# Use cases

## *Use case 1: Entering a game(round)*

**Goal in context**: The user is tasked to begin a round in the game after opening the application.

**Preconditions**: The game is successfully downloaded with no launching issues.

**Trigger**: The User wants to play the game.

**Actor**: User/Player

**Scenario:**

1. Open the game via the exe application.
2. Under the main menu with the listed choices: "Start game" and "Exit", click the "Start game" option.
3. The user will enter the game and all necessary components will spawn.

**Exceptions**:
1. The game does not open after clicking the exe application.
2. The main menu options do not appear.
3. The mouse does not appear and cannot access options by scrolling with the keyboard.
4. Other errors include: Game goes straight into playing a round and bypasses main menu

**Priority**: High, as it is a basic function

**When available**: TBD (as soon as possible)

**Frequency of use**: Frequent

## *Use Case 2: Leaving the game(application)*

**Goal in context**: The user is tasked to leave the game application without clicking the "x" symbol on the top right corner.

**Preconditions**: The game is successfully launched and the main menu is shown.

**Trigger**: The user wants to leave the game after changing his mind.

**Actor**: User/Player

**Scenario:**

1. Under the title screen main menu with the listed choices: "Start game" and "Exit", click the "Exit" option.
2. After clicking it, confirm that the application closes and disappears off the screen.

**Exceptions**:
1. The user clicks the "x" button by mistake.
2. The title screen menu "Exit" option is not working after interacting with it
3. The "Exit" option takes you to a different screen (eg. takes you in game) rather than closes it.

**Priority**: High as it is a basic function

**When available**: TBD (as soon as possible)

**Frequency of use**: Frequent

## *Use Case 3: Leaving the game(round)*

**Goal in context**: The user will leave the "currently in progress" round.

**Preconditions**: User has successfully entered a game(round); User is currently playing a round with no technical issues.

**Trigger**: The user wants to leave the round and enter the main menu.

**Actor**: User/Player

**Scenario:**

1. User clicks the "Esc" key on the keyboard which pauses the game in the background and brings up the main menu.
2. Confirm the options "Continue", "Restart", and "Back to Main Menu" appear.
3. Click the "Back to Main Menu" option.
4. After clicking it, confirm that the round closes with the "title screen" main menu appearing.

**Exceptions**:
1. Clicking the "Back to Main Menu" option leads to a different result than intended (eg. restarts the game, exits the application or closes the main menu continuing game).
2. The "Back to Main Menu" button does not work or is unresponsive.
3. The "Back to Main Menu" or the other remaining options do not appear.

4. The "Esc" key does not respond as intended (eg. does not open the menu or causes the game to close etc).

**Priority**: Moderate, can leave the application as temporary measure

**When available**: TBD

**Frequency of use**: Infrequent

## *Use Case 4: Clearing the board(in game)*

**Goal in context**: The user is going to restart the round.

**Precondition**: User has entered the round successfully; User is currently playing the game with no technical issues.

**Trigger**: The user wants to restart the round by clearing the game rather than leaving.

**Actor**: User/Player

**Scenario:**

1. User clicks the "Esc" key on the keyboard which pauses the game and brings up the main menu.
2. Confirm options "Continue", "Restart", and "Back to Main Menu" appear.
3. Among the listed indicators, click "Restart".
4. Upon clicking "Restart" the main menu closes and the board is set to state 0 (beginning).

**Exceptions**:

1. Clicking the "Restart" option leads to a different result than intended (eg. leaves the game to the title screen, exits the application or closes the main menu continuing game).
2. The "Restart" button does not work or is unresponsive.
3. The "Restart" or the other remaining options do not appear.
4. The "Esc" key does not respond as intended (eg. does not open the menu or causes the game to close etc).

