Game Design Document

Run, Deliver & Gun

Assignment 3

2D Shooter Game

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1. Genre and subgenre analysis

The two main inspirations I will draw from are:

- Hotline Miami [1]
- Nuclear Throne [2]

The inspiration for many mechanics in my Top-Down Shooter Game came from other top-down shooters, like Hotline Miami. Typical tropes from top-down shooters will be in my game, but what I want to interrogate is the player's awareness of the level, its layout, and the mechanics they have access to. Often there will be a focus on puzzles, rather than enemies to shoot. The inspiration for the bullet-hell sections I intend to put into my game comes from Nuclear Throne. In these sections, the main challenge the player faces comes from a large number of enemies/obstacles.

2. Hypothesis / Interrogation / Design goal

My design goal is to create a simple 2D Top-Down Shooter Game themed around a package trying to get its destination. The actual shooting and enemy AI will be simple, but each level will have a different twist from the 2D shooter game genre. The first level will be a simple Top-Down shooter (where the player shoots in all directions around them and their main goal is to get to the end of the level). This first level will have puzzle sections where the player must use themselves, their bullets, or the enemies to get past certain obstacles. The next level will add Bullet-Hell mechanics (more accurately, an "enemy-hell" where the number of enemies is the obstacle of that level. The final level will have timed-survival mechanics (instead of making it to the end of the level there will be a timer and the player will have to survive until it reaches zero).

My plan for feedback to the player: the player will always see their heath value, their ammo-count, and their ammo-type at all times (on the HUD). This will allow the player to make informed and meaningful decisions when playing. For example, if the player is low on ammo, the might go into a riskier area of the level to get an ammo box.

My plan for level progression and change of mechanical focus: the first level, being a tutorial, will be mostly focused on puzzling (for example: luring an enemy through a "scanner" in order to open a door to progress). The second level will have fewer puzzles, but more enemies. The level will feel like a bullet-hell sprint (where getting away from the enemies is a better option than fighting them since more will be spawning if you stay in the same

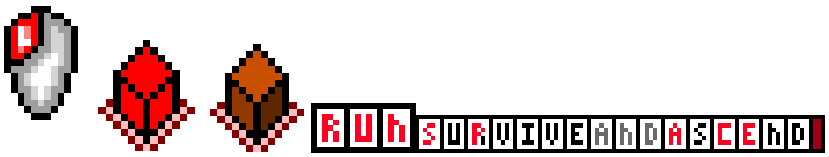
location). The final level will have almost no puzzle elements, only enemies - a lot of enemies - and the timer mentioned above.

My plan for pacing (moments of comfort/discomfort): The first level, being a tutorial, will have very few stressful moments. The second level will alternate between sprints (away from enemies) and moments of reprieve (where only a few or no enemies follow the player). The final level will be the most stressful. From the very start, the player will be chased by enemies. I plan to have one area where enemies won't spawn, to allow for a brief reprieve (allow the player to wait out some of the timers) before they are forced into the final area. The shift in mechanical focus from puzzling to bullet-hell survival, discussed above, is to facilitate a gradual shift in pace (from stress-free to stressful).

3. Design notes & process

General Design Notes:

