# FIRST TERM PROJECT, SERVER-SIDE DEVELOPMENT: **MESSAGING APPLICATION**

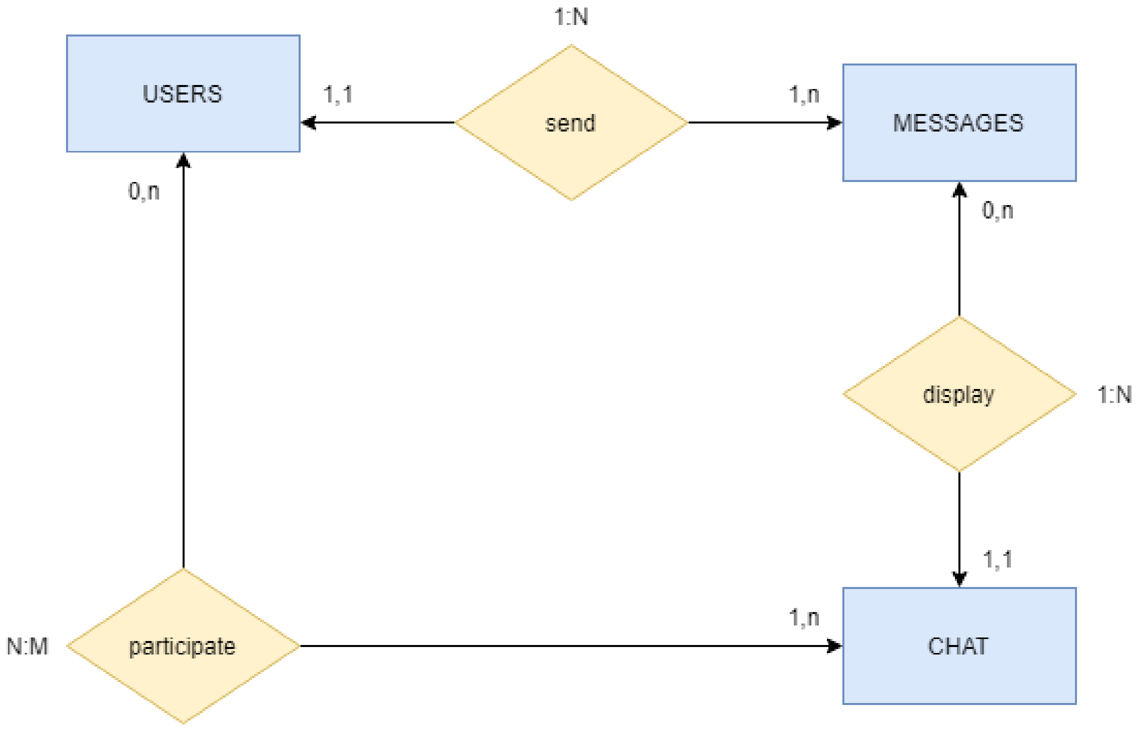
## Introduction

This web application consists of a WhatsApp or Telegram based functionality. It consists of several screens where you can select users which exist on the application database to send them messages. Creating groups, changing your profile and recovering password are some more functionalities implemented.

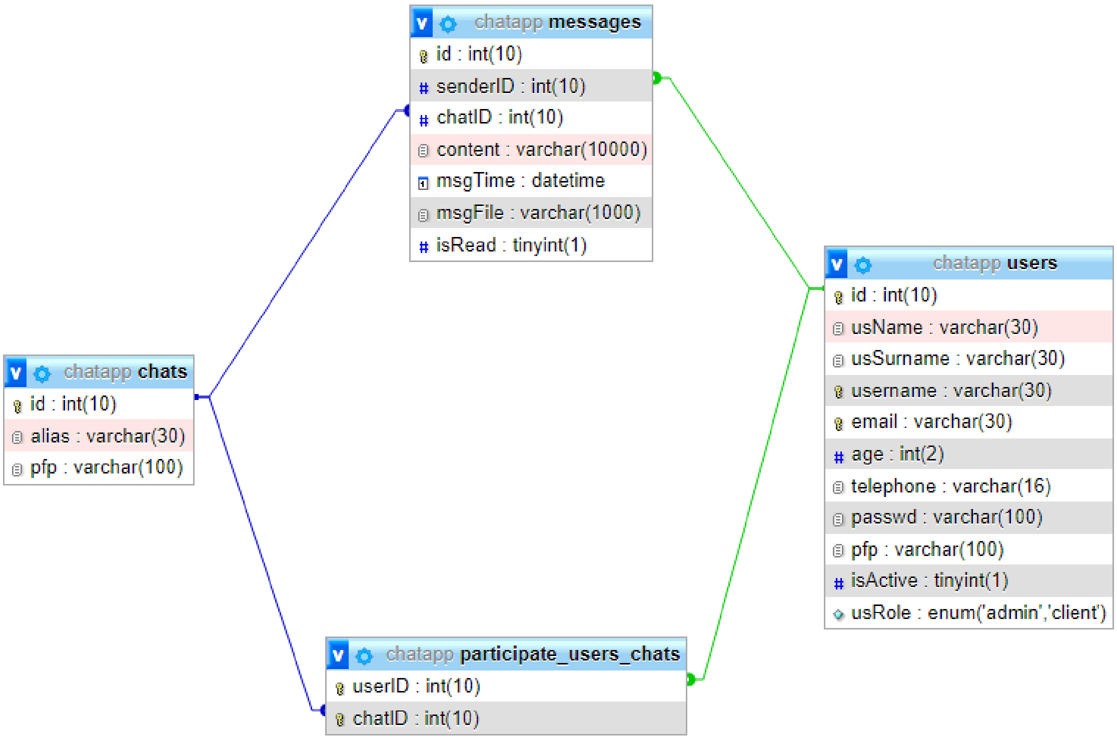
## Extensions table

| ENLARGEMENT | MADE (Y / N) |
|---|---|
| A1 | Y |
| A2 | Y |
| A3 | N |
| A4 | Y |
| A5 | Y |
| A6 | Y |
| A7 | N |
| A8 | Y |
| A9 | Y |
| A10 | Y |
| A11 | Y |
| A12 | N |
| A13 | N |
| A14 | Y |

## E/R Scheme



## Logical model



chatapp messages
id : int(10)
senderID : int(10)
chatID : int(10)
content : varchar(10000)
msgTime : datetime
msgFile : varchar(1000)
isRead : tinyint(1)

chatapp users
id : int(10)
usName : varchar(30)
usSurname : varchar(30)
username : varchar(30)
email : varchar(30)
age : int(2)
telephone : varchar(16)
passwd : varchar(100)
pfp : varchar(100)
isActive : tinyint(1)
usRole : enum('admin','client')

chatapp chats
id : int(10)
alias : varchar(30)
pfp : varchar(100)

chatapp participate_users_chats
userID : int(10)
chatID : int(10)

## User manual

*PREVIOUS INDICATIONS:*

- The interface is not very well done, as it contains plain CSS, some Bootstrap, some inline CSS in HTML tags,etc. There are even pages without any CSS, but all this is just to be able to differentiate between the different sections of the application, and it is not going to be graded.

- Emails will be sent by “talesdemiletoxd@gmail.com”, a personal email address used to test things like this. This email will send verification and password recovery messages.

