

Chess with Grids-Online

Version 1.0

Producer:

Off the Grid

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1. Glossary

Account- The means by which a user is able to access the system. An account is identified by its username and requires a password for authentication. All of a user's data, such as their friend list and chat history, is stored in their account.

Chat Channels- a messaging panel between 2 or more people.

Emojis- a small digital image or icon used to express an idea, emotion. Emojis are basically special characters defined in Unicode.

Friend- A user who is on another user's friend list, allowing these two users to contact each other more easily. Users can see whether friends are online and open a chat with them via the friend list. A user becomes a friend of another user when one user sends the other a friend request and the other user accepts the friend request.

Friend List- List of users that have accepted a submitted friend request.

GIF- a format for image files that supports both animated and static images.

Login- Connecting an existing account to the program to gain access to its features. Logging in requires the user to enter the username and password for their account.

Password- A series of characters, generally known by only the user of one account, that must be entered in order for an account to access the program. Passwords are used to prevent unauthorized use of a user's account by another person. For security consideration, password is invisible while inputting and is transferred by their Hash value.

Provider- A daemon program that runs on the server platform to provide login verification, handshaking between two or more clients and contact data from its database to the clients. Additionally, the provider stores users' account details so that they can log in to the program.

Registration- Creating a new account that can be used to connect to the program. Registration requires a user to enter a username that is not used by anyone else on the system, along with a password.

Screen Name- The name for an account which is displayed to other users using the program. An account's screen name can differ from its username and can be changed in the profile menu.

User Application- The interface between the user and the provider. The user application handles the display of information to the user and sends and receives information from the provider.

Chess Panel- A popup for playing chess game between two humans. This is triggered by clicking the lower-right chess icon in the chat panel.

Username- An identifier for an account that the program uses to recognize the account. It must be entered in order for an account to access the program.

2. Instant Messaging

2.1. Overview

This software program enables users to create profiles, add other users to a friend list, and interact with other users through a chat system including gifs and emojis, as well as play chess with other users.

2.2. Usage scenario

Upon starting up the program the user is presented with a window containing a login screen for the user to either login, if a returning user, or to register an account to be used on the program.

