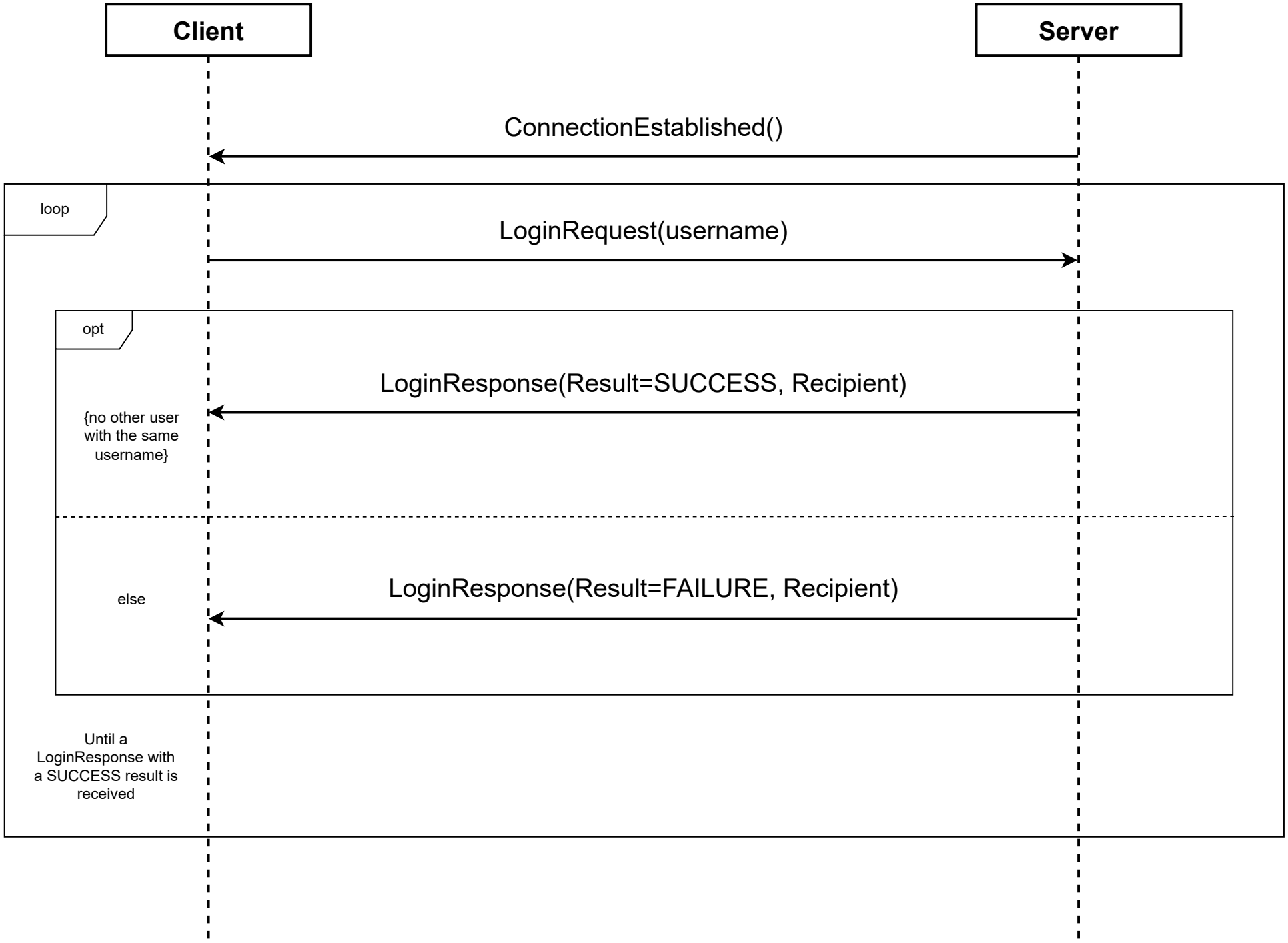
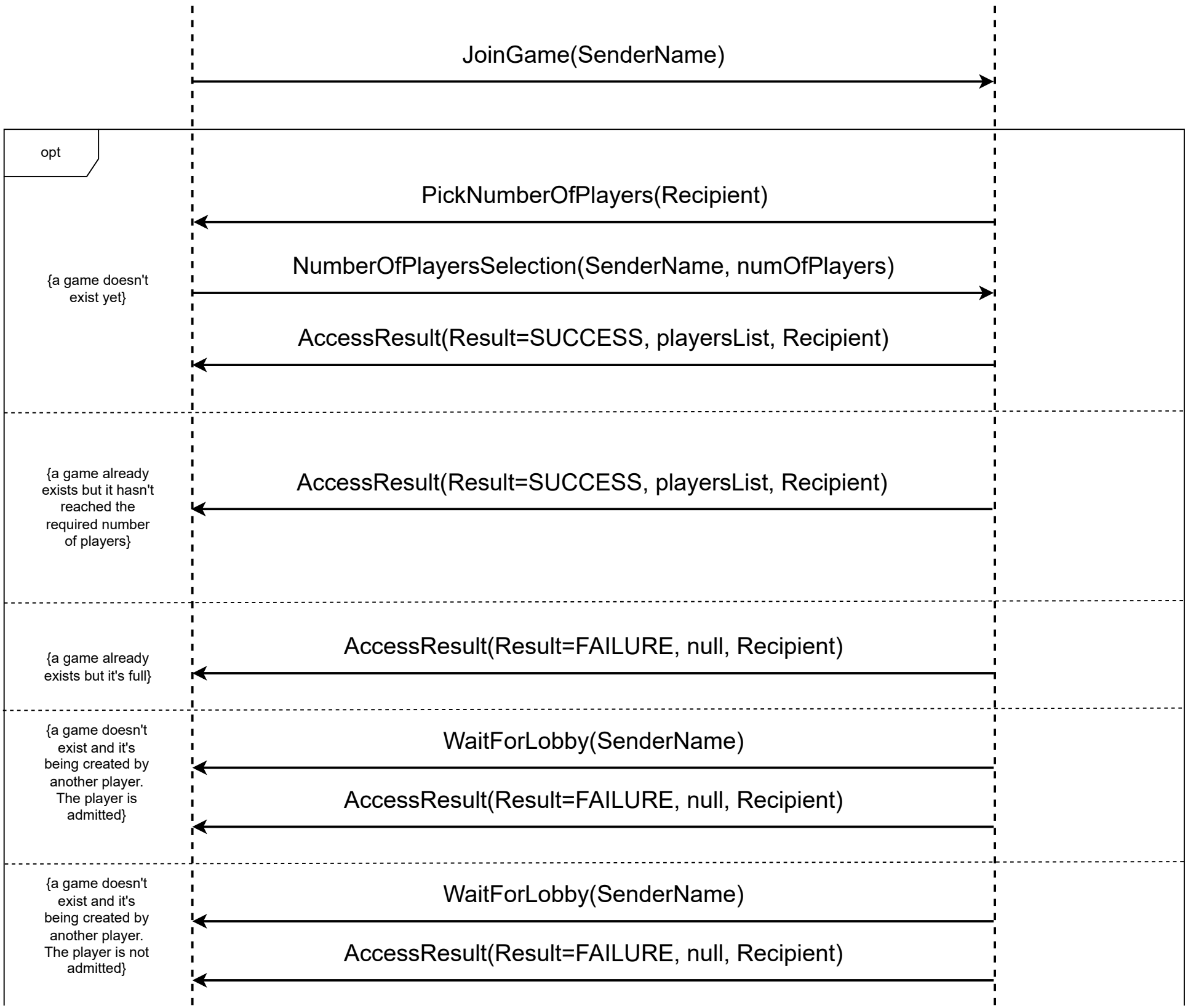
PSP17 GUFFANTI, FERRARIO, GALLI, FRANZONI - SEQUENCE DIAGRAMS