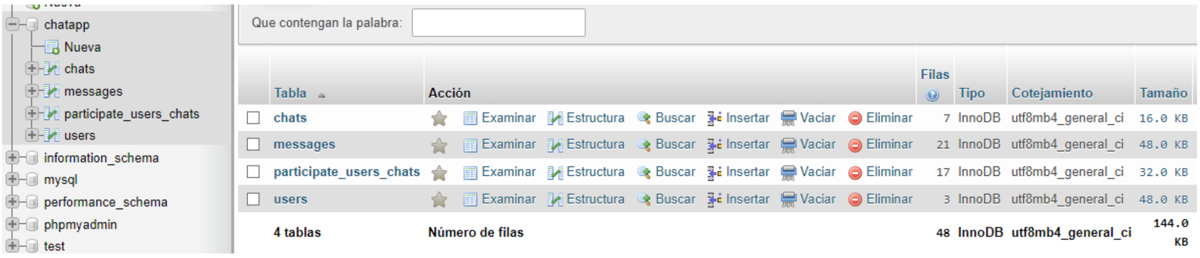
- AJAX is not implemented, so to check the new messages inside a chat, refreshing the current page (or pressing F5) is a must.

*REQUIREMENTS*:

- PHP >= 7.1
- Composer
- PHPMailer
- MySQL
- Xampp

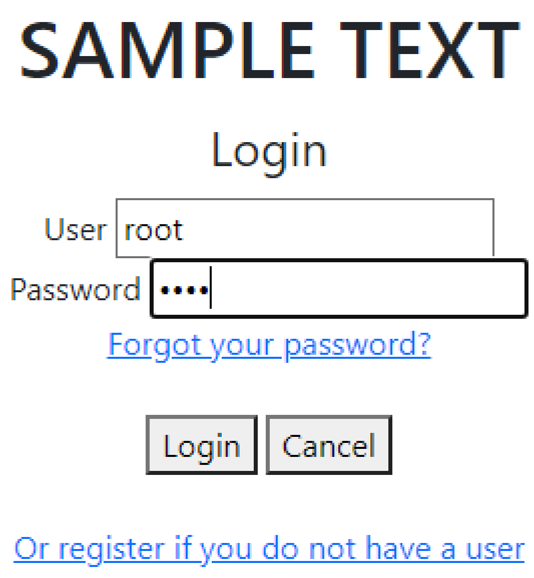
*USAGE*:

To use this application you will first need to create a new database in your DBMS. In this case, I used phpmyadmin. You will need to create the database and import the file ‘chatapp.sql’, which has all the tables you will need, and then import the ‘chatapp_initial_data.sql’ to insert all the initial data (root user, average user and several test messages and chats).



| | Tabla | Acción | | | | | | Filas | Tipo | Cotejamiento | Tamaño |
|---|---|---|---|---|---|---|---|---|---|---|---|
| □ | chats | Examinar | Estructura | Buscar | Insertar | Vaciar | Eliminar | 7 | InnoDB | utf8mb4_general_ci | 16.0 KB |
| □ | messages | Examinar | Estructura | Buscar | Insertar | Vaciar | Eliminar | 21 | InnoDB | utf8mb4_general_ci | 48.0 KB |
| □ | participate_users_chats | Examinar | Estructura | Buscar | Insertar | Vaciar | Eliminar | 17 | InnoDB | utf8mb4_general_ci | 32.0 KB |
| □ | users | Examinar | Estructura | Buscar | Insertar | Vaciar | Eliminar | 3 | InnoDB | utf8mb4_general_ci | 48.0 KB |
| | 4 tablas | Número de filas | | | | | | 48 | InnoDB | utf8mb4_general_ci | 144.0 KB |

Once done, we can start using the app. We will type ‘localhost/project_first_term’ and it will automatically go to the login form of the application.



SAMPLE TEXT

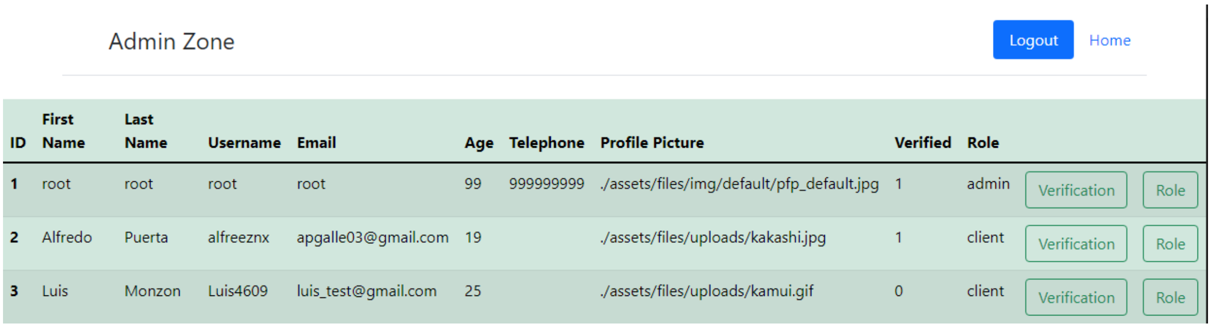
Login

User root

Password ••••

The user will be able to start using the application directly by using the register. However, the root user is available for any user by entering “root” in both “User” and “Password” fields.

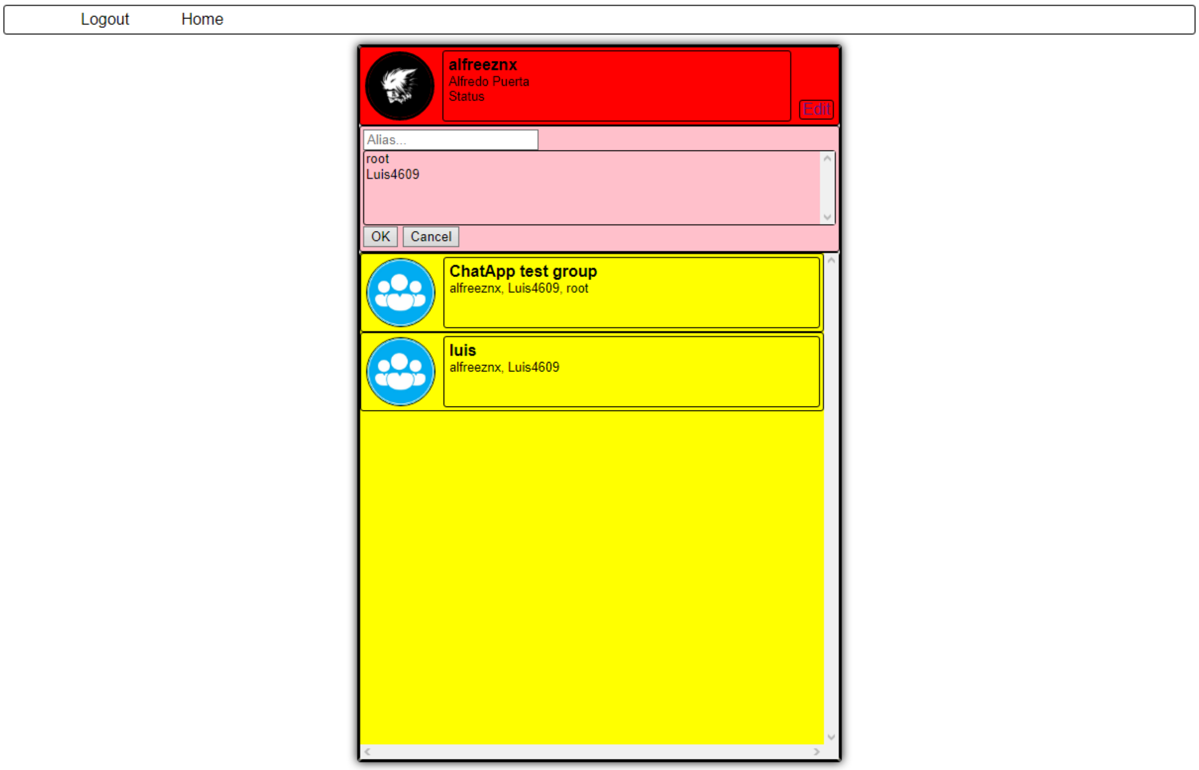
After logging in, the root user will directly enter into the Admin Zone, where you will be able to see all the registered users with their data. There will also appear the possibility to verify users manually and to change their role to ‘admin’ or ‘role’.



