**Sprint 3 Report**

**Task Listing:**

1)     As a player, I want to be able to play with full functionality (no gameplay

                   bugs/glitches)

a)     Finish ammo pickups (1 hour)

b)     Finish weapon pickups (2 hours)

c)     Add health pickups (1 hour)

d)     Fix enemy/player damage (1 hour)

Total hours for user story 1: 5 hours

This user story has been completed to a degree of roughly 80%. Of the four qualities we defined for this story, they all have been met to some minimum, but some time that would have been allocated for debugging and quality assurance was sacrificed. Actual implementation time was overestimated at being complete in an early 2 hours, but time was not allocated for thorough testing/debugging.

2)     As a player, I want to be able to start my game

a)     Make menu UI (2 hours)

b)     Make menu music (done)

Total hours for user story 2: 2 hours

This user story was implemented fully. An executable is compiled from our game engine, and there is a functional menu system for starting a game session. Basic implementation was completed much quicker than the estimate, but working the menus into a comprehensible game loop summed up to an unprecedented total of 4 hours.

3)     As a player I want to fight enemies that are not bland

a)     Finish enemy sprites (3 hours)

b)     Revise enemy AI, using an FSM (2 hours)

Total hours for user story 3:  5 hours

Enemies will spawn randomly in rooms and aggressively swarm the player in attempts to overwhelm you with damage. The bleak design of the enemies in conjunction with the hivemind-like motions of swarms in larger numbers yielded a surprisingly fun effect. This story was overestimated, as this story was fully achieved in about 2 hours.

4)     As a player, I want to be able to play on a controller

a)     Write code for gamepad support (2 hours)

Total hours for user story 4: 2 hours

This story was not able to be completed. Time that would have been allotted for meeting this story was reallocated primarily for implementing menu systems and reworking the world building system.

5) As a designer, I want the game to look visually pleasing (and have sound)

b)     Room sprites (2 hours)

c)     Sound effects (2 hours, stretch goal)

d)     Revise reticule sprites (3 hours)

Total hours for user story 5: 7 hours

The reticule sprites and room sprites have been adjusted to final states. Total time for completion was the correctly estimated 4 hours, and that included getting the audio stretch goal to the state we deemed at least minimum quality.

6)  As a player I want to be able to play alongside up to 3 other players

a.     Write code for multiplayer support (2 hours)

Total hours for user story 6: 2 hours.

This quality was not met. Similar to controller support, more integral qualities such as a completed world generation system, and coherent game loop involving the game menus were deemed a much higher priority.

7)  As a player I want to be able to progress through multiple levels

a.     Level design (4 hours)

b.     Level implementation (3 hours)

Total hours for user story 7: 3 hours

Upon completion of the world generation, randomly generated rooms are successfully traversable. The correct amount of time was allocated for the minimum of this quality, including bug checking. Further time would have been utilized to implement more qualities of room definition.

8) As a player, I want to be able to explore different rooms with varying levels of difficulty

a)     Build a prototype room (3 hours)

b)     Create generation code for making pathways between rooms (4 hours)

Total hours for user story 7: 7 hours

The randomly generated rooms successfully implement paths leading between rooms other generated rooms. Other areas of room definition include the number of enemies that are spawned. This story was finalized in the full time allocated of 7 hours.

**Overall Feedback:**

This was the final sprint for our project, as such we inevitably had to finally bring some stories to an ultimate termination if they had not been of at least minimum quality. Fortunately, several stories from the past sprint, such as the final reticule implementation, world generation, and enemy AI, were successfully followed up on. The time that was spent completing past sprint goals is the largest factor of why we may have fallen behind on the user stories like controller implementation and multiplayer. Overall, this sprint became the sprint with easily the most hours plotted in the shortest amount of time. Time management and proper judgement on the finalization of every user story on the table for this sprint was crucial to developing a completed product.