



Introduction:

The SAE Student Forum is a website I developed as project for my Back-End assignment as an SAE Liverpool Web student. Although it is a project to be submitted for grading I will be developing it beyond the assignment specifications and deploying it to a server for use by students of SAE Institute around the globe. This document serves as a user guide as well as documenting features and planned additions to the website.

Key Features:

- New users are restricted to SAE Institute Students with a valid SAE Email address. (Note: I will have disabled this function on submission to allow any valid email address to be used for testing.)
- Email account verification system.
- Password recovery system.
- Customisable user profile page (profile image, cover image, user bio, social media links).
- Private messaging system (inbox, new message notifications, delivery/seen status).
- Discussion forum (Creation of new topics, controls to edit, delete and quote topics and posts)
- Live Search functionality

Upcoming Features:

- User image gallery.
- Status updates.
- Friends system.
- Facebook style "Wall" used for sharing things to friends and allowing friends to post on each others wall.

Technical Specifications:

Created with PHP, MySQL, Javascript, HTML, Bootstrap and CSS using PHP MVC design pattern and OOP.

As user input is the focus of the website, I have made security a high priority

by implementing PHP prepared statements, hashing passwords, sanitising user inputs by escaping HTML tags and symbols that could be used maliciously.

Styling and design choices:

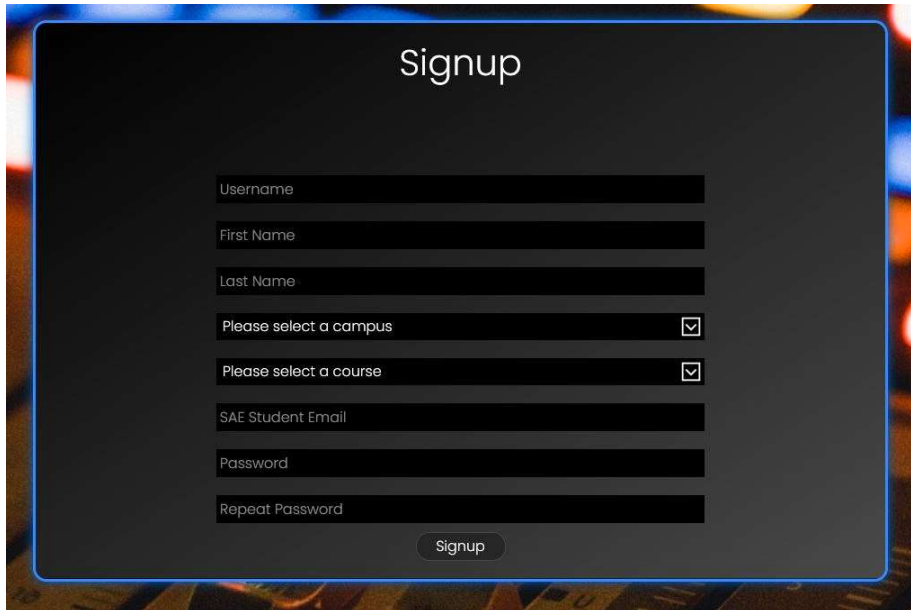
The colour scheme of the website was inspired the SAE Institute website. Most notably the main SAE orange colour. I then chose a complimentary blue colour for highlights and borders.

I chose a background image of an Audio Mixing desk considering SAE started out as the School of Audio Engineering. It also features vibrant oranges and blues which compliment the colour scheme of the website.

The website is fully responsive with mobile devices and tablets and has been through many testing phases to ensure the best user experience possible.

Getting Started:

To begin using the website, Users first need to register using the sign up form (Fig 1.)