Admin Zone

| ID | First Name | Last Name | Username | Email | Age | Telephone | Profile Picture | Verified | Role | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | root | root | root | root | 99 | 999999999 | ./assets/files/img/default/pfp_default.jpg | 1 | admin | Verification | Role |
| 2 | Alfredo | Puerta | alfreeznx | apgalle03@gmail.com | 19 | | ./assets/files/uploads/kakashi.jpg | 1 | client | Verification | Role |
| 3 | Luis | Monzon | Luis4609 | luis_test@gmail.com | 25 | | ./assets/files/uploads/kamui.gif | 0 | client | Verification | Role |

You will have the navbar above the admin table where you can access your chats, but we will check that with another user: alfreeznx. We will press Logout and login with alfreeznx.



alfreeznx
Alfredo Puerta
Status

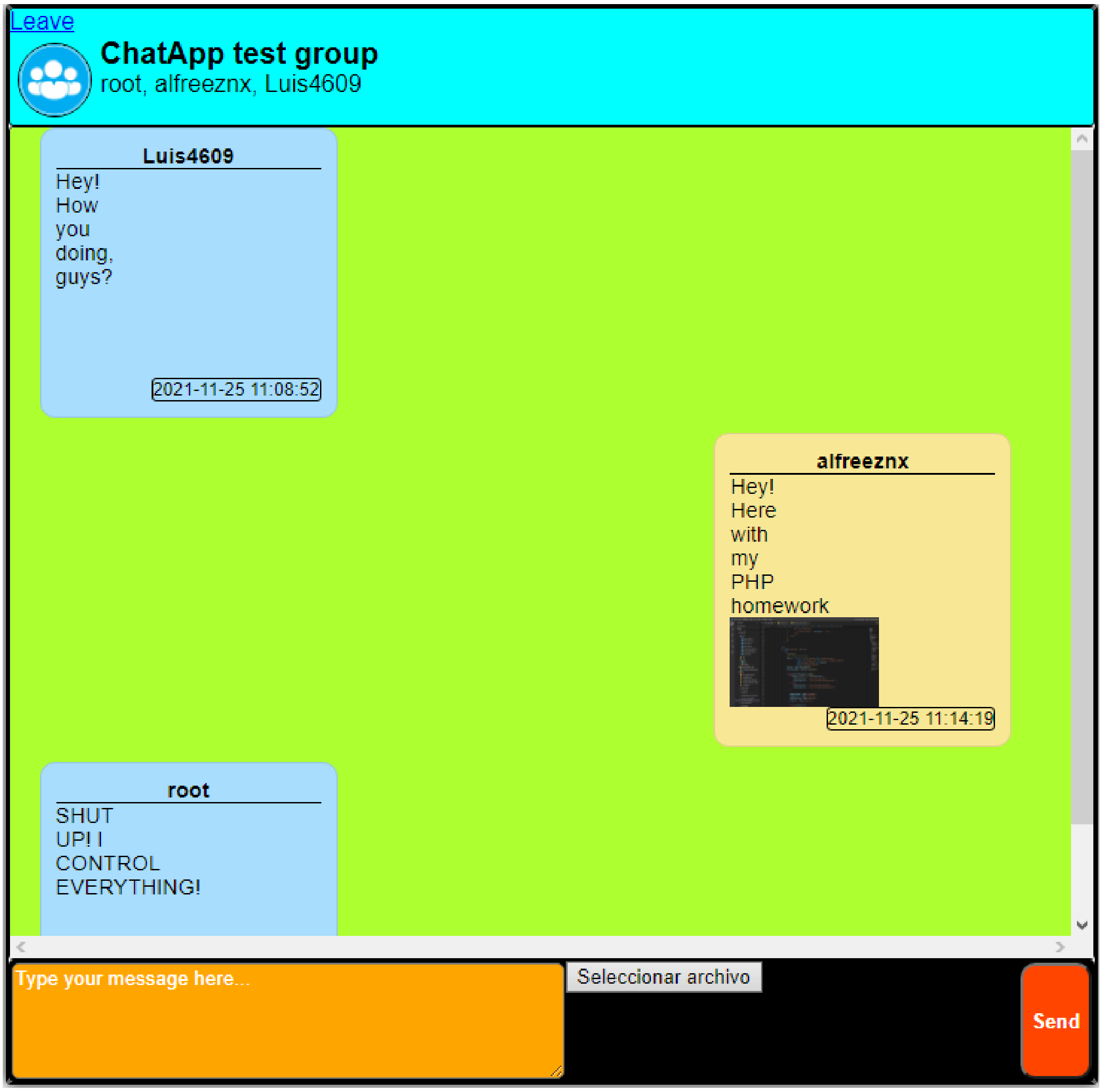
root
Luis4609

ChatApp test group
alfreeznx, Luis4609, root

luis
alfreeznx, Luis4609

Here you will see all your chats, the people registered in the database and your profile information. To create a chat, we will just need to select the users we want (pressing CTRL + click) and, optionally, adding an alias.

Now let’s see the chats we have already in our database:



ChatApp test group
root, alfreeznx, Luis4609

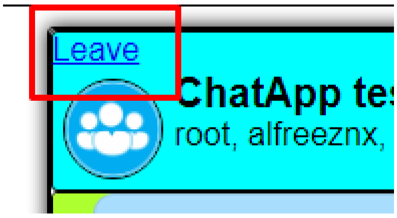
Luis4609
Hey! How you doing, guys?
2021-11-25 11:08:52

