# Use case 1

## Use case

Check game controls

## Primary Actor

Game player

## Goal in context

To obtain information on how to control the player character and how to play the game

## Preconditions

The player is already running the application and is inside the game level

## Trigger

The player is confused about how to control the player character and/or the objective of the game

## Scenario

1. The player clicks the pause button on the top left corner of the screen
2. The game is paused and the controls are displayed on the screen, along with information about the enemies and rewards
3. The player reads the information displayed on the pause screen
4. The player clicks the pause button again to unpause the game
5. The game continues

## Exceptions

1. The player does not click the pause button when confused; the player will not receive explicit instructions but can likely still determine the controls and game objectives via experimentation
2. The player does not understand the instructions or is not fluent in English; the player will not receive explicit instructions but can likely still determine the controls and game objectives via experimentation

## Priority

Moderate priority, to be implemented after basic functions

## When available

Third development iteration

## Frequency of use

Infrequent

## Chanel to actor

On-screen clickable interface

## Open issues

How can we ensure the instructions and controls displayed are reasonably concise but still enlightening to the player?

# Use case 2

## Use case

Find the exit of the level

## Primary Actor

Game player

## Goal in context

Find the exit of the level since reaching the exit is necessary to win the game

## Preconditions

The player is already running the application, the player understands the controls and objective of the game

## Trigger

The player wants to win the game or explore the map

## Scenario

1. The player travels away from the map entrance with WASD motion controls
2. The player navigates around walls, security guards, and EMPs
3. The player picks up any batteries or security keycards along their chosen path
4. The player observes a tile on the map depicting an exit from the factory
5. The player remembers the location of the exit and begins collecting all the security keycards

## Exceptions

1. The player doesn’t understand they must reach the exit with all keycards to win; see use case 1
2. The player is defeated by running into a security guard or EMP before finding the exit; see use case 3

## Priority

High, this is integral to the software

## When available

First development iteration

## Frequency of use

Frequent

## Chanel to actor

On-screen map display and keyboard movement controls

## Secondary actors

Players who have already beat the game and can coach the player; Anyone watching gameplay of the game

## Channels to secondary actors

1. Players who have already beat the game and can coach the player – screen-sharing software or in-person observation
2. Anyone watching gameplay of the game – screen-sharing software, prerecorded video, or in-person observation

## Open issues

How can we/should we make finding the exit challenging even for experienced players?

# Use case 3

## Use case

Restart the game after being defeated

## Primary Actor

Game player

## Goal in context

Restart the level to try to win again after being defeated

## Preconditions

The player is defeated

## Trigger

The player character is defeated by a security guard or EMP and they want to try again

## Scenario

1. The player is defeated by a security guard or EMP
2. A screen appears informing the player they were defeated with a restart button and main menu button
3. The player clicks on the restart button
4. The player is returned to the start tile on the map with their score reset and the map set back to its initial state

## Exceptions

1. The player wants to exit the game and stop playing; they close the game or click the main menu button in the defeat screen
2. The player beats the game instead; see use case 5

## Priority

Important, this makes testing the application easier and is a core and expected functionality

## When available

First development iteration

## Frequency of use

Fairly frequent

## Chanel to actor

On-screen clickable display

## Open issues

How can we communicate defeat to the player in a distinct way?

# Use case 4

## Use case

Find all keycards

## Primary Actor

Game player

## Goal in context

Collect every keycard in order to unlock the exit and beat the game

## Preconditions

The player is already running the application, the player understands the controls and objective of the game

## Trigger

The player wants to win the game, explore the map, or has found the exit and realized it is locked

## Scenario

1. The player navigates around the map with WASD motion controls, avoiding enemies until they spot a keycard
2. The player moves onto the same tile as the keycard
3. A keycard counter displayed on the top of the application increases
4. The player repeats the process until the keycard counter changes color, signaling they have collected all the required keycards

## Exceptions

1. The player is defeated by a security guard or EMP; see use case 3
2. The player doesn’t realize keycards are necessary to win the game; see use case 1
3. The player doesn’t realize they have collected all keycards; they will likely realize they have collected all keycards if they continue searching the map or if they reach the exit and the exit unlocks

## Priority

Important, finding all keycards is an important challenge in the gameplay

## When available

Second development iteration

## Frequency of use

Frequent

## Chanel to actor

On-screen display and keyboard input

## Secondary actors

Players who have already beat the game and can coach the player; Anyone watching gameplay of the game

## Channels to secondary actors

1. Players who have already beat the game and can coach the player – screen-sharing software or in-person observation
2. Anyone watching gameplay of the game – screen-sharing software, prerecorded video, or in-person observation

## Open issues

How many keycards are the required to unlock the exit?

