Second Peer Review

Network Protocol

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The following is a review of the network protocol by group AM14. The document assumes a throughout understanding of the game rules and the body of work under review. It starts by discussing positive and negative aspects of the design and it ends evaluating possible improvements to our own work.

1 Positive Aspects

The protocol correctly models the exchange of information between the server and its clients needed by each phase of the gameplay. The team addressed messages in great detail and the game is thus playable from start to finish without any problem. Even advanced features such as the chat and multiple games were broken down paying the same level of attention. This precision did not go unnoticed and the last section discusses the element we realized is missing in our own design.

2 Negative Aspects

Although it works, the protocol can be improved both in its design and presentation to respectively streamline its implementation for the team and simplify its understanding for the reader.

First of all, sending an ack to accept a connection every `t` seconds is overkill. The client can simply reply by either creating a new lobby or joining an existing one. If in the meantime the lobby filled up and the game started, the server can again send the list of active lobbies. This will greatly simplify the logic of the codebase both in the server and in the client.

Overall, we strongly advise to better define the precise content of each message before continuing to implement the protocol, as we found this pointed us to multiple subtleties that would have gone unnoticed otherwise. For example, it is unclear the difference between `isFirstPlayer` and `turn` and the role of the first when the second could and should contain everything needed. We would also like to see a list of throwable exceptions for every request, since this will come handy to the team at a later stage.

3 Designs Comparison

The designs overlap in the breakdown of the gameplay and are similar in the modelling of the exchange of information. As previously pointed out in the first section, we are inspired by the level of detail payed to each phase and while reading all calls we realized the message to let the player choose its color is missing in our own design. An updated version of our protocol will be published to reflect this.