alfreeznx
Hey! Here with my PHP homework
2021-11-25 11:14:19

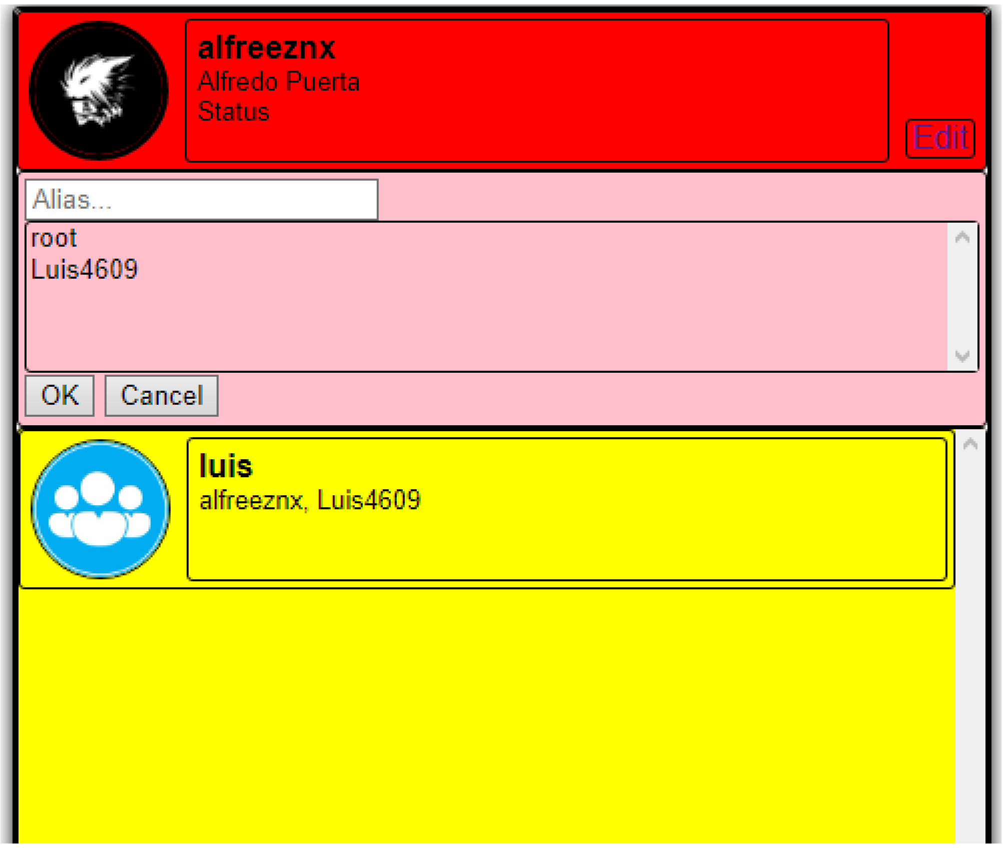
root
SHUT UP! I CONTROL EVERYTHING!

**Not only images can be sent.

Even though all the chats will be displayed as groups in the Home page, the reality is that a chat is considered a group when there are more than 2 users in the chat. Furthermore, when there are more than 2 users, you will see a button to leave the group above, in the information box where the profile pic, alias and users are displayed.



Once pressed, we will be redirected to the Home page, and the group will not be displayed.



**alfreeznx**
Alfredo Puerta
Status

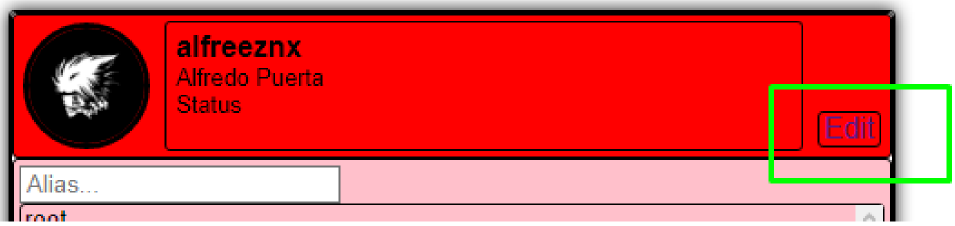
Alias...

root
Luis4609

**luis**
alfreeznx, Luis4609

Now, we only have our individual chat with Luis. As it is mentioned, in the Home page it is displayed as a group, but there are only 2 users inside, so it can be considered as an individual chat. If we press it, the chat will display the other user's name and profile picture.

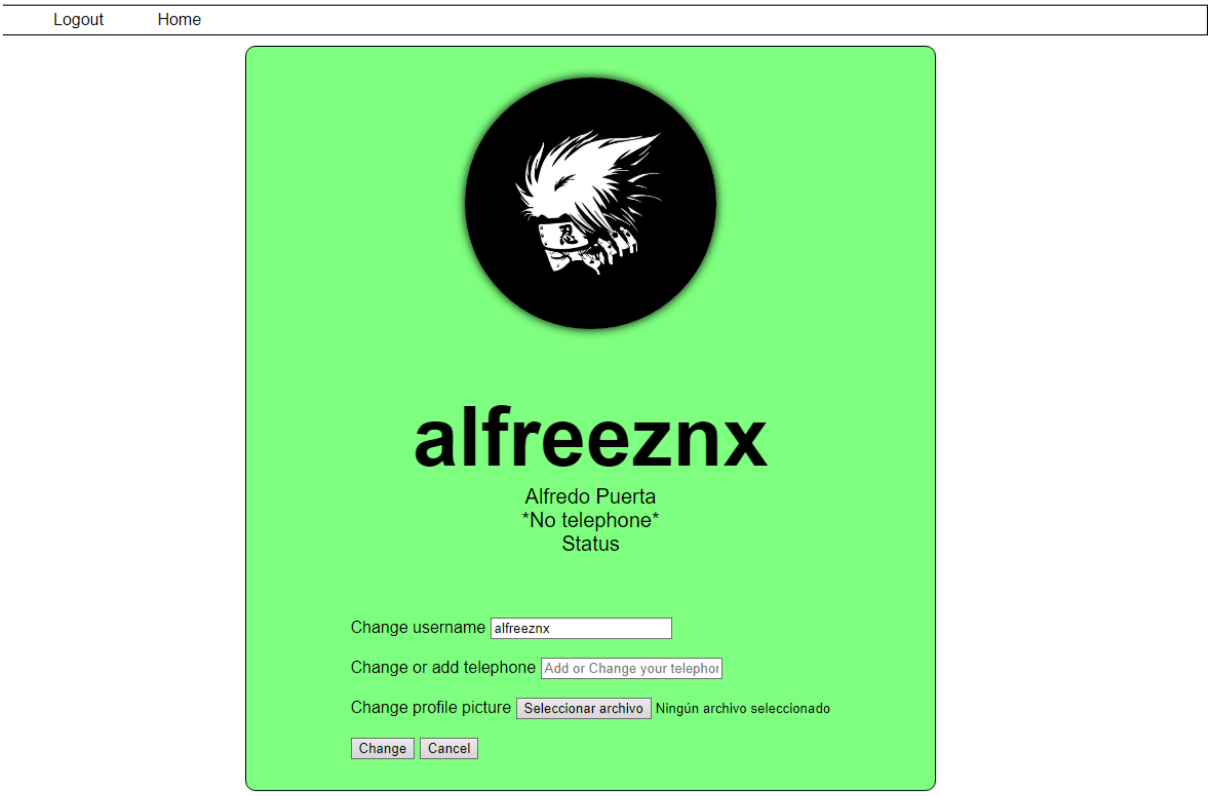
Finally, regarding the main functionality of the application, we will also be able to change some of our information and our profile picture. We just need to go to our home page and press the 'Edit' button next to our profile.



