

Protocol design specifications

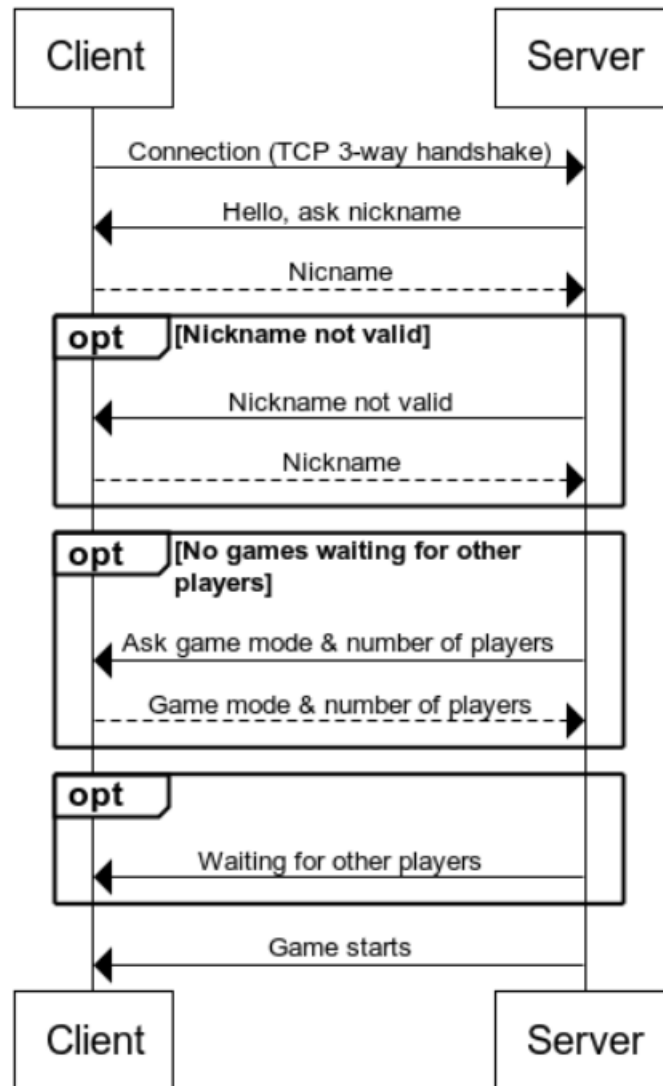
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Team number: GC10

1 Player access the game

After the Server has been started with its own port number, a Client can start a connection by providing the Server's IP address and port number.

After having accepted the request, the Server asks the Client to provide a nickname. The Client replies with a message containing the chosen nickname. If the nickname is equal to the nickname of a disconnected player which has an old game still active, than player is reconnected to the room of that game. Otherwise, the Server checks if the nickname is unique in the system and, if it's not, a new request is sent to that Client. Once a valid nickname is provided, the server asks the client to choose the game set (basic or advanced) and the number of players allowed in the game. The server adds the player to the lobby corresponding to the selected parameters.

As soon as there are enough players in the lobby in relation to the choosen parameters, the server starts a game and notifies the clients.

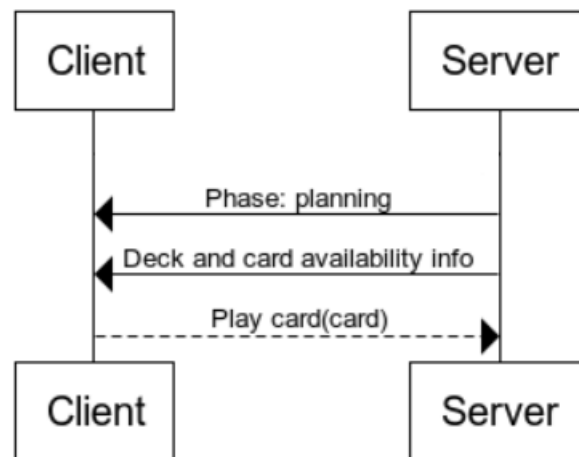


2 Game phases

Before sending a message to the Server, the Client checks itself the validity of the message. Nevertheless, the Server never trusts the Client and, in case of invalid response, it sends to the Client the same request until the Client provides valid parameters.

