Level Design prototype – Assignment 3

2090536, Michaela Bussey

Intention

When learning about the overall concept of level design, I aimed to apply my newly acquired knowledge into designing a sense of progression into my turn-based combat system. My rudimentary concept of level design was that it consisted of geometric elements such as platforms and obstacles, and now I understand that it is the overall incline in difficulty to keep the player engaged and challenged. The aim was to be able to better understand the broad scope of level design through refining and expanding my prototype to imitate similar mechanics and events from Pokémon games.

I hypothesize that the prototype will have three different enemies that increase in their damage output, the second enemy having an alternative move and the third having an additional healing move. The player will also be given the choice to boost stats such as HP, attack damages or heal amounts at the end of each battle. Furthermore, the stats for each of these aspects will scale slightly for each round for the player as well. In terms of my personal hypothesize, I do believe that I will gain a sufficient amount of knowledge to understand how level progression exists in many different faucets of gameplay.

Process

To begin, the hardcoded values for enemy and player attacks that was in the "BattleSystem" was of concern and had to be modified to be able to change when progressing to the next level, done through making the moves into functions on their own. The averages of each move were calculated for the first battle: Solid attack would deal on average 4dmg, hard attack 5.25dmg, the heal restored 4.5HP and the enemy would deal 4.25dmg. These all took into consideration the percentages of failure as well, and it was clear that the values were all in proximity, but for the heal move it was not a good thing, as it made it that only 0.25 HP ultimately restored in comparison to what the enemy dealt. For this reason, the value was increased for the heal to make it an average of 5HP healed.

The enemy also dealt less damage in the first battle now, as his damage bracket changed from 3-7dmg to 4-6dmg. This was chosen so the player could get a better idea of what amount the

enemy could deal by only having 4, 5 or 6dmg possible, thus easing the player into the battle system without taking the player off guard with unfair, high damage attacks.

The enemy's base attack damage was increased each new battle by detecting which scene was currently active. Furthermore, a second attack was introduced in the second enemy, with the third having a higher chance of performing the move over the lesser attack.

Table showing all values associated with each unit's moves

Round	Player HP Max option	Enemy HP	Player atk1 max option	Enemy atk1	Player atk2 max option	Enemy atk2	Player Heal max option
1	24	24	3-5	4-6 (85%)	5-9 (75%)	-	3-6
2	30	30	5-7	4-7 (85%)	6-10(75%)	6-8 (70%)	5-8
3	36	36	6-8	5-9 (90%)	7-11(75%)	7-11(80%)	6-9

The max option was chosen for the graph because if the player did not invest the boost choice at the beginning of the round into that stat, it would just stay as the same value from the first round. This table was used and altered heavily through the design process, as it clearly lays out all the chances and comparisons between the enemy and player's stats which aided in gauging the level progression.

Reflection

Overall, this prototype was the most challenging as it dealt with micro and macro level design features. Both are equally as valuable to build a good sense of level design, but my enemy and player stat changes were mostly macro examples. The hypothesis was not fully met, as although I implemented three enemies, two with a second move, a healing move was not implemented for the third. This was not attempted as for the healing move to feel natural, at a certain point the enemy should determine when the most optimal point would be to heal, and not constantly use the heal thereafter but still alternate between moves in a natural manner.

Most aspects regarding the player were achieved, with their HP scaling slightly throughout the battles, but the moves values did not change unless the player invested their boost into one of them. This was a missed opportunity as if a singleton were used, the player's choices from the

previous round could've carried over into the next scene, but time management did not allow for me to research how to effectively use one.

The enrichment of the enemy behaviour did, however, provide a sense of progression in a way that allowed the player to understand the system initially, then in the second battle, they could come across the enemy's second attack occasionally, with the final enemy more frequently dealing a far greater amount of damage and increasing their threat unto the player.

The concept of level progression through numerical increments was a challenging thing for me to grasp, but ultimately it did teach me about the side of level design that I was unaware of, as well as highlighting how important it is within the entirety of the game feel.