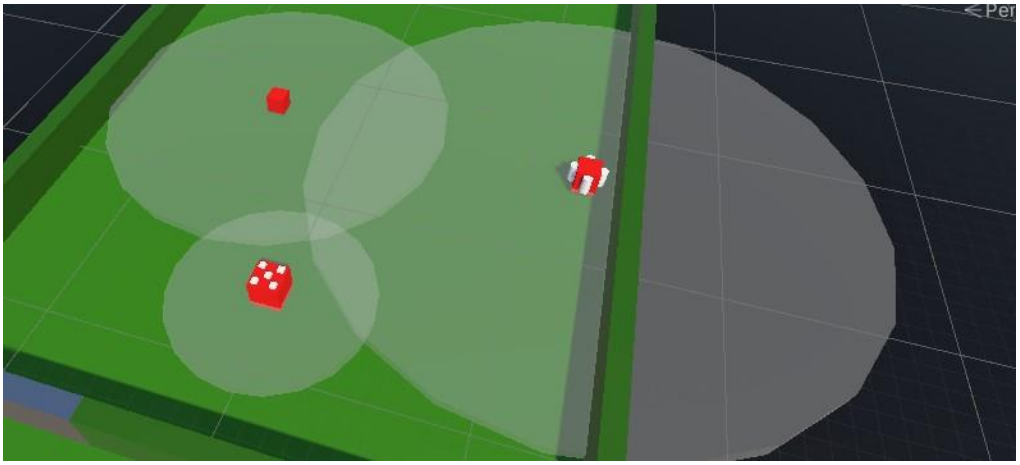
- I decided to add my portal-script from a previous assignment (it allows the avatar to teleport) in order to force the player into certain closed-off areas. It stops the player from skipping areas if they can't always backtrack.
- There are sprites that indicate what the player needs to do



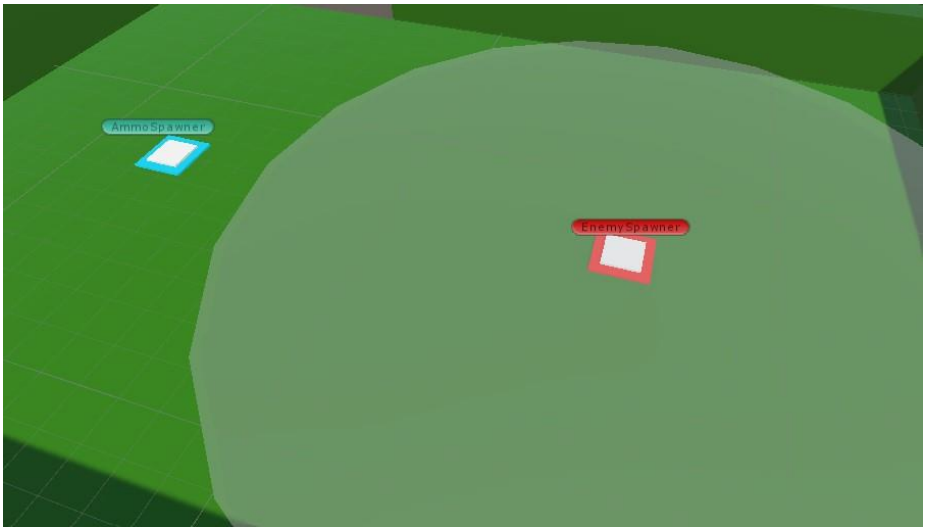
- The mouse icon tells the player to left click in order to shoot, the red box indicates that the scanner searches for enemy boxes, the brown box indicates the scanner searches for the player, the "run" icon is self explanatory, and the "Survive And Ascend" sign has the letters that make up "space" highlighted in red – "Ascend" and "Space" slyly indicates to the player they have to press space to jump (a mechanic not yet before used in the game at that point in Level 3)

Level1 (Puzzle):

- I decided to tutorialize the enemy "Spot Player Range" by giving the first 3 enemies transparent cylinders showing off their respective ranges.

