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Content of the messages

Each message has 3 main fields:

- The username of the player sending the message / triggering an event.
- The id of the event.
- Additional parameters (which vary based on the event).

Heartbeats

The server periodically sends all the clients a heartbeat message to verify they are still connected.

If a client does not reply within a given amount of time, they are considered disconnected.
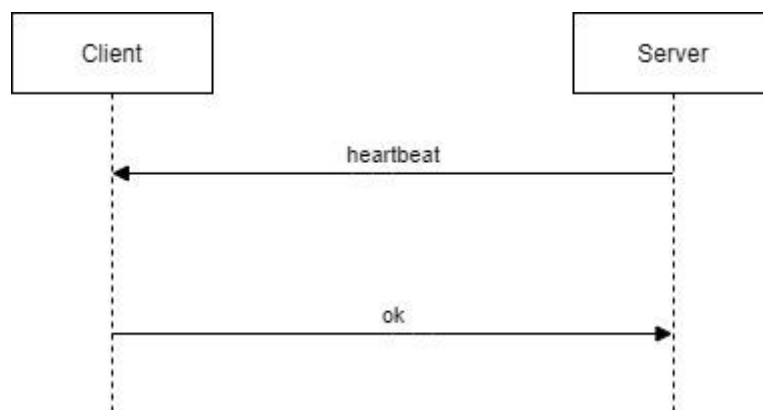
Beginning of the game

When the player starts the client, they are asked to connect to a server and to provide a username.

The server then checks the given username:

- If another player with the same username already exists, the client is asked to change the username.
- If the username is unique, the server asks the client if they want to join an already-existing game or create a new one.
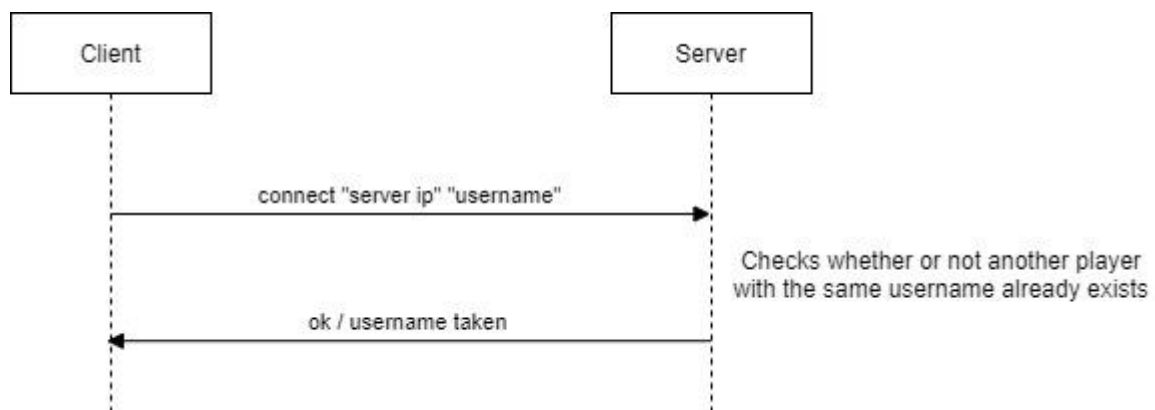

When the player decides to join an already existing game, the server checks if the game exists and if it is not full.

