

Testing Plan

Testing Approach

In our testing approach, we will initially decide on the entities that exist in our game and write unit tests to test the basic functionality of these objects. Additionally, integration tests will also be implemented in order to ensure the components of the system are able to work efficiently and cohesively. The tests are also blackbox tests, as the tester will only need to worry about testing the input and output requirements. This will be done before implementing the game in order to keep us on track and focused when we write code for larger features.

Unit tests to implement

- Arrows tests
- Bomb tests
- Boulder tests
- Exit tests
- Floor switch tests
- Invincibility potion tests
- Invisibility potion tests
- Key tests
- Player tests
- Shield tests
- Treasure tests
- Wall tests
- Wood tests
- Zombie spawner tests
- Sword tests
- Portal tests
- Zombie toast tests

Integration tests

- Integration test 1
 - Description: Player picks up sword, then gets a key and takes a portal to open the door and using it on the exit
- Integration test 2
 - Description: Player picks up key1, goes through door to get key2, then has to drink the potion before going into portal and using key2 on door2 so that he can reach the exit
- Integration test 3
 - Description: Player picks up bomb then places bomb next to wall, moves towards mercenary and bribes it. Then proceed to move boulders onto switches. Next pick up key and sword and move through door into another room with a zombie toast spawner. Proceed to eliminate enemies. Then take portal to exit room than take the exit.
- Integration test 4
 - Description: Player picks up all the wood and arrow necessary to build a bow and a shield.

Unit Tests

| Test | Sub Test | Sub Test | Sub Test |
|---------------------------|--|--|--|
| Arrow Test | Test that the player picks up arrows | - | - |
| Bomb Test | Test surrounding entities are removed when placing a bomb next to an active switch with config file bomb radius set to 2 | Test surrounding entities are removed when placing a bomb next to an inactive switch with config file bomb radius set to 2 | Try to pick up bomb that has already been placed |
| Boulder Test | Test the boulder being pushed down | Test the boulder not moving due to being pushed into a wall | Test player trying to move more than one boulder |
| Exit Test | Test if player goes through exit, the puzzle is complete | - | - |
| Floor Switch Test | Test player pushes boulder on switch | Test player pushes boulder on switch and pushes it off again | - |
| Invincibility Potion Test | Test basic battle calculations - mercenary - player loses except player is invincible | Test basic battle calculations - mercenary - player loses except player is invincible | - |
| Invisibility Potion Test | Can move through enemies | - | - |
| Key Test | Test player can use a key | Test player can't use wrong | - |

| | | | |
|----------------------|---|---|-----------------------------------|
| | to open and walk through a door | key to open and walk through a door | |
| Player Test | Test the player can move down | Test the player can move right | - |
| Shield Test | Test making a shield using 2 wood + 1 treasure | Test making a shield using 2 wood + 1 key | Test making a shield using 2 wood |
| Treasure Test | Test that the player picks up treasure | - | - |
| Wall Test | Testing the wall stops movement of player | Testing the wall enemy interactions | - |
| Wood Test | Test that the player picks up wood | - | - |
| Zombie Toast Spawner | Test player can break | Test if adjacent are all walls, can't spawn zombies | - |
| Sword Test | Test picking up sword amplifies damage | Test sword durability | Test can pickup |
| Portal Test | Test player can teleport and they end at the right location | Test player cannot teleport | - |
| Zombie Toast Test | Test spawn at spawner | Test portal has no effect | - |

Integration Tests

[illegible]