Signup

Username

First Name

Last Name

Please select a campus ☐

Please select a course ☐

SAE Student Email

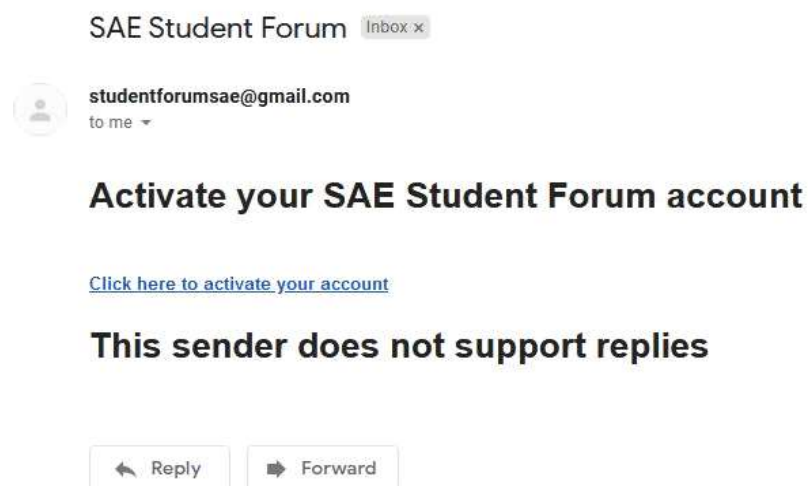
Password

Repeat Password

Signup

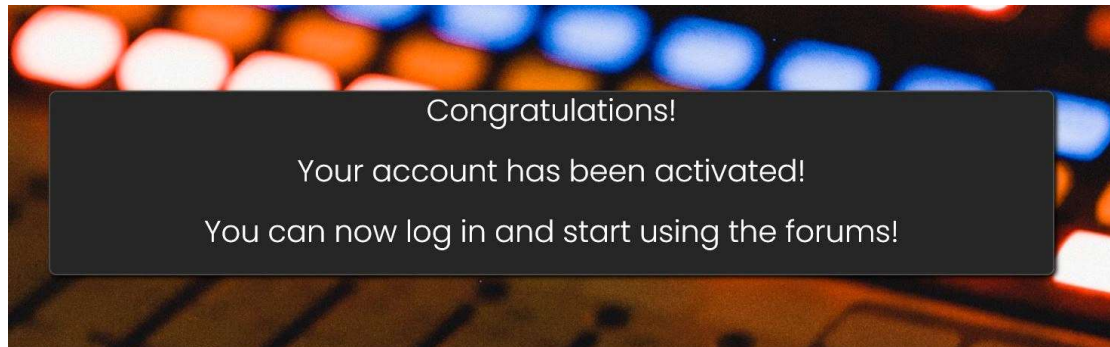
(Fig 1.)

After signing up, users are required to navigate to the email they used to register and click on the activation link (Fig 2.) sent to them to confirm a legitimate email address.



(fig 2.)

After clicking the activation link, the user will be sent to the home page of the website and notified of a successful activation (Fig 3.)



(Fig 3.)

Using the Forum

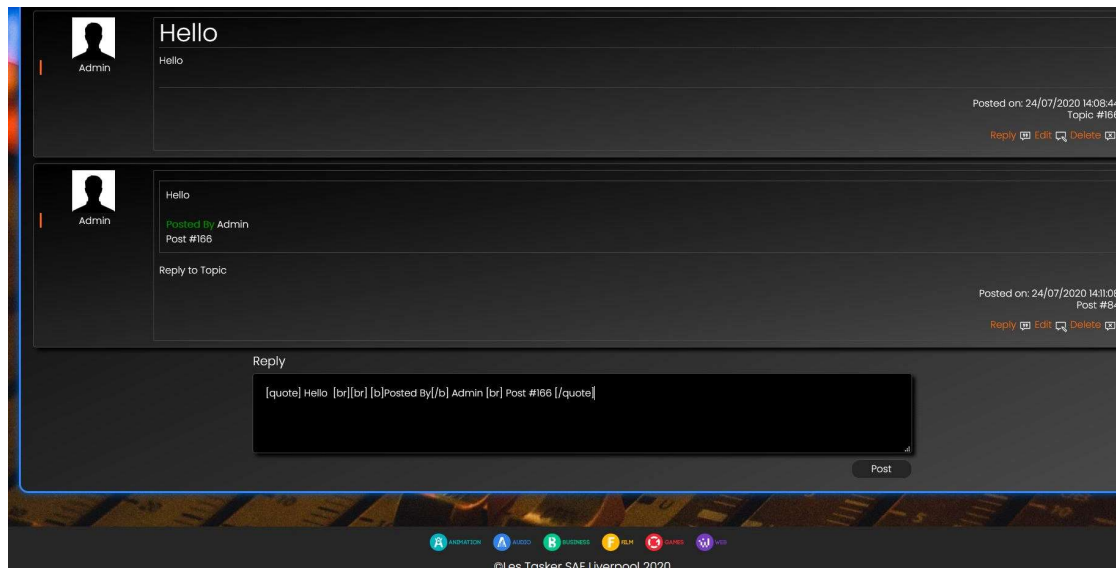
Once the user has registered and verified, the user can log in to the website using either their Username or Email and password.