The player is also given the possibility to play with other random players (by simply not specifying the game name). All the players that choose this option will join a queue and:
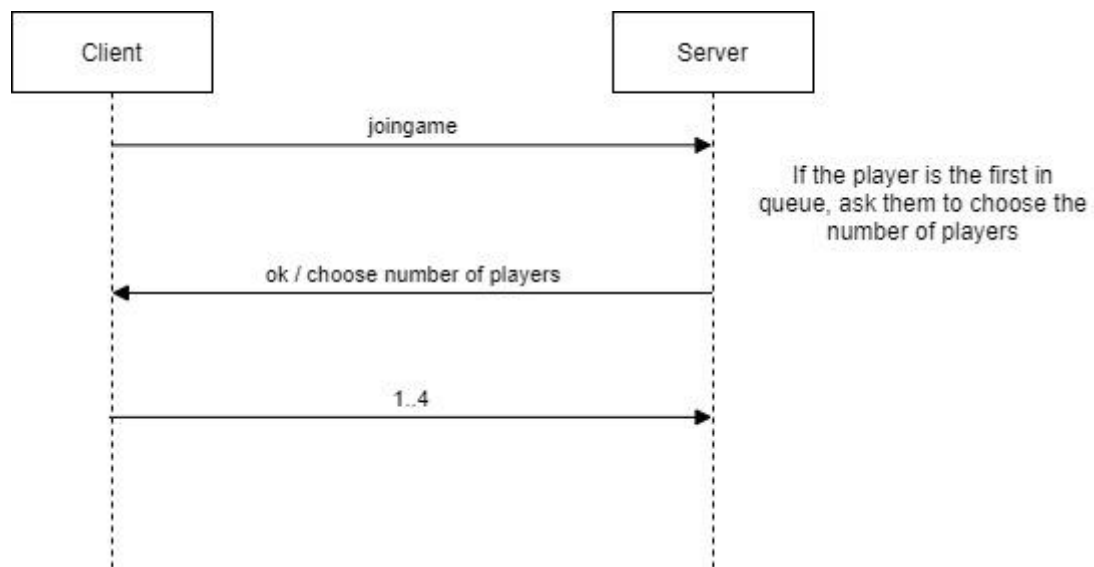
- If a player is the first in line, they will create a new game, specifying the number of players.
- Otherwise, the player will join the existing game.

Once a game is full of player, it automatically starts, and the players are removed from the queue. The new first player in line then creates a new game, specifying the number of players.
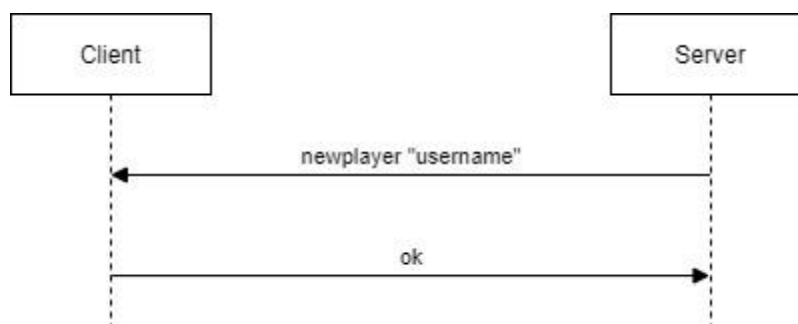

