Use Case: Start Session

Primary Actor: Player
Goal in Context: The player begins a session to play a game.

Preconditions:

1. The player is connected to the internet.
2. The player has the platform installed (if necessary).

Trigger:

The player starts the game platform.

Scenario:

1. The player opens the platform.
2. Platform GUI starts.
3. Player logs into their account (authentication, profile, GUI, and network).

Postconditions:

1. Player can check stats, view the leaderboard, or start a game.

Exceptions:

1. Player does not have the platform installed (if necessary).
2. Player is not connected to the internet.

Priority: Essential

When Available: Once the platform is installed.
Frequency of Use: Whenever the platform is opened.
Channel to Actor: Platform, electronic device (computer, laptop, etc.).

Secondary Actors:

- GUI
- Authentication and Profile
- Network

Channels to Secondary Actors: Platform

Open Issues:

1. Does the platform require installation, or is it available on a web browser?

Use Case: Matching Players Together

Primary Actor: Player
Goal in Context: Connect the player to a suitable opponent.

Preconditions:

1. The player is connected to the internet.
2. The player is logged into their account.

Trigger:

The player selects which game they want to play.

Scenario:

1. The system finds all other players looking for a match (network).
2. The system selects an opponent with the closest skill rating (leaderboard and matchmaking).
3. The game begins (GUI and game logic).

Postconditions:

1. The player may now begin the game.

Exceptions:

1. The player is offline.
2. There are no available opponents to match up with.

Priority: Essential

When Available: Once the game is selected.
Frequency of Use: Often.
Channel to Actor: Platform, electronic device (computer, laptop, etc.).

Secondary Actors:

- Opponent
- Network
- Leaderboard and Matchmaking
- GUI
- Game Logic

Channels to Secondary Actors: Platform

Open Issues:

1. What if there are no online opponents within a reasonable skill range of the player?

Use Case: Game/Server Selection

Primary Actor: Player
Goal in Context: Matches the player to online opponents in the desired server and game.

Preconditions:

1. The player is connected to the internet.
2. The player is logged into their account.

Trigger:

The player wants to begin a game.

Scenario:

1. The player selects which server they want to play on (network and GUI).
2. The player selects which game they want to play (GUI).

Postconditions:

1. Player can now match up with an opponent.

Exceptions:

1. The player is not connected to the internet.

Priority: Essential

When Available: Whenever the platform is open and a game is not already in play.
Frequency of Use: Often.
Channel to Actor: Platform, electronic device (computer, laptop, etc.).

Secondary Actors:

- Network
- GUI

Channels to Secondary Actors: Platform

Open Issues:

1. Will different servers be available on launch?

Use Case: Registering Gameplay

Primary Actor: Player
Goal in Context: Update gameplay and GUI for both players.

Preconditions:

1. The game has already begun.
2. The player is connected to the internet.
3. The player is logged into their account.

Trigger:

The player chooses what move they want to make.

Scenario:

1. The player makes a move (game logic).
2. GUI updates to show the move (GUI).
3. Opponent's GUI updates to show the player's move (network, GUI, game logic).

Postconditions:

1. Opponent can now make their move.

Exceptions:

1. Player does not make a valid move.
2. Player disconnects from the network.
3. Player closes the game/platform.

Priority: Essential

When Available: Whenever the game is in play.
Frequency of Use: Often.
Channel to Actor: Platform, electronic device (computer, laptop, etc.).

Secondary Actors:

- Opponent
- Network
- GUI
- Game Logic

Channels to Secondary Actors: Platform

Open Issues:

1. What will happen if either player leaves mid-game?

Use Case: Updating Profile

Primary Actor: Player
Goal in Context: After the game concludes, both players' profiles are updated to reflect new stats.

Preconditions:

1. Player is connected to the internet.
2. Player is logged into their account.
3. Player has completed at least one match.

Trigger:

Game has been completed.

Scenario:

1. Win/loss is added to both players' records (leaderboard, matchmaking, and network).
2. Both players' stats are updated according to the game outcome (leaderboard, matchmaking, and network).

Postconditions:

1. The player can check new stats on their profile.

Exceptions:

1. Either player leaves before the game is completed.

Priority: High

When Available: Right after the game is completed.
Frequency of Use: Often.
Channel to Actor: Platform, electronic device (computer, laptop, etc.).

Secondary Actors:

- Opponent
- Network
- Leaderboard and Matchmaking

Channels to Secondary Actors: Platform

Open Issues:

1. How are stats affected if a player leaves mid-game?
2. Can the game end in a draw?

Use Case: Updating Leaderboard

Primary Actor: Player
Goal in Context: Update the global leaderboard based on the outcome of a match.

Preconditions:

1. Player is connected to the internet.
2. Player is logged into their account.
3. Player has completed at least one match.

Trigger:

Match has been completed.

Scenario:

1. Players' individual stats are updated (leaderboard, matchmaking, and network).
2. Players' position on the leaderboard is updated based on new stats (leaderboard, matchmaking, and network).

Postconditions:

1. Player can check their new position on the leaderboard.

Exceptions:

1. Game doesn't finish, or the game result is inconclusive.

Priority: Medium

When Available: After the game is finished.
Frequency of Use: Often.
Channel to Actor: Platform, electronic device (computer, laptop, etc.).

Secondary Actors:

- Opponent
- Leaderboard and Matchmaking
- Network

Channels to Secondary Actors: Platform

Open Issues:

1. What statistics are used to determine the leaderboard? (e.g., win rate, number of games won).

Use Case: End Session

Primary Actor: Player
Goal in Context: Player ends the session.

