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If you would like to start the networked CLI with a fresh database, You can run the SQL scripts located in src/implementation. Run database_clear.sql to remove the tables from the database and then run database_setup.sql to re-generate the tables. If only the clear is run, then the database code will not function properly.

How to run un-networked GUI:
ruby gui_client.rb

How to run networked CLI:
Start a CLI server by running the following:
> irb
> require "./implementation/master_server_impl"
> master_server = MasterServerImpl.new

And kill the server by calling destroy on the server object.
> master_server.destroy

Start a new CLI client by running the following:
> irb
> require "./cli_client"
> CLIClient.new

You can set the master server which the client is connected to by calling set-master <hostname>. Then, you can open a game server by calling open-server. Another client can then view this server by invoking list-server, and join your server by calling join-server <id>. Start a game using the start command, and give it the -o flag to start a game of Otto and Toot. Only the player that opened the server can start a game.

The client can now also use the show-leaderboards <game type> command to view the leaderboards. Game type = 1 indicates Connect4, and Game type = 2 indicates Otto and Toot. Default is Connect4

Use list-saved-games to view a list of all saved games, and load <game id> to load the game you want to continue. Of course, you can still use the regular load command while offline to load your locally stored game. Invoking the regular save command during an online game will automatically save your game online, and loading a game will remove it from the database, so you don't need to worry about cleaning up your old saved games.

<u>Failings:</u>

Command Line Interface is working currently. Command Line interface is hardcoded to connect to localhost so server and CLI Client must run on the same machine at the moment.

Graphical User Interface is running the non-networked version of connect 4 with a slightly different look and feel compared to the old GUI. New GUI has the same functionality as our old one with the exception that load no longer works. Load no longer works as it was replaced with a dialog to facilitate choosing between multiple saved games.

The GUI was not changed to the networked version because of time constraints imposed by other year end projects. The time constraints led us to complete the networking code close to the deadline and this did not provide us with sufficient time to convert the GUI code into a networked version. We tried, but in the end it just didn't work out and the state the code was in was not in a presentable state.

Contracts are not actively applied to all the new classes as we also ran out of time for this.

<u>Take aways:</u>
Sometimes, despite best efforts, a project can not be completed on time. There are always competing projects and design priorities.