1Create a game
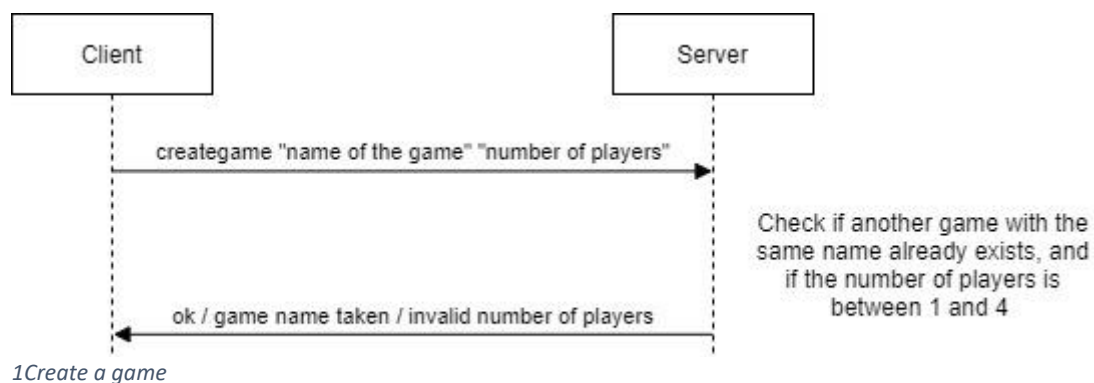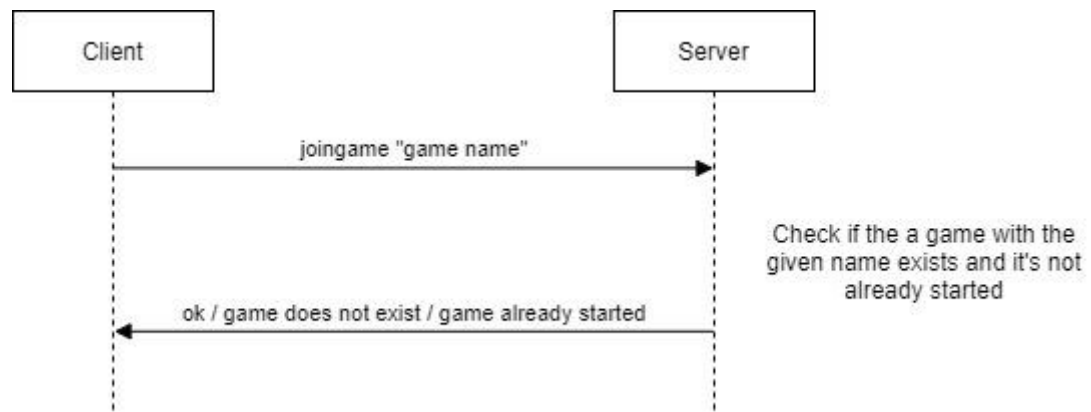
3Join an existing game

2Join the random-players queue

Every time a new player joins the game, all the other players are informed, the players then reply with an ok message to notify the server they are still connected.

Once game is full of players, the game starts, and all the players get notified. 4 leader cards are then given to each player, who choose 2 to keep and 2 to discard.
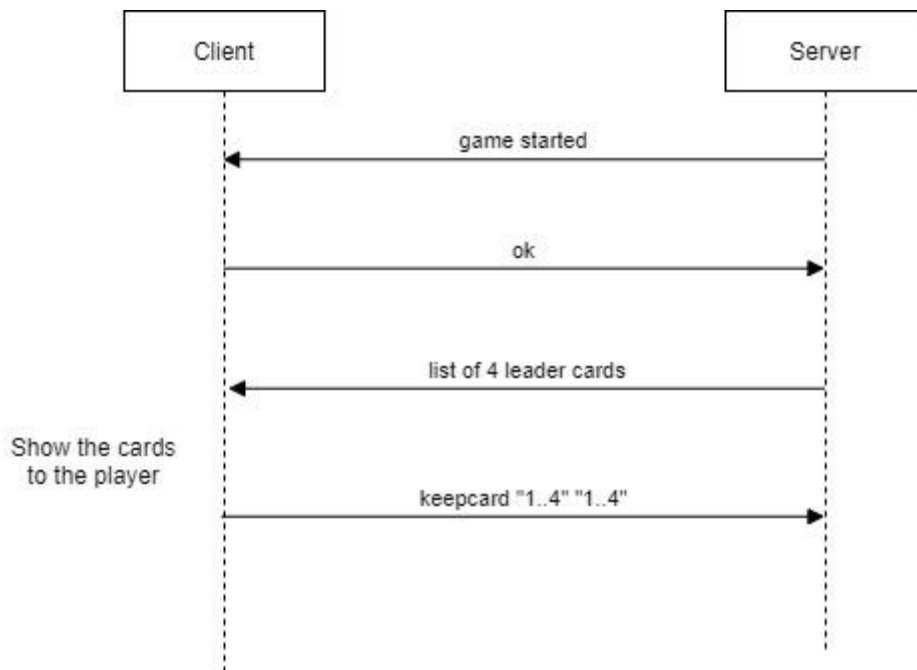
The inkwell is then given to a random player and based on the number of players; each player is asked to choose an additional resource.