**Priority**: Moderate; can play the game in one run as a temporary measure.

**When available**: TBD

**Frequency of use**: Infrequent.

## Use Case 5: Attempting to win the game

**Goal in context**: The user attempts to win the game as it is designed.

**Trigger:** The user wants to complete the game by winning.

**Precondition**: Round launches successfully; Character and enemies spawns at stationary position and moving enemies begin to move;

**Actor**: User/Player

**Scenario:**

1. Move the character with the keyboard keys indicating left,right, up or down if not blocked by barriers.
2. Avoid the moving enemies chasing you and the stationary enemies in the way by moving
3. Collect the regular rewards one at a time and confirm it disappears from the field.
4. (Optional) Attempt to collect the bonus rewards in the same fashion before it disappears from the screen.
5. (Optional contd.) If a bonus reward is collected, confirm the increase in total score.
6. When all the regular rewards are collected, navigate to the end cell by moving towards it.
7. When the player reaches the end cell, a pop up indicating "Victory!" appears indicating the win for the player.
8. Along with the popup, click the indicator labeled "Exit" to leave the game to the Main menu.

**Exceptions**:

1. Movement keys are not responding
2. The enemies or character sprites do not spawn.
3. Player loses unintentionally by stationary enemy (refer to Losing the game by stationary enemies)
4. Player loses unintentionally by a moving enemy (refer to Losing the game by a moving enemy).
5. Reaching the end goal does not stop the game
6. Reaching the end goal does not prompt a "Victory" popup or an option to exit.
7. Regular rewards do not disappear from the game after being picked up
8. Bonus rewards stay on the platform the whole round.

**Priority**: High, as it is the main function of the game

**When available**: TBD (as soon as possible)

**Frequency of use**: Frequent

## Use Case 6: Losing the game (by stationary enemies)

**Goal in context:** Player loses the game by negative score.

**Preconditions:** Round launches successfully; character and enemies spawn at appropriate grid spaces with no issues; Moving enemies begin to move;

**Trigger:** The player wants to see what would happen if he/she continues to hit the stationary enemies.

**Actor**: User/Player

**Scenario:**

1. (Prerequisite) Character spawns at stationary position and enemies begin to move.
2. Move the character with the keys indicating "up","down","left", or "right" if not blocked by a wall/barrier.
3. Move in the direction of the stationary enemy's cell.
4. When reaching the stationary enemy's cell, confirm that the player's total score decreases.
5. Repeat steps 3 and 4 until the player's total score reaches negative (below 0).
6. When the player score reaches negative, confirm that the player sprite disappears.
7. An indicator showing "Defeat!" will pop up as well as an option to "Exit" to leave the game to the Main Menu.

**Exceptions**:

1. Movement keys are not responding
2. The enemies or character sprites do not spawn.
3. The enemies do not act as intended (Eg. moving enemies do not move etc).
4. Being defeated does not stop the game
5. Being defeated does not prompt a "Defeat" popup or an option to exit.
6. Regular rewards picked up along the way do not disappear from the game after being picked up
7. Bonus rewards stay on the platform the whole round.

**Priority**: High, as it is a main function of the game

**When available**: TBD (as soon as possible)

**Frequency of use**: Frequent

## Losing the game (by moving enemies)

**Goal in context:** Player loses the game by getting caught by enemy sprite

**Preconditions:** Round launches successfully; character and enemies spawn at appropriate grid spaces with no issues; Moving enemies begin to move;

**Trigger:** The player wants to see what would happen if he/she gets caught by the moving enemies.

**Actor**: User/Player

**Scenario:**

1. Move the character with the keys indicating "up","down","left", or "right" if not blocked by a wall/barrier.
2. Move in the direction of the closest moving enemy, or stay at one cell and let the enemy come to you.
3. When both the player and the moving enemy reach one cell,confirm the player sprite disappears.
4. An indicator showing "Defeat!" will pop up as well as an option to "Exit" to leave the game to the Main Menu.

**Exceptions**:

*Refer to Losing the game (by stationary enemies)*

**Priority**: High, as it is a main function of the game

**When available**: TBD (as soon as possible)

**Frequency of use**: Frequent