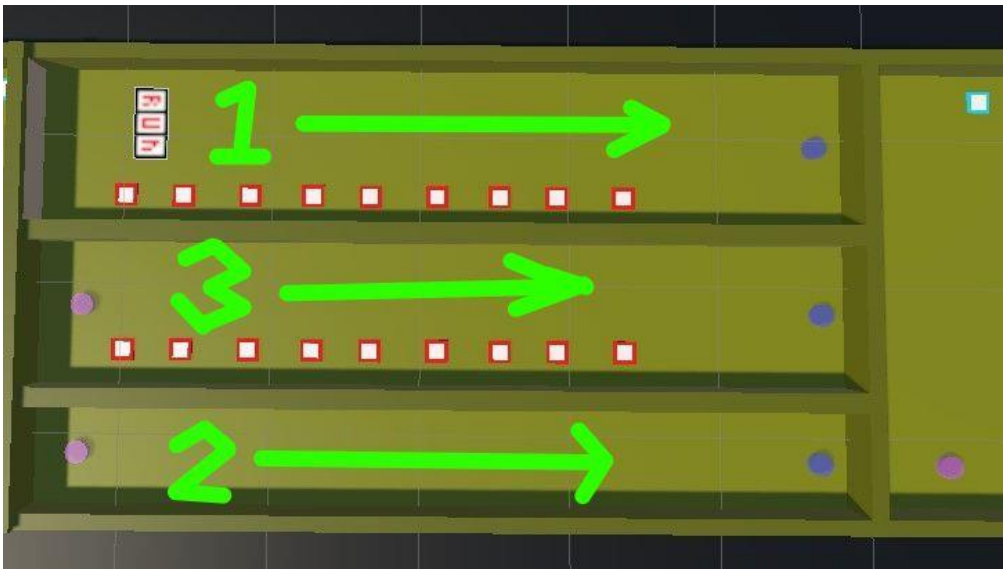


- I decided to tutorialize the enemy spawner range of detection in a similar way.

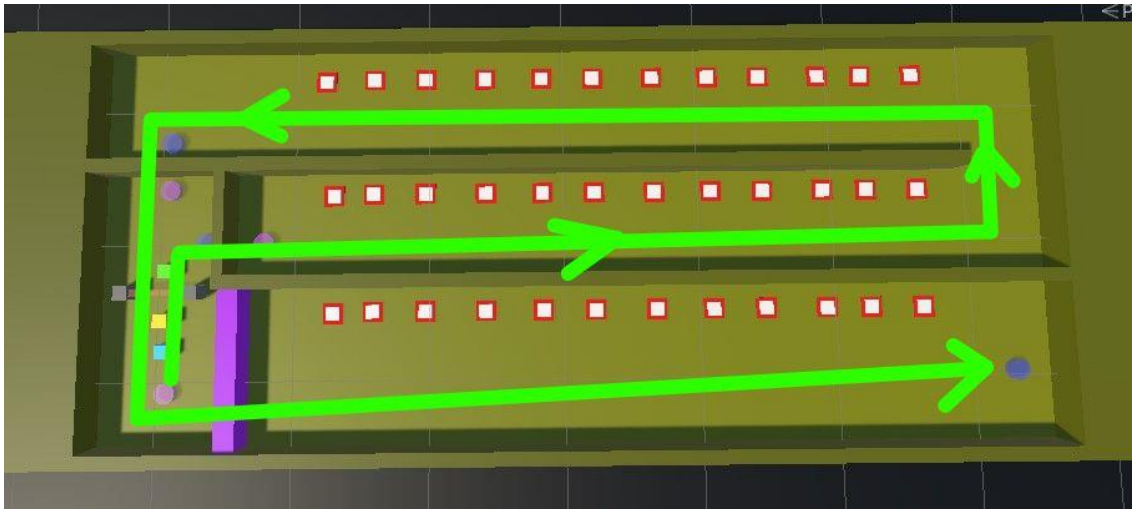


Level2 (Bullet hell):

- The range of detection for the enemy spawner played a large role in this level's design.