After the game has started, each turn the player is asked to:

- Choose a leader action. (Discard or activate a leader card)
- Choose a turn action. (Visit the market, buy a development card or activate production)
- Choose another leader action. (Discard or activate a leader card)

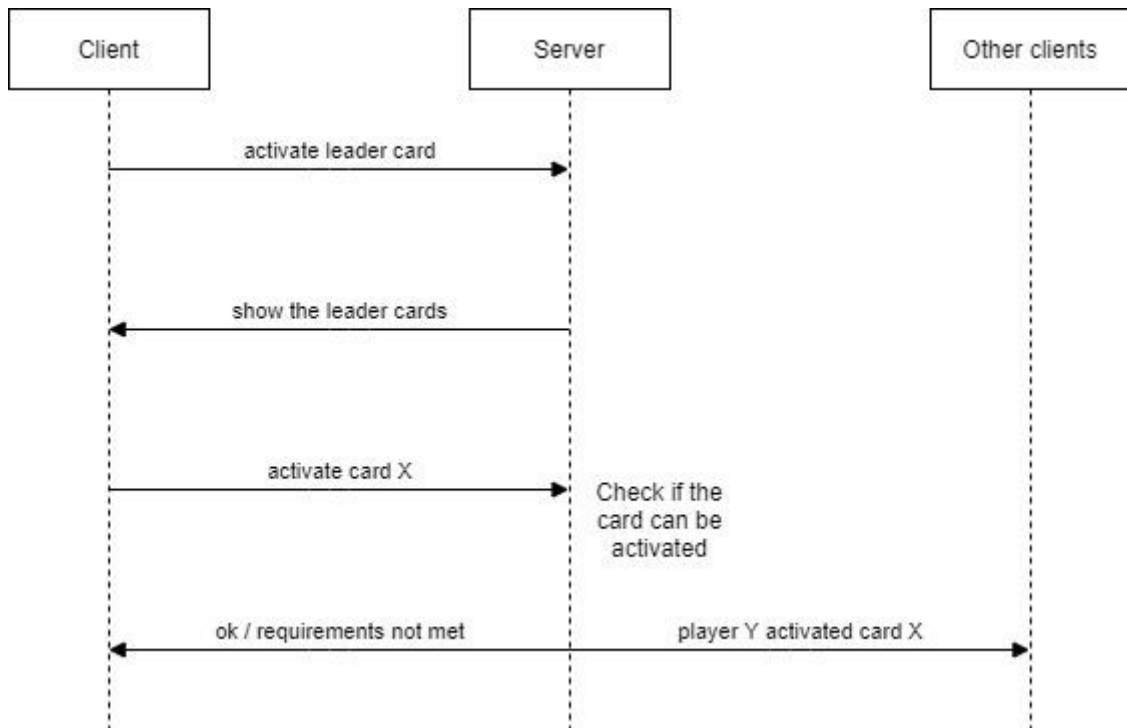# Leader Actions

Discard a leader card

The server shows the player which leader cards can be discarded. The player then informs the server about which leader cards they want to discard. The server then notifies the other players.
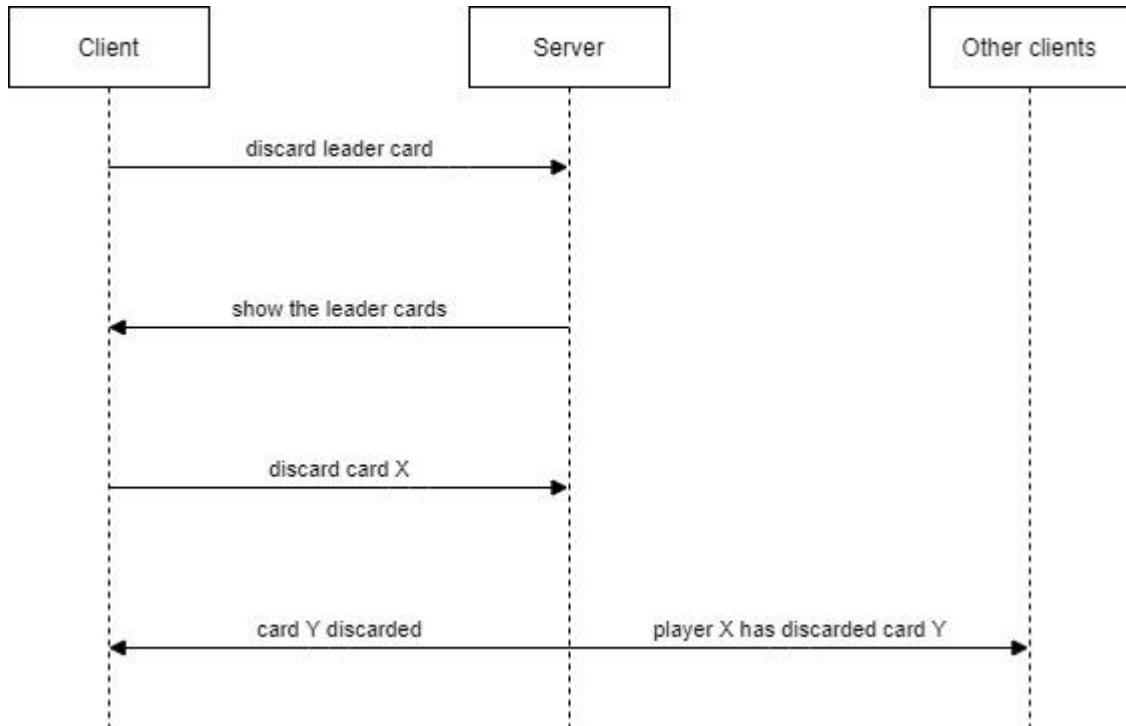
Once the card has been discarded, the player advances on the faith track.

Activate a leader card

The server shows the player which leader cards can be activated. The player then informs the server about which leader card they want to activate. The server then notifies the other players.

Client	Server	Other clients

- activate leader card (Client → Server)
- show the leader cards (Server → Client)
- activate card X (Client → Server)
- Check if the card can be activated
- ok / requirements not met (Server → Client)
- player Y activated card X (Server → Other clients)

Turn actions

Each turn, the server asks the correct player what turn action they want to play.