**alfreeznx**
Alfredo Puerta
Status

Alias...

root



alfreeznx

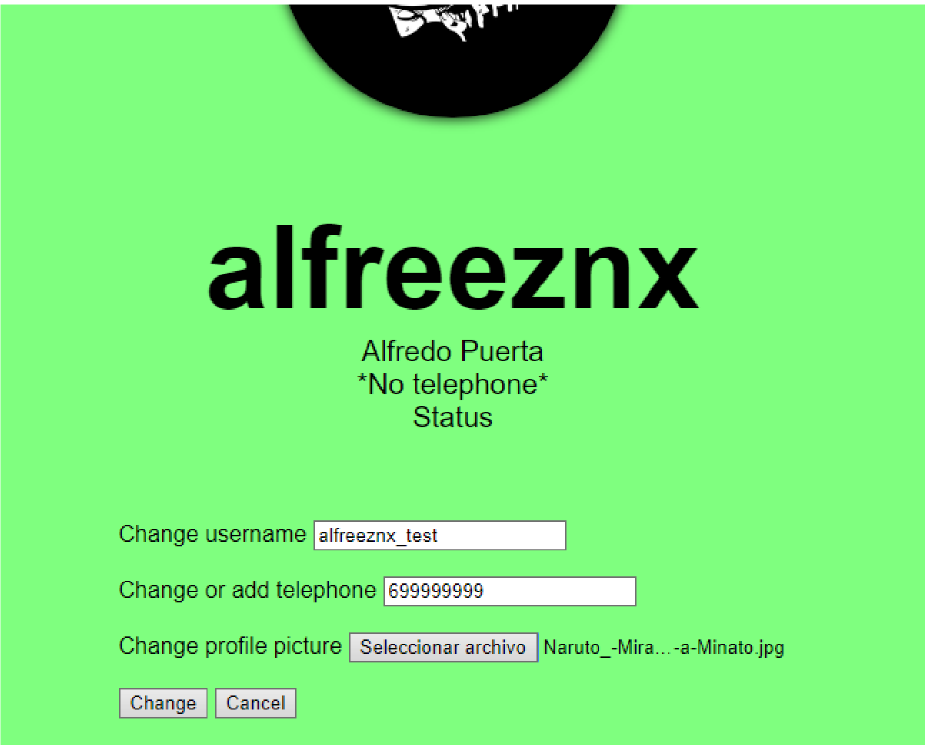
Alfredo Puerta
*No telephone*
Status

Change username alfreeznx

Change or add telephone Add or Change your telephon

Change profile picture Seleccionar archivo Ningún archivo seleccionado

There we will have the possibility to change whatever we want and, when pressing ‘Change’, everything will be updated.

