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CS 485

Dr. Xiang

Final Project Document

For the course this paper the following subjects will be discussed; an overview of the game's original design (original design and the changes that needed to be made), (our methods) the design strategies and division of labor (research resources, program code structure), technical challenges and lessons learned (gitHub, miscommunication, underestimation of team ability). Within those sections there will be subsections such as game design philosophy, initial circumstances, inspiration for game design, creation tools and sources, a brief timeline of productivity, discussion of growth areas.

As our team initially assembled and sought to pool all of our ideas into a single coherent design, we endeavored to make a game similar in tone and theme to iconic games in the 'Survival Horror' genre- Silent Hill and Resident Evil. These games revolve heavily on third person over-the-shoulder cameras, powerful enemies, puzzles along with plots heavily driven by scripted cutscenes, puzzles and voice acting. We used a custom model of the Cal State San Marcos campus in order to give a realistic feel to the game and to challenge our design skills. Throughout this semester, we have had to cut lots of features from the final design. those features removed include custom voice acting, cutscenes (escape via the sprinter), in-game exposition via notes, more than 50% of the weapons, interactive puzzles, several enemy designs, an inventory system and even an entire second character along with branching progression paths. As our team assembled the final product over the course of the

semester, we made use of some instrumental strategies that will be discussed in the next section.

Design Strategies:

Throughout the course of this project we used several different strategies in the design and building of this game. We used:

- Youtube: For video explanations and tutorials as well as specific solutions to complex issues that may have been hard to describe through text
- StackOverflow: For specific coding issues that arose relating to C#
- Unity Answers: For specifics on the different built in settings and methods unique to Unity as well as the most efficient ways of manipulating them
- GitHub: in order to track changes made and allow easier merging of the project. It also allowed us to keep up to date easily.

We designed most of your scripts to be fairly modular, making it easier to read as well as allowing us to reuse some scripts for different actions and characters. This had the added bonus of making errors easier to pinpoint.

Division of Labor:

- Throughout this project we worked in separate scenes with occasional merging.
- Chase worked on the UI as well as finding all the free sound assets and the UI-Health scripts as well as the main game menu and player death menu.

- Chris worked on the modeling and design as well as level building and health scripting and found the enemy models. He also hosted the game website and resolved all the merge conflicts for each major build.
- Harrison worked on enemy AI as well as object interactions such as damage and health.

Having discussed the design strategies and methods, we can now move on to the technical challenges that the team faced as well as the overall lessons learned from this project.

Our team learned many lessons from this experience in Game Programming. We refined our ability to work as a team as well as under pressure. However these achievements did not come without their challenges:

Some of the numerous problems throughout this project:

- Issues with Maya crashing and losing work
- Merge issues due to GitHub
- Prefab connections lost due to GitHub

Despite these issues we learned quite a bit about programming and game design throughout this project. We have improved our understanding of github and are all fairly competent with Unity.

There were many things that we attempted to due but were unable to finish due to running out of time. Harrison attempted to add weapon swap which worked but didn't look right due to weapons having different normals. Chase started to get a soundtrack as well as had many sound effects that did not get added. Chris also had some models, textures and

designs that did not make the final cut. As we more to the end of the final paper, we have an opportunity to reflect on how things might have gone if we could do it all again.

This is a zombie survival game where the player is at a disadvantage. Sometimes your best bet is just to run. If we could have done things differently we would have not spent nearly so much time on modeling. Also we would have spend more time group coding in the beginning. If we had more time we would have added sound effects, voice acting, scripted cutscenes, some interactive puzzles and in-game items that would help provide plot exposition as well and more weapons and fixed the weapon swap in order to give the player more choices.In addition a second character would have been fun so that they would have different stats and it would have forced the player to act differently. Given what we know now we could have been much faster in everything we attempted and had a more flushed out game. Despite these shortfalls we have a well done game that has amazing UI, detailed modeling, and in-depth coding.