Visit the market

Once a player visits the market, the server sends the player the content of the market. The player then chooses a row or a column to acquire the resources from, and the server notify every player and shows them the updated market.
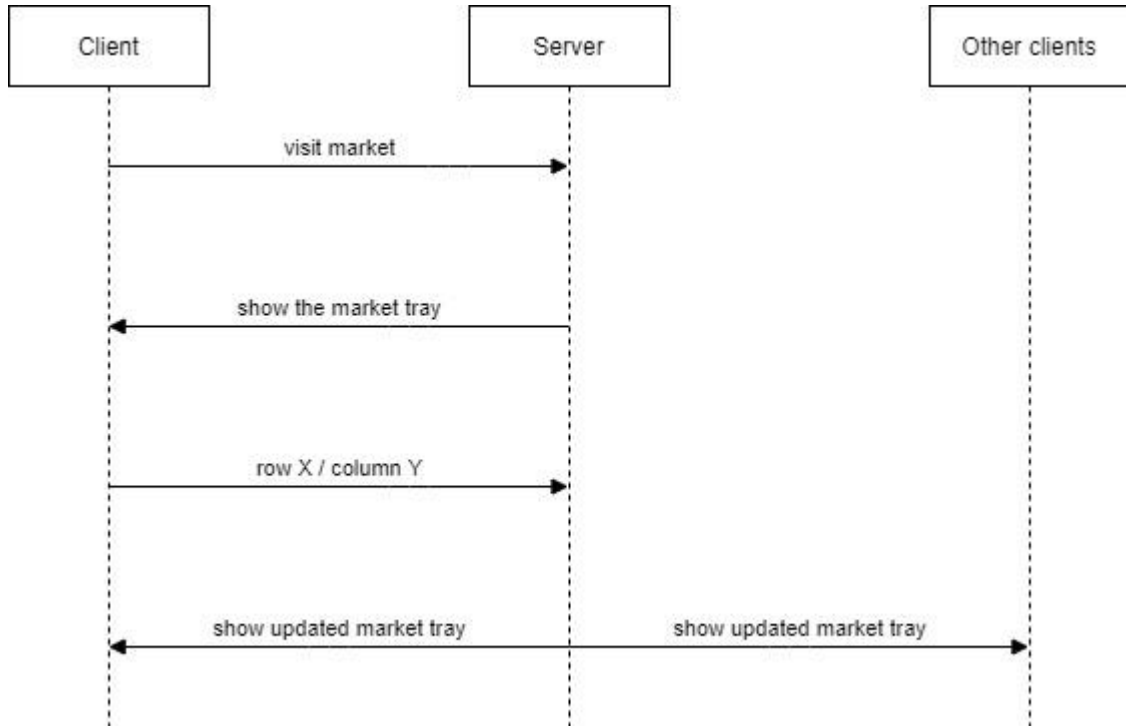