Preconditions:

1. Game is not currently in progress.
2. Player is connected to the internet.
3. Player is logged into their account.

Trigger:

Player clicks the log-out button (GUI).

Scenario:

1. Player logs out of their account (authentication, profile, and GUI).
2. Player closes the platform (GUI).

Postconditions:

1. Player is disconnected from the platform.

Exceptions:

1. Player is currently playing a game.

Priority: Essential

When Available: Whenever the game is not in session.
Frequency of Use: Often.
Channel to Actor: Platform, electronic device (computer, laptop, etc.).

Secondary Actors:

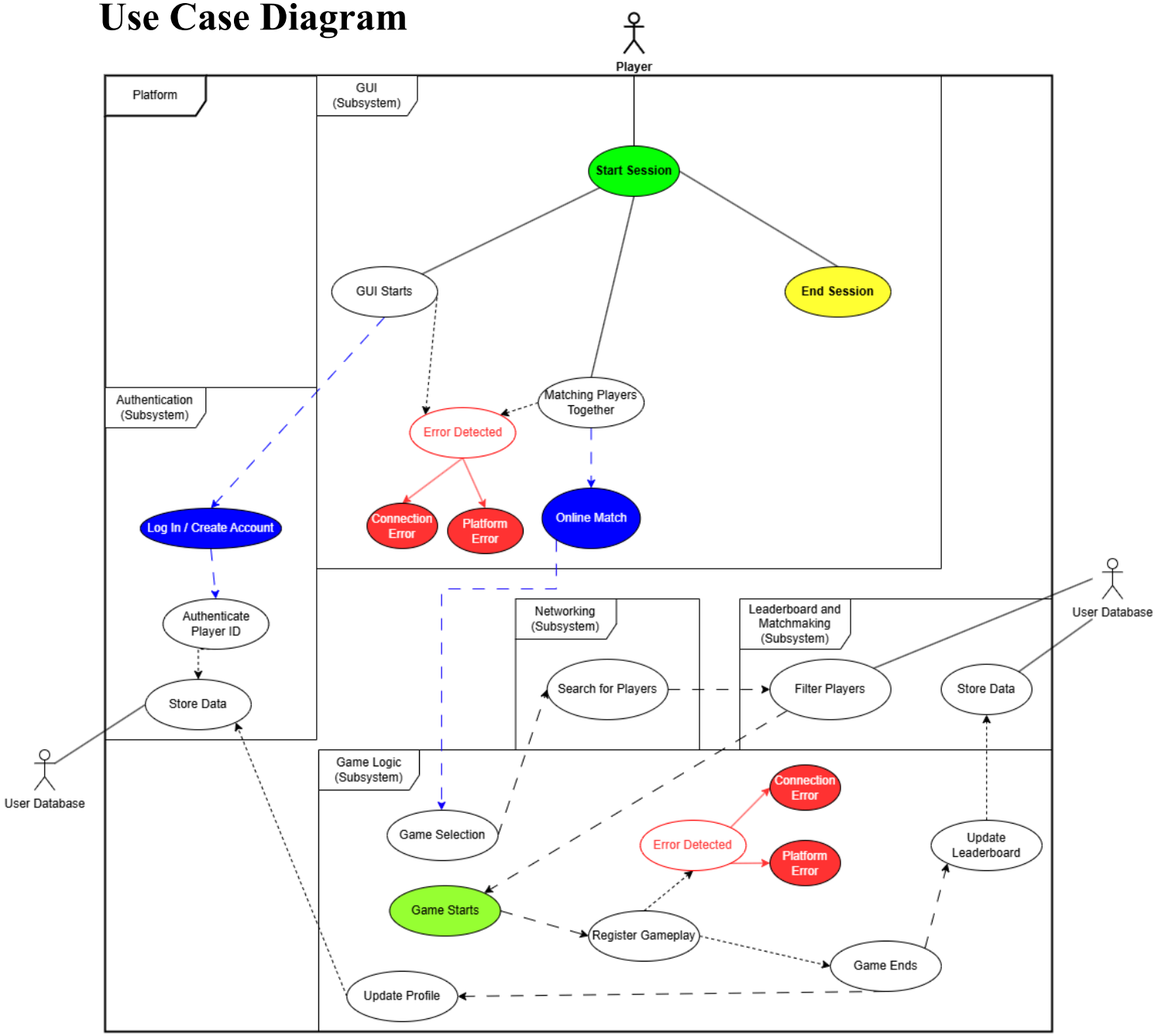
- GUI
- Authentication and Profile
- Network

Channels to Secondary Actors: Platform

Open Issues:

1. Can the session be ended while the game is in progress?
2. Will a "save login info" feature be implemented so the user doesn't have to log out at the end of the session?

Use Case Diagram



Association Legend

<----------	Include	Description: The relationship includes the following use case. (i.e. When the user moves to 'Pay for Order', they'll need to select their 'Payment Method', and finally 'Confirm Payment')
————	Associated	Description: There is an association in the relationship that causes an actor or a use case to interact with another.
<..........	Extend	Description: The relationship implies that the case extends under certain conditions. In this case, when the user begins their session they'll immediately have the option to select their language of operation and/or call for assistance
	User Database	Description: This represents the project's external database that stores the players statistics (Wins, losses, points, and ranking). This information can be accessed mainly by the Authentication and Leaderboard and Matchmaking teams