Use Cases Phase 1 CMPT 226

Main Program

User Case: Open program
Primary actor: Player
Goal in Context: Initiate the game program
Preconditions:Have the Java code compiled to an executable file
Trigger:The player decides to launch the game
Scenario:
1. Player sits at computer
2. Player logs into computer
3. Player double clicks executable
Exceptions: N/A
When available:Anytime
Frequency of use:Any
Channel to actor: Via mouse and keyboard
Secondary actors: N/A
Channels to Secondary actors: N/A

Main Menu

User Case: Start Game
Primary actor: Player
Goal in Context: On the main menu of the game
Preconditions: Open program Use Case
Trigger: Player decides to begin a round
Scenario:
1. Player selects preferred difficulty
2. Player clicks Start button
Exceptions: N/A
When available:On the main game menu
Frequency of use: Any
Channel to actor: Via mouse and keyboard
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: Exit Game
Primary actor: Player
Goal in Context: Terminate the program

Preconditions: in the main menu
Trigger: Player wishes to close game
Scenario:
    1.   Player presses the exit button
Exceptions:N/A
When available: in the main menu
Frequency of use: once per game launch
Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: Open Settings menu
Primary actor:Player
Goal in Context: Open the settings menu
Preconditions: On the main menu of the game
Trigger: Player decides to open settings menu
Scenario:
    1.   Player clicks the settings button
Exceptions:N/A
When available:On the main game menu
Frequency of use:Any
Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

Settings Menu

User Case: Change game volume
Primary actor: Player
Goal in Context: to adjust the game volume
Preconditions: In the settings menu
Trigger: Player wishes to change the game volume
Scenario:
    1.   Player presses the '+' or '-' buttons to raise or lower the volume respectively
Exceptions: game is muted volume will not change
When available: in the settings menu
Frequency of use: anytime
Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: Mute/unmute Game Audio
Primary actor: Player
Goal in Context: to mute or unmute the game audio
Preconditions: in the settings menu
Trigger: Player wishes to mute or unmute the game audio
Scenario:
    1.   Player presses the mute button to toggle mute or unmute
Exceptions:N/A
When available: in the settings menu
Frequency of use: Any
Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: Change Characters skin
Primary actor: Player
Goal in Context: Change the skin of the character
Preconditions: In the settings menu
Trigger: player wishes to change the look of their character
Scenario:
    1.   Player clicks on the character icon in the settings menu to rotate through skins
Exceptions: N/A
When available: in the settings menu
Frequency of use:any
Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

Gameplay

User Case: Choose restart after gameover by loss
Primary actor: Player
Goal in Context: games resets to the state of a new game; new round begins with same difficulty
Preconditions: A round of the game must be played, and the game must be terminated via intended game mechanics i.e not exiting the program
Trigger: The round ends
Scenario:
1. The round ends
2. Menu pops
3. Player chooses restart
4. Game loads again with the same selected difficulty

Exceptions: N/A
When available: after the end of a round ended by either collision with moving enemy or negative score

Frequency of use: once per round
Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: Choose menu after game over by loss
Primary actor: Player
Goal in Context: game brings UI back to main game menu display
Preconditions: A round of the game must be played, and the game must be terminated via intended game mechanics i.e not exiting the program
Trigger: The round ends
Scenario:
1. The round ends by a loss
2. Game over menu shows up on screen
3. Player chooses "back to main menu option"
4. Game's state goes to main game menu
Exceptions: N/A
When available: after the end of a round ended by either collision with moving enemy or negative score

Frequency of use: once per round
Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: ingame pause
Primary actor: Player
Goal in Context: Stop the game's ticks, player/enemy's will not be able to move
Preconditions: Game must be running
Trigger: Player hits 'escape' key on keyboard
Scenario:
1. Escape key is pressed
2. Game's pixels gets darker
3. A mini pause symbol pops up in the middle of the screen
4. Game state remains (i.e character movements do not move, movable entities remain stationary) until escape is pressed again
Exceptions: N/A

When available: during gameplay
Frequency of use: anytime
Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: character movement
Primary actor: Player
Goal in Context: player decides to move character
Preconditions:game must be running
Trigger:player presses "w", "a", "s", "d" for up left down and right movements respectively
Scenario:
1. Player inputs movement key
2. Game considered the square that the character will move into
3. If the square is empty, player moves
4. If the square has a barrier, player remains on current space
5. If the square has a reward, player moves and collectes reward (see collected reward use case)
6. If the square has a stationary enemy, player moves and takes damage (see stationary enemy use case)
7. If the square has a moving enemy, game over (see moving enemy use case & game over use case)
8. If the square is the exit and all rewards are collected, game won (see win condition use case)

Exceptions: game is paused
When available:during gameplay
Frequency of use:onces per movement tick
Channel to actor: Via mouse and keyboard
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: collect reward
Primary actor: Player
Goal in Context: collect a reward
Preconditions: game is running, player is beside a reward tile
Trigger: player moves character onto the reward tile
Scenario:
1. Player moves character onto reward tile
2. Reward disappears
3. Score is added to the total score

Exceptions:N/A
When available: during gameplay
Frequency of use: however many rewards are spawned for the current difficulty

Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: stationary enemy
Primary actor: Player
Goal in Context: take damage from stationary enemy
Preconditions: game is running, player is beside a stationary enemy tile
Trigger: player moves character onto the stationary enemy tile
Scenario:
1. Player moves character onto the stationary enemy tile
2. Stationary enemy dissapears
3. Score is deducted to the total score
4. If score is negative, game over (see game over use case)
Exceptions:N/A
When available: during gameplay
Frequency of use: however many stationary enemy are spawned for the current difficulty
Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: moving enemy
Primary actor: Player
Goal in Context: lose game by touching a moving enemy
Preconditions: game is running
Trigger: either the moving enemy moves onto the same square as the character or vice versa
Scenario:
1. Moving enemy moves onto same tile as character or vice versa
2. Game over use case triggerd
Exceptions: N/A
When available: during gameplay
Frequency of use: once per game
Channel to actor: Via mouse and keyboard:
Secondary actors: N/A
Channels to Secondary actors: N/A

User Case: game over

Primary actor: Player

Goal in Context: end the game due to loss

Preconditions: game is running

Trigger: player gets a negative total score or touches a moving enemy

Scenario:

1. Stationary enemy use case or moving enemy use case
2. Intermediate screen displayer a "Game Over" message, players score, final time, restart and menu button
3. If player presses restart then "choose restart after gameover by loss" use case, if player presses menu then "choose menu after gameover by loss" use case

Exceptions: Player wins the game

When available:during gameplay

Frequency of use:once per round

Channel to actor: Via mouse and keyboard:

Secondary actors: N/A

Channels to Secondary actors: N/A

User Case: Win condition

Primary actor: Player

Goal in Context: win the game

Preconditions: Player has collected all regular rewards (see collect reward use case)

Trigger: player walks through the exit gate

Scenario:

1. All rewards are collected
2. Exit opens for player
3. Player moves character to the exit
4. An intermediate screen shows up displaying "Congradulations" and total score and final time.
5. Player is returned to main menu after pressing any button

Exceptions: game over use case

When available: during gameplay

Frequency of use: once per game

Channel to actor: Via mouse and keyboard:

Secondary actors: N/A

Channels to Secondary actors: N/A