

## Application Overview

The application is a user management system that includes features for user registration, login, profile management, and admin functionalities for managing users and their messages. It is built using the CodeIgniter framework, following the MVC (Model-View-Controller) architecture to separate concerns, making the codebase modular, maintainable, and scalable.

## Key Functionalities

### 1. User Registration and Login

- **Registration:** Users can register by providing their name, last name, email, and password. The registration process includes validation and storing the user data in the database.
- **Login:** Users can log in using their email and password. The login process includes authentication and setting session data.

### 2. Profile Management

- **User Profile:** Logged-in users can view and update their profile information, including their name, last name, and email. They can also change their password.
- **Admin Profile:** Admin users have a separate profile page where they can update their profile information.

### 3. Password Management

- **Forgot Password:** Users can request a password reset by providing their email. The application sends a reset link to the user's email.
- **Reset Password:** Users can reset their password using the reset link sent to their email.

### 4. Admin Functionalities

- **Customer Management:** Admins can view a list of all customers, view detailed information of a specific customer, edit customer details, and delete customers.
- **Message Management:** Admins can view all messages sent by users, view messages of a specific user, and manage message history.

## Detailed Functionality

### Controllers

#### 1. Admin Controller

- **admin\_profile():** Ensures the admin is logged in, updates the last interaction timestamp, retrieves admin data, and loads the profile view.
- **customers():** Ensures the admin is logged in, retrieves all customers, and loads the customers view.
- **customer\_detail(\$id):** Ensures the admin is logged in, retrieves specific customer data by ID, and loads the customer detail view.

- **edit\_customer(\$id)**: Ensures the admin is logged in, retrieves specific customer data by ID, and loads the edit customer view.
- **update\_customer(\$id)**: Ensures the admin is logged in, validates form data, updates customer data, and redirects to customer detail view.
- **delete\_customer(\$id)**: Ensures the admin is logged in, loads the confirm delete view.
- **confirm\_delete(\$id)**: Ensures the admin is logged in, deletes specific customer by ID, and redirects to customers view.
- **customer\_messages(\$user\_id)**: Ensures the admin is logged in, retrieves messages by user ID, and loads the messages view.
- **all\_message\_history()**: Ensures the admin is logged in, retrieves all messages, and loads the messages view.
- **logout()**: Logs out the admin by destroying the session and redirects to admin login view.

## 2. Auth Controller

- **register()**: Validates form data, registers a new user, and sends a confirmation email.
- **profile()**: Ensures the user is logged in, retrieves user data, and loads the profile view.
- **login()**: Validates form data, authenticates the user, and redirects to the profile view.
- **submit\_form()**: Ensures the user is logged in and loads the submit form view.
- **submit\_message()**: Ensures the user is logged in, validates form data, submits a new message, and redirects to the submit form view.
- **update\_profile()**: Ensures the user is logged in, validates form data, updates the user profile, and redirects to the profile view.
- **message\_history()**: Ensures the user is logged in, retrieves user messages, and loads the message history view.
- **forgot\_password()**: Validates form data, sends a password reset email, and redirects to the forgot password view.
- **reset\_password(\$token)**: Validates form data, resets the user password, and redirects to the login view.
- **admin\_login()**: Validates form data, authenticates the admin, and redirects to the admin profile view.
- **admin\_profile()**: Ensures the admin is logged in, retrieves admin data, and loads the admin profile view.
- **update\_admin\_profile()**: Ensures the admin is logged in, validates form data, updates the admin profile, and redirects to the admin profile view.
- **logout()**: Logs out the user by destroying the session and redirects to the login view.

## Models

### 1. User\_model

- **check\_login(\$email, \$password)**: Checks user login credentials.
- **insert\_user(\$data)**: Inserts a new user into the database.

- **get\_user\_by\_email(\$email)**: Retrieves a user by email.
- **get\_user(\$user\_id)**: Retrieves a user by ID.
- **update\_user(\$user\_id, \$data)**: Updates user data.
- **insert\_message(\$data)**: Inserts a new message.
- **get\_user\_messages(\$user\_id)**: Retrieves messages for a user.
- **set\_reset\_token(\$user\_id, \$token)**: Sets a password reset token for a user.
- **verify\_reset\_token(\$token)**: Verifies a password reset token.
- **get\_admin\_by\_email(\$email)**: Retrieves an admin by email.
- **get\_all\_customers()**: Retrieves all customers.
- **delete\_user(\$user\_id)**: Deletes a user by ID.

