

# Use Case 1 - Start / Load Game from Lobby

**Use case:** Start a new run or load a saved run from the Lobby

**Primary actor:** Player

**Goal in context:** Begin playing “Red Corridor” by starting a new game or resuming a saved one.

**Preconditions:** Game launches to Lobby; keyboard input available. Prior saved run exists to resume (if chosen).

**Trigger:** Player focuses the Lobby screen and chooses an option.

## Scenario:

1. The system displays Previous Games, High Score, and Options (New, Resume, Restart, Back).
2. Player moves the cursor using W/A/S/D or arrows.
3. Player selects New Game (or Resume/Restart) and confirms with [F] Choose.
4. On New Game: the system loads the initial map, places fragments/medkits/drones per difficulty, and initializes Heads-Up Display (HUD) - ((Health Points (HP)), Fragments, Time, Message).
5. The Game UI appears with a 10×10 visible area
6. The game clock starts.

## Exceptions:

1. No save present when selecting Resume → show message “No saved run found” and remain in Lobby.
2. Content load failure → show error and return to Lobby.

**Priority:** High (core entry path).

**When available:** First increment.

**Frequency of use:** Frequent.

**Channel to actor:** Keyboard + desktop window.

**Secondary actors:** File system (save slots).

## **Use Case 2 - Move Player Character (per tick)**

**Use case:** Move one cell on the grid

**Primary actor:** Player

**Goal in context:** Navigate the ship one cell at a time to explore, avoid threats, and reach the exit.

**Preconditions:** Game UI active; player avatar spawned; map loaded.

**Trigger:** Player presses W/A/S/D (or arrows).

**Scenario:**

1. Player presses a valid movement key.
2. System checks the target cell (wall, closed door, open door, room, item, hazard, enemy).
3. If blocked (wall/closed door), deny move and render a message (“Wall/door blocked”).
4. Otherwise, advance the avatar exactly one cell and update the 10×10 view & fog of war.
5. System advances one tick and then updates moving enemies (patrol drones) one cell toward the player’s last known position.
6. HUD (Time/HP/Fragments) and Message panel refresh.

**Exceptions:**

1. Invalid key → ignore input.
2. Attempt to step into closed door without [E] Enter → deny and show message.
3. Collision with drone on arrival or after enemy move → hand off to Use Case 7 (Lose Game).

**Priority:** High.

**When available:** First increment.

**Frequency of use:** Continuous while playing.

**Channel to actor:** Keyboard.

**Secondary actors:** None.

# **Use Case 3 - Interact with Environment (Enter/Leave Room, Pick Up Item)**

**Use case:** Enter/leave rooms and pick up items

**Primary actor:** Player

**Goal in context:** Use doors and collect items to progress and survive.

**Preconditions:** Player is adjacent to a door to enter/leave or stands on an item cell.

**Trigger:** Player presses [E] Enter/Leave or [F] Pick Up.

## **Scenario:**

### 1. For Enter/Leave:

- a - Player presses [E].
- b - System validates door state; if enterable, moves player one cell into/out of the room and updates fog of war; message updates (“Entered room” / “Left room”).

### 2. For Pick Up (fragment or medkit):

- a - Player presses [F] while on an item cell.
- b - System removes the item from the map and updates HUD.
- c - Message panel confirms the action.

## **Exceptions:**

- 1. No item underfoot → show “Nothing to pick up.”
- 2. Door blocked/locked → show “Door is closed” and deny.

**Priority:** High.

**When available:** First increment (fragments/medkits).

**Frequency of use:** Frequent.

**Channel to actor:** Keyboard.

**Secondary actors:** None.

## **Use Case 4 - Trigger Trap (Punishments)**

**Use case:** Hazard effects on the player

**Primary actor:** Player

**Goal in context:** Apply punishments (lasers, radiation) when entered.

**Preconditions:** Game UI running; hazard cells exist on map.

**Trigger:** Player steps onto a hazard cell.

**Scenario:**

1. Player moves into a hazard (Security Laser or Radiation Leak).
2. System reduces HP or applies slow (per design), updates HUD and Message.
3. If HP < 0, transition to Use Case 7 (Lose Game).

**Exceptions:**

1. Multiple effects stacked in one tick → apply in defined order (damage, then slow).

**Priority:** Medium-High.

**When available:** First increment.

**Frequency of use:** Occasional.

**Channel to actor:** Automatic on movement.

**Secondary actors:** None.

# **Use Case 5 - Enemy Encounter (Patrol Drones & Alarm Nodes)**

**Use case:** Resolve drone movement and contact

**Primary actor:** Player

**Goal in context:** Enemies chase one step per tick; touching the player causes HP loss.

**Preconditions:** At least one moving enemy is active on the map.

**Trigger:** Each tick after the player's move.

**Scenario:**

1. System computes each patrol drone's step (one cell toward player's last known position).
2. Drones move one cell (cannot cross walls).
3. If a drone enters the player's cell (or the player moved onto a drone's cell), apply 1 HP damage and check defeat; if defeat, go to Use Case 7.
4. If the player moved onto an Alarm Node cell, activate one additional drone, show Message, and proceed with future ticks.

**Exceptions:**

1. Two moving characters trying to occupy same cell → only one per cell is allowed; resolve by order (first move player then enemies) and check collision.

**Priority:** High.

**When available:** First increment.

**Frequency of use:** Continuous while enemies exist.

**Channel to actor:** Automatic per tick.

**Secondary actors:** None.

## **Use Case 6 - Win Game (Escaped)**

**Use case:** Win condition and victory screen

**Primary actor:** Player

**Goal in context:** Successfully finish a run and show win stats.

**Preconditions:** Player has collected all fragments (regular rewards).

**Trigger:** Player moves onto the Escape Hatch cell after all fragments are collected.

**Scenario:**

1. System verifies all fragments collected (regular rewards complete).
2. Player enters the Escape Hatch.
3. System stops the clock and displays win screen with stats (fragments retrieved, drones triggered, traps triggered, time taken, health remaining).
4. Provide options: [N] New game, [M] View final map, [Q] Lobby.

**Exceptions:**

1. Player reaches exit without all fragments → deny win and show message (“Hatch locked due to missing fragments”). (Requirement: must collect all regular rewards to win.)

**Priority:** High.

**When available:** First increment.

**Frequency of use:** Once per successful run.

**Channel to actor:** Keyboard.

**Secondary actors:** None.

## **Use Case 7 - Lose Game (Defeat)**

**Use case:** Loss condition and defeat screen

**Primary actor:** Player

**Goal in context:** Conclude a failed run and show defeat stats.

**Preconditions:** Game screen should be active.

**Trigger:** Any loss condition occurs.

### **Scenario:**

1. A loss condition is met:
  - a - If drone catches the player (collision after a tick), or
  - b - HP < 0 due to hazards/drones.
2. System stops the clock and displays defeat screen with stats (fragments retrieved, drones triggered, traps triggered, time, health remaining).
3. Provide options: [N] New game, [M] View final map, [Q] Lobby.

### **Exceptions:**

1. Win and collision at same tick (rare case) → count as loss (apply damage first).

**Priority:** High.

**When available:** First increment.

**Frequency of use:** Occasional.

**Channel to actor:** Automatic; then keyboard for menu.

**Secondary actors:** None.