How can we/should we make finding all the keycards challenging even for experienced players?

# Use case 5

## Use case

Beating the game

## Primary Actor

Game player

## Goal in context

Complete all the objectives in order to help the robot escape from the factory

## Preconditions

None

## Trigger

The player installs the game and runs it with the intent to beat it

## Scenario

1. The player opens the application and clicks the start button
2. The player sees a short introduction scene where a robot trying to escape a factory is introduced
3. The player becomes acquainted with the WASD movement controls
4. The player collects all the keycards while avoiding the guards and EMPs
5. The player navigates to the exit with all the keycards
6. The player is shown a short scene depicting the robot is now free
7. The player is redirected back to the main menu

## Exceptions

1. The player doesn’t understand the game controls or objectives; see use case 1
2. The player is defeated by a guard or EMP; see use case 3
3. The player doesn’t find the exit; see use case 2
4. The player doesn’t collect all keycards; see use case 3

## Priority

Important, gameplay and the desire to win is the reason for playing a game

## When available

Second iteration

## Frequency of use

Frequent

## Chanel to actor

On-screen clickable display and keyboard input

## Secondary actors

Players who have already beat the game and can coach the player; Anyone watching gameplay of the game

## Channels to secondary actors

1. Players who have already beat the game and can coach the player – screen-sharing software or in-person observation
2. Anyone watching gameplay of the game – screen-sharing software, prerecorded video, or in-person observation

## Open issues

How can we make the process of beating the game more rewarding to the player?

# Use case 6

## Use case

Beating the game with a high score

## Primary Actor

Game player

## Goal in context

Obtain a score high enough to satisfy the player and then beat the game

## Preconditions

None

## Trigger

The player has already beat the game and wants to beat the game with a higher score

## Scenario

1. The player opens the application and clicks the start button
2. The player sees a short introduction scene where a robot trying to escape a factory is introduced
3. The player collects all the keycards while avoiding the guards and EMPs
4. The player collects batteries that periodically spawn around the map by traversing on top of them
5. The player observes their score displayed at the top of the screen gradually increment until they are satisfied
6. The player navigates to the exit with all the keycards and their high score
7. The player is shown a short scene depicting the robot is now free
8. The player is redirected back to the main menu

## Exceptions

1. The player is defeated by a guard or EMP; see use case 3
2. The player doesn’t find the exit; see use case 2
3. The player doesn’t collect all keycards; see use case 3
4. The player doesn’t care about their score; see use case 5

## Priority

Not a priority, beating the game with a high score can be considered an extra challenge

## When available

Third iteration

## Frequency of use

Infrequent

## Chanel to actor

On-screen clickable display and keyboard input

## Secondary actors

Players who have already beat the game and can coach the player; Anyone watching gameplay of the game

## Channels to secondary actors

1. Players who have already beat the game and can coach the player – screen-sharing software or in-person observation
2. Anyone watching gameplay of the game – screen-sharing software, prerecorded video, or in-person observation

## Open issues

Should we implement a leaderboard to track the user’s scores?

# Use case 7

## Use case

Adjust game volume

## Primary Actor

Game player

## Goal in context

Adjust the game volume to a level that the player finds optimal

## Preconditions

The player is on the main menu

## Trigger

The player thinks the volume is too loud or soft

## Scenario

1. The user clicks on the settings button on the main menu
2. The user observes a volume slider
3. The user moves the volume slider until they are satisfied with the volume
4. The user exits the volume panel by clicking on an exit button

## Exceptions

1. The user is in the level; see use case 3 or 5

## Priority

Unimportant; sound is not essential to core functionality

## When available

Third iteration

## Frequency of use

Infrequent

## Chanel to actor

On-screen clickable display

## Open issues

Will sound effects be implemented for in-game interactions such as picking up a keycard or stepping on an EMP?