

CMPT276-D100

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Phase 1 Project Use Cases

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Use Case 1

- Launching the game

Primary Actor

- User

The goal in the context

- To play the Game

Pre-Conditions

- The user must have sufficient hardware such as a laptop or PC with a monitor, mouse, and keyboard.

Trigger

- The user wants to play the game

Scenario

- 1) The user launches the program
- 2) The home page shows two buttons (play and instructions) also with the default program commands (close, minimize, full screen)
- 3) Once the play button is clicked, the program initializes all the game aspects (board, cat, mouse, cheese, etc) and displays it

Exceptions

- The user closes the game
- The program doesn't open or crashes due to some technical issues such as insufficient ram
- Instead of clicking play, the user clicks on Instructions

Priority

- Loading the components of the game has a high priority
- Loading the starting page of the game has low priority

When Available

- Load the game components as the first increment then the starting page next

Frequency of Use

- Whenever the user desires.

Channels to Actor

- Keyboard, monitor, and mouse

Use Case 2

- Move Mouse

Primary Actor

- User.

The goal in the context

- To move the mouse around the board to collect the cheese and win the game

Pre-Conditions

- The user must click on play and the board and its components must be fully loaded

Trigger

- The player starts the game and decides where the mouse will move next

Scenario

- 1) After the game has fully loaded, the time will start ticking and waiting for the user to click on the arrow keys to move the mouse.
- 2) After an arrow key has been pressed, the program will update the map by changing the mouse's location as well as the cats.
- 3) A mouse trap, cheese, or steak will be removed once the mouse goes over it.
- 4) The characters won't be able to pass through the wall

Exceptions

- The user presses an invalid key
- The user presses the key towards the wall when the mouse is next to it. Hence the mouse will stay stable but the cat will get closer.
- The cat catches the mouse so the game gets over. It could happen when the mouse and the cat move to the same block
- The mouse exits through the door after collecting all the cheese to win the game

Priority

- Highest on the priority list

When Available

- As soon as the game starts so first increment

Frequency of Use

- The main aspect of the game so very frequent

Channels to Actor

- Keyboard (arrow keys) and the monitor/screen

Use Case 3

- Object Interaction

Primary Actor

- User

The goal in the context

- To interact with the object by moving on the block where the object is

Pre-Conditions

- The mouse must be next to the object

Trigger

- The user moves the mouse onto the block where the object is placed

Scenario

- 1) The mouse moves to the block where the object is placed
- 2) The system will remove the object and place the mouse on top of the block
- 3) The system will update the scorecard
- 4) If the object is cheese then score card will be incremented by 1
- 5) If the object is steak then score card will be incremented by 3
- 6) If the object is a mouse trap then score card will be deducted by 5

Exceptions

- 1) The cat catches the mouse before the object interaction happens
- 2) If all the objects have been collected and the mouse is going toward the exit door

Priority

- Second highest priority after the mouse movement

When Available

- Second increment

Frequency of Use

- About 5 to 7 times based on what object the user interacts with but, second most frequently after moving the mouse

Channels to Actor

- Keyboard (arrow keys) and the monitor/screen

Use Case 4

- Player wins

Primary Actor

- User

The goal in the context

- To win the game by completing it or beating your old stats

Pre-Conditions

- The mouse needs to collect all 6 cheeses so the door is unlocked
- The mouse is in the next block of the unlocked door

Trigger

- The arrow key is pressed towards to unlocked door when the user wants to win the game

Scenario

- 1) The mouse collected all 6 cheeses where the steak is optional
- 2) The cat is at least 1 block far when the mouse is in the next block of the unlocked door
- 3) Once the user has completed the game, on the winning page the user will see the stats of the game (time, steak collected, cheese collected, total points).
- 4) The user then can go back to the home page and could play again if they want to

Exceptions

- The 6 cheeses have not been collected so the exit door won't get unlocked (is a wall)
- The cat catches the mouse during the game
- The mouse gets on the mouse trap before the mouse got 5 points

Priority

- Medium priority

When Available

- Third increment

Frequency of Use

- Only once, during the end

Channels to Actor

- Keyboard (arrow keys) and the monitor/screen, mouse

Use Case 5

- Player Loses

Primary Actor

- User

The goal in the context

- To learn from mistakes and beat your statistics of the game by playing again

Pre-Conditions

- The game has started and is ongoing

Trigger

- The mouse gets negative points by interacting with the mouse trap
- The cat catches the mouse

Scenario

- 1) Either the mouse gets negative points or the cat catches the mouse
- 2) The loose page will come up with red headings where the stats will be shown (cheese collected, steak collected, total points and time taken)
- 3) They can return to the menu and restart the game to try to win

Exceptions

- The user instead of going to the menu and starting again they decide to close the program/game

Priority

- Medium priority

When Available

- Third increment

Frequency of Use

- Less frequent

Channels to Actor

- Keyboard (arrow keys) and the monitor/screen, mouse