RubyC4 Status and Issues

To run RubyC4, call server_main.rb to run a new server, and assignment5_main.rb to run a new client.

When running a new client (using assignment5_main.rb), you must specify the IP address of the running server at the top of the assignment5_main.rb. This is because our intention is to have one centralized server given that the games can be played with one party offline. Note that you can also play a game between two clients (one vs. the other) even if both are running on a separate server.

RubyC4 currently works (almost) as expected with no major issues (minor issues are listed at the bottom). The core functionalities are as follows:

1. The user must first login to the game with a username and password. If the username does not exist, a new username will be created with the password entered. If the username does exist, the user must provide the password that is stored for that username.

2. Once logged in, the user can create a new game with any other user that has an account. The other user does not need to be logged in at the time, they will simply be notified next time they log in that a game has been started with them.

3. The user, once logged in, can also see a list of games he is currently a member of and he can choose any one of those games to continue playing. Every move made will be saved to the server and the opponent can make a move immediately if he is logged in, else he can make his move the next time he logs in.

4. A user can also create a game with an AI opponent, but the stats for that game will not be saved (it will be considered a practice round). This AI component has 3 varying difficulties.

5. In the main screen, along with the list of currently active games, there is also a leaderboard that at any time displays the top ten users according to the number of games that user has won.

6. The user can choose to play either a game of Connect 4 or a game of TOOT. These options appear when creating a new game.

7. The user can change the color of the tokens on the board, however these colors will only be local to him (his opponent won't see the users color choices). Color tokens are also used for TOOT, the only difference being the combination of tokens that wins the came (i.e. in Connect 4, you must string together 4 of the same color, whereas in TOOT, one user must string together RED BLACK BLACK RED and one must string together BLACK RED RED BLACK, assuming the colors of each player are red and black respectively).

Minor Issues

1. When playing against a UI player locally, everything works as expected. However there is odd behaviour after finishing/closing that game against the AI. Once that game is closed, and another game is started with a new/different player, the odd behaviour is as follows:

   a. The AI player remains active somewhere in the background
   b. Because of this, if you make a move out of turn (when it's the other players turn), the AI still attempts to make a move and ends up overwriting the game view of the current game you're actually in.
   c. This does not affect the stored game state of your game, but you must exit and re-launch that game to properly reload the correct game board view.
   d. Note: This only happens when playing games AFTER playing an AI opponent…

2. When launching multiple clients on the same machine, both connected to the same server (with two different users), an end of file exception occurs. Multiple clients can still play together if on separate machines.

3. The games list in the main window (the window that appears after logging in) will not update automatically as soon another player creates a new game with you. It does however update in the following situations

   a. Immediately after login
   b. Hitting the "refresh" button in the file menu
   c. After launching a new game
   d. After making a move in any game