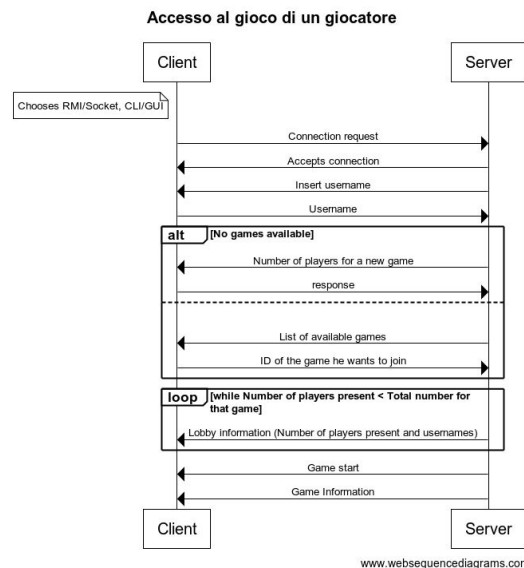# Explicative Text sequence diagrams

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1 ACCESSO AL GIOCO DI UN GIOCATORE

- **Connection request**: Client sends a first connection request to join the server and starts waiting for an answer from the server.

- **Accepted connection**: Server responds to the client.

- **Insert Username**: Server requests the username to the client.

- **Username**: Client sends the username to the server.

- **(NO AVAILABLE GAMES) Number of players for a new game**: Server asks for the number.

- **(NO AVAILABLE GAMES) Response**: Clients gives the number of players.

- **(AVAILABLE GAMES) Available games**: Server sends a list of available games to the client that he can join.

- **(AVAILABLE GAMES) IDtojoin**: Client chooses a game by its ID.

- **(LOOP) Lobby information**: Server sends a message with the number of players in the game and their respective usernames. Loop ends when the total number of players has been reached.

- **Game start**: Server starts the match.

- **Game information**: Server sends to the client all the information for the match (personal card, board, common cards).

Accesso al gioco di un giocatore

Client	Server

Chooses RMI/Socket, CLI/GUI

Connection request →
← Accepts connection
← Insert username
Username →

alt [No games available]
    ← Number of players for a new game
    response →
- - - - - - - - - -
    ← List of available games
    ID of the game he wants to join →

loop [while Number of players present < Total number for that game]
    ← Lobby information (Number of players present and usernames)

← Game start
← Game Information

Client	Server

2   IN-GAME GENERIC

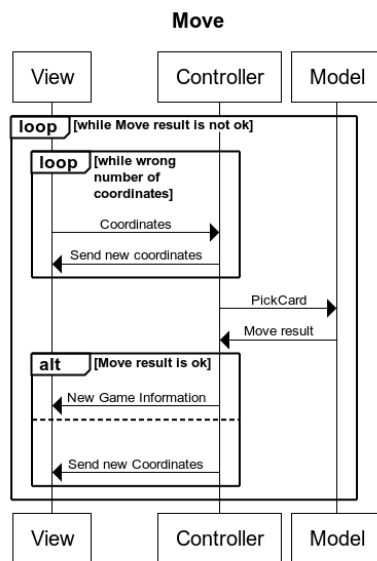## 2.1   General vision of how a game works split between Model, View, Controller

- **Create Game**: Controller send a message to the Model in order to create a new game.

- **Game information**: Once the game is created Model sends all the information to the Controller.

- **(LOOP)Game information**: For each player, Controller shares with View only the graphical information (Board disposition, Common card).

- **Move request**: Controller requires to the View a move and waits for a response.

- **Move**: View sends to Controller a player's move.

- **(LOOP) Move request**: If the move can't be executed following the rules, Controller continues to ask for a possible move.

- **Make the move**: Once the move is approved by the Controller, a message is sent to the Model, and the move gets completed (Check the next paragraph for a more detailed view).

- **New Game Information**: Model sends to the Controller all updated information, and everything gets repeated, based on the latest situation.

