User cases

Use case 1: Start the game

Primary actor: Player

The goal in context: The application is opened and the player wants to start the game.

Preconditions: The game has not yet started, or the previous round has ended.

Trigger: The application is opened, or the player returns to the main menu.

Scenario:

1. The main menu appears with a start game and close game button.
2. The player presses the start game button.
3. The game starts, creates the world, main character and game objects and gives the player control of the main character.
4. The game renders and runs logic.

Exceptions:

1. The player presses a button. (see use case **Player presses a button**)
2. The player exits the game, and the application closes.

Priority: High priority; the game can start.

Frequency of use: Infrequent, once per game

Use case 2: Player presses a button

Primary actor: Player

The goal in context: Player inputs a button to control the main character.

Preconditions: The game is started, and the game world exists.

Trigger: The player presses the button.

Scenario:

1. The player presses a movement button.
2. The main character moves in the direction pressed by the character.
3. The main character moves onto an empty space.
4. The game is progressed by 1 tick

Exceptions:

1. The button is not a movement button, and nothing happens.
2. The main character attempts to move into a wall tile, but the main character does not move, and 1 tick goes by.
3. The main character does not move onto an empty space and encounters an enemy. (see use case **the main character encounters an enemy**)
4. The main character does not move onto an empty space and encounters an object. (see use case **the main character encounters an object**)
5. The main character does not move onto an empty space and encounters the exit. (see use case **The main character encounters the exit**.)
6. The player presses the main menu button. (see use case **Start the game**)

Priority: High priority, the player can move the main character.

Frequency of use: Extremely frequent.

Use case 3: The main character encounters an enemy.

Primary actor: Player

The goal in context: The player inputs a movement button and moves the main character onto an enemy in order to attack the enemy.

Preconditions: The game is started, and the game world exists.

Trigger: The player presses a button movement and the character attempts to move into an enemy.

Scenario:

1. The player presses a movement button.
2. The main character moves in the direction that was pressed by the character onto an enemy.
3. Enemy loses health according to the main character's attack stat.
4. The enemy's health is reduced to zero or less. The main character is moved onto the enemy's position, the enemy is defeated, and the player is rewarded.

Exceptions:

1. The enemy's health is not reduced to zero or less. The main character does not move from its original position. (see use case **Player presses a button**)

Priority: Medium priority; main character needs to be able to move around first

Frequency of use: Frequent.

Use case 4: The main character encounters an object.

Primary actor: Player

The goal in context: The player inputs a movement button and moves the main character onto an object.

Preconditions: The game is started, and the game world exists.

Trigger: The player presses a button movement and the character attempts to move into an object.

Scenario:

1. The player presses a movement button.
2. The main character moves in the direction that was pressed by the player onto the object. Based on if the object is a reward or a trap, the main character either obtains the reward or is punished by the trap.

Exceptions:

Priority: Low priority.

Frequency of use: Frequent

Use case 5: The main character encounters the exit.

Primary actor: Player

The goal in context: The player inputs a movement button and moves the main character onto the exit.

Preconditions: The game is started, and the game world exists.

Trigger: The player presses a button movement and the character attempts to move into the exit.

Scenario:

1. The player presses a movement button.
2. The main character moves in the direction pressed by the character onto the exit. If the player has collected all the keys, the main character exits and the player wins.

Exceptions:

1. If the player does not have enough keys the player cannot exit (see use case **Player presses a button**).

Priority: Medium priority, the game can end.

Frequency of use: Somewhat frequent