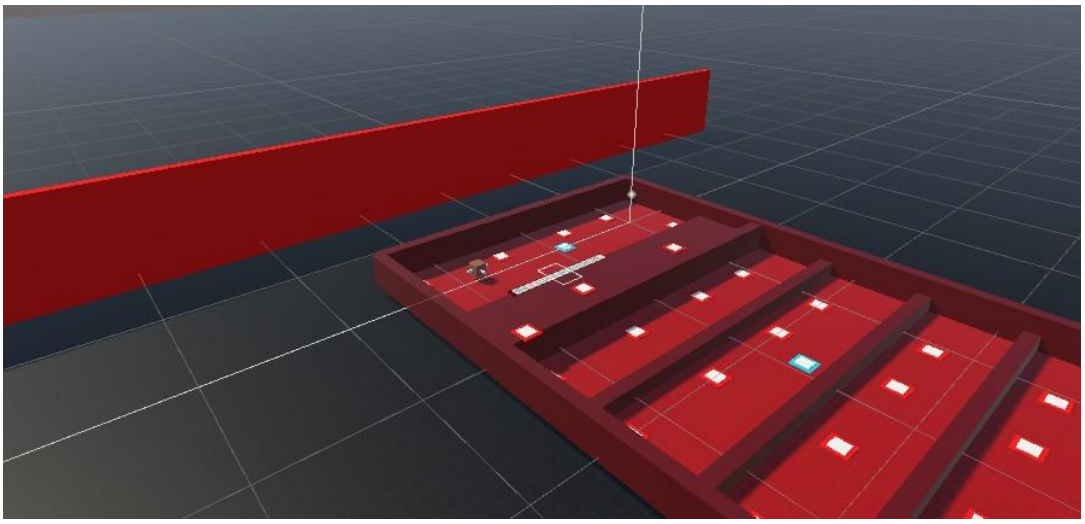
- As you can see in the figure above (note the purple and blue circles are portals) in the run 1 and 2, the player is only in range of one row of spawners, but in the final run (3), the player will activate both rows and will have to avoid even more enemies. This ramps up the tension as you race to the final portal.



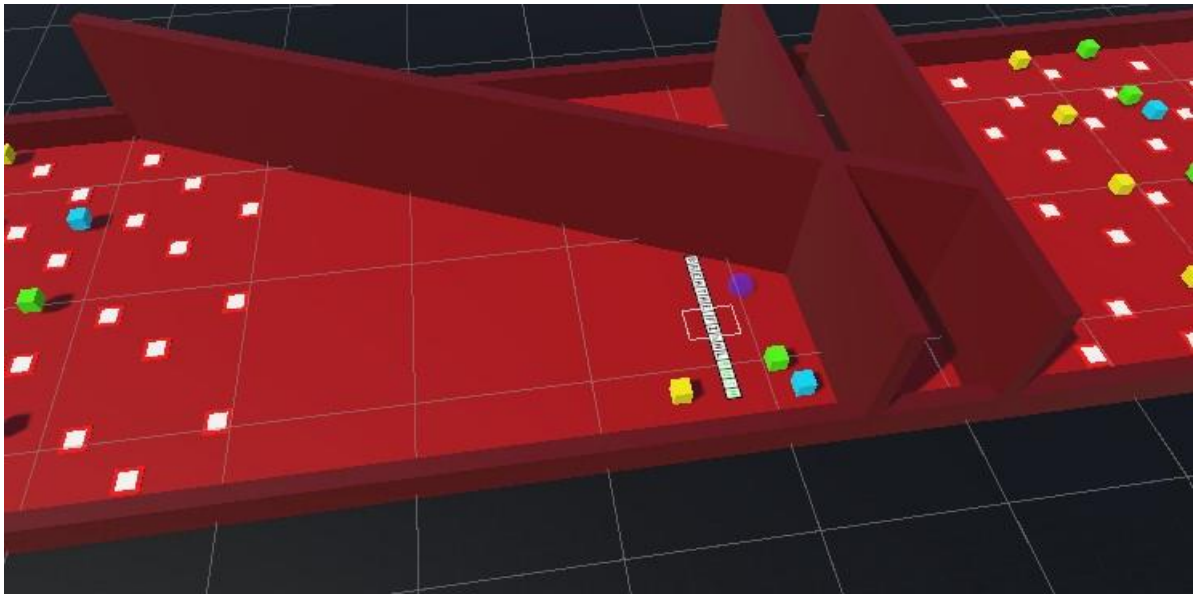
- The player also loops in on the same spawners making them a challenge at multiple points of the level.

Level3 (Survive):

- Early in the development of this level, I noticed I needed something to motivate the player to move forward (to more difficult areas) and not just remain at the start. This is a problem in this level since the goal is to survive for an amount of time, not reach the end of the level, like the other levels. The way I solved this problem, was to make a wall always closing in on the player. If it hits the player, they die instantly. It nudges the player to other sections of the level.