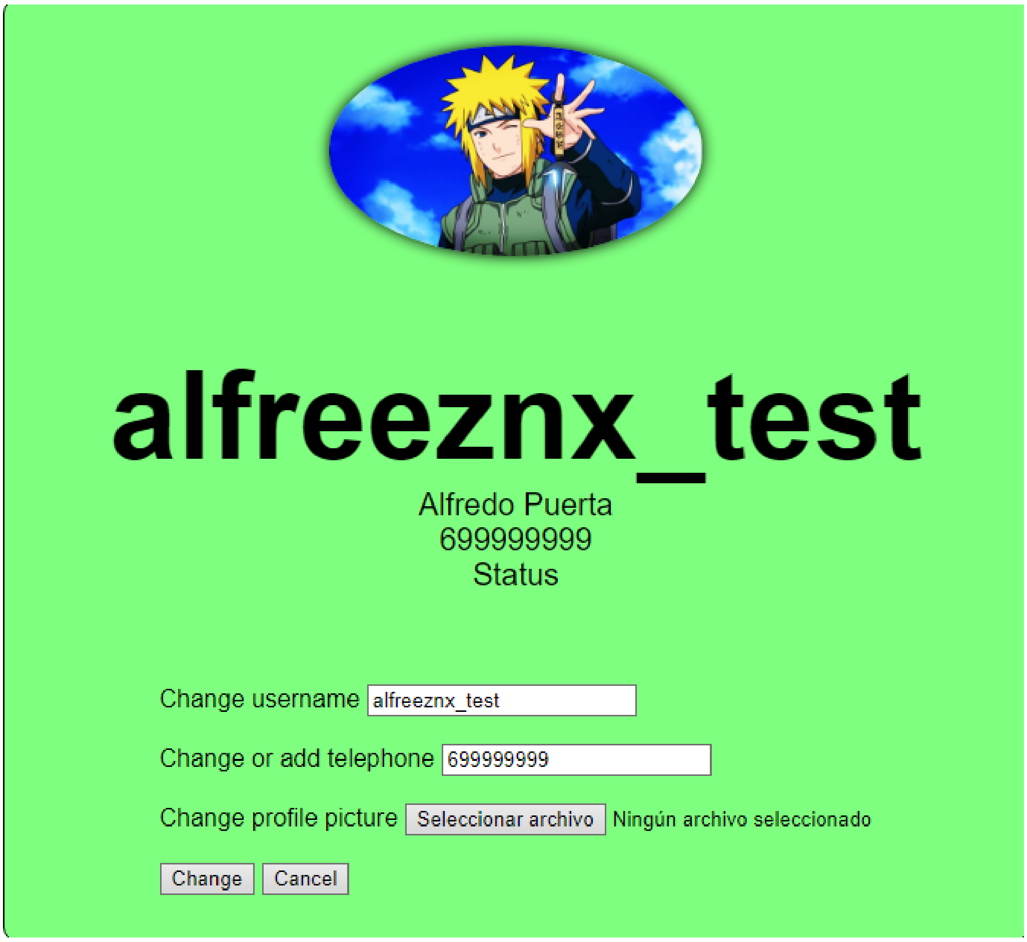

alfreeznx

Alfredo Puerta
*No telephone*
Status

Change username alfreeznx_test

Change or add telephone 699999999

Change profile picture Seleccionar archivo Naruto_-Mira…-a-Minato.jpg



alfreeznx_test

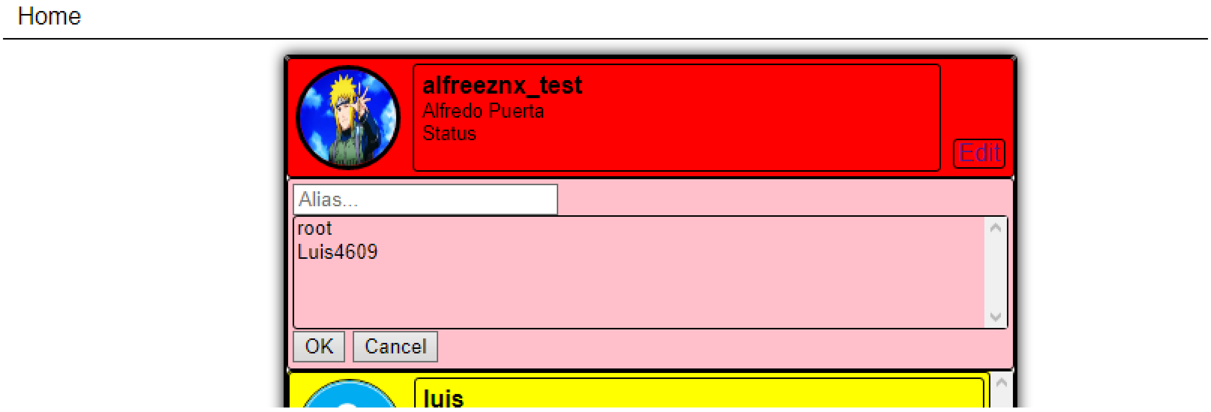
Alfredo Puerta
699999999
Status

Change username alfreeznx_test

Change or add telephone 699999999

Change profile picture Ningún archivo seleccionado

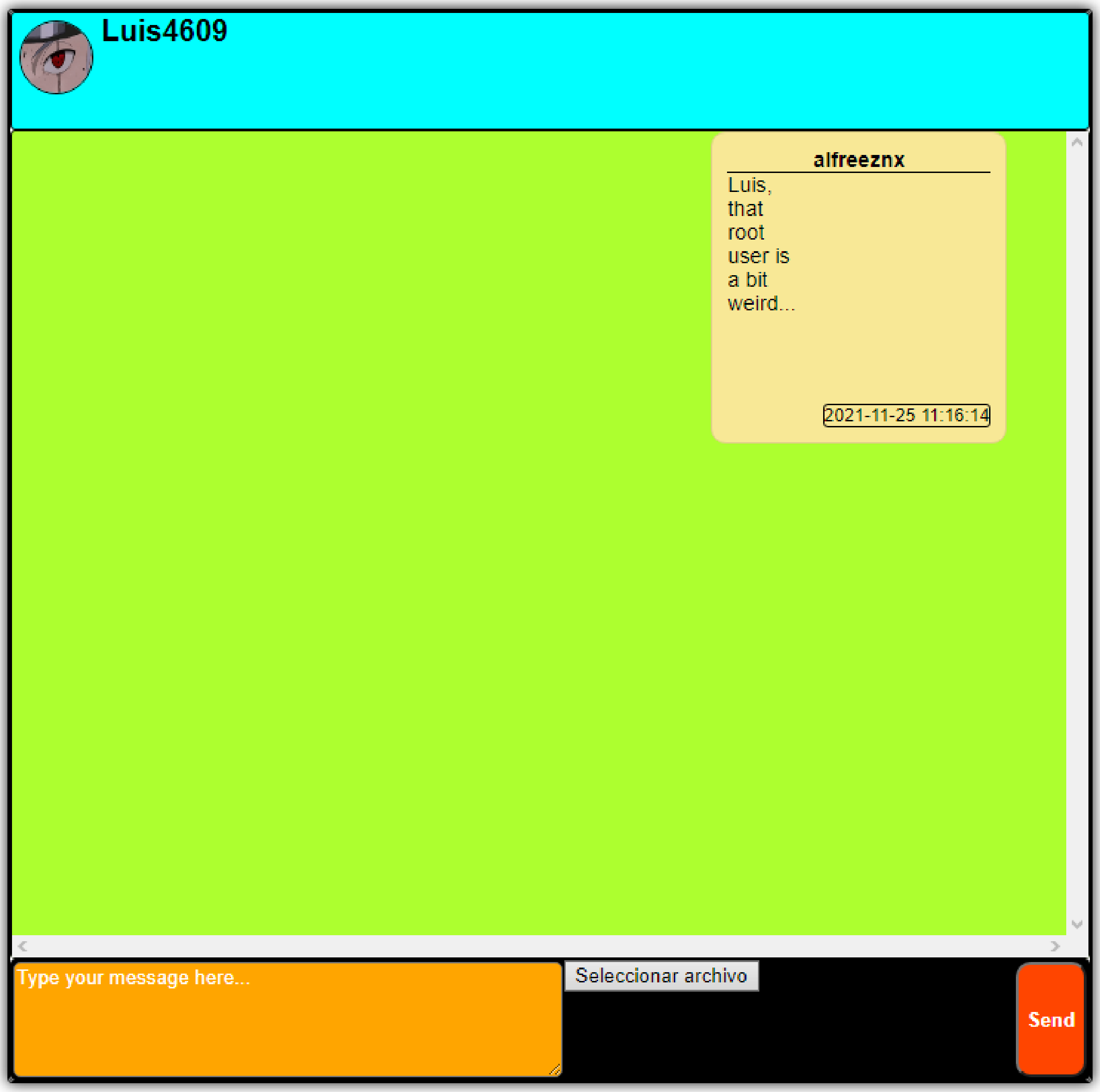
Now, when pressing ‘Home’, everything will also be updated.



alfreeznx_test
Alfredo Puerta
Status

root
Luis4609

luis



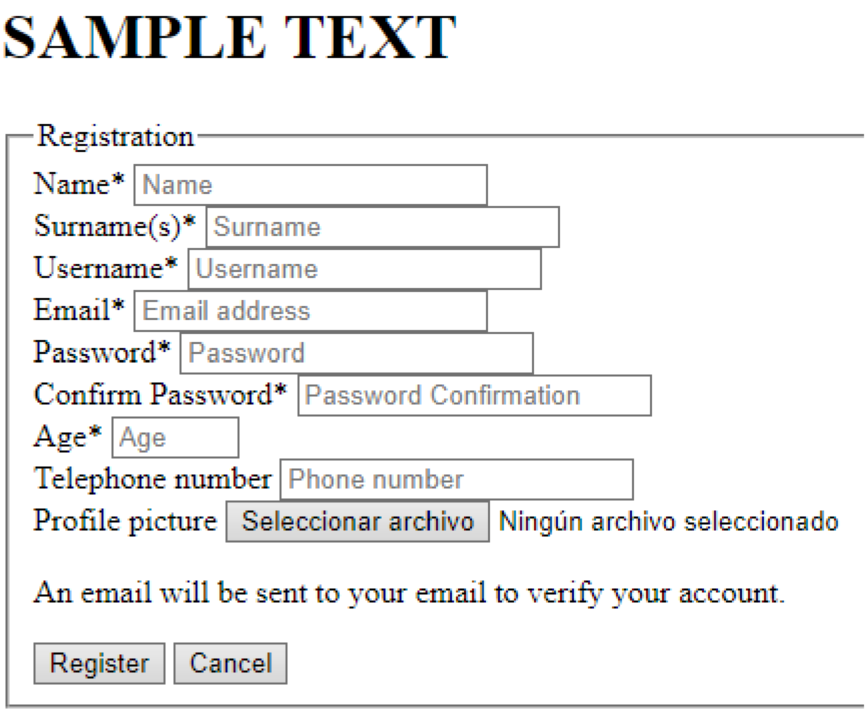
alfreeznx

Luis, that root user is a bit weird...

2021-11-25 11:16:14

After showing the chat functionalities, we will press Logout and go for the registration and password recovery processes.

If we click the register link, this will be displayed:



# SAMPLE TEXT

Registration

Name* Name

Surname(s)* Surname

Username* Username

Email* Email address

Password* Password

Confirm Password* Password Confirmation

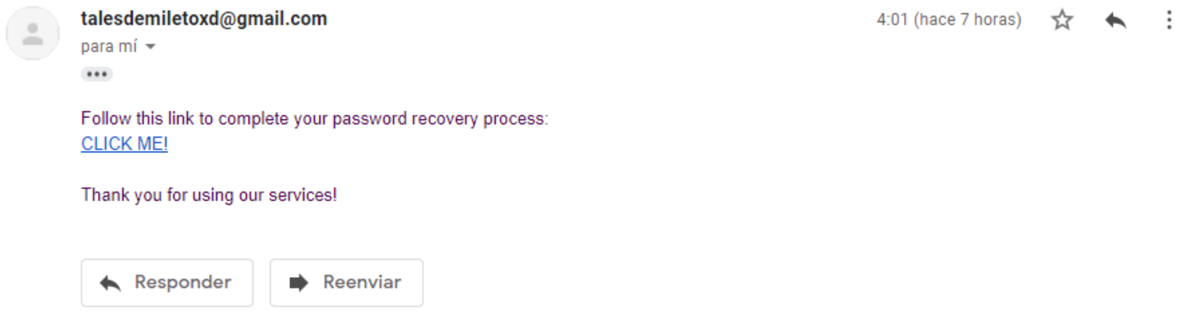
Age* Age

Telephone number Phone number

Profile picture Seleccionar archivo Ningún archivo seleccionado

An email will be sent to your email to verify your account.