In-Game generic
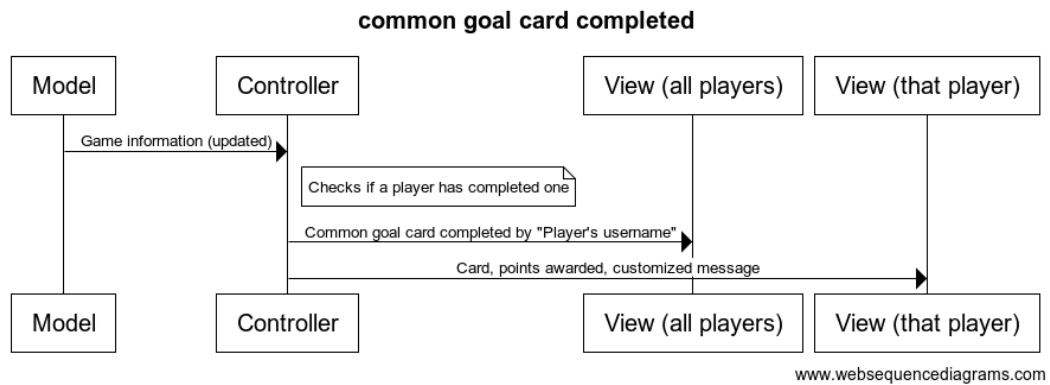

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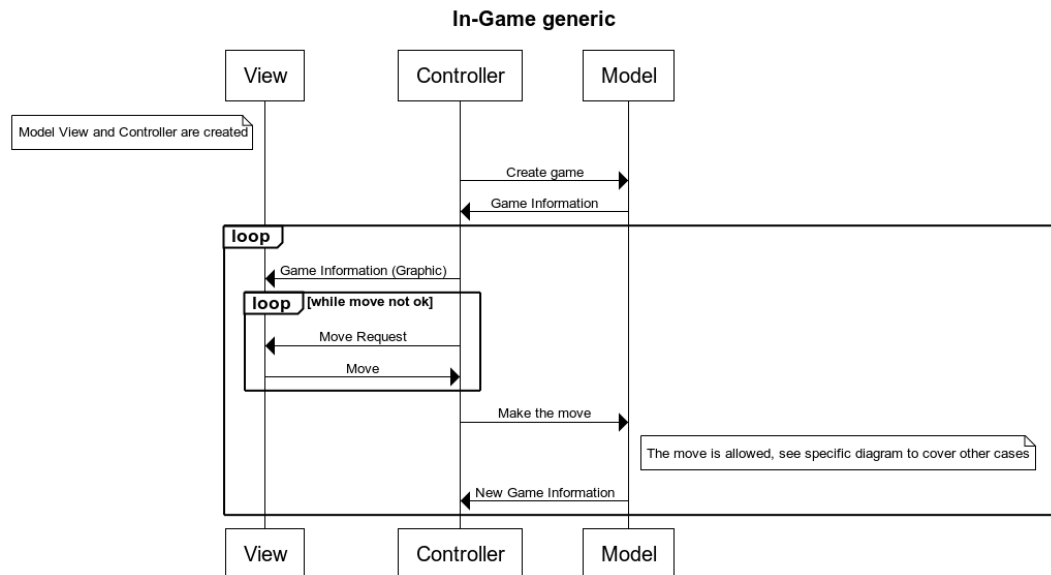
2.2   Move

- **(Loop) Move result not ok:**   The process will repeat until the move is completed.

- **(Loop) Wrong number of coordinates:**   this process will repeat until the number of coordinates is correct.

- **Coordinates:**   Client sends the coordinates of the tiles the player wants to take from the board and the column in which he wants to put them.

- **Send new coordinates:**   The controller will check if the player has submitted a correct number of tiles. This involves checking if the number is between 1 and 3 and if the player's column in the bookshelf has enough space to put them. If the result is negative it will ask the client to send new coordinates.

- **PickCard:**   The controller sends the coordinates to the model and asks it to remove the tiles from the board and put them in the bookshelf of the player who sent them.

- **Move result:**   The model sends the result of the move to the controller. It will be positive if the coordinates of the tiles don't break the rules of the game, negative otherwise.

- **(Move completed) New Game Information:**   The controller sends to the client the new status of the game (board, bookshelf ecc.).

- **(Move not allowed) Send new Coordinates:**   The controller asks the client to send new coordinates.

Move

| View | Controller | Model |

loop [while Move result is not ok]

loop [while wrong number of coordinates]

Coordinates

Send new coordinates

PickCard

Move result

alt [Move result is ok]

New Game Information

Send new Coordinates

| View | Controller | Model |

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2.3   Common Goal Card Completed

- **Game Information**: Once a move in completed, Model sends the updated information of the game to the Controller.

- **Checks if a player has completed a common card goal, and gives points for it**

- **Common goal card completed**: Controller sends to the general View a message with the username of the player who completed he common card goal.

- **Card Points Awarded**: Controller sends only to the player's View who completed the card a customized message.

common goal card completed

Model	Controller		View (all players)	View (that player)

Game information (updated)

Checks if a player has completed one

Common goal card completed by "Player's username"

Card, points awarded, customized message

Model	Controller		View (all players)	View (that player)

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3 Messages

- **Insert username:** "Choose a username"

- **Username:** "..."

- **Number of players for a new game:** "There are no games available, please insert how many players will be in your game (between 2 and 4)"

- **Response:** Integer

- **Lobby Information:** "n/tot players connected. waiting for more players... Players connected: usernames...."

- **Game Start: "Starting game..."**

- **Game Information:** This message will be an object containing: board, common goal cards, personal cards (each player his own) and more if necessary