Tokimon Finder Use Cases

Use Case 1: Play Game

Primary Actor: Player
Secondary Actors: None
Preconditions:
The game has been started, and the initial game grid has been generated.
Main Success Scenario:

1. The player is presented with a 10x10 game grid, with some cells containing Tokimons, Fokimons, and some empty cells.
2. The player's current position is marked as "@" on the grid.
3. The game shows the number of Tokimons the player has collected, the number of remaining Tokimons, and the number of spells remaining.
4. The player is presented with a map of the game grid indicating known and unknown locations.
5. The player can make a move by entering one of the following options:
   a. Press "W" to move up.
   b. Press "A" to move left.
   c. Press "S" to move down.
   d. Press "D" to move right.
   e. Press "1" to use a spell.
   f. Press "Q" to quit the game.
6. The player's chosen move is processed:
a. If the move results in the player landing on an unknown cell:
i. The cell is marked as visited.
ii. If the cell contains a Tokimon, the player is notified and congratulated, and the Tokimon is collected.
iii. If the cell contains a Fokimon, the game ends, and the player loses.
b. If the player collects all Tokimons on the grid, the game ends, and the player wins.
c. If the player loses by landing on a cell with a Fokimon or running out of spells, the game ends, and the player loses.
d. If the player chooses to quit the game by pressing "Q," the game ends, and the player quits.

Alternative Scenarios:
If the player enters an invalid input, the game prompts the player to enter a valid move.

Postconditions:
The game is in one of the following states: player wins, player loses, or player quits.

Use Case 2: Use Spells

Primary Actor: Player
Secondary Actors: None
Preconditions:
The game is in progress.

Main Success Scenario:

1. The player is presented with a 10x10 game grid, with some cells containing Tokimons, Fokimons, and some empty cells.
2. The player's current position is marked as "@" on the grid.
3. The game shows the number of spells the player has remaining.
4. The player is presented with a map of the game grid indicating known and unknown locations.
5. The player can choose to use a spell by entering "1".
6. The player's spell usage is processed:
7. If the player has at least one remaining spell:

i. The game provides a list of available spells to choose from:
- Press "1" for Tokimon Spell.
- Press "2" for Fokimon Spell.
- Press "3" for Teleportation Spell.
ii. The player enters the number corresponding to the desired spell.
iii. The game processes the chosen spell:
- Tokimon Spell (Spell 1):
- The game randomly selects an unvisited cell on the grid.
- If the selected cell contains a Tokimon, it is collected, and the player's spell count is reduced by one. The cell is marked as visited.
- Fokimon Spell (Spell 2):
- The game randomly selects an unvisited cell on the grid.
- If the selected cell contains a Fokimon, it is eliminated, and the player's spell count is reduced by one. The cell is marked as visited.
- Teleportation Spell (Spell 3):
- The player is prompted to enter the new row and column where they want to teleport.
- The player enters the new row and column values.
- The player's position is updated to the specified location.
- If the new cell contains a Tokimon, it is collected, and the player's spell count is reduced by one. The cell is marked as visited.

8. The game continues, and the player can make further moves or take additional actions.

Alternative Scenarios:
If the player attempts to use a spell when they have no remaining spells, the game notifies the player that they are out of spells.

Postconditions:
The player's spell count is updated, and the game continues.

Use Case 3: Exit the Game
Primary Actor: Player
Secondary Actors: None
Preconditions:

The player has entered the spawn location and grid appeared.
The game is in progress.

Main Success Scenario:

1. The player can choose to exit the game by pressing "Q."
2. The game ends, and the player quits.

Alternative Scenarios:
None.

Postconditions:
The game is terminated, and the player exits the game.

Use Case 4: Setting Up the Game

Primary Actor: Player
Secondary Actors: None
Preconditions:
The game has not yet started.

Main Success Scenario:

1. The player starts the game, where they can specify three options for the game: --numToki=10 (or other number), --numFoki=13 (or some other number), --cheat.
2. The player can either include the options or omit them and run the game instantly. If the player decides to include options, the order of listing them does not matter.
3. If the player doesn't want to include them, then default values will be used: numToki = 10; numFoki = 5; and no cheat mode.
4. **If the user specifies cheat mode, they will be shown a solution grid after choosing the spawn position on the grid. Cheaters have no option of omitting the possibility of getting spawned on the Fokimon and ending the game instantly. Luck will always stay important in TokimonFinder.**
5. All the incorrect inputs will be handled by notifying the user about the error and using the default values.

Alternative Scenarios:
None.

Postconditions:
The game is initialized with the specified options, or default values if options are omitted, and the game begins.