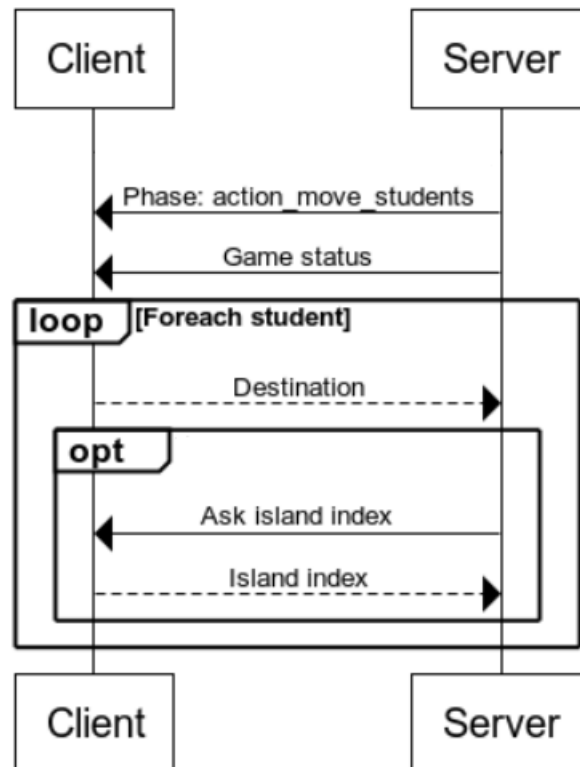
2.1 Planning

The Server notifies the Client about the starting of the planning phase and sends updates about the status of the game so that the Client can allow the player to choose an Assistant Card.



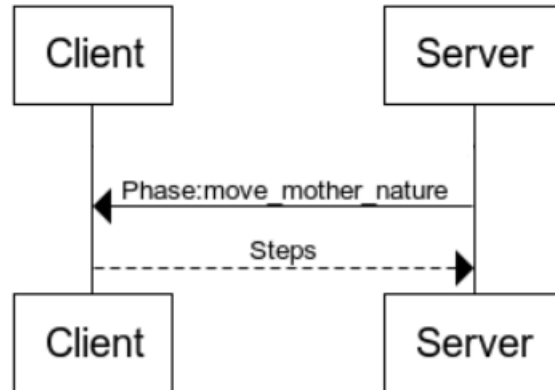
2.2 Move students from entrance

The Server notifies the Client about the current phase and the game status. The Client sends a message for every student the player has to move. If the player decides to move a student to an Island, then the Server asks the Client the destination.



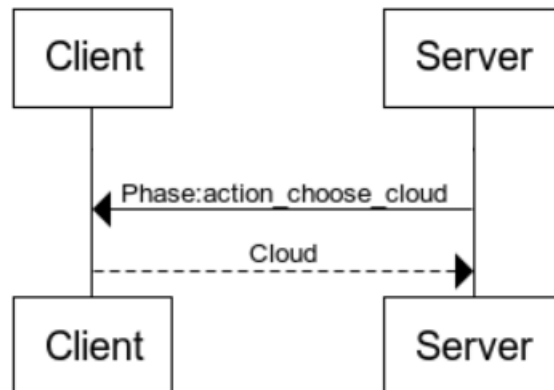
2.3 Move mother nature

The Server notifies the Client about the game phase, the Client responds with the number of steps Mother Nature should run, according to the selected Assistant Card.



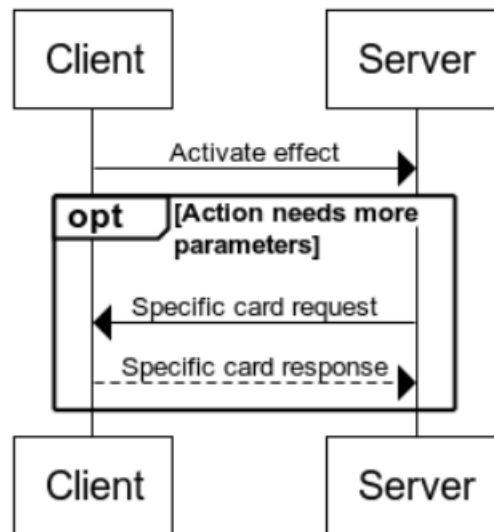
2.4 Pick students from cloud

The Server notifies the Client about the game phase. The Client sends the index of the Cloud the player has selected.



2.5 Activate a character effect

At any stage of the expert mode game, a player can activate the effect of a Character Card. The Server will send to the Client a specific request based on the chosen card.



3 Game over

At the end of the game, the Server notifies the Client and specifies the reason why the game has ended (a player reached a winning state, other players have left the game...). The Server also tells the Client if it is the winner.

