Prototype 1

Playable Level - TestLevel.unity

This prototype was created to answer the core questions of the game. How will the player move, shoot, and otherwise interact with the game world? How will the enemies move and shoot, and how will this interact with the player? And how will levels be created and function? In producing this prototype we hoped to learn basic player strategies, to use in future level and enemy development. The workload was split between all three members of the group, and took most of the week. The components of this prototype are: enemy movement patterns, enemy shooting types, wave generation, player movement, player projectile design, health interface design, and a level builder.

Over Monday, Tuesday, and the first half of Thursday, Reuben primarily worked on player movement and projectile design. Over this time he built four different shooting types (beam, basic shot, arcing basic shot, triple basic shot), gave each type a different delay depending on shot power, and gave the player smooth concise controls. Over this time, Reuben also produced a basic graphical overlay to show the players health and energy (which relates to the delay on different shooting types); and gave the enemy mini health bars. These were added when it became clear that the game became frustrating to play when the player could not see when they could shoot and when they could not, or how close their enemies were to being killed. Once they were added, it was immediately apparent that it was much easier to plan ahead while playing, making the gameplay more engaging and rewarding.

Chris mainly worked on supporting Reuben in producing the player controls. He would check over it and make sure that it was working properly. He also produced a basic health enemy drop, which can easily be extended to include enemy drops of other kinds.

For the Second half of Tuesday, Wednesday, and the first half of Thursday, Simon worked on an enemy spawner which could produce groups of enemies in specific formations, and he worked on different enemy behaviors. This gave us a proper selection of enemy types and formations to add to our prototype level. Working on this also gave us a good idea of how formations should be built, and what projectile types should be assigned to what movement style, so that the player is challenged without being overwhelmed by attacks.

For the second half of Thursday and the first half of Friday Reuben worked on a level builder script. This would use the formation building script Simon made to make enemies or groups of enemies spawn at set times as the level progresses. From there Simon and Reuben worked on building a level to properly test how the mechanics work, and adjusting things based on what they found. This prototype showed us what the game was on a basic level, showing us what the player will experience as they play it. This let us decide on how fast the player should move, how big the formations should be. This has given us some improved insight on how both future enemies and future levels should be designed.

To view the prototype, simply load the scene and press play. You can use WASD to move, space to shoot, and “,” “.” and “/” to shoot. If you would like to get used to the movements without the enemies, load EmptyLevel.unity.

Ultimately, we were all happy with how the prototype functions, and are confident that using this framework, building more sophisticated and enjoyable levels will require minimal additional coding work besides creating new enemy behavior scripts.