The user can navigate to a topic of interest by following the links through Campus, Course and Category.

Replying to a post is a simple process. The User clicks the Reply button (Fig 4.) on the post they want. The post is automatically inserted into the text box at the bottom of the page. The user then adds the text they want to post after the [/quote] tag and posts the message using the Post button (Fig 5.)



(Fig 4.)

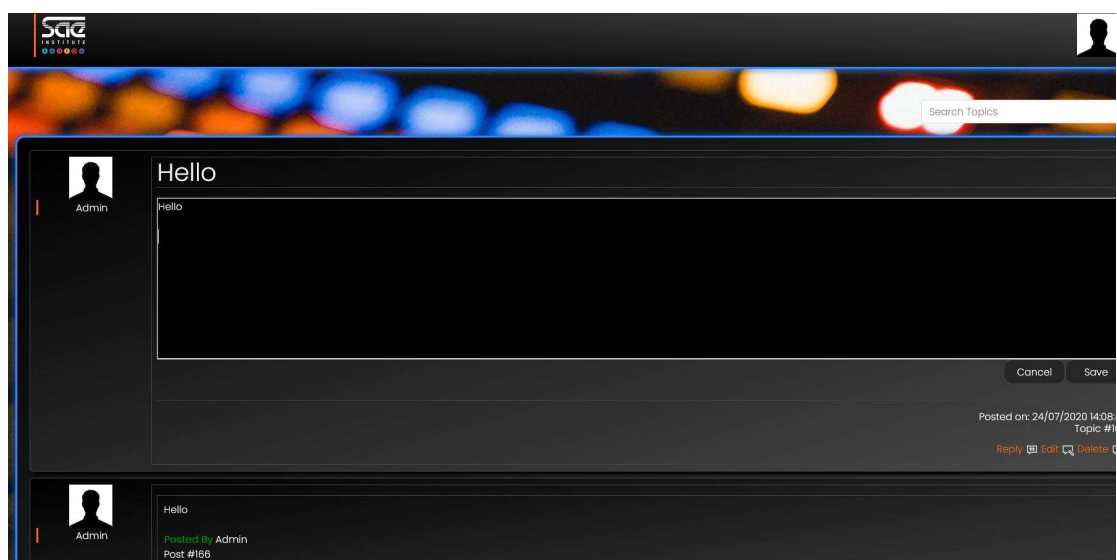


(Fig 5.)

If a user would like to edit a post they are the author of, they need to click the Edit button (Fig 6.) on the specific post they want to make changes to, the original post will be replaced by a text box and a Cancel and Save button which the user can either cancel and return the post to its original state or submit the changes they have made. (Fig 7.)



(Fig 6.)

