

Scheme: **“A player joins the game”**.

The process of joining a game is handled on the server side by a thread called Controller. The Controller is responsible for creating the lobbies. A lobby is always created by the first player who contacts the server to log in. In that case, the Controller does not have any reference to the lobby, so it needs to ask the creating client to provide the number of players to include in the lobby. Once this number is received, the Controller assigns the subsequent clients who want to log in to this lobby. As soon as the lobby is filled, the Controller delegates its management to GameController, which will start the game. If new login requests come to the Controller at this point, the process starts over. GameController is an instance of a game server manager, so each game will have its own GameController. When the Controller transfers the game management to GameController, the lobby clients need to be notified that the server has changed, and they should now interact with GameController to play. This server change is handled with a message containing the new reference, which is not shown in the diagrams provided.

