



Introduction:

The SAE Student Forum is a website I developed as a project for my Back-End assignment. 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: Function will be disabled on submission to allow any valid email address to be used when 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.) that was sent to them in order to confirm a legitimate email address was used.



SAE Student Forum Inbox x

 **studentforumsae@gmail.com**
to me ▾

Activate your SAE Student Forum account

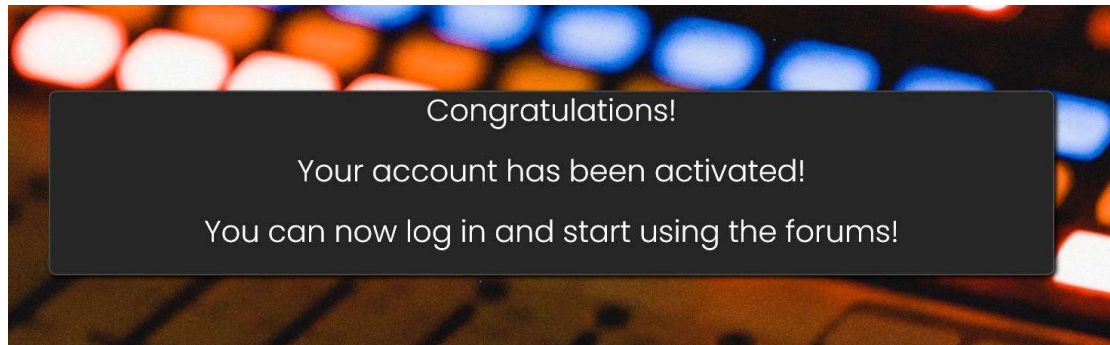
[Click here to activate your account](#)

This sender does not support replies

 Reply  Forward

(fig 2.)

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



(Fig 3.)

Using the Forum

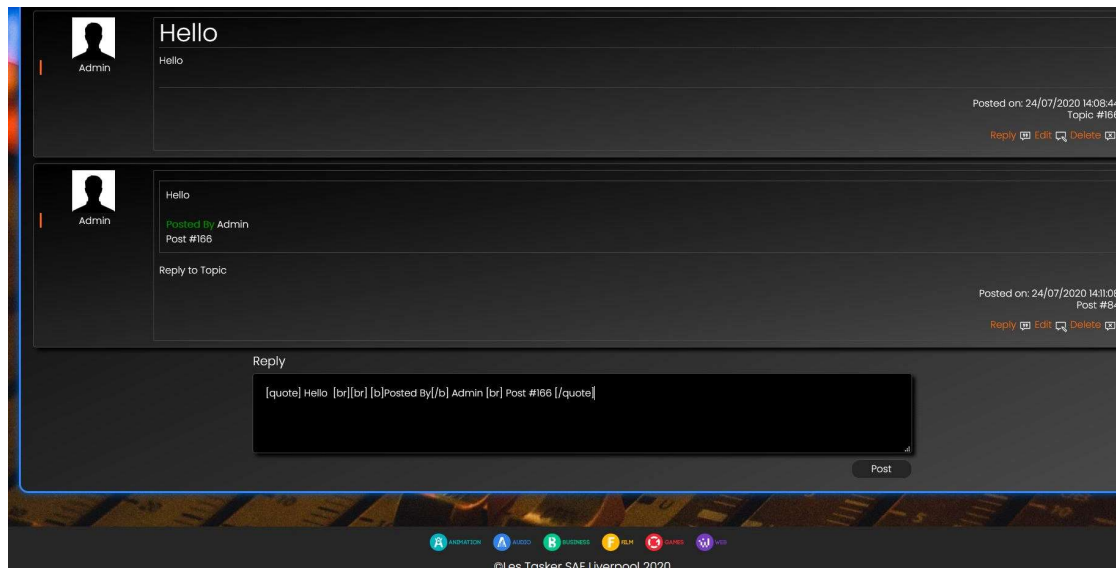
Once the user has registered and verified their account, the user can then log in to the website using either their Username or Email along with their password.

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

Replying to a post is a simple process. The User clicks the Reply button (Fig 4.) on the post of their choosing. The post content is automatically inserted into the text field 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.)