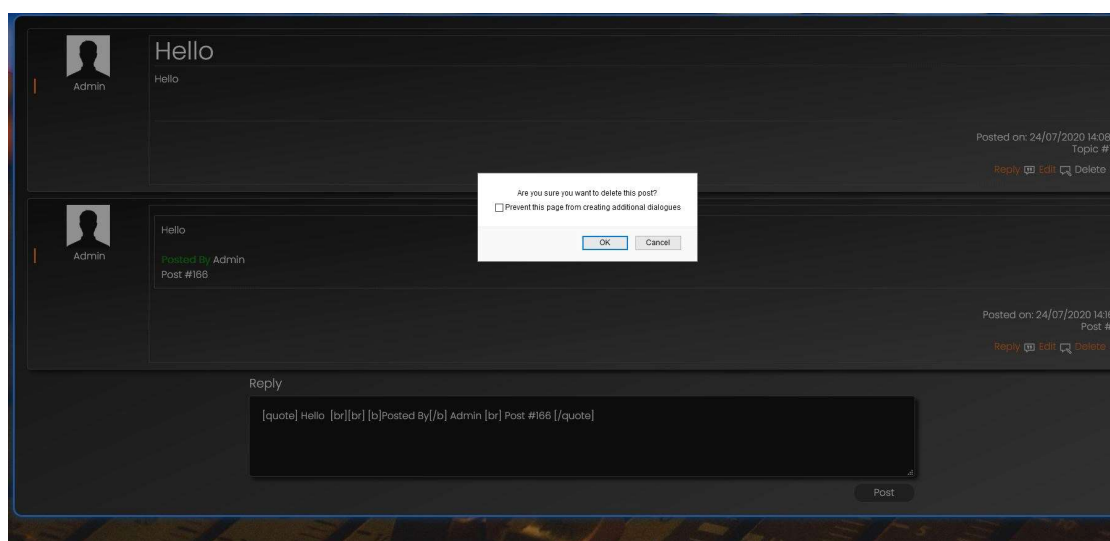


(Fig 7.)

To delete a post or a whole topic the user must be the author. If a user clicks the Delete button (Fig 8.) on a post, they will be prompted with a confirmation box (Fig 9.) and if confirmed, the post will be deleted permanently. If a User wants to delete the original topic post, they will also be prompted by a confirmation box, however, if a user deletes a topic, the entire thread along with user replies will be permanently deleted via MySQL Cascade on Delete using Primary & Foreign Keys.



(Fig 8.)

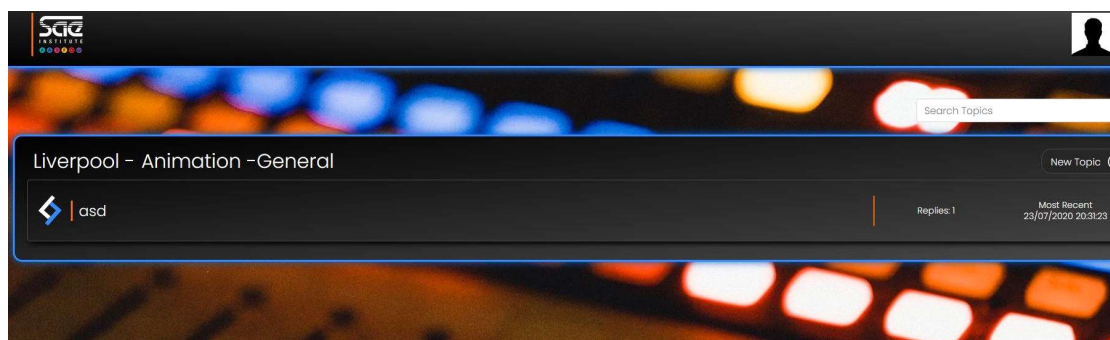


(Fig 9.)

Creating a topic is a simple process for the user. They must navigate to the topic list screen (Fig 11.) and click the new topic button.(Fig 10.)



(Fig 10.)

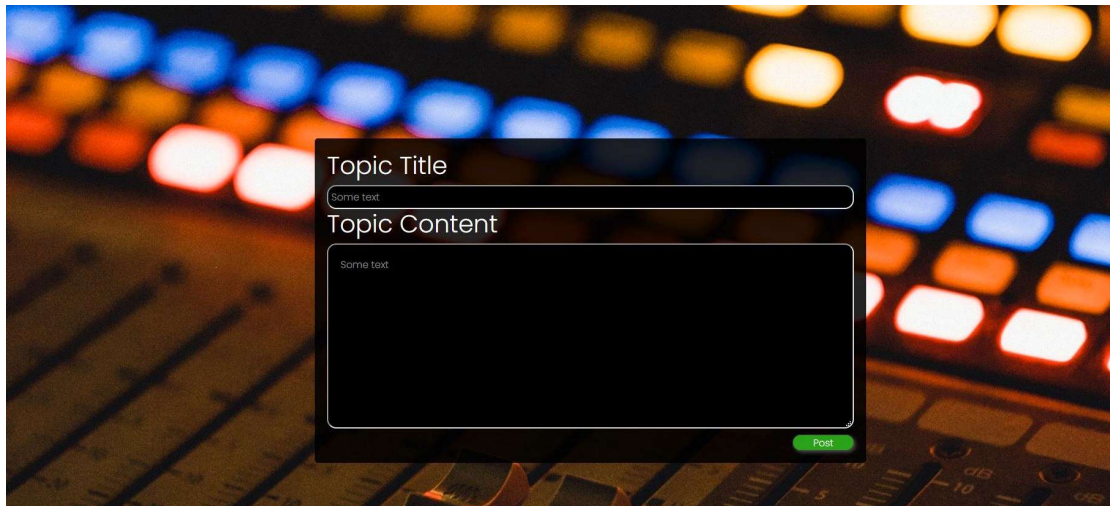


(Fig 11.)