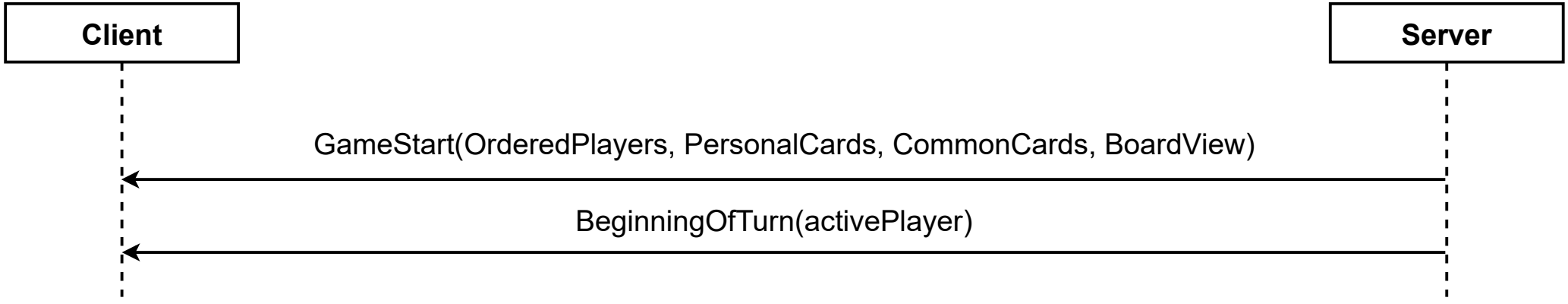
1. Client login and access




JoinGame(SenderName)
opt
PickNumberOfPlayers(Recipient)
{a game doesn't exist yet}
NumberOfPlayersSelection(SenderName, numOfPlayers)
AccessResult(Result=SUCCESS, playersList, Recipient)
{a game already exists but it hasn't reached the required number of players}
AccessResult(Result=SUCCESS, playersList, Recipient)
{a game already exists but it's full}
AccessResult(Result=FAILURE, null, Recipient)
{a game doesn't exist and it's being created by another player. The player is admitted}
WaitForLobby(SenderName)
AccessResult(Result=FAILURE, null, Recipient)
{a game doesn't exist and it's being created by another player. The player is not admitted}
WaitForLobby(SenderName)
AccessResult(Result=FAILURE, null, Recipient)

