4. Modelled a small secondary weapon for the character, “The Cleanser”.

## Friday, September 29th, 2017

1. Read through this week’s minutes to refresh myself on what I’ve to complete for the following week.
2. Was able to complete most sections of the Game Design Document that was assigned to me, which included;
   1. Gameplay
      1. Summary
      2. RoboPill
      3. Enemies
      4. Level Design
      5. Evolution & Infection Meter
      6. Navigation
      7. UI Design
3. Created a rough-draft sketch of the in-game interface.
4. Researched into functional and non-functional requirement definitions.

## Monday, October 2nd, 2017

1. Continued work on the Game Design Document sections I was assigned to complete, which included;
   1. Functional Requirements
      1. Environment & Technical
      2. Gameplay
   2. Non-Functional
      1. Audio & Visuals
      2. Interface

## Thursday, October 5th, 2017

1. Created some models that will be valuable for Level Design
   1. Layout
      1. Level Walls
      2. Level Floor
   2. Props
      1. Flowers
      2. Vein/Artery outlet

## Friday, October 6th, 2017

1. Started to create some enemy models for the game
2. Created a base model, and rigged a basic skeleton which I may be able to re-use
3. Spent most of the day looking into why Blender was smoothing models very weirdly, could not find a fix so will need to work with it.

## Monday, October 9th, 2017

1. Picked up where I left off with the enemy models.
2. Created the “Mage” enemy model, rigged and animated him. Ready to be added to the game.
3. Started to experiment with different enemy models that would match the enemy types, but nothing really looked nice.

## Wednesday, October 11th, 2017

1. Again, spent most of the day working on enemy models.
2. Was able to create a nice looking nice “Tank” model, which is basically a Rock with massive fists.
   1. Rigged the Tank model, and animated him, ready to be imported into the game project.
3. Created an extremely basic enemy “Melee” model. Will definitely change this later.

## Friday, October 13th, 2017

1. Finished off the enemy models today.
2. Created the “Martyr” model, creatively named, “Boom”.
   1. Spent a few hours trying to animate him as I couldn’t get it just as I wanted, but it looked alright in the end.
3. Created the final enemy model, “Punchy” who will replace the basic melee model I created a few days ago.
   1. Rigged and animated him, ready to be imported to the game
4. Spent the rest of the day trying to create an intro sequence using the player’s model, didn’t turn out too well.

## Monday, October 16th, 2017

1. Finally started work on the actual game.
2. Referred mainly to the prototype to implement basic character movement.
   1. Modified the movement of the character as it felt too awkward.
      1. Modified the player’s model so he has an upper half and a lower half that can move independently.
      2. Updated the character movement which allowed WASD to control the movement on a global axis, and the mouse can rotate the upper half independently, allowing for easier aiming.
3. Thought it would be a good idea to have an easy system to build the levels.
   1. Created a basic Level Editor which allows us to place pre-defined level props into the scene on a grid layout, modify their position/rotation and save the final layout into a prefab.
   2. This, then looks through all of the objects we have stored and spawns them into the scene when the level starts.
4. Laid out the first level.
5. Spent a few hour tweaking physics and collisions to avoid any glitches down the road.
6. Start building the framework & foundations for scripting, by creating a few base classes that I feel will be needed. This included;
   1. The baseEnemy class.
   2. The baseWeapon class.
   3. The IDamagable interface.

## Thursday, October 19th, 2017

1. Started adding enemies to the game.
2. Was able to import all the enemy models I had created, and spent an hour or so getting the animations hooked up and correcting the scaling.
3. Started work on implementing AI for the enemies.
   1. Created a sub-class from baseEnemy for each of the enemies. This allows us to keep everything standardised, but also have different behaviours for each of the enemies.
   2. Was able to create the AI for the Melee & Tank enemy types

## Friday, October 20th, 2017

1. Spent the day finishing off the AI for the enemies.
   1. Enemy types Mage & Martyr have now been created.
   2. All enemy types now behave different and damage different things in different ways. Allows us to have a lot of variation in the game and require a different level of skill.

## Tuesday, October 24th, 2017

1. Spent some more time working on the game, just some basic organisational and management things such as;
   1. Keeping track of objects in the scene
   2. Ensuring objects are destroyed and instantiated efficiently & correctly
   3. Ensuring things stop when the game is paused
2. Tested things were still working correctly
3. Worked a little on making the game more aesthetically pleasing.
   1. Added some post-processing effects.
   2. Created some particle effects.
   3. Modified the lighting slightly

## Friday, October 27th, 2017

1. Started work on the shooting mechanics for the player.
   1. Was able to quite easily create the MiniGun mechanics as baseWeapon had already been created.
   2. Started working on The Cleanser as well, which took a lot longer than expected.
      1. Spent so much time trying to have it target the closest enemy, then leach from the first enemy to another enemy in range, and do this continuously to have a large connected path of enemies being zapped. This just did not seem worth the time & effort it would take, and also the impact on performance it would have.
      2. Instead, I was able to have it target any object with the IDamagable interface within a certain radius, and continuously apply damage until its charge had run out.
2. Spent a few hours creating a second weapon model, The Blaster.
3. Added The Blaster model into the game.