

1. Introduction

The purpose of this document is to demonstrate our testing strategy, and document our findings from said tests. Our tests are based on the functional expectations laid out in our requirements document, with the second part of this document listing those requirements and our expected result given the provided inputs. The 3rd part of this document provides a report, indicating the expected results from testing certain inputs.

2. Testing Requirements

2.1 *Application Startup*

2.1.1 RS 3.2.1.1

Launch the application

2.2 *Player Movement*

2.2.1 RS 3.2.1.2

Press keys on keyboard to move player

2.2.2 RS 3.2.1.2

Press wrong keys on keyboard

2.2.3 RS 3.2.1.2

Press button to make player jump

2.2.4 RS 3.2.1.2

Press incorrect buttons to make player jump

2.2.5 RS 3.2.1.2

Player movement invokes walk animation

2.2.6 RS 3.2.1.2

Player idle invokes idle animation

2.3 *Player Combat*

2.3.1 RS 3.2.1.3

Press the attack button

2.3.2 RS 3.2.1.3

Press the incorrect button to attack

2.3.3 RS 3.2.1.3

Hit an object with weapon while attacking

2.3.4 RS 3.2.1.3

Hit an object with weapon without attacking

2.3.5 RS 3.2.1.3

Hit an object with player

2.4 *Computer AI*

2.5.1 RS 3.2.1.5

AI characters can move in the world

3. Test Cases

3.1. *Application Startup*

3.1.1. Test 1

Purpose:

Test the launch of the game.

Setup:

Launch the game by clicking the “play” button in unity developer.

Inputs and Expected Outputs:

Input	Expected Output
Click the green “play” Button	The game runs

Testing Requirement Covered:

Requirements 2.1.1

3.2. *Player Movement*

3.2.1. Test 2

Purpose:

Test the player movements and movement related animations.

Setup:

Press each arrow key one at a time, then press the spacebar to verify the movement functionality. Select random incorrect keys and verify that they have no behavior.

Inputs and Expected Outputs:

Input	Expected Output
Incorrect key press (other)	No movement, maintain Idle animation.
Left arrow press	Move left, walking animation plays. Other animations stop.
Right arrow press	Move right, walking animation plays. Other animations stop
Up arrow press	Move up, walking animation plays.
Down arrow press	Move down, walking animation plays. Other animations stop.

Spacebar button press	Jump into the air, jumping animation plays. Other animations stop.
No input	Idle animation plays, no movement/ cease previous movement.

Testing Requirement Covered:
Requirement 2.2

3.3. *Player Combat*

3.3.1. Test 3

Purpose:

Test the player combat functions, animations, and collisions related to combat.

Setup:

Press the left mouse button to verify the attack and animation. Check to ensure damage is dealt to objects. Select a random button to press to ensure that no attack occurs.

Inputs and Expected Outputs:

Input	Expected Output
Incorrect key press (other)	No movement, maintain Idle animation.
Left mouse button click	Attack animation plays.
Left mouse click (attacking an object)	Attack animation plays, and object takes damage from attack.
Player collides with an object	No damage should be dealt to the object
Weapon collides with an object (not attacking)	No damage should be dealt to the object.
No input	Idle animation plays, no movement/ cease previous movement.

Testing requirements Covered:
Requirements 2.3

3.4. Computer AI

3.4.1. Test 4

Purpose:

Ensure the NPC/enemy is operational.

Setup:

On launch of the application the AI/NPC character should begin its movement pattern.

Inputs and Expected Outputs:

Input	Expected Output
On launch	AI Moves.

Testing Requirements Covered:
Requirement 2.4.1

4. Results

4.1. Application Startup

4.4.1. Test 1

Results:

Input	Expected Output
Click the green “play” Button	The game runs

Conclusion:

The program passed the test and begins operation as expected.

4.2. Player Movement

4.2.1 Test 2

Results:

Input	Result
Incorrect key press (other)	No movement, maintain Idle animation, with the exception of

	the “a,w,s,d” keys.
Left arrow press	Move left, walking animation plays. Other animations stop.
Right arrow press	Move right, walking animation plays. Other animations stop
Up arrow press	Move up, walking animation plays.
Down arrow press	Move down, walking animation plays. Other animations stop.
Spacebar button press	Jump into the air, jumping animation plays. Other animations stop.
No input	Idle animation plays, no movement/ cease previous movement.

Conclusion:

The program passed the test and begins operation as expected, with the exception of incorrect key presses. However, we deem that this error is acceptable as using those keys to navigate is a widely used practice in the gaming community.

4.3. Player Combat

4.3.1 Test 3

Results:

Input	Expected Output
Incorrect key press (other)	No movement, maintain Idle animation.
Left mouse button click	Attack animation plays.
Left mouse click (attacking an object)	Attack animation plays, and object takes damage from attack.
Player collides with an object	Damage is dealt to that object.
Weapon collides with an object (not attacking)	Damage is dealt to that object.

No input	Idle animation plays, no movement/ cease previous movement.
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Conclusion:

This application failed this test due to the collision of either the weapon or the player with another object dealing damage to that object. It will be necessary to add conditions to restrict when damage is dealt to coincide with the attack animation and to reduce the “hitbox” size so that the player colliding doesn’t do damage.

4.4. *Computer AI*

4.4.1 Test 4

Results:

Input	Expected Output
On launch	AI Moves.

Conclusion:

The application passed this test, on launch of the application the NPC moves in a set pattern.