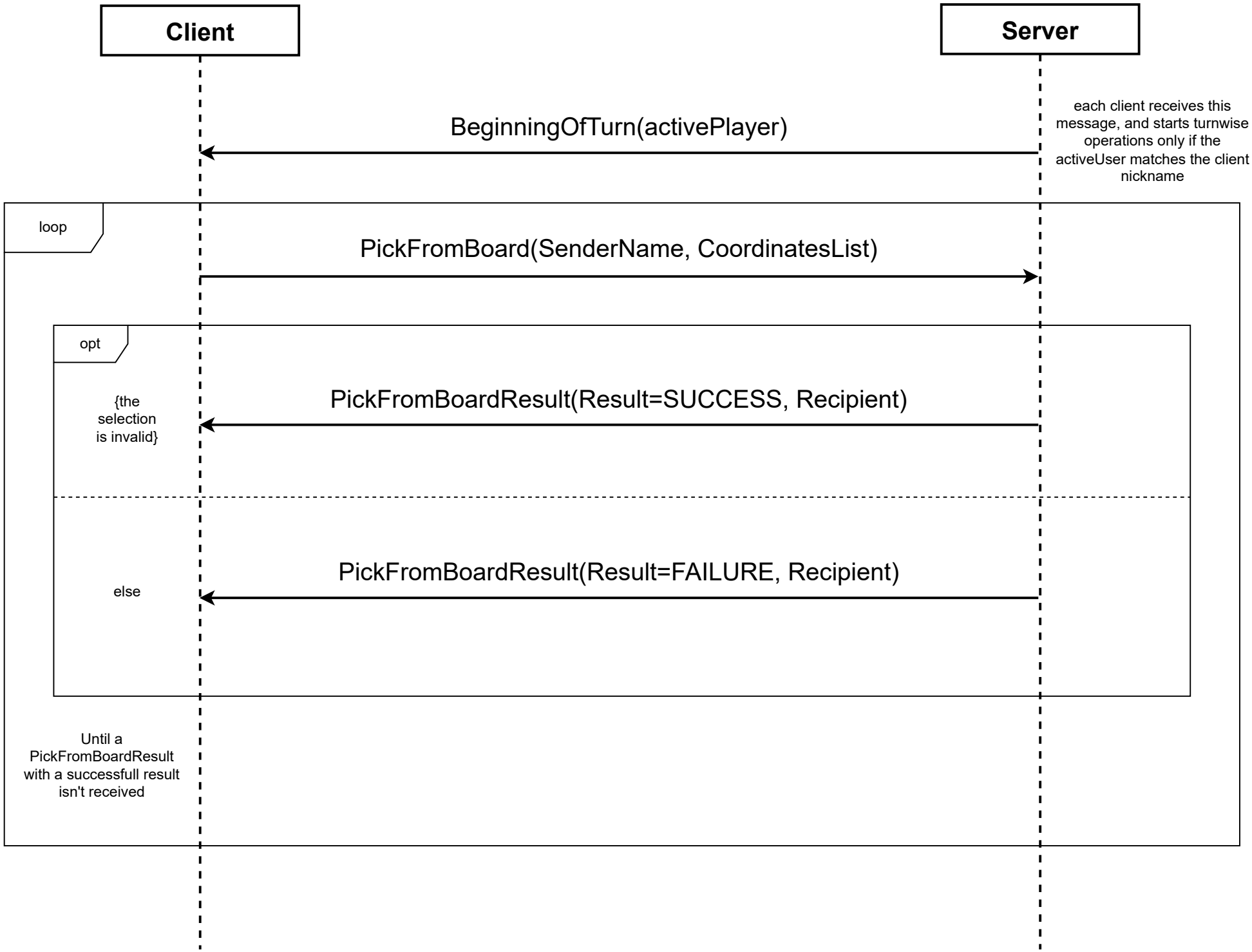
2. Another client logs in while one has already logged in and the game is created