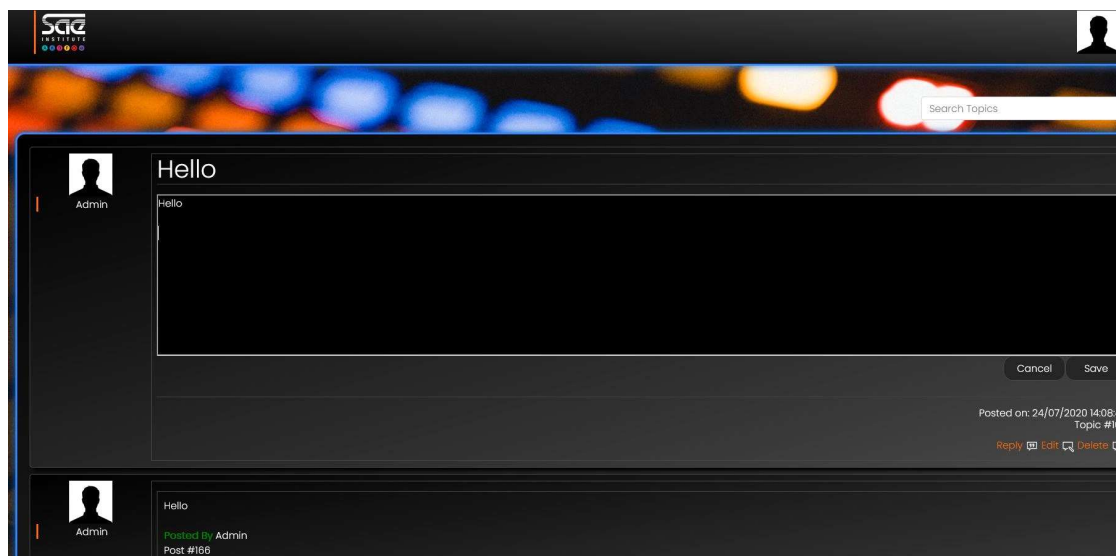


(Fig 5.)

If a user would like to edit a post they created, they must click the Edit button. (Fig 6.) The original post will then be replaced by a text field along with 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.)

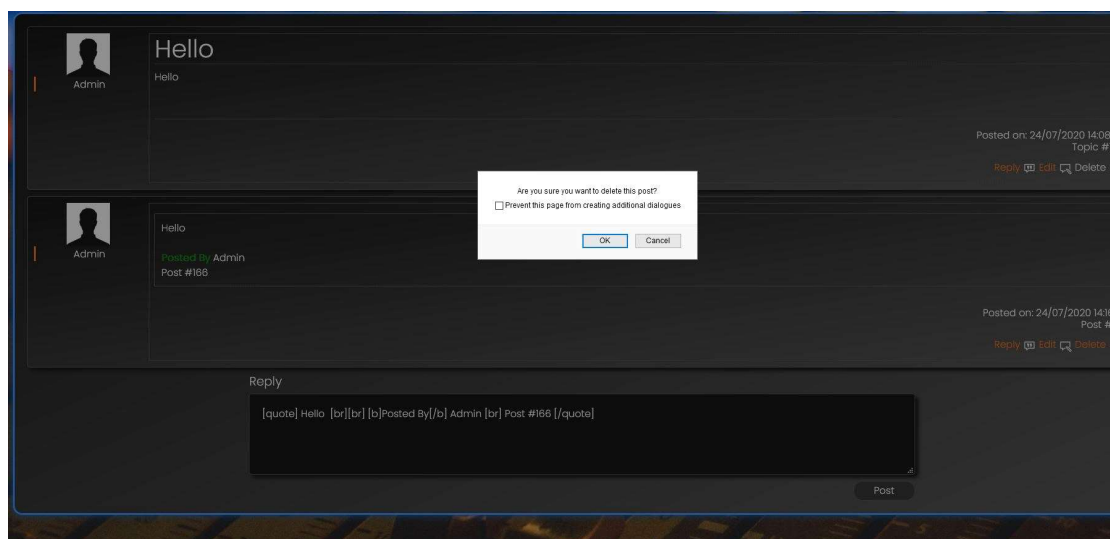


(Fig 7.)

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 including user replies, will be permanently deleted.



(Fig 8.)