If the player has more than one leader cards, and has acquired white marbles from the market, ask them which to which resource they want to convert the white marbles.
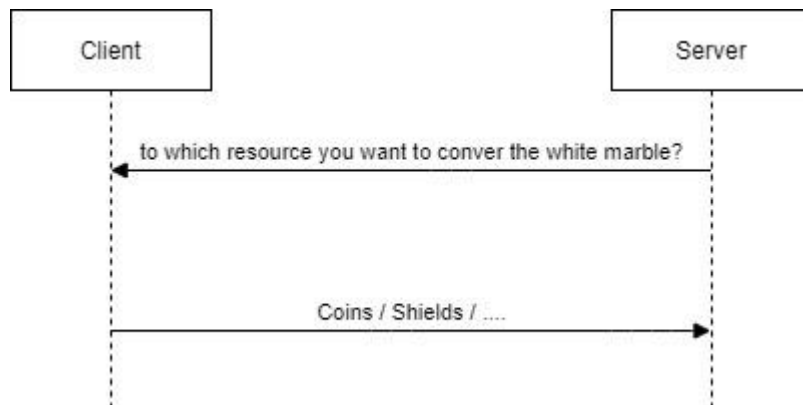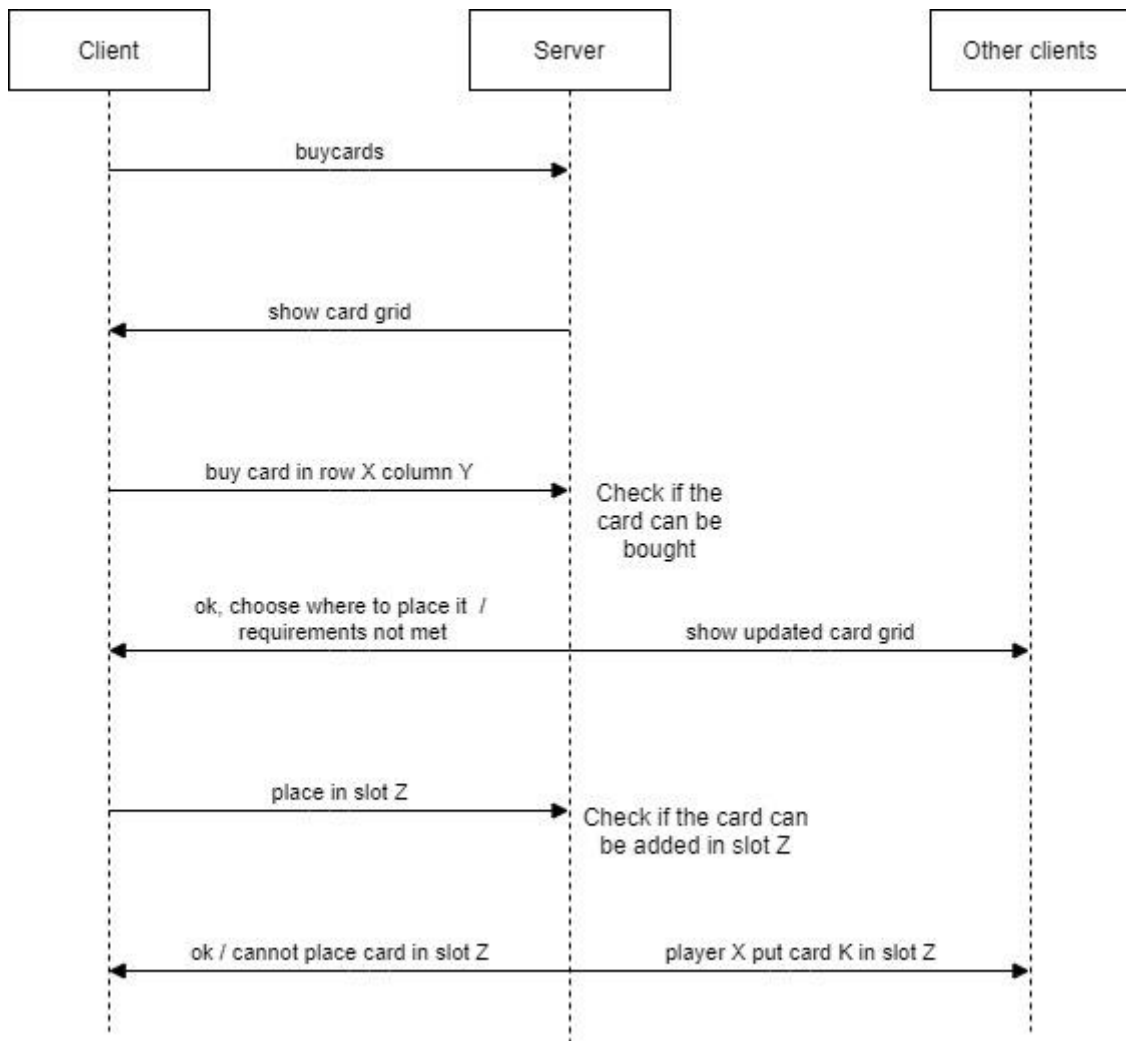
Buy a development card

