

CMSC 447
Software Engineering
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Testing Report

The Boundless Hollow
Testing Report
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1. Introduction

1.1 Purpose of This Document

This document delves into the details of the various tests done on The Boundless Hollow. It will contain a list of the testing sessions and describe what was done in those sessions. Testing sessions will be created based on our use cases. These tests may also highlight any errors found during the sessions and how those errors are handled.

1.2 References

System Requirements Document

2. Testing Process

2.1 Description

Our team tested the game by putting ourselves in the position of the player. We played the game normally and prioritized testing functions that would hinder the games playability. These functions include: Weapon Balancing, Weapon Evolution, Reward System, Screen Transitions, and Enemy Spawn Rate. By prioritizing these functions, we were able to produce a functioning game and focus on less important functions and quality of life additions.

For each function, we also tried finding defects/bugs that hinder us from satisfying our use cases. By doing so, we were able to meet the customer's expectations and deliver a working product. Testing this product was the equivalent of being in the position of the player, so we just played our game and tackled the various test cases listed.

2.2 Testing Sessions

For each testing session, specify the date, location, time started, time ended, who performed the tests, and which use case(s) was covered.

| Testing Session | Date | Start Time | End Time | Location | Tester(s) | Use Case |
|-----------------|----------|------------|----------|----------|--------------|------------------|
| 1 | 12/1/23 | 2:00pm | 10:00pm | N/A | Kabeer Alabi | Weapon Evolution |
| 2 | 11/17/23 | 7:00pm | 3:00am | N/A | CJ Vittek | Enemy Spawn Rate |

| | | | | | | |
|---|----------|---------|--------|-----|-------------------|--------------------------------|
| 3 | 11/20/23 | 12:00pm | 9:00pm | N/A | Collins Ufua | Reward System when Leveling Up |
| 4 | 12/2/23 | 10:00am | 5:00pm | N/A | Nahim Kamruzzaman | Weapon Balancing |
| 5 | 12/4/23 | 12:00pm | 3:00pm | N/A | Tae Hyung Kim | Scene Transitions |

2.3 Impressions of the Process

The testing process was very informative and effective, as we were able to discover issues that could have ruined the experience of our product. Prior to testing, certain features were not satisfying their specified use-case/requirement. Due to this the quality of our game was not where we wanted it to be. However, during testing, these issues were identified and fixed. The quality of our product drastically improved after these tests and repairs.

The best modular unit would be the scene transitions, since it was simpler to implement when compared to other units. The worst modular units in our program would be the weapon evolution and balancing, because of how complex they were to implement. For instance, weapon balancing had a bug where the weapons were doing no damage to the enemies. This would have disabled players from progressing.

3. Test Results

| Testing Session | Use Case | Tester(s) | Test Summary | Defect(s) | Repairs |
|-----------------|------------------|--------------|---|--|--------------|
| 1 | Weapon Evolution | Kabeer Alabi | Kill enemies with selected starting weapon and pick up upgrades dropped by them to ensure the weapons the player possess are progressing as intended (aesthetic and power-wise) | Old projectile of weapons would still be on screen after evolution | N/A |
| 2 | Enemy | CJ Vittek | I played the | Many of the | Eventually I |

| | | | | | |
|---|--------------------------------|-------------------|--|--|--|
| | Spawn Rate | | game each time making modifications to the enemy spawn rate in order to determine a rate that would not prove to easy or boring but also not be to difficult | rates that were chosen were way too fast or too slow and led to the game either being impossible or just being really boring to play | landed on making the spawn rate change with time so that early on the spawns would be manageable but would scale up as the player got stronger to get it difficult |
| 3 | Reward System when Leveling Up | Collins Ufua | Kill enemies with selected starting weapon to ensure enemies are dropping upgrades at the appropriate rate. After, move the player towards the upgrade to ensure the pickup is registering and giving the appropriate buffs. | Unfinished but functional | N/A |
| 4 | Weapon Balancing | Nahim Kamruzzaman | Pick up each weapon upgrade and move close to enemies to test whether the correct damage numbers would display when the weapons makes contact with the enemy | -Weapons were doing no damage to enemy units -Damage of mace weapon was not scaling properly | -Fixed Incorrect Damage Output -Fixed Mace Weapon Damage Scaling |
| 5 | Scene Transitions | Tae Hyung Kim | Switched game scenes to discover if options selected from the main | Switching starting weapons (after first game) doesn't register | Had to reset the player data before the game started to register the |

| | | | | | |
|--|--|--|---|---|--|
| | | | menu scene was being passed to the game scene | for the first item on the drop down menu without clicking off and clicking back on the weapon | selection of the first item on the drop down menu |
|--|--|--|---|---|--|

Appendix A – Team Review Sign-off

After thorough review and discussion, all members of the team have carefully examined the document, and unanimously agreed regarding its content and format. This collaborative team effort has allowed us to incorporate diverse perspectives from one another, ensuring that the document accurately represents our shared understanding of the project requirements and design standards. We are confident that this agreement reflects the collective vision of the team.

Kabeer Alabi

Print Name

CJ Vittek

Print Name

Nahim Kamruzzaman

Print Name

Tae Hyung Kim

Print Name

Collins Ufua

Kabeer Alabi

Signature

CJ Vittek

Signature

Nahim Kamruzzaman

Signature

Tae hyung kim

Signature

Collins Ufua

Appendix B – Document Contributions

Collins Ufua - Section 1.1

Nahim Kamruzzaman - Section 1.2

CJ Vittek - Section 2.1

Tae Hyung Kim - Section 2.2

Kabeer Albi - Section 2.3