

Use Case UC2: Take a Turn

Primary Actor: Current Player

Stakeholders and Interests:

- Current Player: Wants to be able to perform all possible actions on their turn (Moving a frog, placing a bridge, or using a special card), and wants to be notified of if their move is illegal/unperformable
- Other Players: Wants play to be passed to the next player's turn after the active player completes their turn

Preconditions: A game is currently active and a player is allowed to take their turn

Postconditions: Play is passed to the next player or, if the turn taken caused the current player to win, the game ends

Main Success Scenario:

- 1: The game checks the turn order to pass play to the correct player
- 2: The player up next is selected to take their turn
- 3: The game notifies the players on whose turn it is
- 4: The current player is given the ability to select which action they would like to perform (Move a frog, place a bridge, or use a card)
- 5: The player selects their chosen action or may cancel their action to pick another
- 6: The game checks if the chosen action is able to be performed
- 7: The game performs the chosen action and updates the board to reflect the completed action
- 8: The current player's turn is considered complete and the turn order is updated

Extensions:

1a: The game has just begun

1: The player considered “first” is always chosen initially on game start

4-7a: The player attempts to make a jump without a bridge

1: The game does not process the jump

2: The game informs the player that their move is illegal as there is no bridge to use

3: The player is allowed to choose a different tile to move to

4-7b: The player’s frog lands on a tile already containing a frog

1: The player is given the ability to move to another tile adjacent to the tile the two frogs are sharing

1a: The new selected tile and current tile do not have a bridge

1: The game does not process the jump

2: The game informs the player that their move is illegal as there is no bridge to use

3: The player is allowed to choose a different tile to move to

1b: The tile also already contains a frog

1: Repeat Extension 4-7b until a move is completed or the action is cancelled

4-7c: The frog lands on an opponent’s home leaf after their move

0a: The frog was the current player’s final frog not also in an opponent’s home leaf

1: The game ends and the current player is shown as the winner

1: The frog becomes unselectable for future moves

2: The bridge to the home leaf is not removed

4-7d: The player attempts to place a bridge on a gap that already has a bridge

1: The game does not process the move

2: The game informs the player that they cannot place a bridge on a gap already with a bridge on it

3: The player is allowed to choose a different gap to place a bridge on

4-7e: The “Extra Jump” card was selected

1: The player selects a frog to perform both jumps

2: The first jump is performed and the game board updated

2a: The player attempts to make a jump without a bridge

1: Refer to 4-7a

2b: The player's frog lands on a tile already containing a frog

1: The game does not process the jump

2: The game informs the player that the move is illegal as the first jump of the "Extra Jump" card must be to an open tile

3: The player is allowed to select a different tile

3: The player is prompted to make another jump from the tile the first jump ended on

4-7f: The "Parachute" special card is chosen

1: The player selects a frog to perform the jump

2: The frog is allowed to jump to any adjacent tile, regardless of bridges

2a: The tile already has a frog on it

1: Refer to 4-7b

4-7g: The "Extra Bridge" special card is chosen

1: The player selects a gap to place their first bridge

2: The player selects a gap to place their second bridge

1-2a: The gap already has a bridge

1: Refer to 4-7d

4-7h: The "Bridge Removal" special card is chosen

1: The player selects a gap with a bridge

1a: The gap doesn't contain a bridge

1: The game does not process the action

2: The player is informed that they cannot remove a bridge that does not exist

3: The player is allowed to select a different gap

1b: The gap is between a tile and a player's home leaf

1: The game does not process the move

2: The game informs the player that bridges to home leaves cannot ever be removed

3: The player is allowed to select a different gap

2: The game removes the selected bridge

Special Requirements:

- Computer mouse usage required for completing actions

Technology and Data Variations:

- None (that I can think of)