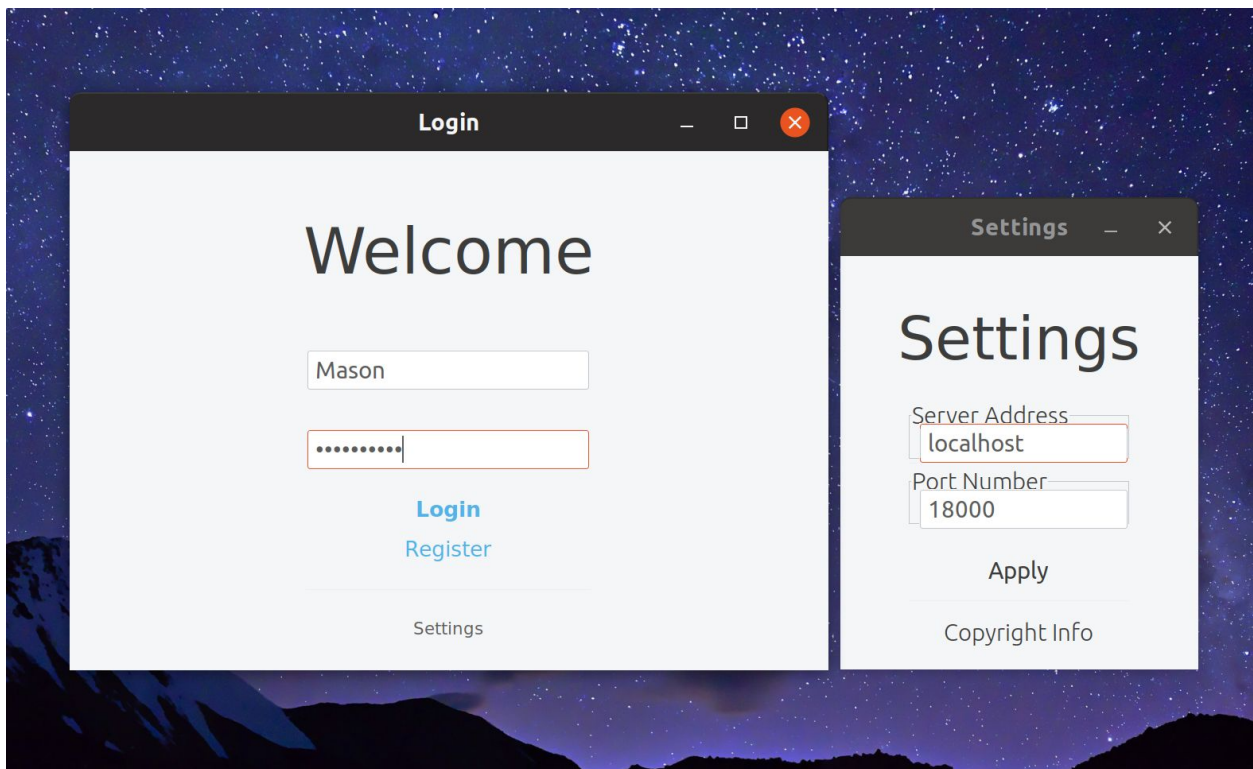


Figure 1 displays how the startup menu will look like when launching the client up. There will be a window prompting the user to enter their username and password along with an option to register if they have not done so already.

After logging in the user is taken to main interface of the program where they can add other users to their friends list. Users will also be able to remove people off their friends list. Once two users are friends they can enter a chat room to message each other. Also within the chat room the users can play a game of chess against each other by clicking the chess icon, when initiated another window will pop up with the chess game then the two users can play against one another.

