

Software Engineering Final Project

Group 27 - Fossati, Genoni, Grazioli

Politecnico of Milano
Academic Year 2020-2021

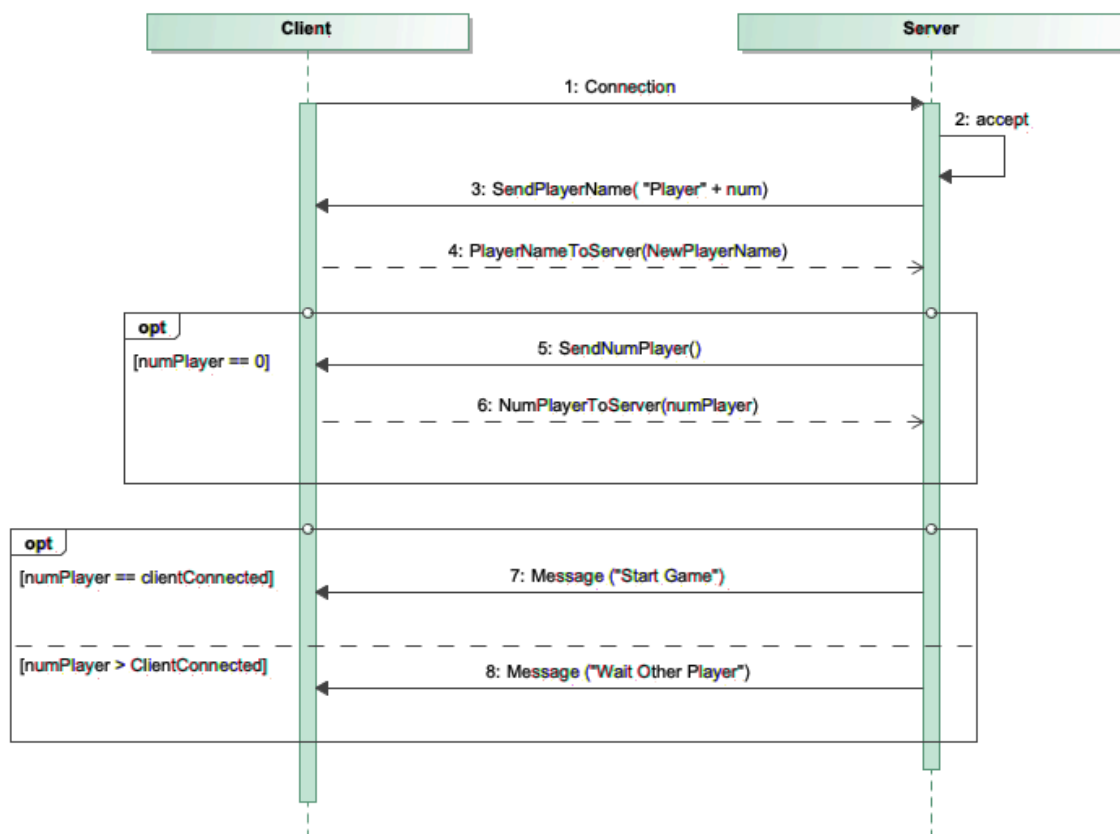
1 Client-Server Communication Protocol	3
2 Setup Phase	3
2.1 Connection	3
3 Turn Logic	4
3.1 Play Leader Card Turn	4
3.2 Market Turn	5

1 Client-Server Communication Protocol

We planned to implement a communication protocol based on the serialization and exchange of Java Objects through socket object streams. When one of them between client and server receives an object it was processed with the technique of overriding that specifies, for each method, which behaviour the receiving has to have based on what it received. Every action the player could do is covert by an event from client-to-server and in the opposite way. In the following paragraphs we present the main protocol and actions in detail.