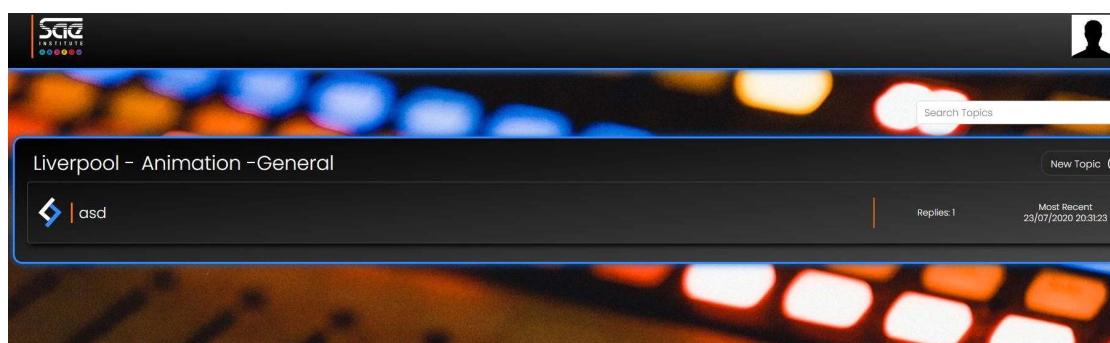


(Fig 9.)

Creating a topic is a simple process for the user. They must navigate to the topic list screen via the relevant Campus>Course>Category path (Fig 11.) and click the New Topic button located at the top right corner of the topic listing section.(Fig 10.)

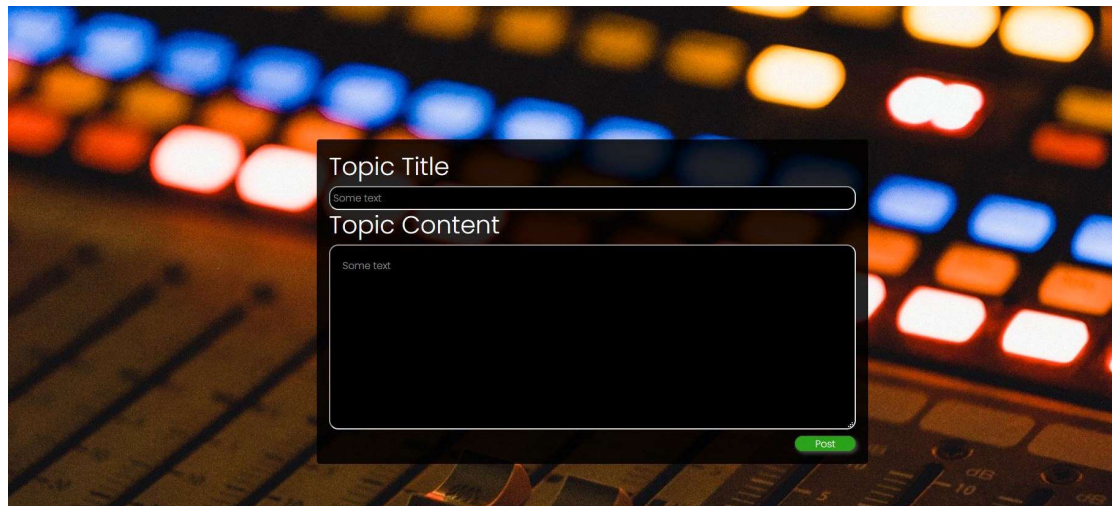


(Fig 10.)



(Fig 11.)

Once the user clicks the New Topic button (Fig 12.) they are met with a new page containing 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.

A dark rectangular form overlay on a background of a keyboard with glowing keys. The form has two input fields: "Topic Title" with placeholder text "Some text" and "Topic Content" with placeholder text "Some text". A green "Post" button is at the bottom right of the form.

Topic Title

Some text

Topic Content

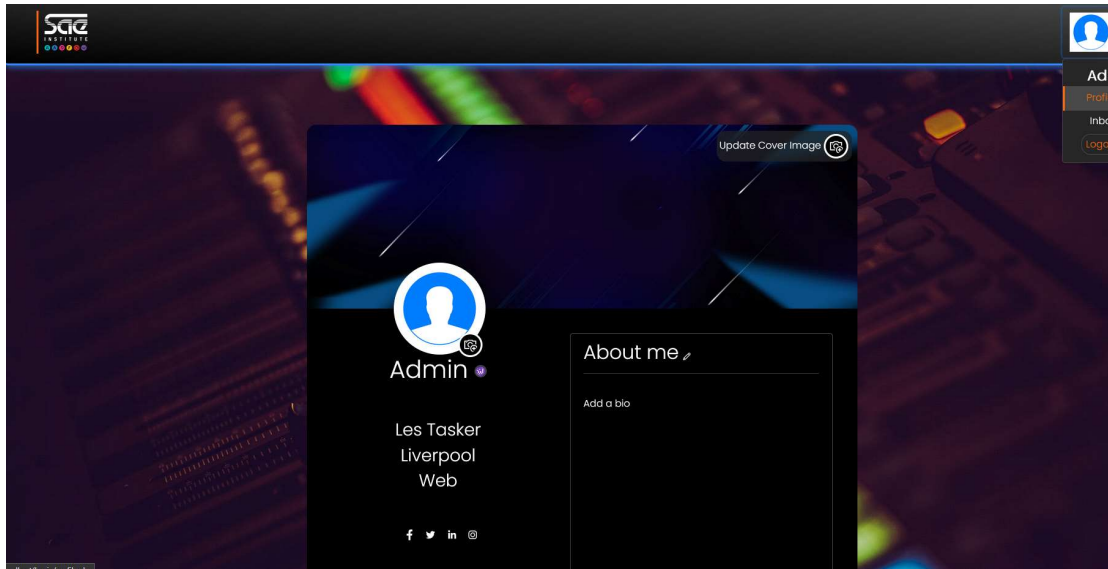
Some text

Post

(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.)

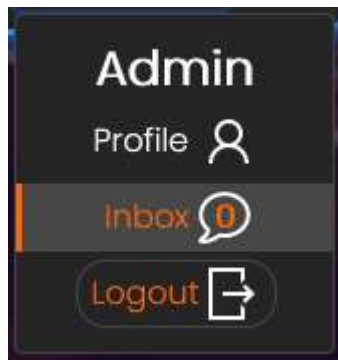
The user will then see an input area for a message and options to Cancel or

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 redirected to their inbox, in which they can see all conversations with users listed in descending order of most recent messages.

When the user clicks on the conversation they would like to reply, 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.

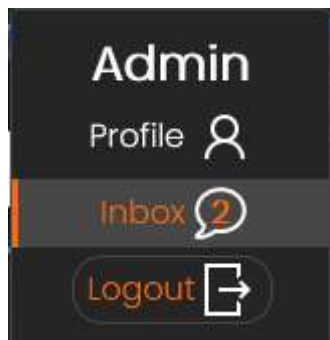
The user can then enter the text they wish to send and click the Send button. (Fig 20.)



(Fig 20.)

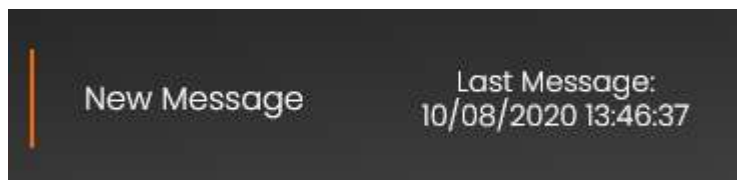
After sending the message, the recipient will receive a notification in their

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 and recipient, 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.)

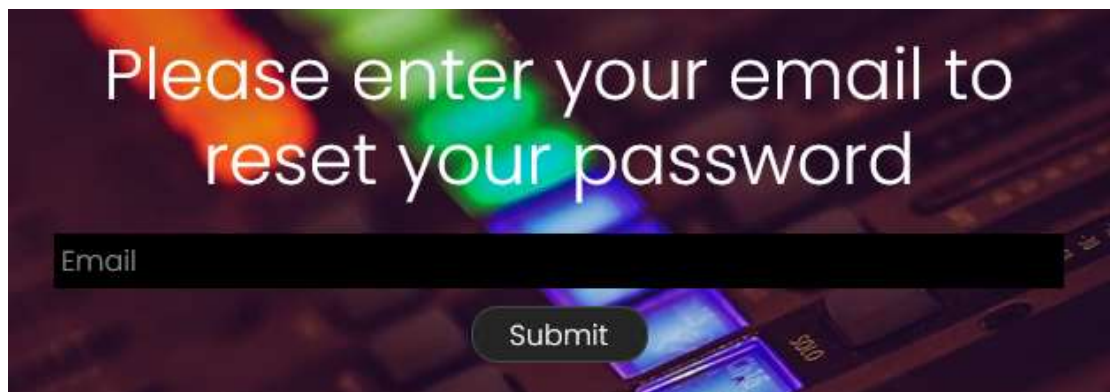
Recovering a lost password

If a user fails to login they will be prompted with a Forgotten Password link.

(Fig 25.)

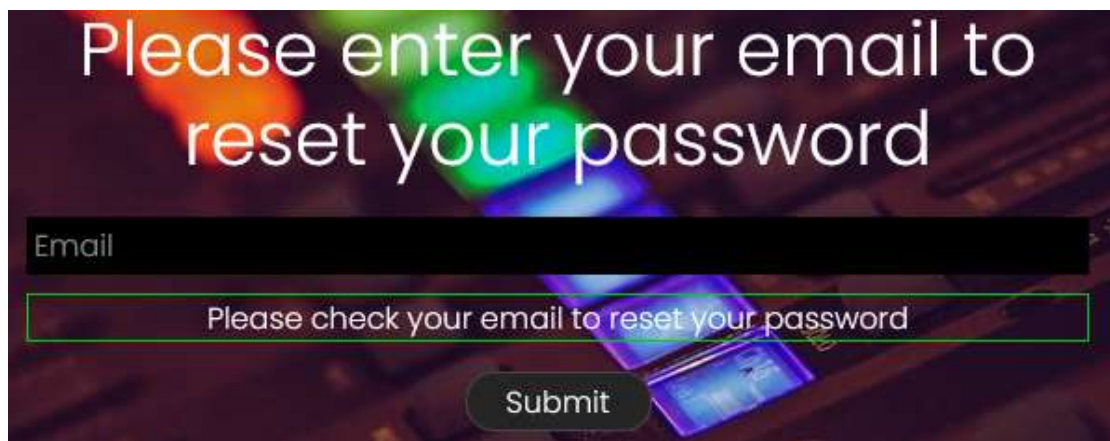


Upon clicking this link, the user is instructed to enter the email address they used to signup. (Fig 26.)



(Fig 26.)

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



(Fig 27.)

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



studentforumsae@gmail.com

to me ▾

Password Reset

[Click here to reset your password](#)

(Fig 28.)

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

Enter your new password

New Password

Confirm Password

Submit

(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.)

You need to be logged in to view the forum

If you have registered, please check your email to verify your account

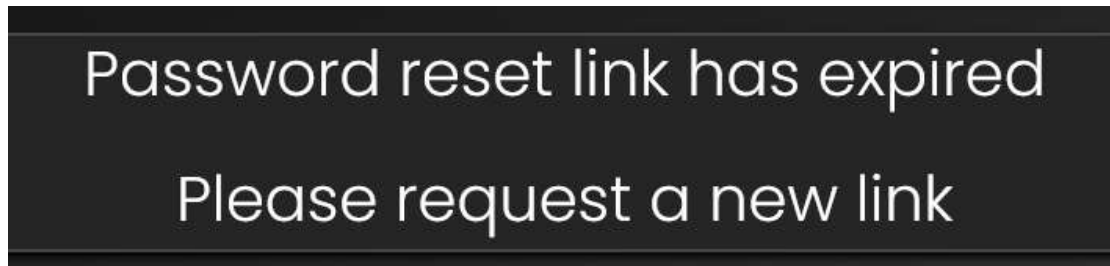
[Click here to register](#)

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.

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 of the user 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, written in a single file for each page. As we progressed through the trimester, we learned new design patterns such as MVC, which I had to adapt and re-factor my code. After re-factoring, the website contained 4 files per page, including a Model, a Controller, a View and the main PHP file which would be accessed by the user.

After MVC came OOP (Object Oriented programming) which consists of classes which encapsulate Properties 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 contained is protected.

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