- This level, being the last and most difficult, can become quite stressful. I anticipated this in my hypotheses section. As I planned in that section, a single moment of comfort is allowed right before the final 30 seconds where the wall forces the player into the final, enclosed, survival room.



- Notice in the screenshot above, there is a large section outside of any spawner range, so once the player has dealt with any enemies still chasing them, they can relax here until the 00:30 mark.
- In terms of the balancing within this final level, it can be described by this table from my *Game Design Tool: Excel Spreadsheet*.

Level 3	Enemy Spawn Delay (sec)			*See focus slowly shift
Section 1	3	*start area		
Section 2	2			
Section 3	3	*small enclosed area		
Section 4	2			
Section 5	1,5	*area followed by open area (no spawners - moment of comfort)		
Section 6	2,5	*final area - forced into by Death Wall for final 30 seconds of timer		

- The spawn delay between each spawn of an enemy at an enemy spawner, was the main method of designing the balance of Level 3.
- Section 5 is the final sprint before a moment of reprieve. It is sort of the “climax” of the level’s story-structure before the falling action.
- Section 6 is a final closed-off area (a final small bit of stress to the end of the game). It is sort of the “climax” of the game as a whole.
- For more detail on the game, refer to the spreadsheet.

4. Reflection

I feel that I achieved my main design goal of making a simple 2D Top-Down Shooter Game, split into three levels that each take different inspirations from various tropes of the 2D shooter genre (namely a puzzle level, a bullet-hell level, and a survival level). I successfully implemented UI that displays all needed information to the player at any given time (namely health, ammo, ammo type, and time left). I feel that I was successful in implementing the shift in tone and mechanical focus from calm puzzling to stressful bullet-hell survival throughout the three levels. I also feel that my pacing (in terms of moments of calm and comfort vs moments of stress and discomfort) is well implemented across the levels, whereas the levels progress, the moments of comfort become fewer and farther between.

The aspect most interrogated within my game is the moments of comfort and discomfort with a game experience. Both within the *difficulty pacing* (like mentioned above with moments of stress vs moments of calm) and within the *player's comfort with the mechanics*. Some mechanics are changed, hidden in some way, or flipped on their heads throughout the course of the game. The player is never left too comfortable with a mechanic.

At the very start of the game, the player will notice that grey blocks are destructible, and thus they assume they are the only destructible terrain in the game, however, this is not the case. There are two cases of "hidden" destructible walls that the player has to shoot to progress. These are not too difficult to find since ammo spawners and enemies are located next to them – so the player can naturally or accidentally discover them by doing the one thing they can always do… shoot.

The player and enemy scanners are introduced as a simple puzzle mechanic to open doors so that the player can progress to the next area, but in subsequent levels, those scanners and doors get in the way of the player as they are running from enemies. This increases the tension as they hope the enemies trigger the scanner and let them through before they take too much damage and die.

At first, the enemy spawners seem to the player that they're only there to make sure the player always has enough enemies to get through the scanner puzzles, but soon after the player will notice the dramatic increase in the number of spawners and well as the shortened time intervals between spawns.

By the final level, the player has become comfortable with the top-down 2D genre of the game, but then one final twist is put on the mechanics. The players get the ability to jump. In actuality this as little effect on the 2D nature of the game, since it only allows for hurdles as an obstacle for the player in addition to destructible walls, portals, and puzzles. When the player jumps the enemies rise to the y-coordinate the player is on, so in a sense, the 2D plane the player-avatar and the enemies are on, only bends or shifts up slightly. The hurdles are just enough of a curveball to through at the player to raise their level of discomfort as the enemies and the "death wall" starts to enclose them.

So in essence, in my 2D, top-down shooter, the player is constantly thrust out of their comfort zone, which is created by the game and its tutorialization, and makes the player alternate from moments of comfort and moments of discomfort.

References

[1] Dennaton Games, "Hotline Miami," 2015. [Online]. Available: https://store.steampowered.com/app/219150/Hotline_Miami/.

[2] J. W. Nijman and R. Ismail, "Nuclear Throne," 2015. [Online]. Available: https://store.steampowered.com/app/242680/Nuclear_Throne/.