### **Questions:**

### 1. How you implemented authentication and session handling.

I implemented authentication by creating login, logout, registration, and user-management features, securing routes with Codelgniter filters for improved page access control. In session handling, you validate users carefully before storing only essential data in sessions to protect private information.

### 2. How the login/logout history is stored and displayed.

#### Store:

First, in log in after the user logged its credentials and passed all validations, when the process comes at the part where the user data is going to store in a session, I implement another session variable in which store the **time in** and **ip address** of the user who logged in.

Second, in log out after the user clicked the log out, the session will turn on and it will assign and store another necessary variable for the **time out**. After storing the timeout value and store, the next process will be uploading or inserting the data into the database table called **login\_history** which consists of the user's id, time in, time out, and the ip address.

When the insertion succeeds, it will now destroy the sessions and redirect the user back to the login page.

## Display:

In my UserController file, I fetch all the users history, but with a conditional statement. As I mentioned in my answer at number 1, by using codeigniter's **filter**, I easily manage and fetch the users history with the **role-based access control** in which admins can see the entire users history, while each user can see their own history.

### 3. Any challenges faced and how you overcame them.

I faced challenges in the part of using the **filter** feature, and the **routing**, which gave me a hard time debugging the application. It causes me confusion with the error messages because it's new to me and I didn't know what to look up because of so many files.

## **Screenshots:**

## Sign in

# Welcome to Jake's User Management System

The website consists of user profiles, tables, login, registration, and logout. Trully created with Codelgniter4

Don't have an account Register here



## **Profile**



Back to home

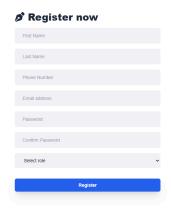
# Profile Information First Name: Jake Last Name: Napay Phone: 09453347158 Email: napayjakem@gmail.com Role: Admin Status: Active Edit

## Register

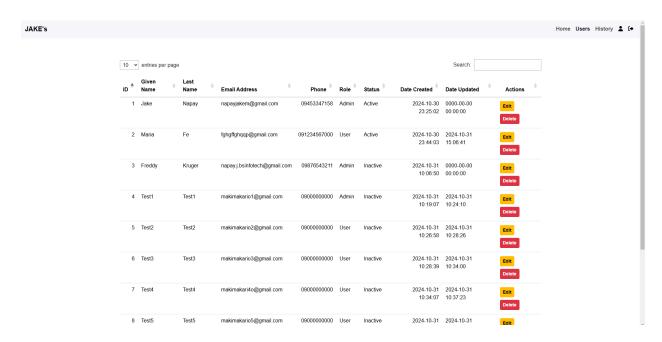


The website consists of user profiles, tables, login, registration, and logout. Truly created

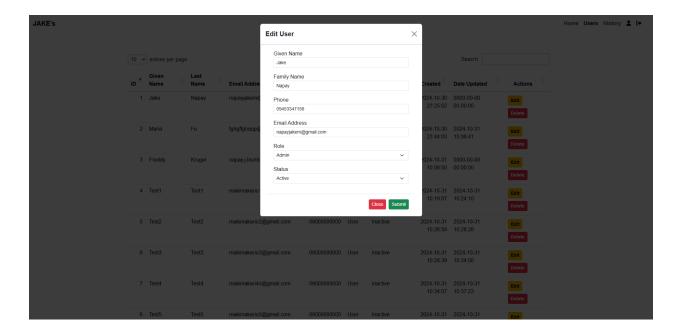
Already have an account? Log in here



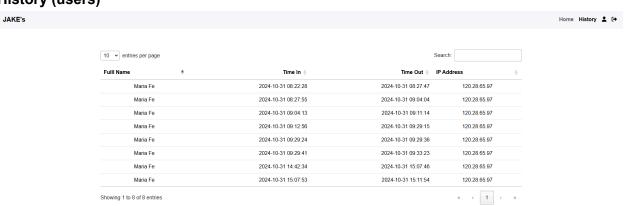
# **Users (admin)**



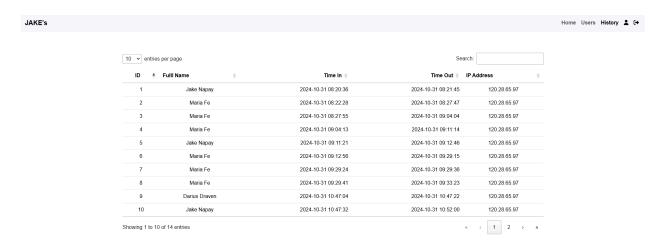
# Users (admin)



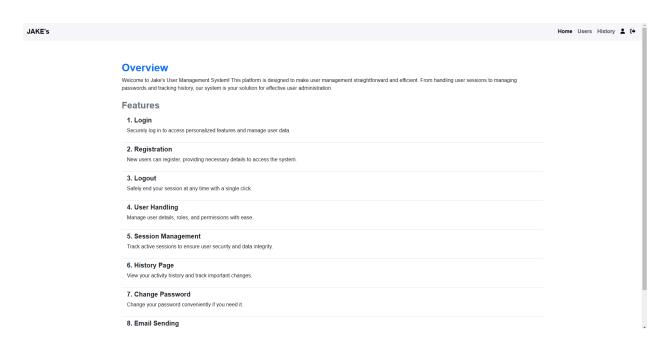
# **History (users)**



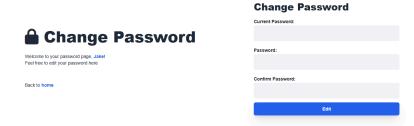
## **History (admin)**



### Home



## **Change Password**



## **Email Sending**

