

System Functionality & Use Cases

Use Case: Start Game

Primary actor: Player

Goal in context: To begin the game and start giving input.

Preconditions: Game must be open to the main menu.

Trigger: Player decides to start the game.

Scenario:

1. Player opens game to main menu
2. Player is presented with options such as: "New Game", "Settings", "Exit"
3. Player clicks New Game button
4. The system begins the game.

Exceptions: None

Priority: High, Basic functionality of game

Use Case: Move Player

Primary actor: Player

Goal in Context: To move the player character to collect the rewards, while avoiding enemies and punishments and exiting the level.

Preconditions: The map must be loaded and ready to receive input

Trigger: The player presses keys to begin moving

Scenario:

1. Player wants to move up, down, left or right and will press, the corresponding arrow keys(or wasd)
2. Player will move towards key or banana or exit while avoiding enemies

Exceptions:

1. Player presses wrong button: no movement input is registered and player does not move
2. Player wants to move to barrier tile: player does not move
3. Player collides with moving Enemy, See Use Case: 'Monkey Collides with Moving Enemy'
4. Player collides with punishment, See Use Case: 'Monkey Collides with Stationary Enemy)
5. Player Collides with Key, See Use Case: 'Monkey Collides with Key'
6. Player Collides with Banana, See Use Case: 'Monkey Collides with Banana'
7. Player presses pause button (See Use Case: Pause Game)

Priority: High, Basic functionality of game

Use Case: Monkey Collides with Key entity

Primary Actor: Player

Goal in Context: Player wants to open exit with key and chooses to collect key by colliding with the key entity

Preconditions: Exit must be locked and Key entity must be on the map

Trigger: Monkey moves onto the same tile as key entity

Scenario:

1. Player moves onto the same tile as the key entity
2. The key entity disappears
3. 100 Points are awarded to the player
4. The Exit is unlocked
5. Player continues to play the game

Priority: High, Basic functionality of game

Use Case: Monkey Collides with Bananas

Primary Actor: Player

Goal in Context: Player wants to increase score by collecting optional bananas

Preconditions: Game must be in progress and Bananas must be on the map

Trigger: Monkey moves onto the same tile as the banana entity

Scenario:

1. Player moves onto the same tile as the banana entity
2. The banana entity disappears
3. 50 Points are awarded to the player
4. Player continues to play the game

Priority: High, Basic functionality of game

Use Case: Pause Game

Primary Actor: Player

Goal in context: to pause all action on screen and present a option menu for the user to either continue or quit game

Preconditions: Game must be in progress to initiate a pause.

Trigger: The user presses the escape key on the keyboard.

Scenario:

1. The user wants to temporarily pause the game, and presses the escape key
2. The player then chooses to either exit the game, or return to playing by selecting one of the two buttons available:
 1. In the case of exit: the game returns to the start menu
 2. In the case of return to game: the screen counts down from 3, then resumes to the state before the pause was initiated

Priority: Moderate, can be implemented after basic functionality

Use Case: Exit Game

Primary Actor: Player

Goal in context: to quit game

Preconditions: the pause menu must be open, and the menu options with 'Quit' or 'Continue' are presented to the player

Trigger: Player presses the escape key

Scenario:

1. The player wants to exit the game and presses the escape key
2. A menu is presented to the player with the options to 'Quit' or 'Continue'
3. The player selects 'Quit'
4. The game returns to the main menu

Exceptions:

1. The player presses 'Continue' instead of 'Quit': the game returns to an unpaused state
Priority: High, Basic functionality of game

Use Case: Win Level

Primary Actor: Player

Goal in Context: Player has collected the key entity unlocking the exit and entered the exit.

Preconditions: None

Trigger: The player enters the exit.

Scenario:

1. A small cut-scene plays which announces that the player wins
2. A stationary box appears with the number of total points collected by the user and time is displayed with the options to 'continue playing' or 'exit'

Priority: High, Basic functionality of game

Use Case: Monkey Collides with Moving Enemy

Primary Actor: Player

Goal in Context: Avoiding enemies

Trigger: Collision with moving enemy (Zookeeper)

Preconditions:

1. Player has just moved to a the same square as a moving enemy

Scenario:

1. Both characters move to the same square on the map
2. The enemy (Zoo-keeper) puts a net over the monkey
3. A box appears letting the user know they have lost
4. Menu appears with the option to play again or quit

Priority: High, Basic functionality of game

Use Case: Monkey Collides with Stationary Enemy

Primary Actor: Player

Goal in Context: Avoiding enemies

Trigger: Collision with stationary enemy (Lion-pit)

Preconditions:

1. Player has just moved to a square containing a stationary enemy

Scenario:

1. Player moves to a square containing a lion pit
2. 150 Points are deducted from the player's score
3. The monkey is stuck on the square for 2 ticks, after which the player can move to a different square and continue playing
4. The lion pit is removed from the map and the player may move again

Exception:

1. If the user's score drops below zero (See: "Score Drops Below 0" use case)

Priority: High, Basic functionality of game

Use Case: Score Drops Below 0

Primary Actor: Player

Goal in Context: Player has collided with punishment resulting in score less than 0

Trigger: Collision with Punishment

Preconditions: Score must be low enough for punishment to reduce score to below 0

Scenario:

1. Player collides with lion pit
2. Score is reduced to below 0
3. Player loses game
4. 'Game Over' is displayed on screen with time
5. Options such as 'New Game' and 'Exit' is displayed on screen

Priority: High, Basic functionality of game