A similar email to this one will be also sent to the email address registered:



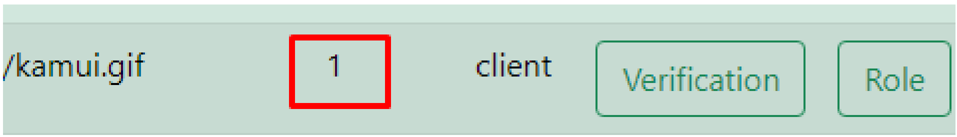
**talesdemiletoxd@gmail.com** 4:01 (hace 7 horas)

para mí

Follow this link to complete your password recovery process:
CLICK ME!

Thank you for using our services!

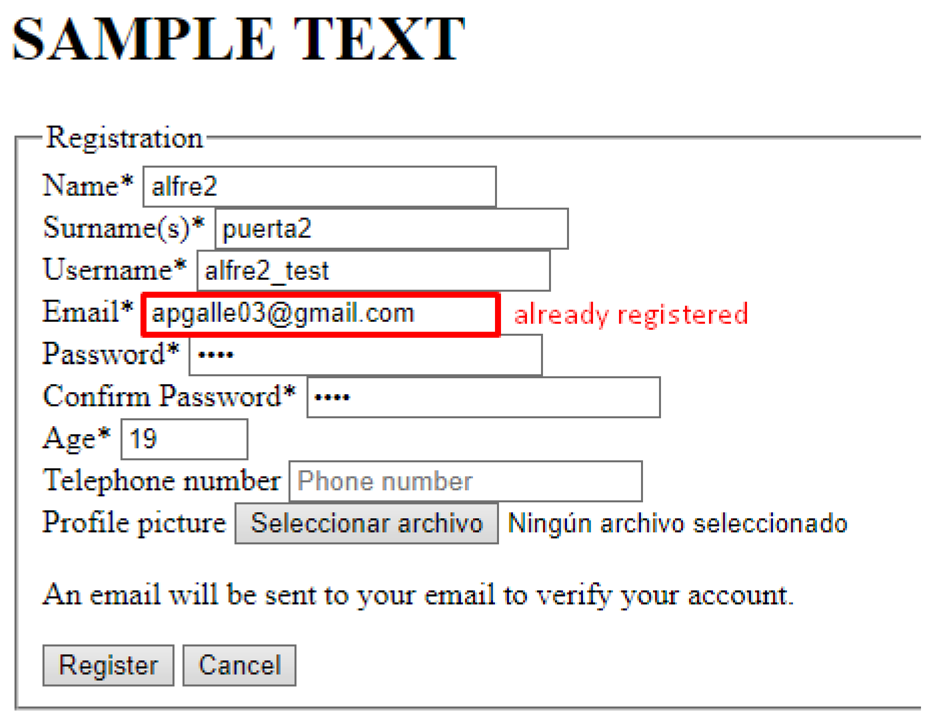
With just a click, you will be redirected to the login again and get your account verified.



| | | | | |
|---|---|---|---|---|
| /kamui.gif | 1 | client | Verification | Role |

**Picture taken from the root Admin Zone.

However, the structure of the application makes the email address and the username unique. This leads to a warning message when trying to register with an already registered username or email:



# SAMPLE TEXT

Registration

Name* alfre2

Surname(s)* puerta2

Username* alfre2_test

Email* apgalle03@gmail.com already registered

Password* ••••

Confirm Password* ••••

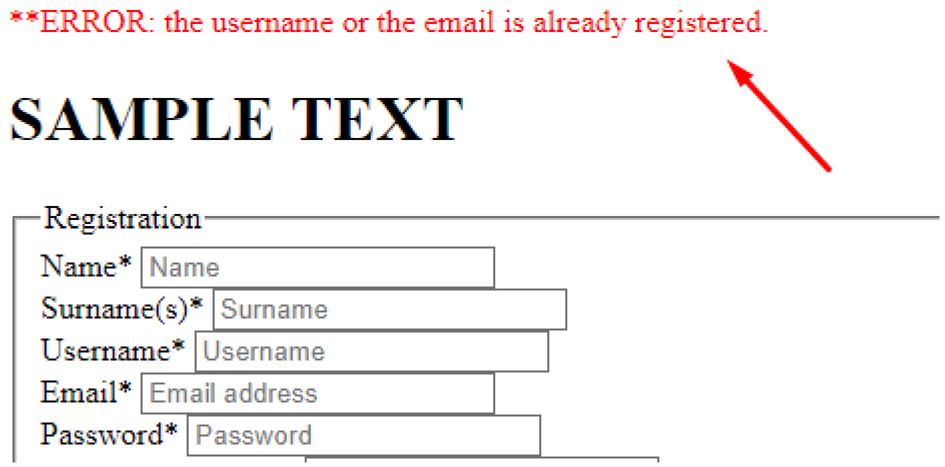
Age* 19

Telephone number Phone number

Profile picture Seleccionar archivo Ningún archivo seleccionado

An email will be sent to your email to verify your account.

Everything will be cleared and the message will be displayed:



**ERROR: the username or the email is already registered.

# SAMPLE TEXT

Registration

Name* Name

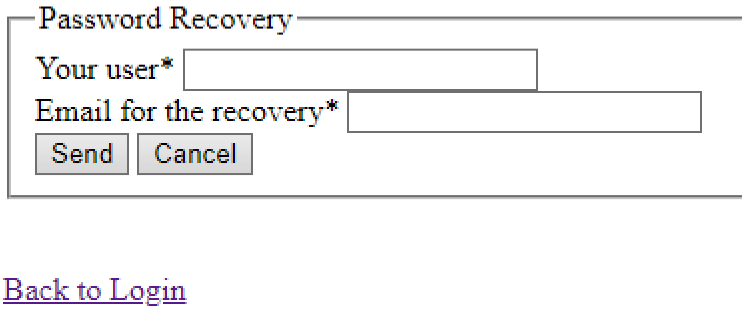
Surname(s)* Surname

Username* Username

Email* Email address

Password* Password

Last, but not least, we have the password recovery process.
If we click on it, this will be displayed:



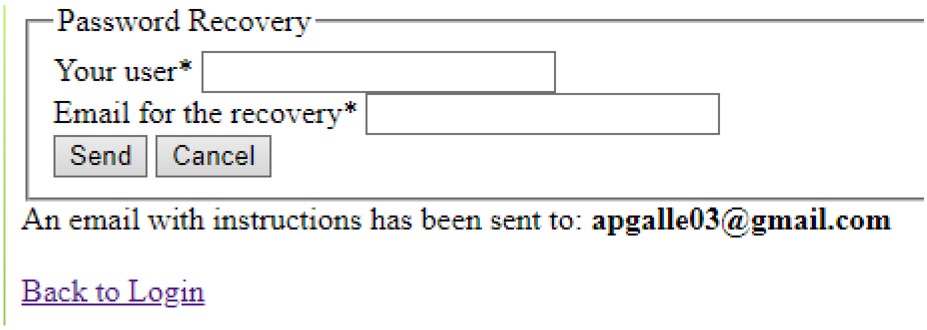
Password Recovery

Your user*

Email for the recovery*

Back to Login

If we fill the form here and click ‘Send’ the fields will be cleared and a message will be displayed too.