2 Setup Phase

2.1 Connection

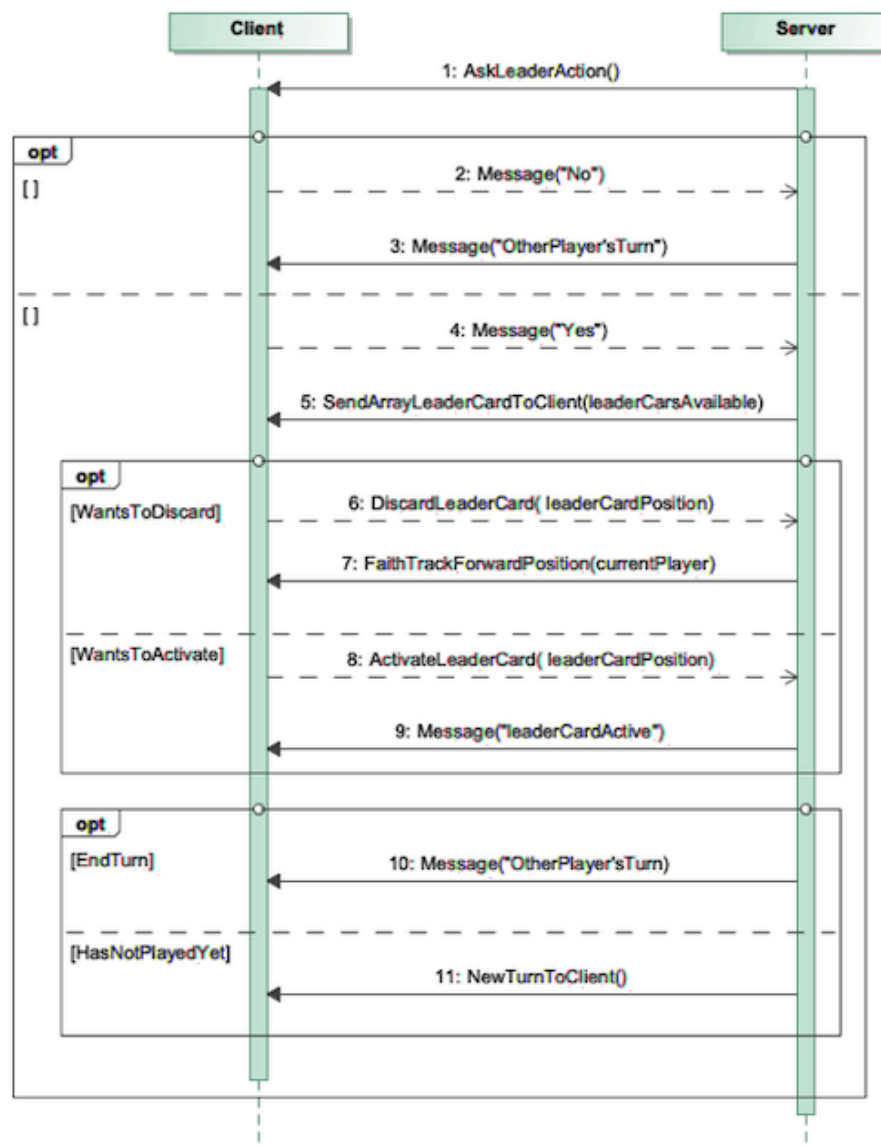


At the beginning the client do a connection request and Server accept, if it can. Next the Server do an insert name request and only if the client is the first client asking for connection the Server also ask the number of the players are going to join. When all the

player specified from the first connected client join the game connecting with Server, the game can start.