## 2. Message\_model

- **get\_messages\_by\_user(\$user\_id)**: Retrieves messages for a user.
- **get\_all\_messages()**: Retrieves all messages.

## Views

1. **auth/login.php**: Login form for users and admins.
2. **auth/register.php**: Registration form for new users.
3. **auth/profile.php**: User profile view.
4. **auth/forgot\_password.php**: Form to request a password reset.
5. **auth/reset\_password.php**: Form to reset the password.
6. **auth/submit\_form.php**: Form to submit a new message.
7. **auth/message\_history.php**: View to display user message history.
8. **admin/profile.php**: Admin profile view.
9. **admin/customers.php**: View to display a list of customers.
10. **admin/customer\_detail.php**: View to display customer details.
11. **admin/edit\_customer.php**: Form to edit customer details.
12. **admin/messages.php**: View to display messages for a specific user or all messages.
13. **admin/confirm\_delete.php**: Confirmation view for deleting a customer.

## Tech stack:

codeigniter v.3

PHP v7.4.33

phpMyAdmin v5.2.0

Composer v2.7.7

MariaDB v10.4.27

Apache/2.4.54

Dbclient libmysql - mysqlnd v7.4.33

tailwindcss v2.2.19

jQuery v3.6.0

## Login credential:

database : root blank

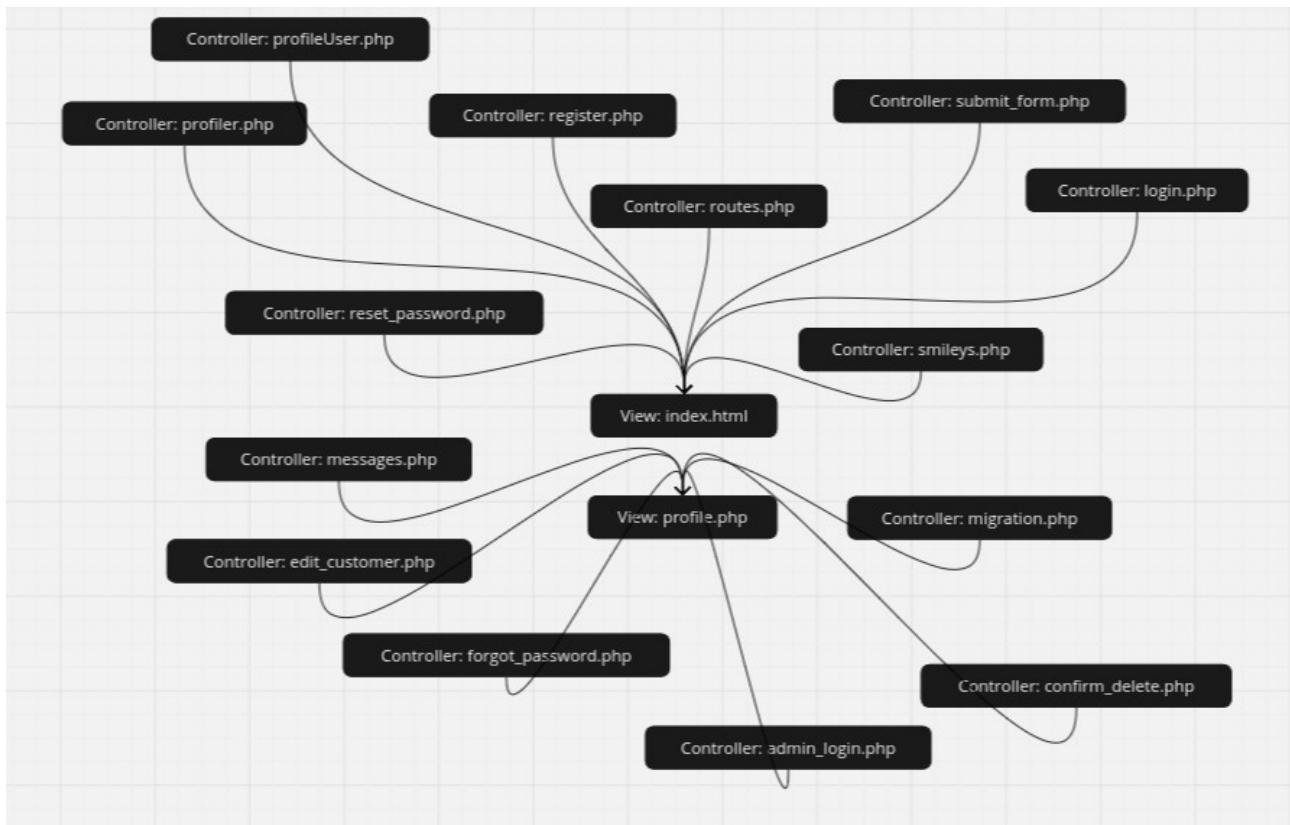
admin: [admin@admin.com](mailto:admin@admin.com) adminlogin