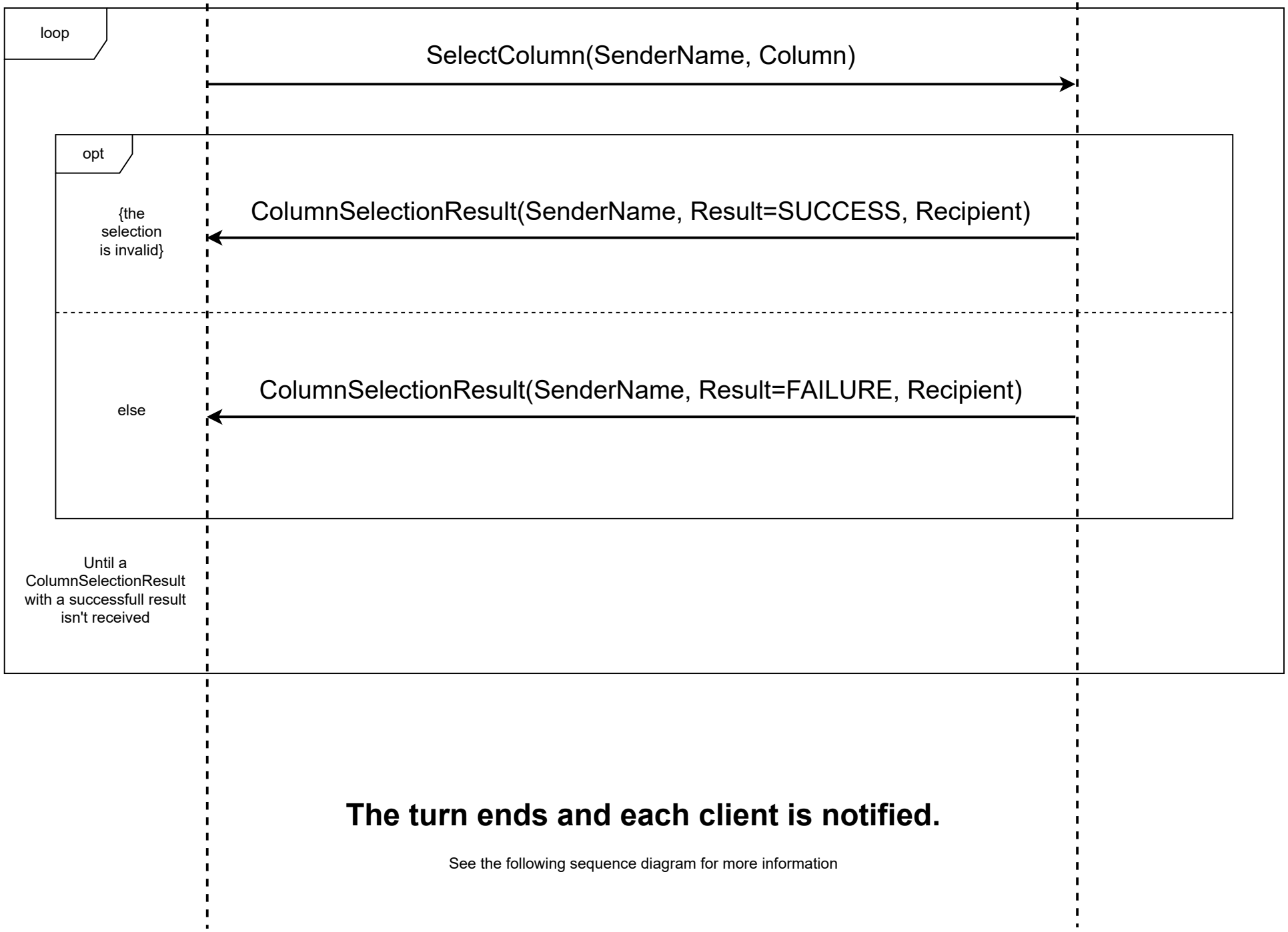
3. The game has reached the number of players set by the game admin and there is no saved game



BoardView is defined as an **ObjectTypeEnum[][].** It contains the types of object cards that are found in the corresponding position in the board matrix. BoardView is built by copying the type of each object card if present, null otherwise.

4. A turn starts and the active player chooses cards and column

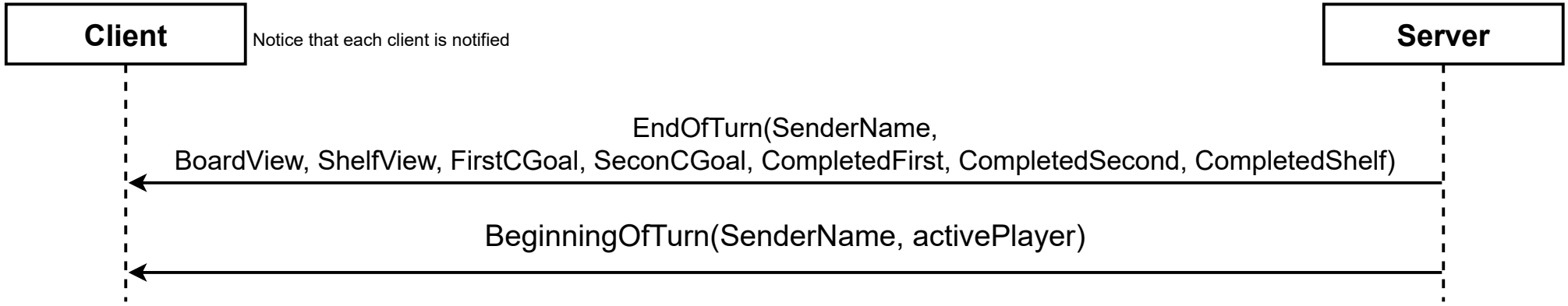




The turn ends and each client is notified.