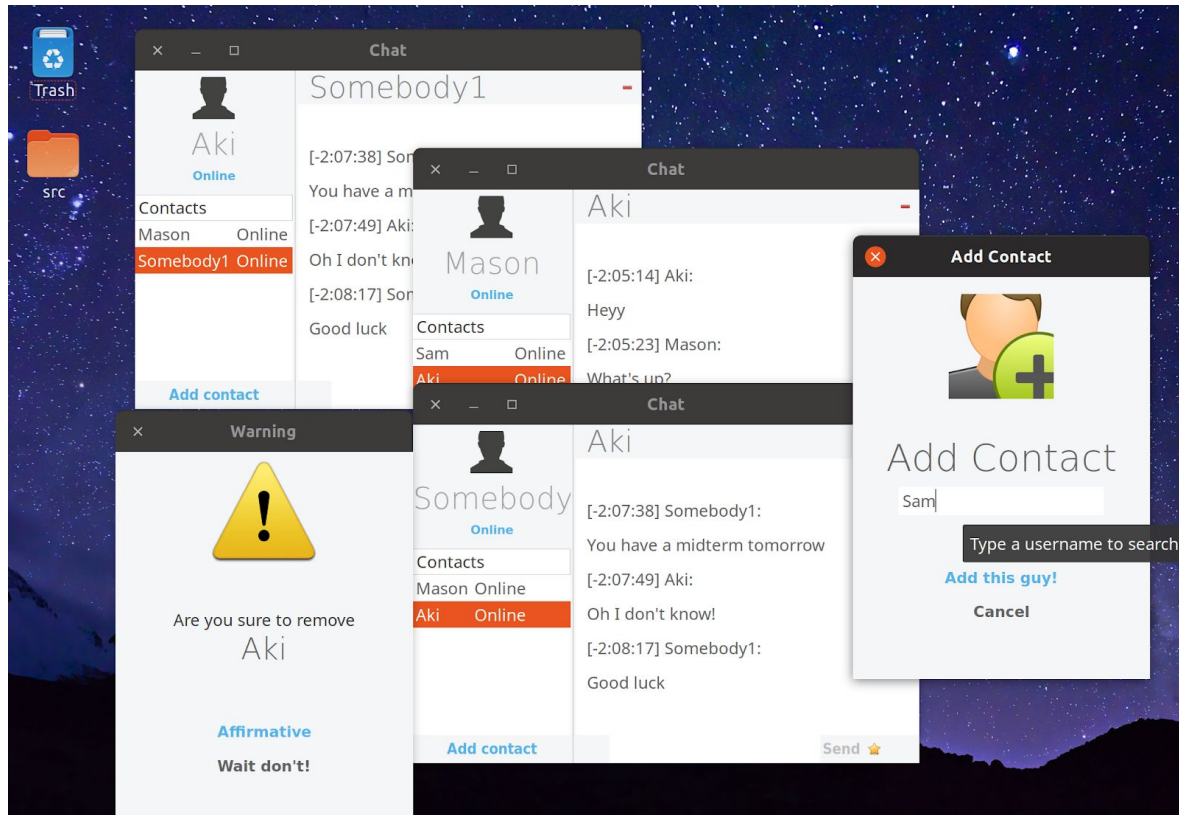


Figure 2 this is how the user interface will look when using the chat room to talk with other users online. There will be a button tagged “add friend” which will allow the user to search up a another user to add to their friends list.

2.3. Goals

This program allows a user to communicate with other users using the program through text messages. Additionally, the user can challenge an opponent to a game of chess. A friend list allows users to add other users as friends so that they can hold conversations with each other more easily.

2.4. Features

- User registration

- Log-in with username and password
- Chat window with other users (Graphical User Interface)
- Friend list with options to add users to and delete users from the friend list
- Chess integration for playing with other users
- Ability to send special messages such as emojis
- Resizeable chat interface
- Ability to keep track of all its chat threads.
- Program provides a graphical user interface.
- Ability to save a log of each conversation
- Ability to retrieve chat history of previous connection when switching chat rooms with another user

3. Installation

3.1. System Requirements

- OS: Linux with Kernel version 3.10+
- Processor: 2.0 GHz Xeon E5 2660 v4 or Higher
- Memory: 512MB RAM
- Graphics: 64 MB VRAM with Shader Model 3.0 support
- Storage: 20 MB available space
- Additional Requirements: Display manager compatible with X11 standard, GTK 2.0+

3.2. Setup and configuration

To Untar the tar file

- **Execute:** `"gtar -xvzf Chat_V1.0_src.tar.gz"`
- **Execute:** `"cd Chat_V1.0_src"`
- **Execute:** `"make"`

To run the program

Stay in the directory Chat_V1.0_src

- **Type:** `"make test-all"`

3.3. Uninstalling

While in the directory Chat_V1.0_src

- **Type: make clean**

This will clear all object and executable files.

- **Type: cd ..**
- **Type: rm -r Chat_V1.0_src**

This should remove all contents inside Chat_V1.0_src

4. Program Functions and Features

4.1 Client and Server Communications

To connect to a server the user must type the following line on the command line: “./server 18000”. The server port number should be between 18000 to 18999. If the server is not responding then simply select another number that is between 18000 and 18999. After establishing the server the next task to fulfill a client to server communication is have the client opened up. The client would need to have this typed on the command line: “./client zuma.eecs.uci.edu 18000” the local host and port number should be the same as the server.

In the new patch the user can now type make test-all and this will start both the server and client up automatically.

Communication Example: “Chatting online with another user”

