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IP1: Ninja-se EscapeRoomApp - Use Cases and Storyboard

Use Cases
1. Choose configuration
2. Move Ninja-Se
3. Pick up Key
4. Unlock Door
5. Reset Puzzle

UC 1: Choose Configuration
Participating Actor: Initiated by User1
Entry Condition: None
Exit Criteria: A configuration is selected
Flow of events:
1. User1 requests to choose a configuration
2. EscapeRoomApp selects the configuration and refreshes display

UC 2: Move Ninja-se
Participating Actor: Initiated by User1
Entry Condition: A cell is selected
Exit Criteria: Ninja-se has been moved to the selected cell
Flow of events:
1. User1 requests to move Ninja-se
2. EscapeRoomApp moves Ninja-se, increment move counter, and refreshes display

UC 3: Pick up Key
Participating Actor: Initiated by User1
Entry Condition: A key is selected
Exit Criteria: Ninja-se has picked up the requested key. If Ninja-se was holding a key when requesting to pick up a new key, the previous holding key is dropped in the cell.
Flow of events:
1. User1 requests to pick up a key
2. EscapeRoomApp resets any holding key, picks up the key, increment move counter and refreshes display

UC 4: Unlock door

Participating Actor: Initiated by User1

Entry Condition: A cell containing a door is selected and Ninja-se has the same color key

Exit Criteria: Door is unlocked and Ninja-se has been moved to the cell originally containing the door

Flow of events:

1. User1 requests to unlock door

2. EscapeRoomApp resets any holding key, clear door, increment move counter and refreshes display

UC 5: Reset Puzzle

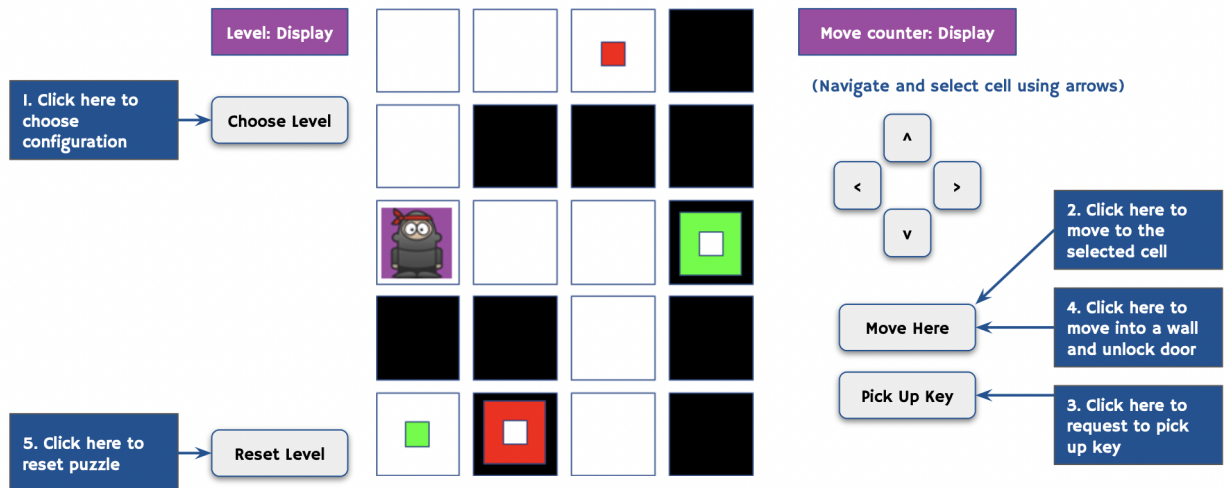Participating Actor: Initiated by User1

Entry Condition: None

Exit Criteria: Puzzle is restored to original configuration

Flow of events:

1. User requests to reset puzzle

2. EscapeRoomApp resets puzzle and move counter,and refreshes display

Storyboard

This GUI shows how the user would interact with the EscapeRoomApp. Purple text boxes containing displaying elements, such as the current level and the move counter. The user can select the *Choose Level* button to choose configuration (UC 1), and or *Reset Level* to reset the puzzle to its original configuration in this level (UC 5). The user can use the keypad on the right to navigate different cells using the arrows. Once a cell is selected, the user can perform *move* action: they can click the *Move Here* button to move to the selected cell (UC 2) and unlock door when moving to a selected cell containing a door (UC 4), and click the *Pick up Key* button to pick up key in the selected cell (UC 3).