



# Communication protocol

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Client-Server communication is thus organized inside our work.

The client sends commands in form of strings to the server, which can in turn reply with feedback on the executed commands, always in form of strings, and provide updated data regarding the game status under the form of a JSON string.

## Messages sent by the client to the server are managed on 4 levels:

**0 - ServerNetwork class:** accepts a client connection and creates a *ClientManager* class with the related socket for each client.

**1 - ClientManager class:** handles **NICKNAME** messages, verifies the availability of the requested nickname, and only then, adds a reference to the socket in the *ServerController*.

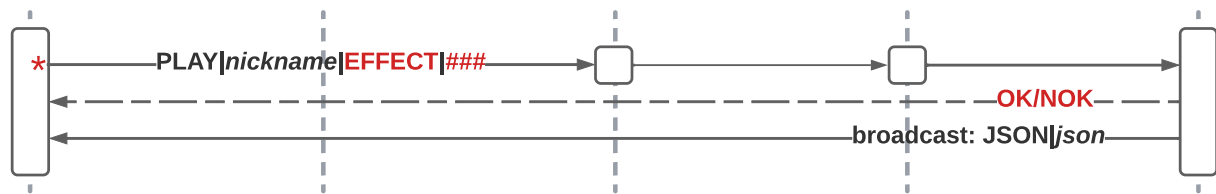
**2 - ServerController class:** handles **GAME** messages. Makes the multiple game-instances functionality possible and creates *GameController* classes.

**3 - GameController class:** handles **PLAY** messages addressed to a single game, and processes them according to the rules of that instance.

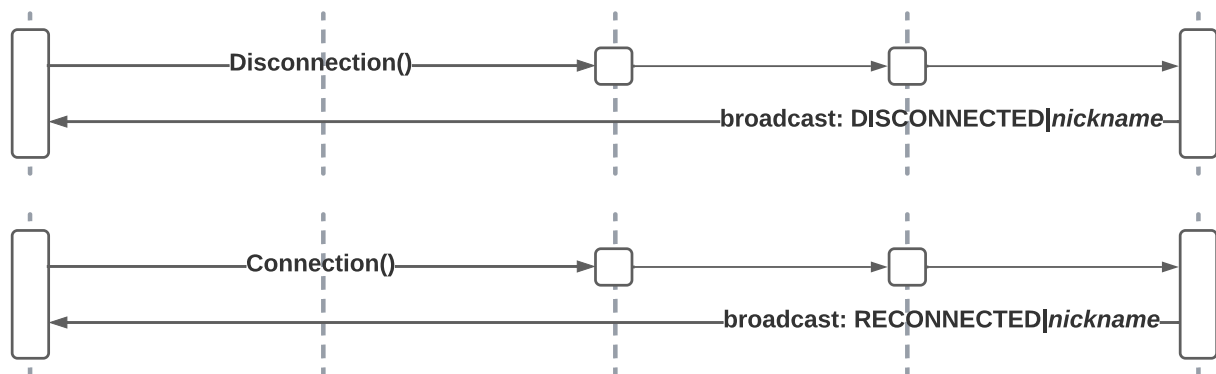
The possibility of the user to interact with the graphical interface and give commands is managed by the client and led by the server's **LOCK** and **UNLOCK** commands.



In correspondence to the star symbols and only once, an effect message can be sent in case of an expert-mode game.



At any moment during the game disconnection and reconnection can occur.



Follows an exhaustive list of all the messages exchanged between client and server, in respect of the syntactical convention: **PARAMETER\_IDENTIFIER|parameterValue|optionalValue**

# ClientMessage

- **NICKNAME**|*playerNickname*

- **GAME**|*playerNickname*|*playerNumber*|*expertOn*

- QUITLOBBY|*playerNickname*

- **PLAY|playerNickname|### - category**
  - **PLAY|playerNickname|WIZARD|wizardName**
  - **PLAY|playerNickname|HELPER|cardNumber[1-10]**
  - **PLAY|playerNickname|ETI|islandIndex|entranceIndex**
  - **PLAY|playerNickname|ETT|entranceIndex**
  - **PLAY|playerNickname|NATURE|mNatureMoves**
  - **PLAY|playerNickname|CTE|cloudIndex**
  - **PLAY|playerNickname|EFFECT|### - category**
    - **PLAY|playerNickname|EFFECT|CAVALIER**
    - **PLAY|playerNickname|EFFECT|CENTAUR**
    - **PLAY|playerNickname|EFFECT|VILLAIN**
    - **PLAY|playerNickname|EFFECT|MAGICIAN**
    - **PLAY|playerNickname|EFFECT|MONK|islandID|cardStudentIndex**
    - **PLAY|playerNickname|EFFECT|COOK|coloredDisc**
    - **PLAY|playerNickname|EFFECT|QUEEN|playerID|cardStudentIndex**
    - **PLAY|playerNickname|EFFECT|LADY|islandID**
    - **PLAY|playerNickname|EFFECT|JOLLY|indexCard1|indexEntrance1|[indexCard2]|[indexEntrance2]|[indexCard3]|[indexEntrance3]**
    - **PLAY|playerNickname|EFFECT|MUSICIAN|entranceIndex1|switchColor1|[entranceIndex2]|[switchColor2]**
    - **PLAY|playerNickname|EFFECT|BANDIT|studentColor**
    - **PLAY|playerNickname|EFFECT|LORD|islandID**

## Response

- OK/NOK

- OK/WAIT/NOK

- OK/NOK

- OK/NOK

- OK/NOK

- OK/NOK

- OK/NOK

- OK/NOK

- OK/NOK

- OK/NOK

- OK/NOK

- OK/NOK

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- OK/NOK

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- OK/NOK

- OK/NOK

- OK/NOK

- OK/NOK

## ServerMessage

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- OK
  - NOK
  - WIZARDS
  - JSON|*jsonValue*
  - DISCONNECTED|*nickname*
  - RECONNECTED|*nickname*
  - LOCK
  - UNLOCK
  - WAIT
  - WINNER|*nickname*
- 

## Response

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- PLAY|...|WIZARD|...
  - Not required
  - Not required
  - Not required
  - Not required
  - Not required
  - Not required
  - Not required
  - Not required
  - Not required
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