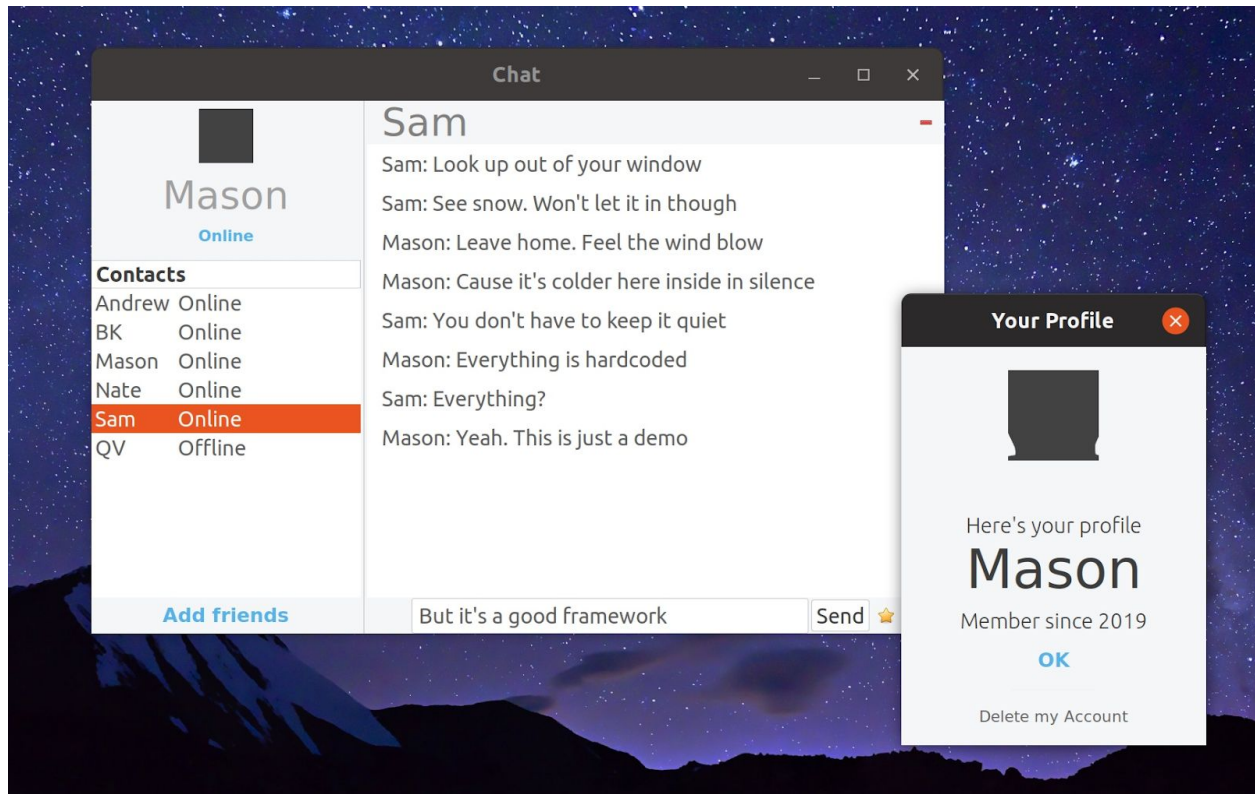


Figure 3: displays how the chat system will look like to the user. The interface is pleasing to the eyes and simple to use. Contacts are shown on the left and on the right is there all the chat messages will be displayed.

4.2 Login and Registration

When the user starts the program, the user application asks them to enter their name and password and select whether they would like to login or register.

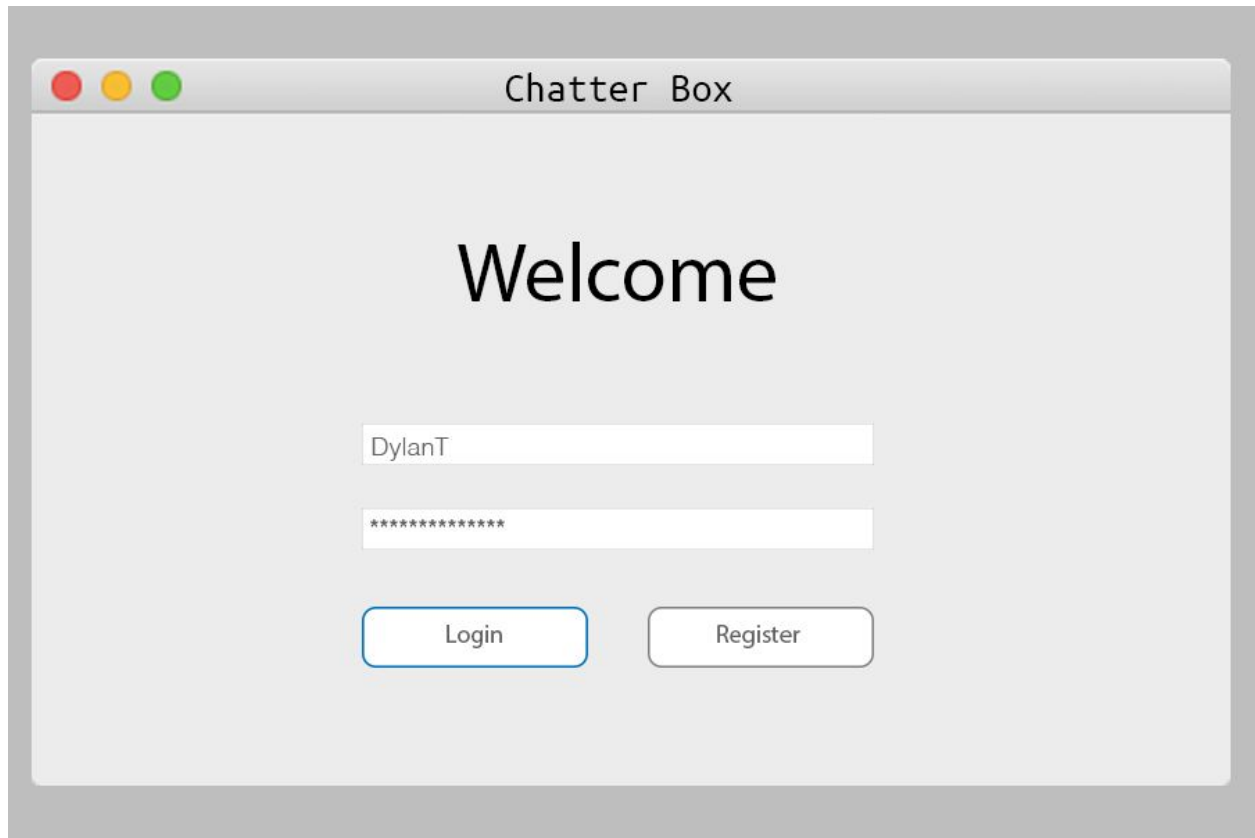


Figure 4: If the user chooses to login, the user application sends the username and password entered to the provider. If the provider recognizes an account with the username and password entered, that account will be connected to the program so that the user can access the program's features. If the provider does not recognize an account with the username and password entered, it will display a message in the interface indicating that the username or password entered is incorrect.

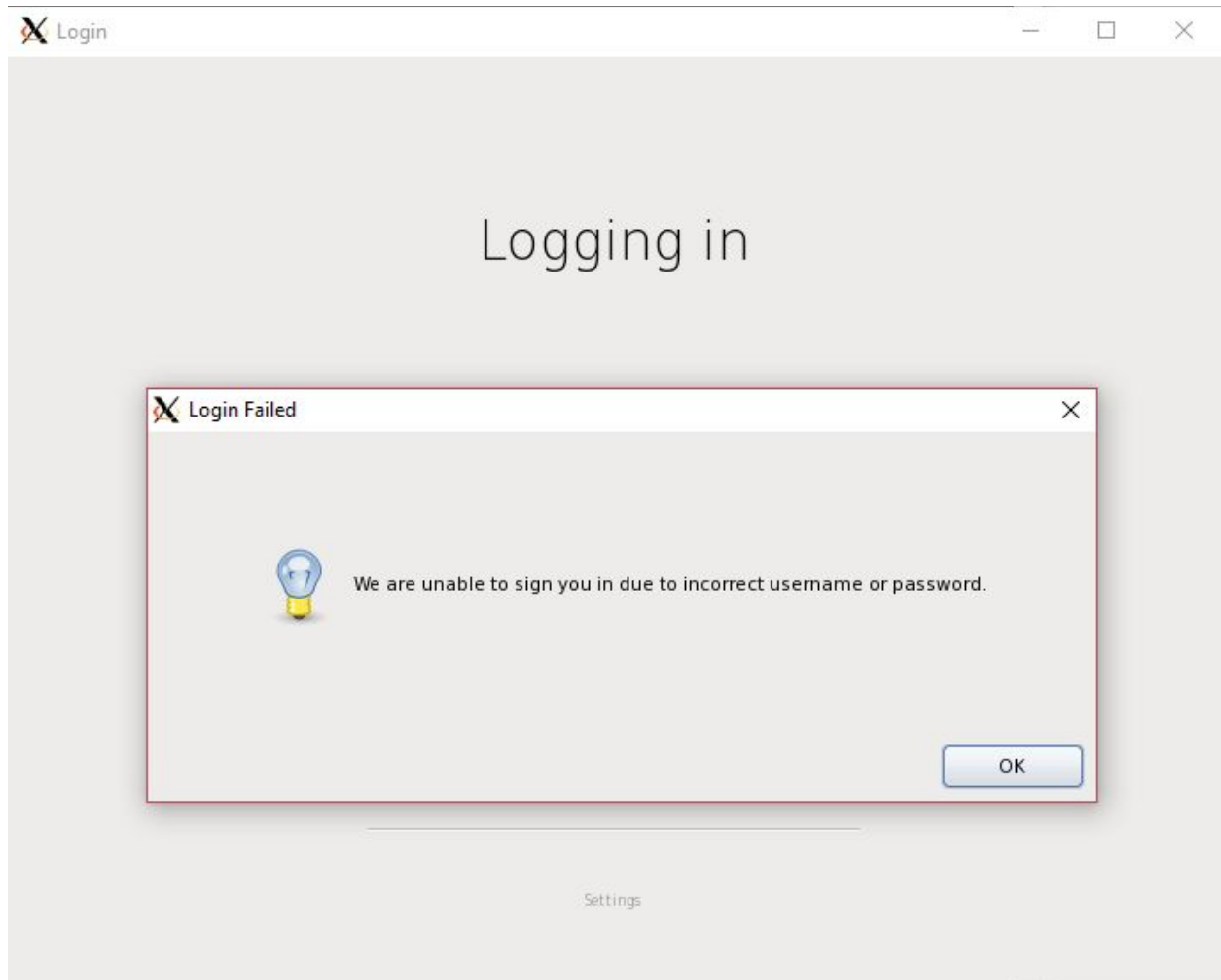


Figure 5: If the user chooses to register, the user application sends the username and password entered to the provider. If the username entered is not used by another account and the password entered is deemed strong enough (based on length [and use of capitalization, numbers, and special characters]), a new account is created in the provider and logged into the program. If not, an error message in the interface indicates the reason a new account was not created.

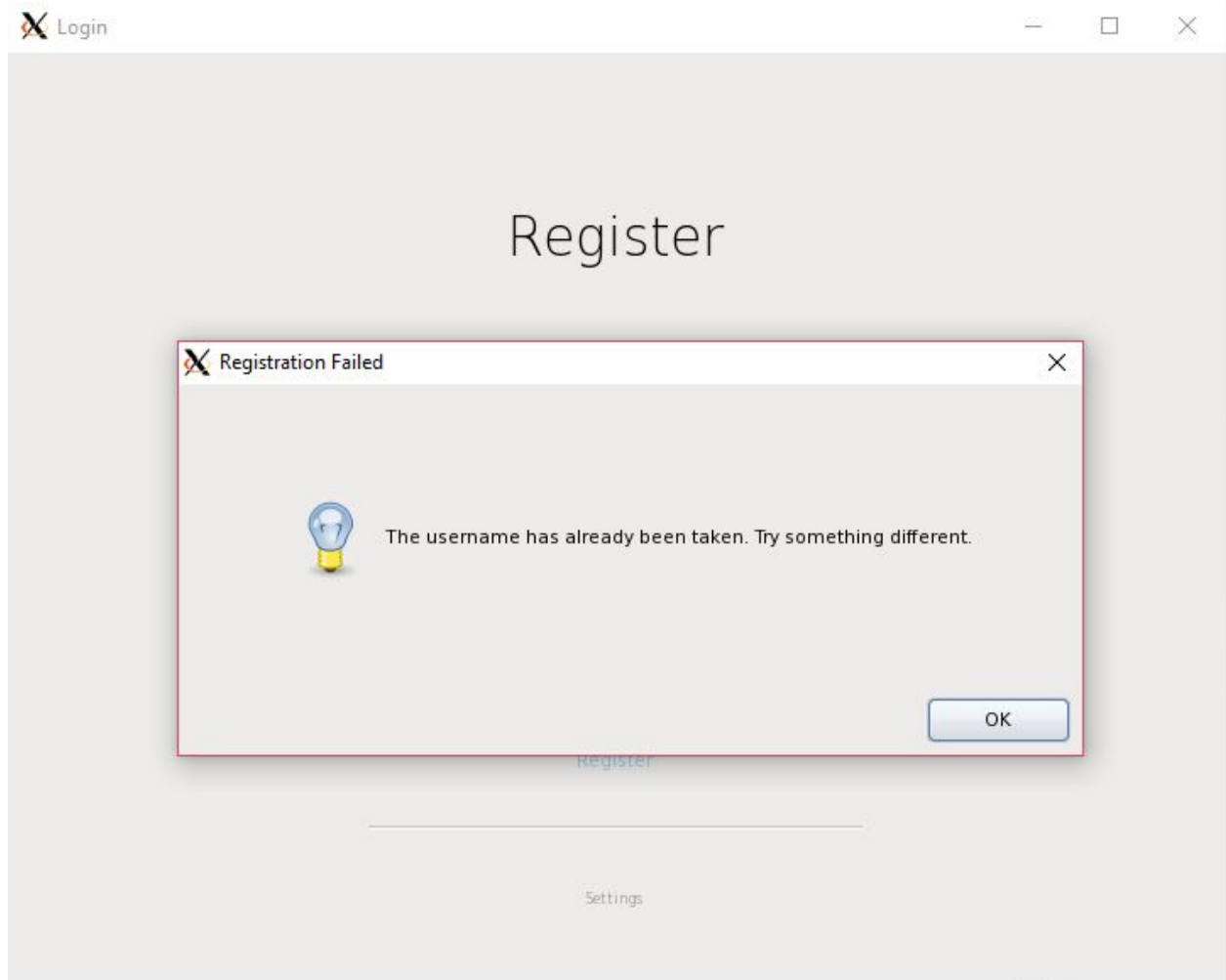


Figure 6: The figure above shows a error message prompting the user to choose another username as it was already taken by another user. Therefore the user won't be confused as to why they couldn't make an account. Doing it this way makes the game more enjoyable and appealing.

4.3 Chess Game Integration

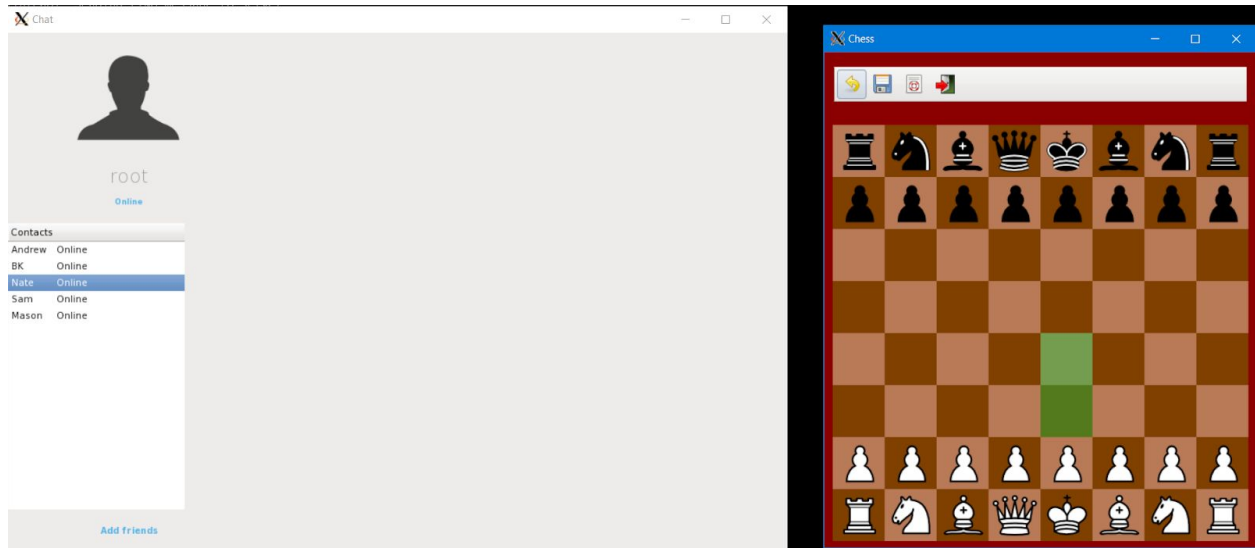


Figure 7: The chess panel is nothing more than a GTK window whose parent widget is the main window. The panel is designed to pop up when user clicks the chess icon in the lower right corner in the main window. The game is set to human vs. human mode by default.

5. Back Matter

Contact Information

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Attributions

Graphical User Interface being used will be GTK+ 2.0 created by The GNOME Project hosted by Red Hat

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