See the following sequence diagram for more information

5. The turn ends (a player may have completed the common goals)



BoardView

As defined before, it contains a barebone description of the board after all the required updates.

ShelfView

Similar to BoardView, it keeps an updated representation of the shelf of the active player during the turn.

FirstCGoal

Short for **FirstCommonGoal**. It's the first common goal card. It's a part of the payolad of the message as the list of point cards it contains may vary if the player completes the goal.

SecondGCard

Short for **SecondCommonGoal**. It's totally equivalent to the first common goal card, both in terms of its structure and semantics.

CompletedFirst

Boolean flag that confirms whether the currentPlayer completed the first common goal. It's **true** if the player completed the goal.

CompletedSecond

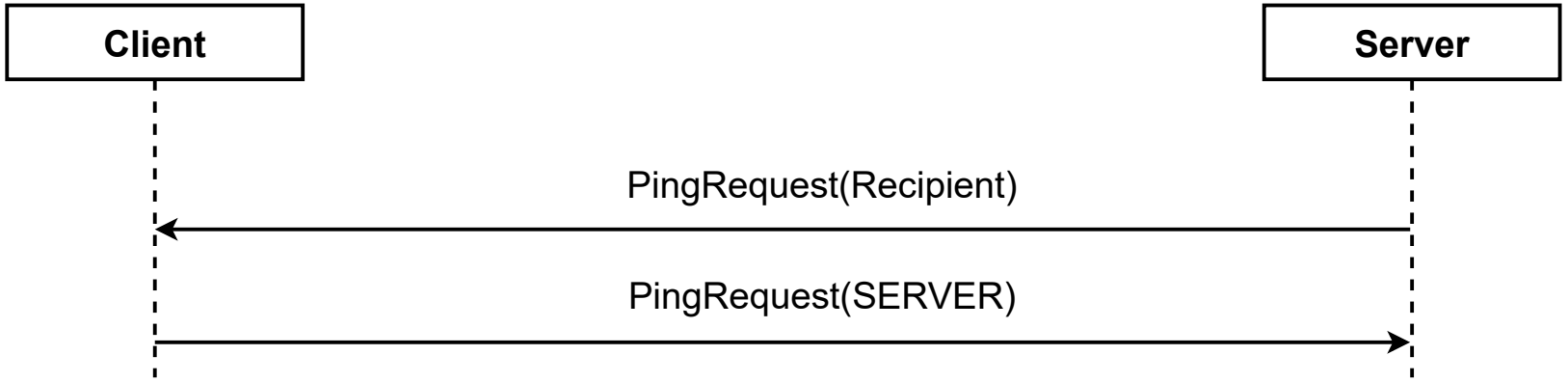
It's equivalent to CompletedFirst.

The Concept

Each turn naturally ends when a player has successfully picked one to three cards from the board and has chosen an available column in the shelf in which to put them, so **each player needs to be notified**, as the local representation of both the board and the active player's shelf will need to be modified to reflect the changes made. **We decided to incorporate the notification of the completion of the common goals in this update**, sending both the goals and flags that determine whether a goal has been completed.

View-wise, the completion of a common goal card will result in the display of an adeguate message **to all players** right after the display of the new board and of the new shelf of the player when using the cli, and it will result in an adeguate popup when using the gui.