When a player decides to buy a development card, the server sends the player the card grid. The player then chooses a card to buy. The server checks whether that card can be bought (the player has resources and cards requirements). The updated card grid is then sent to all the clients.

The player is then asked where to place the card (the same card could be placed in multiple slots).

All the other players are then notified of the new card added.

Activate production

When a player decides to activate production, the server sends the player all the available productions (from development cards, base production and leader cards).

The player then chooses which production to activate and tell the server.

The server checks if the productions can be activated (enough resources) and, if successful, notify all the players about the new resources added and the resources used so they can update the view.
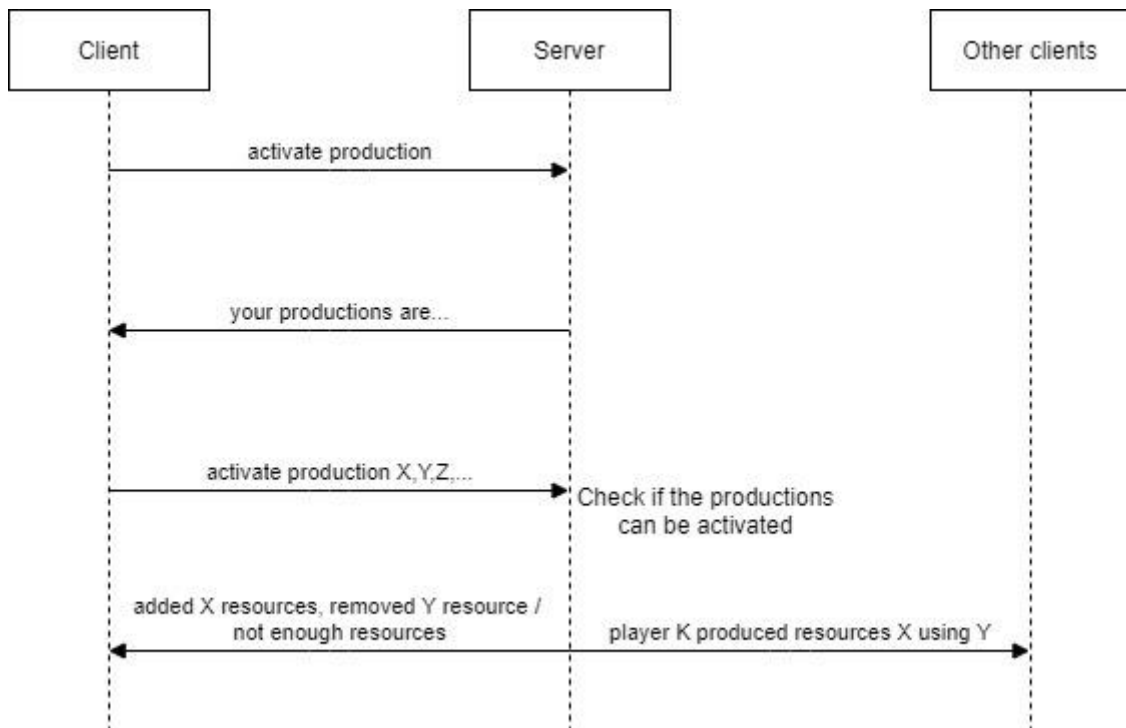
Other events

Player advances on the faith track

When a player advances in the faith track, the server sends the updated faith track to all players. Then the server checks if a Vatican report can start, and in that case, it sends every player the result of the reports (Vatican card activated or discarded)
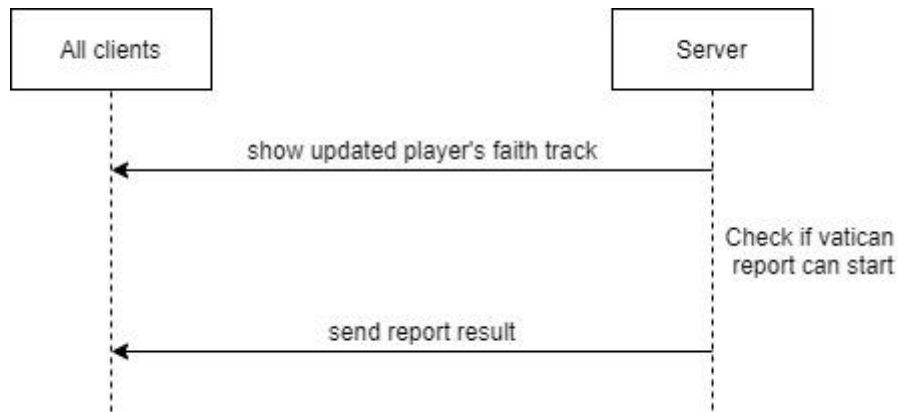
Player gains resources

Whenever a player gains new resources, the server notifies every client.

Game ends

When a player reaches the win condition, the server notifies every player,