

Project Phase 1: Use Cases

Use case: Starting and configuring the game

Primary actor: User

Goal in context: To start the game and begin interacting with the game environment

Preconditions: Game must be downloaded

Trigger: The user has started the game either via running the executable or through the command line

Scenario:

1. The user runs the game program
2. The user waits for the game to enter the main menu
3. Once on the main menu, the user clicks the adjust difficulty button
4. The user selects a difficulty and clicks another button to return to the menu
5. The user clicks the start game button and spawns onto the game map

Priority: Medium priority; Needs to be implemented to demo the full game, but game logic testing can be completed without the start game/menu functionality

Use case: Moving around the map

Primary actor: User

Goal in context: To move the main character around the game map

Preconditions: The user has started the program and configured the game settings

Trigger: The user has clicked the start game button

Scenario:

1. The user has clicked the start game button
2. The user controlled character loads onto the map
3. The user begins to move the character around the map to collect rewards and avoid monsters by pressing the up, down, left, or right buttons on the keyboard
4. The user controlled character moves in the direction of input

Exceptions:

1. The user attempts to move the character into a wall – The game prevents the player from moving past the way
2. The user attempts to move the character into the exit door – The game prevents the player from moving through the door unless all regular rewards have been collected
3. The user does not input any movement commands – The user controlled character stays in the same location and does not move

Priority: High priority; Will need to implement this as one of the first steps to correctly test input as well as interactions with the game world

Use case: Collecting a reward

Primary actor: User

Goal in context: To increase the score of the player and progress through the game to eventually unlock the exit

Preconditions: The user has started the game and the user controlled character has spawned on the map

Trigger: The user controlled character walks over a reward tile

Scenario:

1. The user has clicked the start game button
2. The user controlled character loads onto the map and rewards are spawned
3. The user moves the user controlled character in the direction towards a reward
4. The user controlled character moves to the same tile as the reward
5. The user's score goes up and if the reward is a non-special reward, a counter for the exit condition is incremented
6. At the same time, the reward is removed from the tile

Exceptions:

1. There is a reward on the same tile as a moving monster – The user will collect the reward, but their score will go up/down based on the net difference

Priority: Medium priority, we will need to implement this to test the win condition as well as the score increasing

Use case: Getting attacked by a monster

Primary actor: User

Goal in context: To lower the main characters health and reduce the score of the player

Preconditions: A monster and main character have been spawned onto the map

Trigger: The user controlled character moves to the same tile that contains a monster

Scenario:

1. The user has clicked the start game button
2. The user controlled character loads onto the map as monsters are spawned
3. The user moves the user controlled character onto a tile that also contains a monster
4. The user and the monster touch, the user's score decreases and the user controlled character becomes invulnerable to monster damage for a short period of time
5. Once the monster has touched the player, it will stop chasing the main character until the invulnerability wears off

Exceptions:

Priority: Medium priority, we will need to implement this to test the lose condition as well as the score decreasing

Use case: Finishing the game

Primary actor: User

Goal in context: To successfully win the game and end the current play session

Preconditions: All regular rewards have been collected

Trigger: The game system detects that all regular rewards have been collected

Scenario:

1. The user has clicked the start game button
2. The user controlled character loads onto the map and rewards and monsters are spawned
3. The user begins to collect all of the regular rewards
4. The user successfully avoids enough monsters to stay above 0hp while collecting all of the regular rewards
5. Once all regular rewards have been collected, the exit unlocks
6. The user navigates to the exit door and enters
7. A pop up appears displaying the final score and a button to return the user to the main menu

Exceptions:

Priority: Medium priority, we will need to implement this so that we can successfully test the end winning condition as well as navigation back to the main menu and highscore recording