

Project Phase 1

Use Cases

Use Case: Starting a New Game

- **Primary Actor:** Player
- **Goal in Context:** To start a new game from the main menu.
- **Preconditions:**
 - The user has launched the game.
 - The user is in the main menu.
- **Trigger:** The player decides to start a new game.

Scenario:

1. The player clicks "Play" to access the next screen.
2. The system displays difficulty options.
3. The player selects a dish (difficulty level) to cook.
4. The system highlights the selected option.
5. The player confirms the game mode by pressing "Continue."
6. The system starts the selected game difficulty and transitions to the first frame.

Exceptions:

1. The player decides to quit from the main menu instead.
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Use Case: Quitting the Game

- **Primary Actor:** Player
- **Goal in Context:** To quit the game.
- **Preconditions:**
 - The player has already started the game.
- **Trigger:** The player decides to stop playing.

Scenario:

1. The player presses "Esc" to open the pause menu.
2. The system displays the pause menu.
3. The player clicks "Quit."
4. The system closes the application.

Exceptions:

1. The player changes their mind and resumes playing.
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Use Case: Moving to an Empty Cell

- **Primary Actor:** Player
- **Goal in Context:** To move to an empty cell.
- **Preconditions:**
 - The player is on a valid cell adjacent to the target cell.
 - The player has sufficient oxygen and points.
- **Trigger:** The player moves to an adjacent empty cell.

Scenario:

1. The player presses a directional key (UP, DOWN, LEFT, RIGHT).
2. The system moves the player to the specified cell.
3. The system decreases the oxygen level by 1.
4. The system decreases the item tickers around the map by 1.
5. The system moves the enemy.

Exceptions:

1. The player moves to a cell with a required reward.
 2. The player moves to a cell with a bonus reward.
 3. The player moves to a cell with a bad reward.
 4. The player moves to a cell with an enemy.
 5. The player runs out of oxygen.
 6. The player runs out of points.
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Use Case: Moving to a Cell with a Required Reward

- **Primary Actor:** Player
- **Goal in Context:** To collect a required reward.
- **Preconditions:**
 - The player is adjacent to the reward cell.
 - The player has sufficient oxygen and points.
- **Trigger:** The player moves to an adjacent cell holding the reward.

Scenario:

1. The player presses a directional key.

2. The system moves the player to the target cell.
3. The system collects the required item.
4. The system increases the player's points based on the reward.
5. The system decreases the oxygen level by 1.
6. The system decreases the item tickers on the map by 1.
7. The system moves the enemy.

Exceptions:

1. The player moves to an empty cell.
2. The player moves to a cell with a bonus reward.
3. The player moves to a cell with a bad reward.
4. The player moves to a cell with an enemy.
5. The player runs out of oxygen.
6. The player runs out of points.

Use Case: Moving to a Cell with a Bonus Reward

- **Primary Actor:** Player
- **Goal in Context:** To collect a bonus reward.
- **Preconditions:**
 - The player is adjacent to the cell containing the bonus reward.
 - The player has sufficient oxygen and points.
- **Trigger:** The player moves to an adjacent cell holding the bonus reward.

Scenario:

1. The player presses a directional key (UP, DOWN, LEFT, RIGHT).
2. The system moves the player to the target cell.
3. The system collects the bonus item.
4. The system increases the player's points based on the bonus item.
5. The system decreases the oxygen level by 1.
6. The system decreases the item tickers on the map by 1.
7. The system moves the enemy.

Exceptions:

1. The player moves to an empty cell.
 2. The player moves to a cell with a required reward.
 3. The player moves to a cell with a bad reward.
 4. The player moves to a cell with an enemy.
 5. The player runs out of oxygen.
 6. The player runs out of points.
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Use Case: Moving to a Cell with a Bad Reward

- **Primary Actor:** Player
- **Goal in Context:** To move to a cell with a bad reward, resulting in a penalty.
- **Preconditions:**
 - The player is adjacent to the cell containing the bad reward.
 - The player has sufficient oxygen and points.
- **Trigger:** The player moves to an adjacent cell holding the bad reward.

Scenario:

1. The player presses a directional key (UP, DOWN, LEFT, RIGHT).
2. The system moves the player to the target cell.
3. The system triggers a visual effect (e.g., glowing red) to indicate damage.
4. The system decreases the player's points based on the bad item.
5. The system decreases the oxygen level by 1.
6. The system decreases the item tickers on the map by 1.
7. The system moves the enemy.

Exceptions:

1. The player moves to an empty cell.
 2. The player moves to a cell with a required reward.
 3. The player moves to a cell with a bonus reward.
 4. The player moves to a cell with an enemy.
 5. The player runs out of oxygen.
 6. The player runs out of points.
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Use Case: Moving Over a Jumpable Barrier

- **Primary Actor:** Player
- **Goal in Context:** To move through a jumpable barrier, such as kelp.
- **Preconditions:**
 - The player is adjacent to the jumpable barrier.
 - The player has sufficient oxygen and points.
- **Trigger:** The player wants to cross the jumpable barrier.

Scenario:

1. The player presses a directional key (UP, DOWN, LEFT, RIGHT).
2. The system moves the player two blocks, crossing the jumpable barrier.
3. Randomly, the system either increases or decreases the player's points.
 - If points decrease, the system triggers a visual effect (e.g., glowing red).

4. The system decreases the oxygen level by 1.
5. The system decreases the item tickers on the map by 1.
6. The system moves the enemy.

Exceptions:

1. The player moves to an empty cell.
 2. The player moves to a cell with a required reward.
 3. The player moves to a cell with a bonus reward.
 4. The player moves to a cell with an enemy.
 5. The player attempts to jump a non-jumpable barrier.
 6. The player runs out of oxygen.
 7. The player runs out of points.
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Use Case: Running Out of Oxygen

- **Primary Actor:** Player
- **Goal in Context:** To handle the condition where the player runs out of oxygen.
- **Preconditions:**
 - The player has one oxygen bar remaining.
 - The player has sufficient points.
- **Trigger:** The player moves in any direction, reducing oxygen to zero.

Scenario:

1. The player presses a directional key (UP, DOWN, LEFT, RIGHT).
2. The system decreases the oxygen level by 1.
3. The system opens the game-over screen, indicating the player has lost.

Exceptions:

1. The player moves to a cell containing an oxygen tank, replenishing oxygen.
2. The player moves to a cell with an enemy before running out of oxygen.