6. The server pings the client to check its connection



The Concept

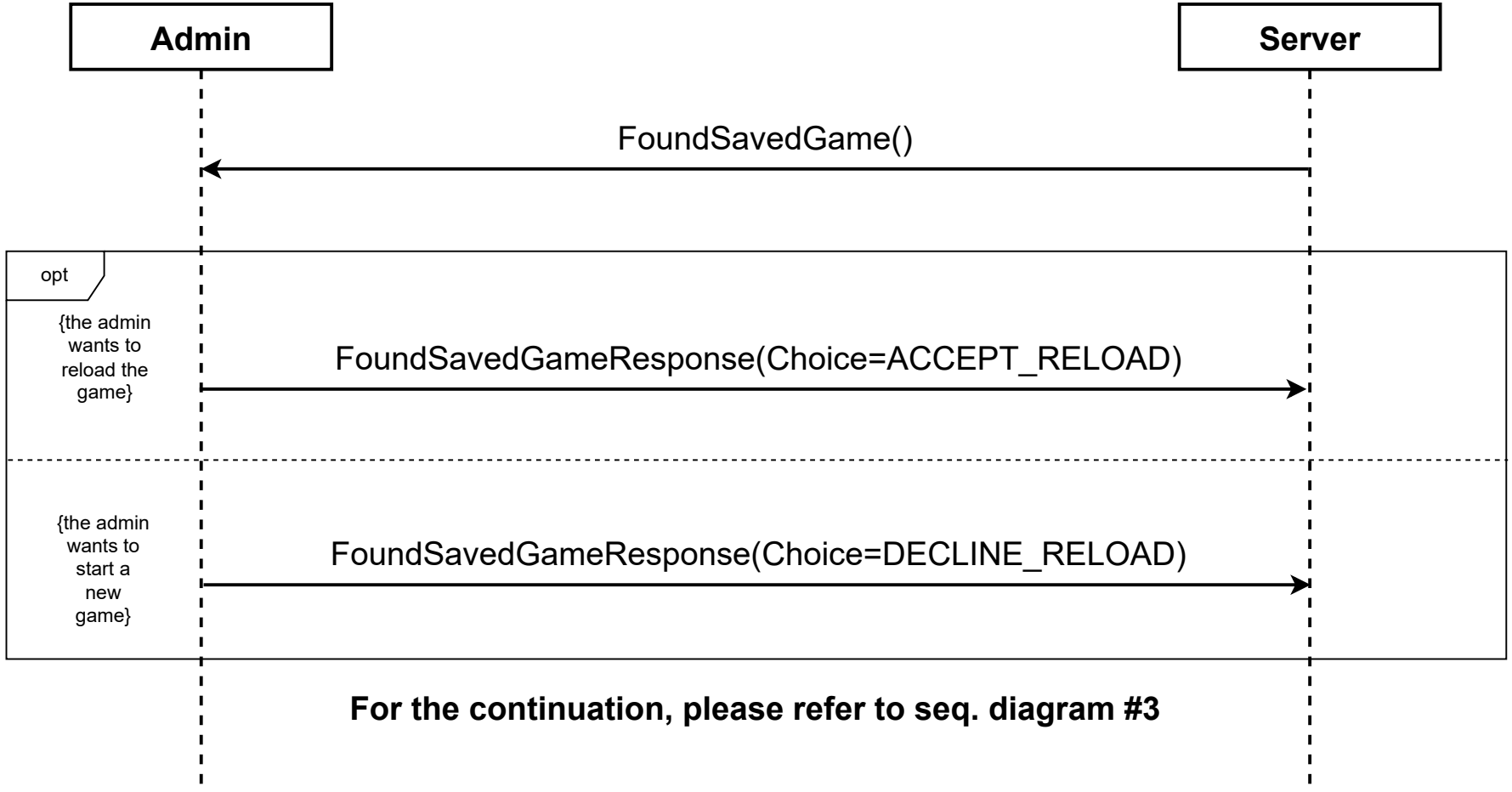
The server pings every client and waits for a predefined time for a response. If the response doens't arrive within the predefined timeout the client is considered disconnected

7. The client asynchronously pings the server

The Concept

The server is pinged by the client at regular intervals. The sole invocation of the method confirms that the server is online (RMI COMMUNICATION)

