

Final Project Report

CSCI 4920 - Aaron Roberts

What you are most proud of about your game?

I'm most proud of the way the design is able to put together a variety of fairly simple components in a way that still makes for an engaging game, even at this prototype-level stage. For some types of games, the most important thing is having that one core gameplay flow be solid and enjoyable, and then repeating that flow with various dynamics. This prototype is a good foundation for that.

What changes you made to your original game design for technical reasons and why.

My original game design was actually an entirely different game. I changed it because I quickly realized that to build a lot of custom components from the ground up was something that was not in the scope of this project. Instead, I worked out a new design which was able to take a number of the topics from homework assignments and build on top of them to create a different experience.

As for the new design, I didn't change anything for technical reasons. That said, I ended up being unable to get "Victory/Failure" messaging to work as I couldn't figure out how to get different levels to communicate with each other properly. I also ran out of time to implement ammunition.

What changes you made to your original game design for playability reasons and why.

Surprisingly, I didn't end up changing anything about the design for playability reasons - at least not as it's laid out in the design document. I made various adjustments to things as I built it to improve the gameplay experience but these were not explicitly laid out in the document. For example, tweaking character move speed and jump height, making more complex enemy spawn points, and so forth. Interestingly I overestimated the difficulty of having enemies move around obstacles; I had this as an "extra" in my development schedule but it was actually easy to do with a navigation mesh.

All that being said, I suspect part of the reason for not making any significant design changes has to do with my answer to the next question.

What did you learn from your play-testers?

I procrastinated too much and thus never had anyone else play test the game. I imagine that if they had, I may have gotten feedback that would have caused me to consider design changes. My own play-testing did inform aspects of the design, but that's not the same as having someone else do it, of course.

What changes did you make to your game as a result of the play-testing?

Not applicable (see above answer).

What you would do next if you had more time?

There were a few things I missed from my development schedule, namely:

- Custom models (I was able to use some of the models from tutorials, but I had planned on making some of my own)
- Sounds (There is a stock gunfire sound that I used, but nothing else)
- All the things in my "extras" list:
 - More interesting AI
 - Takes different paths
 - Attempts to dodge attacks
 - Different weapon types
 - Better art
 - Textures, models, sounds, etc.
 - Particle effects
 - Player health and enemies which target the player instead of the core
 - More arenas

What you would do differently next time?

- I would spend more time learning the fundamental architecture of the Unreal Engine and the different components up front. With my time constraints, I ended up hacking things together to get them to work, but I suspect in many cases that the way I architected things would have been difficult to scale properly.
- I would learn more about UE C++. I did a lot of work in Blueprints just because of the easy discoverability it offers and its relative ease of debugging, but in general it still feels easier to build things using written code rather than the visual programming approach.

- On the note of debugging, I would look more into finding good ways of doing logging and debugging to get more insight into what's going on under the hood and to make development quicker and more robust.
- I would probably look into Unity again (as well as some of the lesser known ones, like Godot) to get more of an understanding of the different approaches these engines take.
- I would actually have some play-testing done...