

CONNECT FOUR

Use Case: Player joins matchmaking queue

Iteration: 1

Primary Actor: Player

Goal in Context: The player wants to quickly find an opponent by entering the Connect Four matchmaking system.

Preconditions:

- The player is logged in.
- The player has a valid account and an assigned MMR/rank for Connect Four.

Trigger: The player selects the “Join Queue” option from the Connect Four game interface.

Scenario:

1. The player clicks the “Join Queue” button.
2. The system verifies the player’s current Connect Four rank and MMR.
3. The system randomly assigns the player to one of the two queue pairs for their rank.
4. The player is added to the selected Connect Four matchmaking queue.

Postconditions: The player is now waiting in a Connect Four matchmaking queue for pairing.

Exceptions:

- Player is already in an active queue.
- Network/server issues prevent the queue join.

Priority: High

When Available: Always

Frequency of Use: High (each game session)

Channel to Actor: Connect Four client interface

Secondary Actors: Connect Four matchmaking service

Channel to Secondary Actors: N/A

Open Issues:

- Determining how to handle simultaneous queue join requests.

Use Case: MMR changes after a game completes

Iteration: 1

Primary Actor: Game/Player

Goal in Context: Update the player's MMR based on the outcome of a completed Connect Four game.

Preconditions:

- The Connect Four game has just finished.
- The game outcome (win, loss, or tie) is recorded.

Trigger: The Connect Four game has ended.

Scenario:

1. The game computes the result of the Connect Four game.
2. The system invokes the corresponding method on the player's Connect Four stats object.
3. The player's MMR is recalculated.
4. Updated MMR is stored and reflected in the player's profile and leaderboard.

Postconditions: The player's Connect Four MMR accurately reflects their recent game performance.

Exceptions:

- Errors in MMR calculation.

Priority: High

When Available: Always

Frequency of Use: Every Connect Four game completion.

Channel to Actor: Internal game processing.

Secondary Actors: Stats and leaderboard

Channel to Secondary Actors: N/A

Open Issues:

- Refine the formula used to update player ratings in Connect Four so that changes are smooth and fairly reflect performance differences.

