ChatBot
The chat tool

Version 1.0

PROGRAMMERS:

Martino Caldarella,

Hanqi Chen,

Ragui Halim,

Hoon Lee,

Jacobis Soriano,

Daniel Truong

BitBots Software Developers from UCI
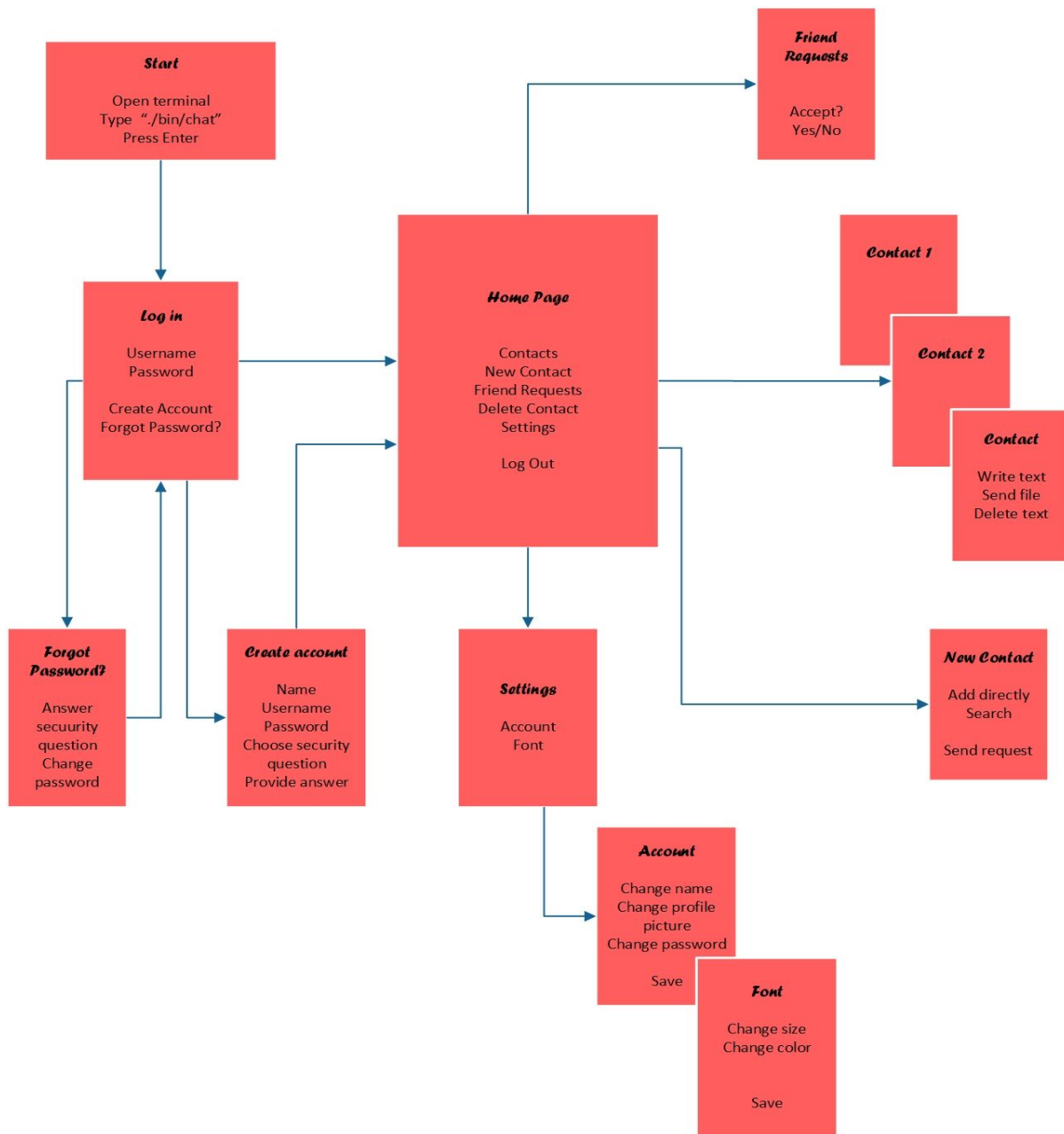
Table of Contents:

Glossary:

- `Notification` - a message alerting the user that some action has taken place. Could be a new message, a friend request, a friend's status, etc.
- `Contact List` - a list of contacts available to the ChatBot subscriber.
- `Username` - a name chosen by the user to be displayed when communicating with others on ChatBot.
- `Password` - a word or phrase that allows access to a tool. For IM tools, they usually require both your account name and corresponding password for it.
- `Application` - program that performs specific tasks for the user.
- `Instant Message (IM)` - type of service allowing the user to exchange messages with someone in real-time over the internet.
- `Status` - present state of an individual. For IM, there are three: online, idle, and offline.
- `Online` - one of the three states of an individual. It indicates the individual is online and available to chat. ChatBot will be deliver messages to this individual immediately.
- `Idle` - one of the three states of an individual. It indicates the individual is online but occupied . ChatBot will be delivered messages immediately but individual will not be notified.
- `Offline` - one of three states of an individual. It indicates the individual is offline and not open for connectivity. Individual cannot send messages when in this state. Individual will be unable to see his/her message until he/she signs on again.
- `GUI` - It is a short for graphical user interface. It makes it easy to communicate with the program.

1. ChatBot Overview

You asked. We delivered. ChatBot is a relatively simple yet powerful tool that allows you to instantly communicate with anyone online wherever you go. Our mission is to provide the fastest and most secure chat system in the world with ChatBot. With ChatBot, you can chat to your heart's content. In the figure below, you can see the different screens that you can use in our application, and how to go from one to another.
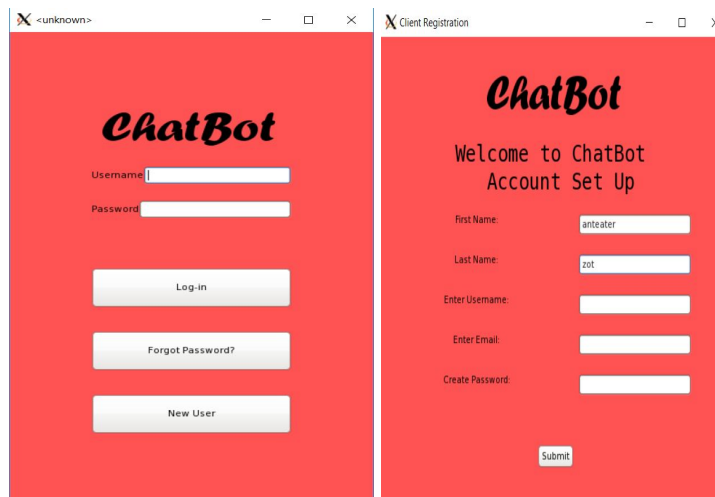
Start

Open terminal
Type "./bin/chat"
Press Enter

Friend Requests

Accept?
Yes/No

Log in

Username
Password

Create Account
Forgot Password?

Home Page

Contacts
New Contact
Friend Requests
Delete Contact
Settings

Log Out

Contact 1

Contact 2

Contact

Write text
Send file
Delete text

Forgot Password?

Answer security question
Change password

Create account

Name
Username
Password
Choose security question
Provide answer

Settings

Account
Font

New Contact

Add directly
Search

Send request

Account

Change name
Change profile picture
Change password

Save

Font

Change size
Change color

Save

Application flow

1.1. How to Use ChatBot

The ChatBot application has various tools available to enhance your chatting experience. Below you will find easy to follow instructions that will guide you through how to use the ChatBot application!

1.1.1. Creating an Account:

Before you can use ChatBot services, you need to create an account. To create an account, click on the "New User" icon as shown by Figure 1. You will be taken to a different screen where you will be asked to enter your name, nickname (display name), password, as well as some security questions as shown by Figure 2. *Your nickname must be between 8-25 characters long. Your password must be 8 characters long and must contain at least 1 uppercase letter and lowercase letter.* After entering an appropriate name, nickname, password, and security question, you are done! You may now use all the services available in ChatBot.

Figure 1   Figure 2

1.1.2. Log in:

If you already have an account, you can log in to your account by typing your username and password. Figure 3 shows the login page.
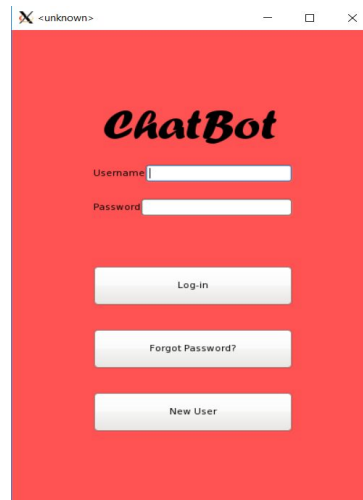

Figure 3

1.1.3. Adding/Deleting Friend:

Once logged into your newly created account, you will be taken to the home page. In there, you can view your contact list, add/delete friends, and start conversations. To add a contact, click on the "Add friend" button on the button right of the page. The home page is shown by Figure 4. You will be taken to the friends request window, shown by Figure 5, where you can add friends by requesting to friend someone. To friend request, search the name of the friend you want to be friends with and click "send". To return to the contact window, click on the home icon.

