**Project Z World**

Team Members: Wei Hsu, Josh Zuluaga, and Dario Zuluaga

Project Description: Project Z World is a 2D castle Vania-style retro platformer game that is being built in Unity Engine. The platform design of this game will be based on my school, and the game experience of the game will be based on the average student life. This game will be created in a 2D platform metromania style setting, and the world will be based on the apocalypse setting, and how the player will react to survive.

Graphical user interface

Description automatically generated

**Section 1.1** Purpose of the project: The purpose of the project is to gain a deeper understanding of Video Game Development while using the C# programming language as well as becoming familiar with Unity Engine.

**Section1.2** Project Scope and design:

Diagram

Description automatically generated

**Section 1.3** Quality Assurance Characteristics: Upon the final stage of the development process, we will invite beta testers to participate in testing this game. The goal is to get the beta tester’s opinion on the overall to playtest experience of the game. We will be the focus on the following items:

* Game Story
* Graphic and Animation
* Gameplay
* Audio and Sound

**Section 1.4** The Risk: Since this project will be using some of the free Unity Store sprites and arts, we cannot legally publish this game for profit until we have artwork completely done by our artist and developers.

**Section 2A** Requirements:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Requirements** | **Description** | **Tasks Assignment** | **Hours Excepted** | **Actual Hours** |
| Tile Map | The over tile mapping system for each of the levels. Make sure that the player does not have an issue regarding collision and 2D physics. | Wei Hsu | 5 | 3 |
| Player Functionality | A player shall have the following functionalities: Moving, jumping, and animation. | Wei Hsu | 15 | 20 |
| Camera Control | The camera shall follow the player. | Dario Zuluaga | 2 | 3 |
| Firing | Bullet functionality, impacts, animation, and functionality. | Wei Hsu | 10 | 10 |
| Player Abilities | The player shall have the following functionalities: Double Jump, Dash, become a ball, and bombs (Being able to destroy destructible objects). | Wei Hsu and Josh Zuluaga | 20 | 20 |
| Enemies | Walker enemy shall have collision, damage player, health system, spawn points, and animation. Flyer enemy shall follow the player on the trigger, damage player, health system, and animations. | Wei Hsu | 15 | 18 |
| Player Health System | Player Health System shall have the following: Displaying Health, Respawning, keep active between scenes, and player death effect. | Wei Hsu and Dario Zuluaga | 5 | 4 |
| Transition Between Scenes | The player shall be able to travel between levels back and forth without having an issue. | Wei Hsu | 10 | 12 |
| Level Design | The project shall have at least two levels with the demonstration of enemies’ placement, level design, platforms, and traps. | Wei Hsu | 10 | 8 |
| Boss Room | The project shall have a boss room where the player can have a boss battle. | Wei Hsu and Dario Zuluaga | 3 | 4 |
| Boss | Boss shall have the following features: shoot bullets, damaging player, health system, animation, and moving spawn points. | Wei Hsu and Josh Zuluaga | 15 | 15 |
| Main Menu | The menu screen shall have the following features: Title of the project, button with the new game, and quit. All these buttons shall work. | Wei Hsu and Dario Zuluaga | 5 | 5 |
| Audio | The project shall have the following audio: Menu screen, in-game levels, and the boss battle. | Wei Hsu | 3 | 3 |
| Art | Each prefab, enemy, player, and boss shall have their own artwork. | Dario Zuluaga | 40 | 18 |
|  |  | Total Hours: | 158 | 143 |

**Section 2B** Stretch Requirements:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Stretch Requirements** | **Description** | **Tasks Assignment** | **Hours Excepted** | **Actual Hours** |
| Unlock Abilities | Control and unlock abilities: Double Jump, Dash, Become a ball, and bombs. | Josh Zuluaga | 8 | 5 |
| Player Health System | Player Health System shall have the following: Invincibility and flashing, checkpoints, and health Pickups. | Wei Hsu | 5 | 5 |
| Boss Room | Boss Room shall be triggered with entering trigger, and the player cannot leave the area without finishing the boss fight. |  | 3 | 2 |
| Boss | Boss shall display health bar system. | Dario Zuluaga | 2 | 3 |
| Menu | Being able to load the player progress by clicking the continue button. | Wei Hsu | 5 | 3 |
| Demo Build | Creating and building a game application for people to play. | Wei Hsu | 1 | 1 |
| Audio | The project shall have the following audio: Enemy sound, shooting, destruction, player death, bomb, etc. | Josh Zuluaga | 5 | 6 |
|  |  | Total Hours: | 29 | 25 |

Total Hours spend on the Project: 168 including the art and sound design,

Section 3.1 Design and Overview of the Game

Diagram

Description automatically generated

Art Design

Text

Description automatically generated with low confidence

**Section 4.1** Verification

Demo:

Quality – Customers are generally using the demo to make a purchase decision on the game. Make sure that what developers put out there is high quality and measures up to the real experience.

Timing – When we release our demo is also important. I generally recommend waiting until the launch date, but there are circumstances where putting a demo out before release is effective. If, for instance, we feel like our potential customers need to touch the game to understand it, then a quality demo before release can be useful.

Length – We need to balance giving the customer enough content to get them excited, without giving away so much that they feel like they've experienced everything the game has to offer.

Testing:

To work properly for our potential customers, our application type must be set as 'Demo' and the App ID of our base game entered in the General Application Settings section of the Steam works website for our demo. Our primary developer account will automatically own both the demo and the base game, thus only letting us launch the base game. To get around this and test our demo, the customer will need to request keys for our demo and activate them on test accounts that do not own the full product. In most cases.

**Reference**

[1] S.R.O., Eccam. “Example Software Requirements Specification (SRS) | ReqView Documentation.” ReqView, 2018, www.reqview.com/doc/iso-iec-ieee-29148-srs-example.

[2] IIEEE, " 29148-2018 - ISO/IEC/IEEE International Standard - Systems and software engineering -- Life cycle processes -- Requirements engineering " pp. 56-87, Jul. 2018. [Online] Available: <https://ieeexplore-ieee-org.byui.idm.oclc.org/document/8559686>