Once the user clicks the new topic button (Fig 12.) they are met with a new page with 2 inputs for Topic Title and Topic Body (Fig 13.). Once the user posts the topic, it is live on the forum for the public to see.



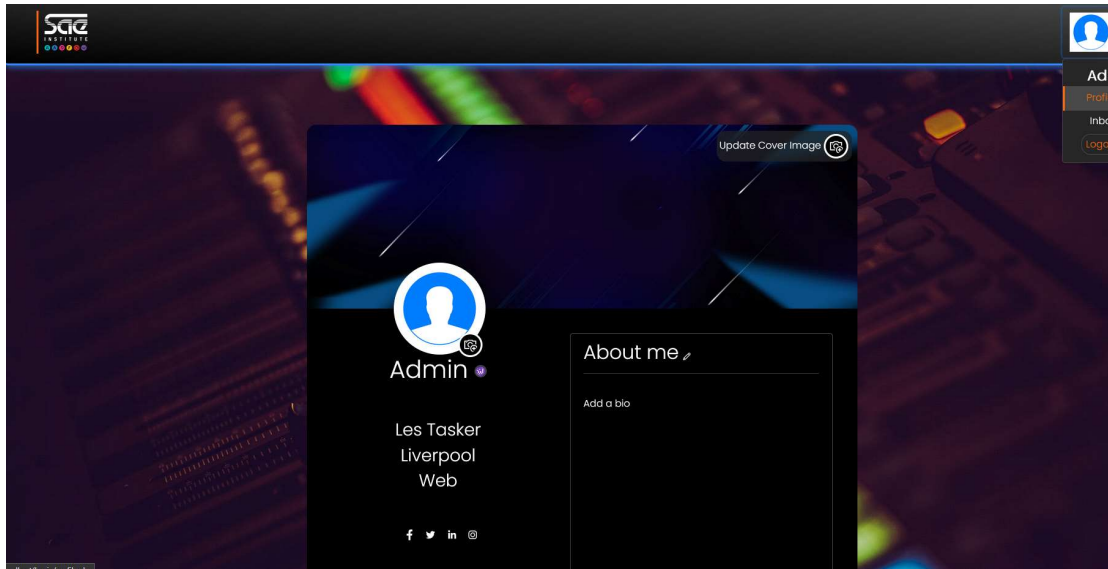
(Fig 12.)



(Fig 13.)

Profile

When on the user profile page (Fig 14.), the user has options to customise data for the public to see.



(Fig 14.)

The user can upload a new profile image and cover image by using the icons (Fig 15.) placed on the profile image and cover image.

The user can also edit their About Me section by clicking the Edit icon. (Fig 16.)



(Fig 15.)



(Fig 16.)

Private messaging

To send a message to a user, there are 2 options.

1. If the user wants to create a new conversation with another user, they can visit the profile of that user and click the Send Message button. (Fig 17.)



(Fig 17.)

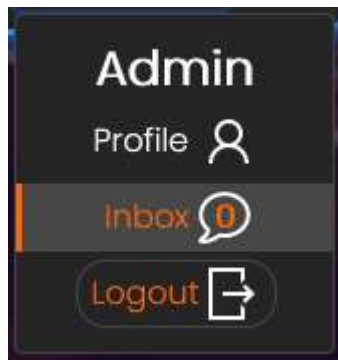
The user will then see an input area for a message and options to Cancel or

Send. (Fig 18.)



(Fig 18.)

2. The second option is to reply to a conversation already started. The user can do this by navigating to their Inbox found in the drop down menu in the navigation menu. (Fig 19.)



(Fig 19.)

Upon clicking Inbox, the user will be taken to their inbox where they can see all conversations with users listed by most recent message.

When the user clicks on the conversation they would like to reply to, they will see the entire conversation with that user listed in descending order with the most recent message at the bottom of the page, above the text input box.

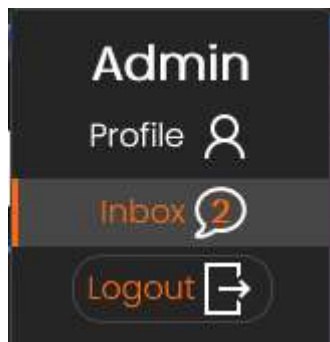
The user can then enter the text they wish to send and click the Send button. (Fig 20.)



(Fig 20.)

After sending the message, the recipient will receive a notification in their Inbox in the form of a number that represents the number of new messages in

their Inbox. (Fig 21.)



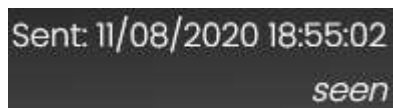
(Fig 21.)

The specific conversation that has new messages will also display a notification of "New Message". (Fig 22.)



(Fig 22.)

For the sender, the message will have a delivery status in the bottom right corner of the message of either "Seen" (Fig 23.) or "Delivered" (Fig 24.) depending on whether the recipient has viewed the message or not.



(Fig 23.)



(Fig 24.)

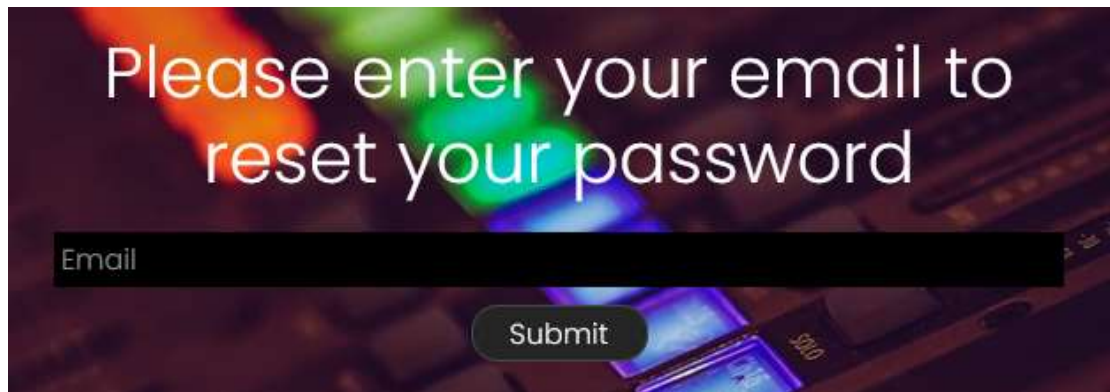
Recover a lost password

If a user fails to login they will be prompted with a Forgotten Password link. (Fig 25.)

Please Enter your login details.
Forgot Password?

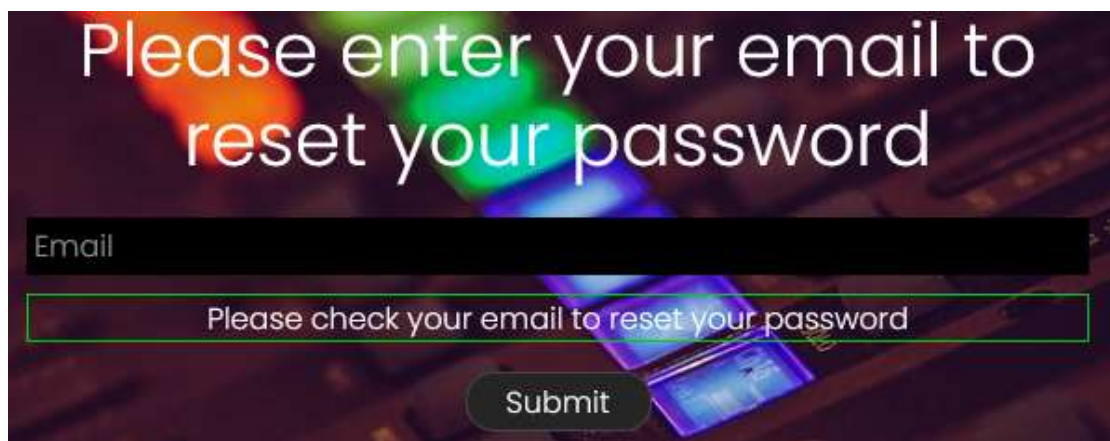
(Fig 25.)

Upon clicking this link, the user is instructed to enter the email address they used to signup. (Fig 26.)

A screenshot of a web form for password reset. The background is a dark, blurred image of a keyboard with some keys highlighted in green and blue. The text "Please enter your email to reset your password" is displayed in a large, white, sans-serif font. Below this text is a black rectangular input field with the placeholder text "Email" in white. To the right of the input field is a dark, rounded rectangular button with the word "Submit" in white.

(Fig 26.)

After entering their email, the user will be instructed to navigate to their email inbox. (Fig 27.)

A screenshot of the same web form as in Fig 26. It includes the title "Please enter your email to reset your password", the "Email" input field, and the "Submit" button. Additionally, a green rectangular box with a thin border is positioned below the input field, containing the text "Please check your email to reset your password" in a white, sans-serif font.

(Fig 27.)

The user will find a email containing a link to reset their password. (Fig 28.)



Password Reset

[Click here to reset your password](#)

(Fig 28.)

After clicking the link, the user is taken back to the web page and is instructed to enter a new password and to confirm the password entered. (Fig 29.)

A password reset form with a dark background and a blurred image of a keyboard. The form contains three main elements: a text input field labeled 'New Password', another text input field labeled 'Confirm Password', and a rounded 'Submit' button at the bottom.

(Fig 29.)

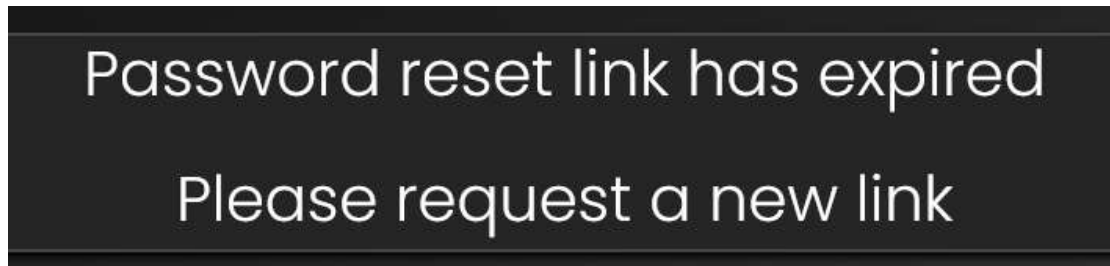
After successfully changing their password, the user will be taken to the homepage and a message will be displayed confirming the change of password. (Fig 30.)

A dark rectangular message box with white text. The main text reads: 'You need to be logged in to view the forum' followed by 'If you have registered, please check your email to verify your account'. At the bottom, there is a link that says 'Click here to register' and a green-bordered box containing the text 'Password has been successfully changed'.

(Fig 30.)

The user can then proceed to log in using the new password they have set.

After changing the password, the link sent to the users email will display a notification informing the user of an expired password reset link. (Fig 31.)



(Fig 31.)

Upcoming Features

There are a number of upcoming features planned as mentioned at the start of this document.

There are plans to implement a user image gallery which will be featured on each users profile page and accessible to all users to see.

A friends system will be added to the functionality of the website allowing users to add friends for easier messaging and restricting information on a users profile to be visible only to friends such as the image gallery mentioned previously.

A Facebook style wall will be added which allows users to express themselves. This will be visible only to friends the user has added and will allow friends to make posts on the users wall.

Status updates will be implemented which will allow users to add a short status to their page which will be visible to all users and possibly available on topic posts and comments.

Conclusion

My journey creating this website has been filled with problems and issues which have had to be overcome to reach this point. I started out with procedural PHP with a single file for each page and as we progressed through the trimester, we learned new design patterns such as MVC which I had to adapt and re-factor my code which ended with having 4 files per page including a Model, a Controller, a View and the PHP file which would be accessed by the user.

After MVC came OOP (Object Oriented programming) which consists of classes which encapsulate Attributes and Methods, these classes are created in such a way that information contained within them is inaccessible to users. This provides an extra layer of security as the information is protected.

I have learned a great deal about PHP and programming as a whole during this project and have noticed the way I analyse problems has changed for the better. I am able to step back and think about issues objectively using logic.