Figure 4   Figure 5

1.1.4.   **Starting a Conversation:**

Now that you have a friend or two, you can start chatting with them. To start a conversation, click on the friend you want to start a conversation with on the contact window. You will be taken to a chat window, where you can send messages to each other. To send a message, click on the message bar and enter the message you want to send. The Chat Page is shown in Figure 6. Your friend should be able to view this message if online. To return to the home window, click on the home icon.

Figure 6

1.1.5. Checking friends requests:

On your homepage, the number of friends requests will be displayed in the upper part of the page. If you click on this, you will be directed to the friends requests page, where you can accept or reject the friend request. This is shown in Figure 7.
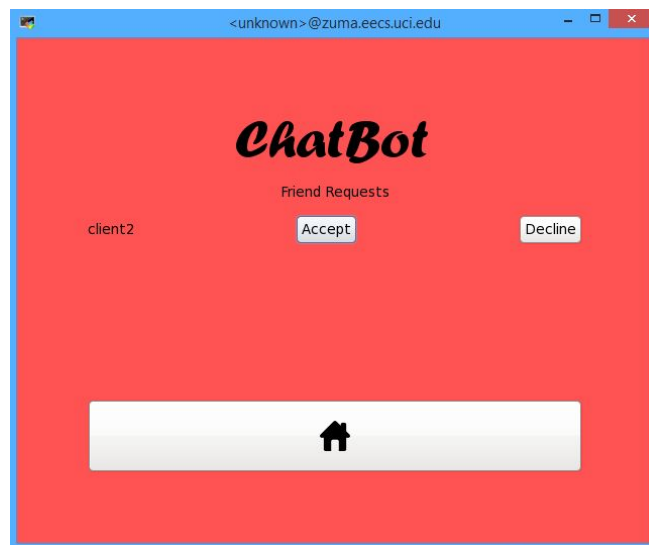

Figure 7

1.1.6. Setting :

From homepage on the left corner leads to the setting page. In which you can change username, password and front. Changing username will require your current password. Changing password would require old password, answering security question, and new password. The settings page is shown in Figure 8.

Figure 8

1.1.7.   Recovering/Resetting Password:

If you have forgotten your password, no need to fret. On the login window, you can recover your password by clicking on the "Forgot Password?" icon. You will be taken to a different window asking you to fill in some information as shown by Figure 9. If you fill those information correctly, your password should appear on the same window.

If you would like to change your password, you can do so by navigating to your account setting window (see section 1.1.7 to learn how to navigate to the settings window). Click the "Edit" icon, the one right next to "Password" to start changing your password. You will be taken to the reset password window, where it asks you for your current as well as your new password, and a security question. This is shown in Figure 10. Fill those information in to change your password.
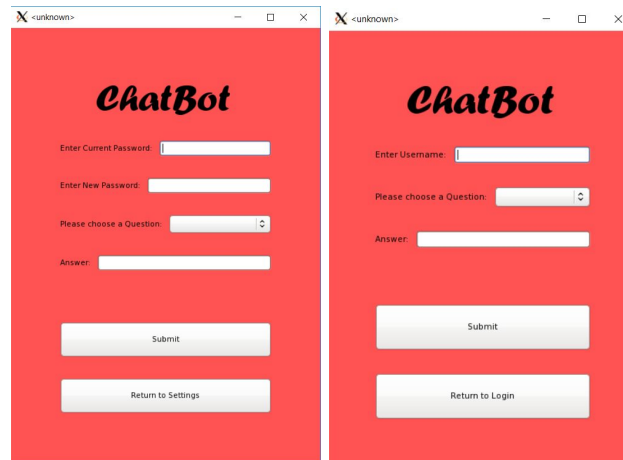
Figure 9   Figure 10

1.2. Goals

To be able to chat with your friends through the internet. Our application will let you communicate with your friends as if you were in the same room.

1.3. Features

- Chat with a friend
- Graphical User Interface (GUI)
- Change your password in the settings page.
- Reset your password if you forgot it.
- Add/delete friends
- Accept or reject friend request
- Personal contact list
- Ability to see the status of other users.
- A save log for each conversation.
- Display of chat history.

