Final Reflection – Neon Trials

# Goal for Stretch

The blanket goal for this development stretch was to take larger steps toward the transition of “Tech Demo” to Game. While this project was meant as a technical, “Under the Hood”, project to play to my strengths, it still needed to gain its own attention through its presentation.

This includes gameplay polish, visual upgrades and better accessibility through menus and menu interaction with the controller.

# Stretch Development

## Visuals

At first, this was a simple case of updating the in-game materials with new ones and calling it a day, however, it escalated far beyond simple material swops. I ended up introducing new factors into the game that cascaded into even more factors. The main issue with game visuals was repetition. The rooms all looked the same and the hallways were empty corridors. While populating the hallways is a mammoth task that requires additions to the base generator, making new rooms was an ideal way of breaking the monotony of the dungeon. The new rooms include décor of their own with changes in height, and new enemy formations, my personal favorite is the Seashell room. It is the first room to go down, and on that lower level is an extension of the room’s arena. As it is the largest room by far, I went slightly nuts making the enemy formations (everything from a single ranged enemy to 3 Brutes, 4 Ranged and 3 Melee) and making the most valuable room yet which most likely has offset the entire generation bias (but oh well, Bruce shows up earlier).

With these environment changes I also decided to spruce up the UI menus to lean more into the Neon aesthetic I have chosen to include more menus with better designs more suited to Neon with sci-fi fonts and striking colors.

## Gameplay

The first was verticality, rooms with height deficits and other decorative structures. This led to gravity needing to become a thing that actually exists within the game – at least for the player, as they could now run up and down stairs and over edges. Luckily, I kept the interactions with gravity and the air to a minimum else I would have had to rebuild the combat system (again). However, I think that combat-verticality can be fun if implemented with a metric ton of polish as a further clone of Devil May Cry or Final Fantasy 16. On the topic of combat however, I chose that players needed more choice in their move set to make combat more engaging or visceral – I did this through the use of a new special attack system that has players prime their special attacks, and then choose one using the NSEW button on the gamepad or 1234 on Keyboard, this has made combat much more fun since there is more choice in the combat and I think it leaves space for new features such as attack-specific buffs or the ability to choose which special attacks to take into the dungeon with you.

Combat is also much snappier now thanks to sped-up animations and faster movement overall. As such, however, the normal enemies had become pushovers, and so they have been rebalanced to be more aggressive toward the player by making decisions more often and being more likely to attack from decision to decision. As such the game’s difficulty is at a point that I feel suits my claim to roguelite difficulty, but difficulty alone is not what makes a roguelite, and so I will continue to call it a Dungeon Crawler. These changes have come from the previous crit as well as playtesting sessions throughout the stretch.

With all these changes out of the way, I moved on to fixing some problems with the dungeon itself. A big one is players’ natural curiosity to explore the void outside the dungeon. This is due to some rooms with multiple entrances having open doors to the outside of the dungeon. I chose to fix this by making each door independent so that they can open and close without causing others in the same room to be in sync with it. This was less challenging than I thought, however did lead to some problems that doors might not have their check position in the right place and so have the incorrect default position. However, with that tedious issue, the doors still work as intended and players’ ability to enter the void has been greatly diminished. Just in case though, I have added a restart button so that if a player finds themselves outside, they do not have to restart the game entirely.

I also found that the original navigation aid was not very helpful being a simple arrow that points directly to the closest incomplete room. The new model uses an AI agent to navigate through the dungeon in real time, allowing it to be helpful min every situation, however, I think a good goal would be to get the dungeon environment to the point where this navigation aid is not necessary at all, where the player is naturally guided into areas where incomplete rooms are. I believe this can be achieved by building a compute shader that calculates the density of the content on specific parts of the dungeon grid and then multiplies the emission intensity of the dungeon’s highlights by said density to create environmental markers. However, I have much to learn before I can implement such a system and not have enough time to do it now.

# Response to Crit and Playtesting Feedback

Most of the feedback I chose to act on was in response to the dungeon’s appearance, camera behaviour, combat feel and balance.

## Dungeon Appearance

A very important piece of feedback I got was that the player model tends to blend into the dungeon, with a suggestion to change the floor texture. I chose to do that and more.

I changed the floor texture to a less solid pattern for more distinguishable changes, as well as upgraded the shader to include smoothness, normal maps and ambient occlusion, for this the floor has become much brighter and overall better. Alongside this change, I added a subtle Fresnel effect to the player character, so the outline is clearly visible around the edge.

While I like the look of the dungeon itself now, the relatively high quality visuals are very contrasted against the player’s own untextured mesh (I may attend to this if I finish this document soon enough). Which makes the player themself look much lower in visual quality.

## Camera Behaviour

While I understand that a 3rd person camera is one of the more difficult camera setups to get right, I feel that anything else may have detracted from my vision for the game and so I stuck to it and have no plans to change it. Any feedback on the camera was greatly cherished (despite not being able to act on all of it).

The main issue I was getting was the camera was too close to the player far too often. To solve that I widened each of the control rings by 0.5 to 2m, and while I was working on this I also limited how much the player could look up or down with the game being predominantly on a single level, the need for vertical panning is very little.

Another request that I didn’t even think of was a camera reset to make the camera face the player’s forward direction, it made getting around a lot easier since the camera can be made to look in the correct direction by the press of a button.

## Combat Feel and Balance

Another big section that needed attention was how combat felt, which was poor and slow. This was mostly due to the player’s slow attack speed and a lack of feedback from the hits themselves. I sped up the attacks and then remade and animated the enemy shaders to show a hit. There is still a bit of lag between the input and the attack landing however, it is nowhere near as bad as it used to be.

I am happy with the enemy shader animations; the shader being hit pulses a bright colour contrasted from the old one and the Fresnel effect is made much more prominent on the attack. However, I think it would have been better to include a stagger or flinch animation instead, just to make the hits that much more apparent and add more weight to the player’s attacks.

# Reflection

This last development cycle felt much more rushed than the previous ones, most likely because it was a week or two shorter. I feel like I could have had more done given another week, especially in the realm of polish and playtesting. I enjoyed working this time because I felt like I was really using everything this project has taught me to improve it, and having a close to fully working game is a very exciting feeling.

The most useful advice was to save the dungeon seed with every generation that presented problems, this made bug tracking, diagnosing and fixing much easier especially with such a massive system like my dungeon generator. However, this made for a small portion of the overall work I needed to get through this development cycle.

The bulk was spent wasting time trying to get a world UI store working, which I now know needed a very simple fix, however by ditching the store entirely I made up a large amount of time and was able to make 4 new rooms, update enemy behaviours, and implement the new special attack system which I think is invaluable now given how much more variety the combat has and that should I build a store system in the future, more unique special attacks can be swopped out for players to customize their playstyles and to bring more variety into the game’s combat.

This project has taught me a lot and through playtesting, working, and talking to people about it, I am excited to take it further and refine the concept even more, I would like to collect more data on the player for the dungeon to play a massive ongoing game of rock paper scissors as it adapts to counter the player’s style. I believe that with the current setup it should not take much longer for the game to have that kind of capability as it needs changes to already existing systems to alter how rooms are evaluated.

Overall, I am glad that I took this game to meetups and sent it around to friends to play. It has improved my confidence as a developer after hearing positive feedback and helpful ideas from others with fresh eyes on how I can make the game a better experience for the player and possible plans to expand the game into less restrictive aesthetics and more creative ways forward.

This game looks a little bit raw and could use an artist’s touch, however, I believe it has some potential to do really well as a dungeon crawler (or rogue-lite with a few more systems), and the challenges it has presented me will not so easily be forgotten and gives me hope that I still have a far way to go both personally as a developer and with this game to make it stand out above the rest as the game I envision it to be.