Password Recovery

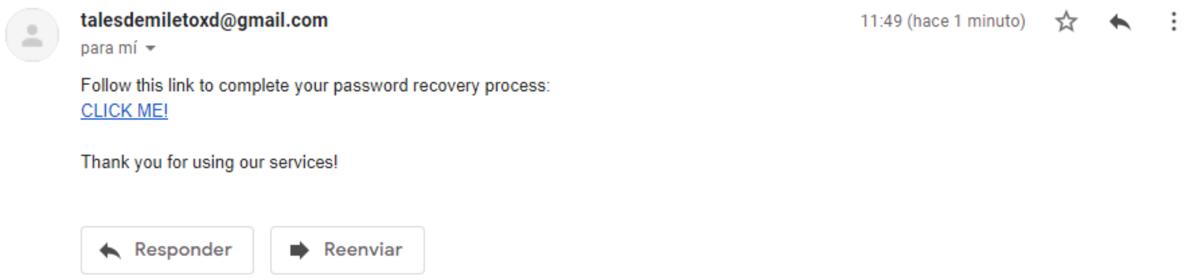
Your user*

Email for the recovery*

An email with instructions has been sent to: **apgalle03@gmail.com**

Back to Login

Now, if we check our email, a similar message to this one will be in our inbox:



**talesdemiletoxd@gmail.com**

para mí

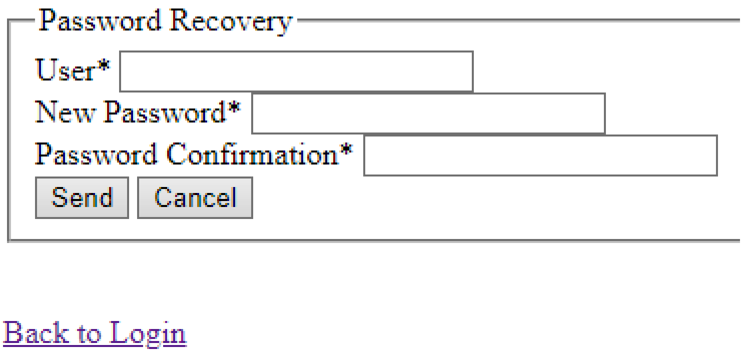
11:49 (hace 1 minuto)

Follow this link to complete your password recovery process:

CLICK ME!

Thank you for using our services!

By clicking, we will be redirected to a new page like this one:



Password Recovery

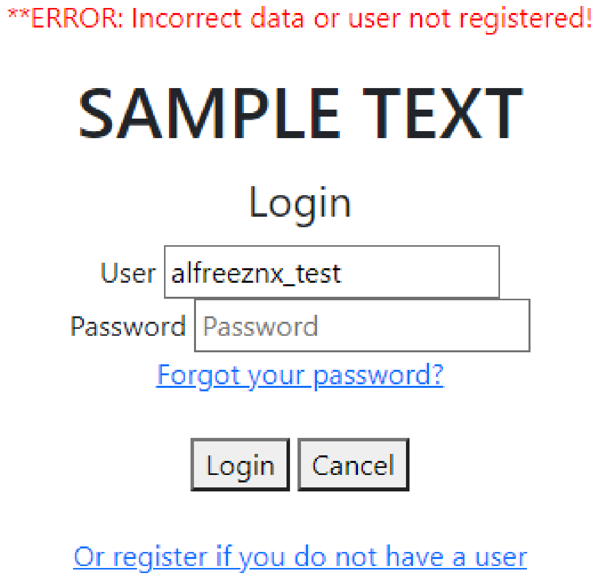
User*

New Password*

Password Confirmation*

Back to Login

If we try to login with the same password, an error message will warn us:



**ERROR: Incorrect data or user not registered!

SAMPLE TEXT

Login

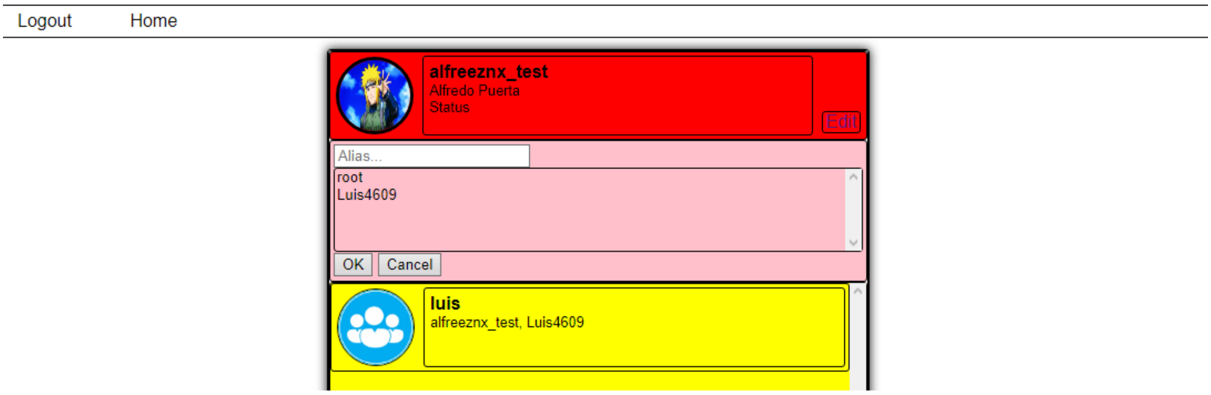
User alfreeznx_test

Password Password

Forgot your password?

Or register if you do not have a user

But using the new password we will go again to the Home page:



alfreeznx_test
Alfredo Puerta
Status

Alias...

root
Luis4609

luis
alfreeznx_test, Luis4609

In conclusion, this is the application functionality and user manual for anyone which trusts this application. Hope you enjoy it!

## Extensions

### *A1. SELF REGISTRATION*

Done with a function that sends an email with a link. By clicking this link, the user is redirected to the login with a special link that contains 2 variables which the login will get with using $_GET. After that, the user will be verified.

### *A2. PASSWORD RECOVERY*

Done with a function that sends another email with another link. This time it redirects to another page where you need to enter your user and the new password. The link on the email has the username, so that the password recovery process page gets it with $_GET and verifies that user with the one entered after. Then it verifies if the new password matches with its confirmation and makes an update with a header to the login again.

### *A4. ENCRYPTED USER PASSWORD*

Done using the password_has() method before inserting the user in the database. The verification is done comparing a new string with the hashed password using password_verify() function.

### *A5. USER AVATAR*

Done with a function that stores files in a directory inside the project and returns the path to it, which is what is stored in the database. An update is possible by entering the right page and selecting a new file.
There are also default avatars in case the user does not upload any.

### *A6. USER PROFILE*

The profile can be updated on the same page where we can change the user profile picture. The username, profile picture and the telephone number can be updated.

Other users will be able to see some of the information (admin users will be able to see everything in the admin zone).

### *A8. GROUPS*

This is done applying the following logic: users do send messages, and the messages are displayed to a chat. Users also participate in chats, so when we create even groups or individual chats, what we do is add users to a chat and give that specific chat ID to the message we want to send. Using this logic, when a user joins a chat, all the messages from the different users can be seen.
There is also an option to leave the group by deleting the user's ID from the selected chat.

### *A9. ADMINISTRATION ZONE*

For this extension, a new attribute was added to the users: role. Its value can only be 'admin' or 'client', with this last as default. At first, only the root can enter the admin zone. If your role is 'admin', you go directly to the admin zone. Once there, a table with all the users and their information will be displayed. 2 actions can be done here: verifying or denying verification and changing the role to the users.

### *A10. ATTACHED FILES*

Done with the same function that lets us upload pictures as profile pictures. This function gets the file selected, uploads it to the project and returns the link to get it. After that, the path is put inside the 'src' attribute of an <embed> tag where the file will be displayed.

### *A11. IMAGES*

Done with the function explained before. The image is directly displayed inside the message.

**ALFREDO PUERTA GALLEGO DW2E**