2. Installation

2.1. System Requirements:

- Linux OS 2.6.32-696.18.7.el6.x86_64
- PC(x86_64 Server)

2.2.   Setup and configuration:

- To extract the file, type gtar xvzf Chat_V1.0.tar.gz.
- To run the chat, type ../bin/chat zuma 7777.
- To run the server, type ../bin/server 7777.
  NB: If the port 7777 was taken, please replace 7777 with any 4 digit number greater than 2000 for server and chat port.

2.3.   Uninstallation:

- No need to uninstall

3.   Program Functions and Features

3.1.   Client and Server Communication Algorithm & Details:
- If the user tries to register, when he clicks 'submit', a request will be sent to the server to check if the username or email is already taken. If it is not taken, the server will save the new contact and return a success message. Otherwise, the user will be told to choose another username or email.
- If the user tries to log in, when he clicks 'log-in',a request will be sent to the server to check if the username and password match. If they do match, the server will allow the user to login and return a success message. Otherwise, the user will be told that the username and password doesn't match, and he/she should enter data one more time.
- Whenever a client type a message and clicks 'send', the server should save the message in the corresponding log file.
- The server should load the old chat for the client whenever he/she tries to open a chat window.
- If a client deletes or add a friend, the server will update his/her contact list.
- If the user updated his contact information, his contact file on the server should be updated as well.

3.2.   Registering and Logging In Algorithm & Details:
- Users register to the server with information needed for new user, and an account will be made based instantly when he clicks 'submit'. When the user clicks 'login', to log in to his/her account, the program will check whether the user is registered or not by searching user's information from the data server.

- Users also can retrieve their passwords if they forgot it. Users will be asked to answer single or multiple security questions that users chose to answer when they signed up.

3.3. Chat with a friend

- Our program allows you to chat with your friend as if you are in the same room. This is shown in Figure 5.

3.4. Graphical User Interface (GUI)

- To make it easy to use, our application have nice looking design. It is also very easy to use and to go from one page to another.

3.5. Change your username, password, or profile picture in the settings page.

- Whenever you want to change your username, password, or profile picture, you can easily go to the settings page and edit any of them.

3.6. Reset your password if you forgot it.

- if you forget the password, you can set a new one by clicking on 'Forgot Password?'. A new window will open and ask you to answer to the security question. The answer of the security question was saved when creating the account. This is shown in Figure 8.

3.7. Add/delete friends

- Users are able to add friend from homepage by clicking add friend" icon on the bottom right of the page. Then type in the friend's username to search for the friend's contact. This is shown in Figure 4.
- User can delete friend by clicking the "x" button next to the friend in homepage.

3.8. Accept or ignore friend request

- When you have new friends requests, a notification with the number of requests will be showed in the upper part of your contacts page.
- If you click on this notification, you will be directed to another page to choose whether to accept or reject the request. This is shown in Figure 7.

3.9. Personal contact list

- All your contacts are displayed on your home page and you can easily click on any of them to start chatting with him/her/them. This is shown in Figure 4.

3.10. Ability to see the status of other users.

- User's status will be displayed in two different colors of light. Green = Active and, Inactive = Red.

3.11. A save log for each conversation.

- Conversations will be automatically saved in the log file so the users can continue the conversation from where he/she stopped.

3.12. Display of chat history.

- Whenever you open your chat with any of your friends, you can see your old chat.

4. Back Matter

4.1. Copyright:
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4.2. References:

http://www.linuxhowtos.org/C_C++/socket.htm

http://www.linuxhowtos.org/data/6/client.c

http://www.linuxhowtos.org/data/6/server.c

4.3. Error messages:

4.3.1. `"Username already taken."`
User attempted to enter an invalid username when creating an account. The user name should not be taken by another user.

4.3.2. `"Invalid Password. Password must be..."`
User attempted to enter an invalid password when creating an account. User must input a password with characteristics requested by the app. The password should be at most 25 characters long.

4.3.3. `"Invalid email. Email must be..."`
When the user enters an already taken email, or type an email that does not match the email naming conventions, the email should have '@' and '.' characters and doesn't contain a space.

4.3.4. `"Username and/or Password is incorrect".`
If the user forgets his or her password, he or she can click on the 'Forgot password?' icon to recover it.
User entered a screen name/password not found in the database. User can either enter the information or request to recover their password.

4.3.5. `"Uh-oh. Something went wrong. Please try again another time."`
Some unforeseen error has occurred. User can reboot the app to potentially solve the issue. If the issue persists, please contact BitBots Software Developers for technical support.

4.3.6. `"<Field Type> field is empty."`
When the user forgot to fill one or more inputs when creating an account, or trying to log in.

4.4. Index: