

# CLIENT JOINING A GAME

This sequence diagram starts off with the client connecting to the server, the server asks the player to choose between single player and multiplayer mode.

In the former, the player is asked to choose a valid nickname, then the game can begin.

In the latter, we have two different options:

- Creating a match : the player chooses a nickname and the game settings, then the lobby is created and the server waits for other players to join.
- Joining an existing match : the player provides an existing match ID. The server then checks if there is an empty space in the lobby, if so, the player chooses the nickname and joins the match and when the lobby is completely filled, the server starts the game. Otherwise, the player can't join the lobby.

The nickname is checked automatically by the server:

- In a single player match, the nickname must be valid (no empty nicknames).
- In a multiplayer match, the nickname must be both valid (no empty nicknames) and not already taken by another player in the same lobby.

interaction PlayerAccess

Client

Server

connect()

accept()

askGameType()

chooseGameType()

opt [If GameType]

alt .

[If SinglePlayer]

askNickname()

chooseNickname()

opt [if nick requested]

alt .

[if nickname is not valid]

invalid nickname

[if nickname is valid]

create Match

matchStart()

[If MultiPlayer]

askLobby()

chooseLobby()

opt [if Lobby chosen]

alt .

[If player chose to create]

askNickname()

chooseNickname()

alt .

[if nickname is not valid]

invalid nickname

[if nickname is valid]

create Match

chooseSettings()

mySettings()

waitForPlayers()

[If player chose to join]

askMatchID()  
sendMatchID()

find Match

match found

put in lobby

alt .

[if lobby is full]

lobby is full

[if lobby is not full]

askNickname()  
chooseNickname()

alt

[If nickname is not valid]

invalid nickname

[If nickname is already taken]

nickname taken, choose again

[If nickname is valid]

nickname OK

checking lobby

alt

[If lobby is not full]

waiting for players

[If lobby is full]

start  
match

loop [for every player]

match started