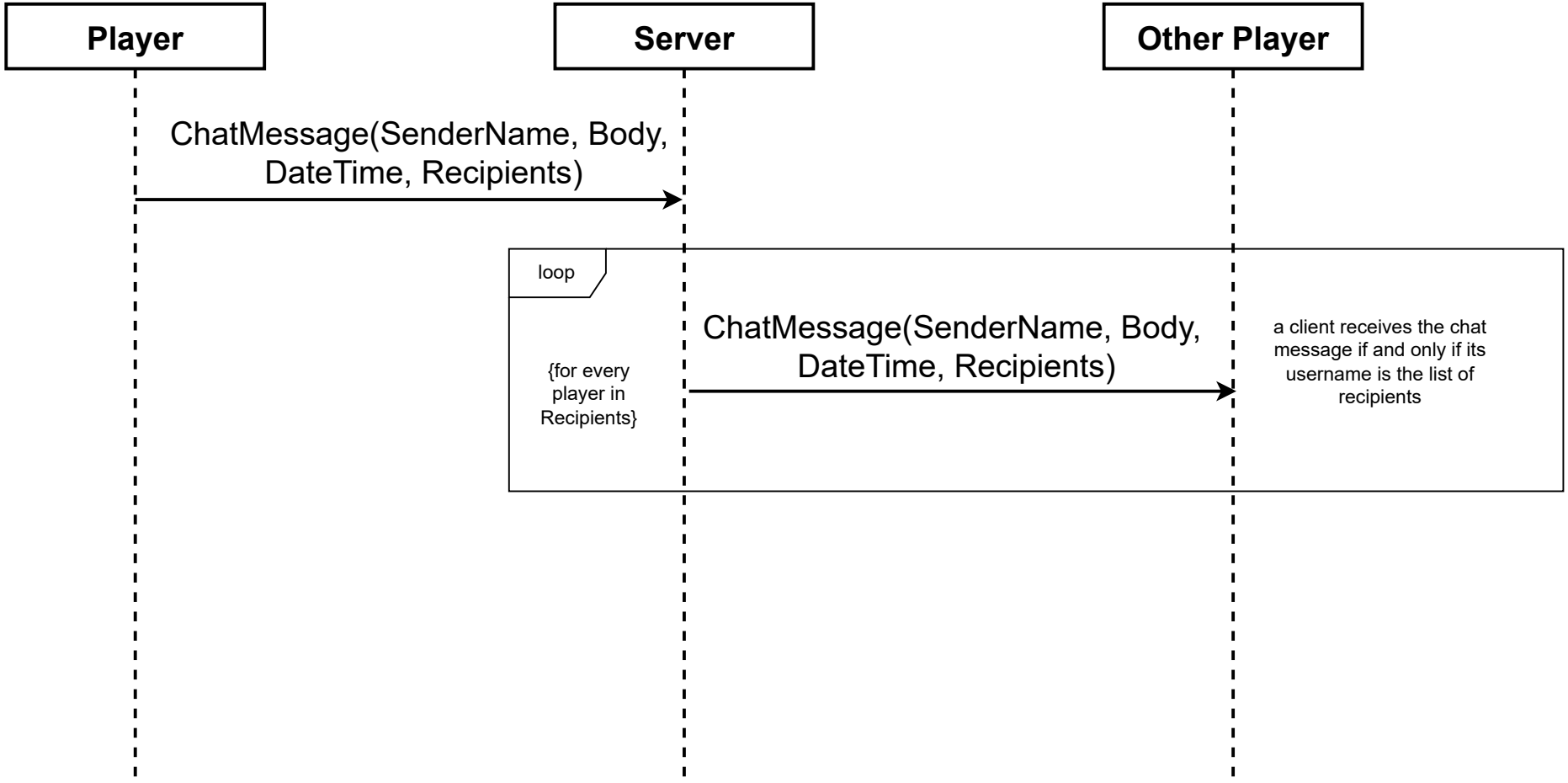
8. The last player joined the game but there's a compatible saved game



The Concept

Given a saved game with a set of players P. If all the new joined players match the usernames in P, and the number of joined players is equal to |P|, the admin of the game is asked to decide whether to reload the save or not.

9. A player sends a chat message



10. A player looses connection. The server notifies all the connected players

11. The game ends and all the players are correctly notified