3 Turn Logic

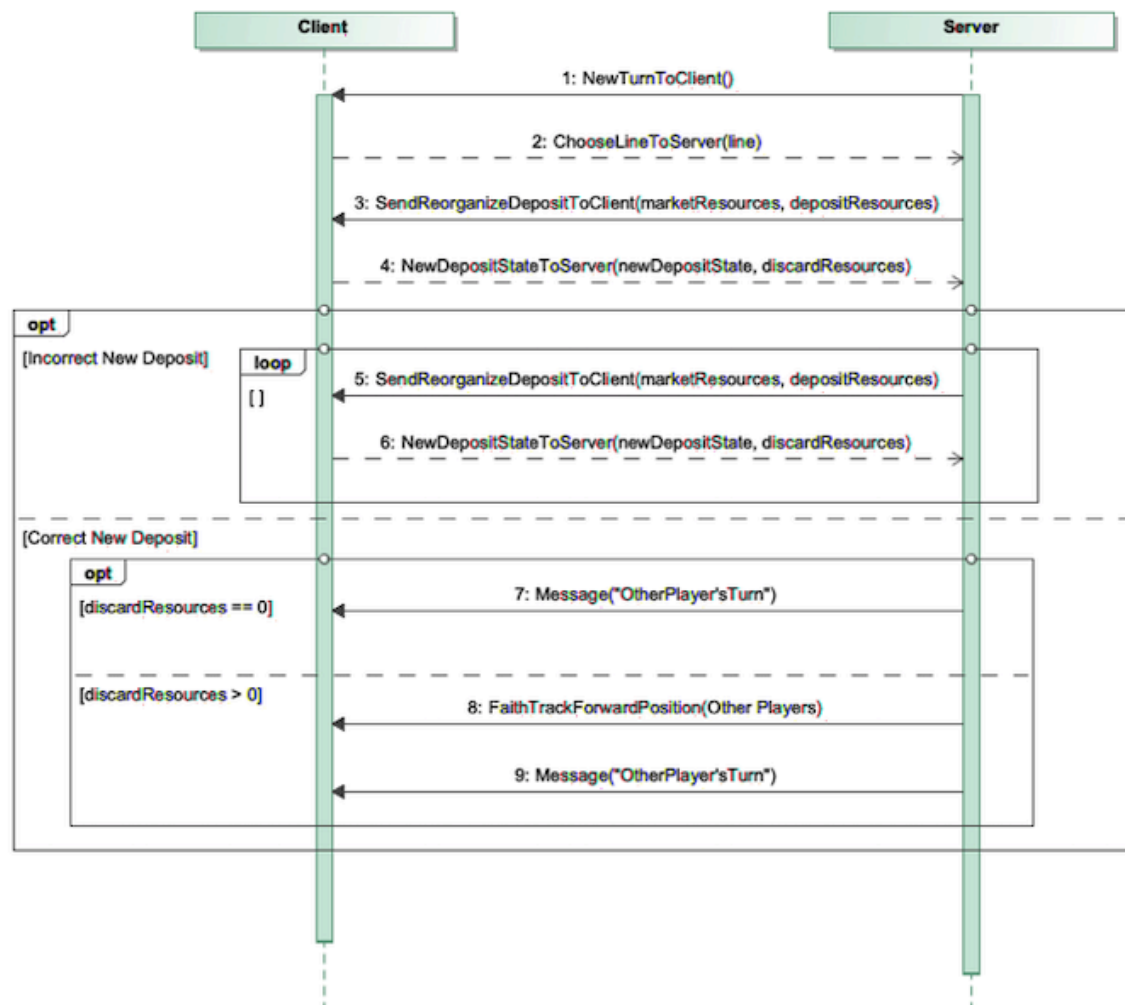
3.1 Play Leader Card Turn



At the beginning and at the end of the turn the Server ask if the player want to play or discard a Leader Card. If the player has the intention to activate or to discard a Leader, so the Server send to client the list of the available Leader the player can choose. If the player has not Leader Card from the available Leader or if the Player can not play a

Leader, the turn go on, skipping the turn PlayLeader phase. Otherwise if the player can provide a valid choose selecting, the leader will be activate from the server and the Player will obtain the Leader Card benefits. A player can always discard a Leader from the available ones only if they are not active, and can activate a Leader only if respects the specified requirements different for each Leader Card.

3.2 Market Turn



Every turn, the server asks the client which turn the player wants to provide. If the player chooses to acquire resources to market, the market turn will start sending to the client the status of the market grid. After, the player chooses a line and the controller grants to him the acquired resources. At this point the player can reorganise the depot and, if he presents a wrong disposition, after three times all the resources acquired from the market will be automatically discarded by the controller that will move his opponents on

the faith-track through as much boxes as discarded resources. After the played turn, the controller passes to the next player.