john doe: [johndoe@user.com](mailto:johndoe@user.com) userlogin

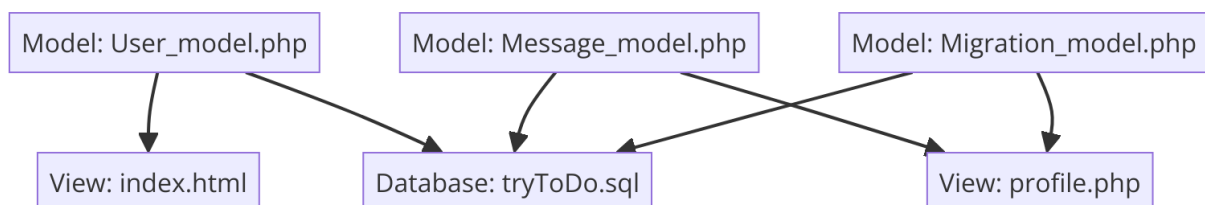
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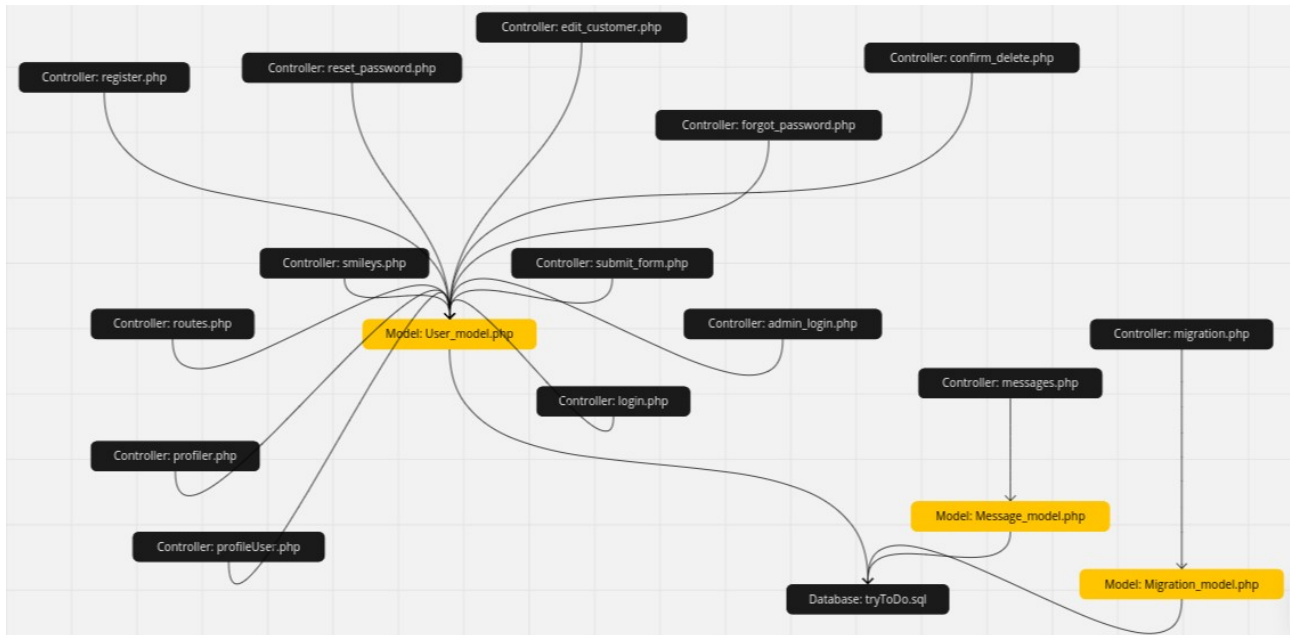
## Controller and view interactions



## Database interactions with views



## Model interactions and database interactions



## Role of views in the interactions between controllers and models

