Blog Posts Project

Software developer: Claude Oduori – Intern Finsense Africa

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Submitted to Zulqada Ali

On 17th Sept. 2021

Introduction

Finsense Africa is a software development company that provides Platform as a service to its customers. As a software development intern at Finsense I am required to understand the software development processes and technologies in order to fit well in the team. As a starting point I have been tasked with developing a simple information system to demonstrate my knowledge of CRUD and general software development processes. This is important as it will provide a base of guidance in future projects aimed at orienting me into the Finsense way of software development.

System Objectives

1. To develop a posts CRUD web application
2. To authenticate users of the web application
3. To deliver technical documentation of the web application

System Deliverables

1. Web application
2. Technical documentation
3. Non- technical documentation

Development Methodology

The web application will be developed using a waterfall model. This is because apart from the timeframe given to deliver the web application being short, the web application is simple and employing a simple software development life cycle is efficient.

Functional Requirements

Authentication – The application should authenticate a user before they are able to modify any information.

Create – The application should enable users to create posts when they are authenticated.

Read –The application should allow its users to view all posts including posts created by other users.

Update – The application should allow authenticated users to update only the posts they created.

Delete – The application should allow authenticated users to delete only the posts they created.

Non-Functional Requirements

Data integrity – the state of posts in a given time should be a true reflection of the actions of its users.

Availability – the web application should be available to its users when needed.

Maintainability – the web application should be easy to maintain.

Scalability – the web application should be easy to scale to provide other functions.

Performance – the web application should be fast and with little loading durations in reflecting user actions.

Security - the web application should provide a form of authorization and authentication through logging in as well as data in transit encryption using an SSL certificate.

Session Management – a user should not be able to return to an authenticated page by pressing the back button without being logged in.

Development Tools

Database Tools

The database of the web application will be hosted on an SQL database management system, specifically MariaDB.

Programming Tools

The web application will be developed using:

Front-end frameworks - Bootstrap version 5.1.1

Back-end framework – Laravel version 8.61.0

- Composer version 2.1.6

IDE - VSCode version 1.60.1

OS - 64-bit Ubuntu 20.04 LTS computer with a core i7 processor.

Version control - GitHub

Documentation Tools

Non-technical documentation – Ms Word (cloud version – build 16.0.14509.41005)

Diagramming Tools

Class diagram - Star UML version 4.0.1

Use case diagram – Star UML version 4.0.1

Database schema - MySQL-Workbench-community version 8.0.26-1ubuntu20.04

Wireframing and mockups - Wireframe Sketcher Studio version 6.3.2-1

Testing Tools

Front-end testing – Browser (google chrome) 92.0.4515.107 (Official Build) (64-bit)

System Modules

Authentication module - contains session management, Login and Logout pages.

View Posts Module – contains landing page to view all posts.

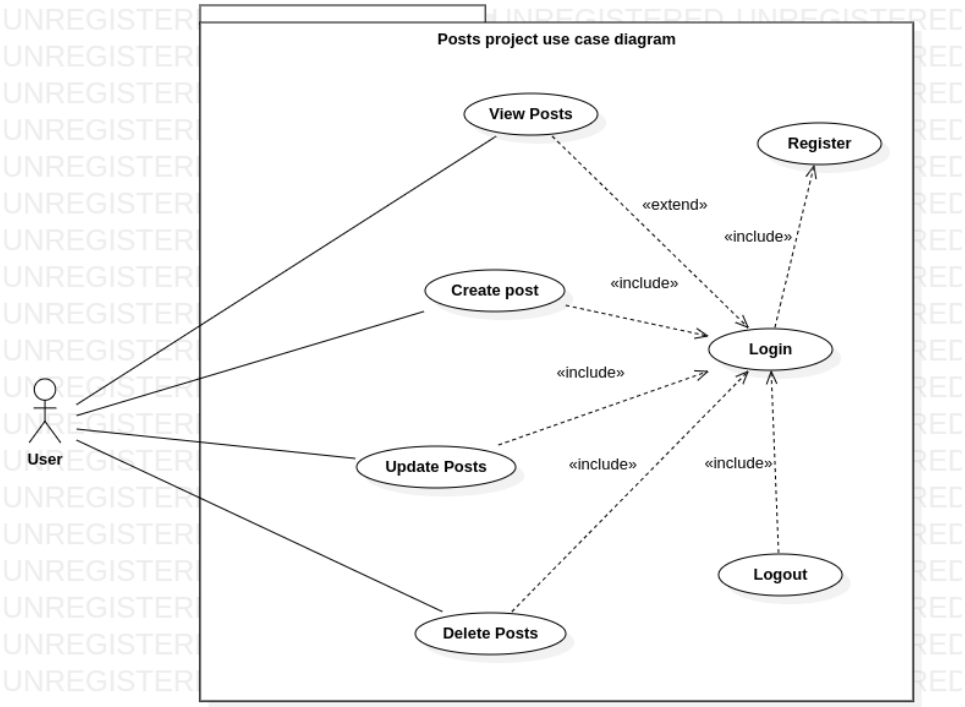
Edit Posts Module – contains post editing page.

Create Posts Module - contains post creation page.

Delete posts module – contains post deletion page.

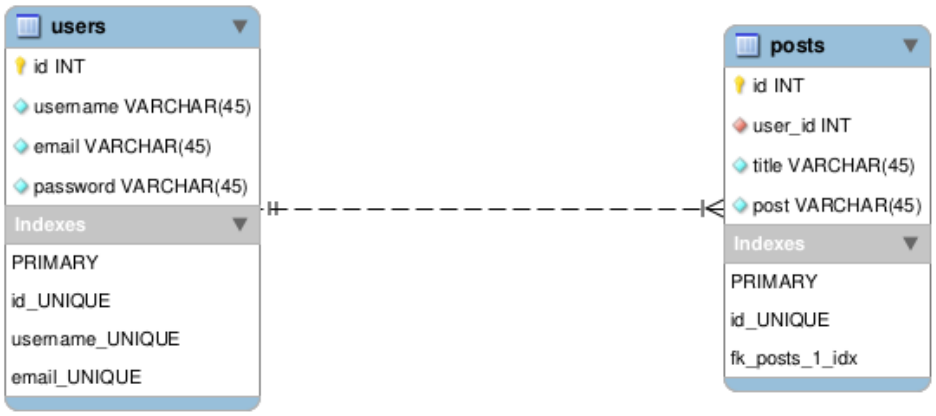
System Analysis Diagrams

Use case Diagram

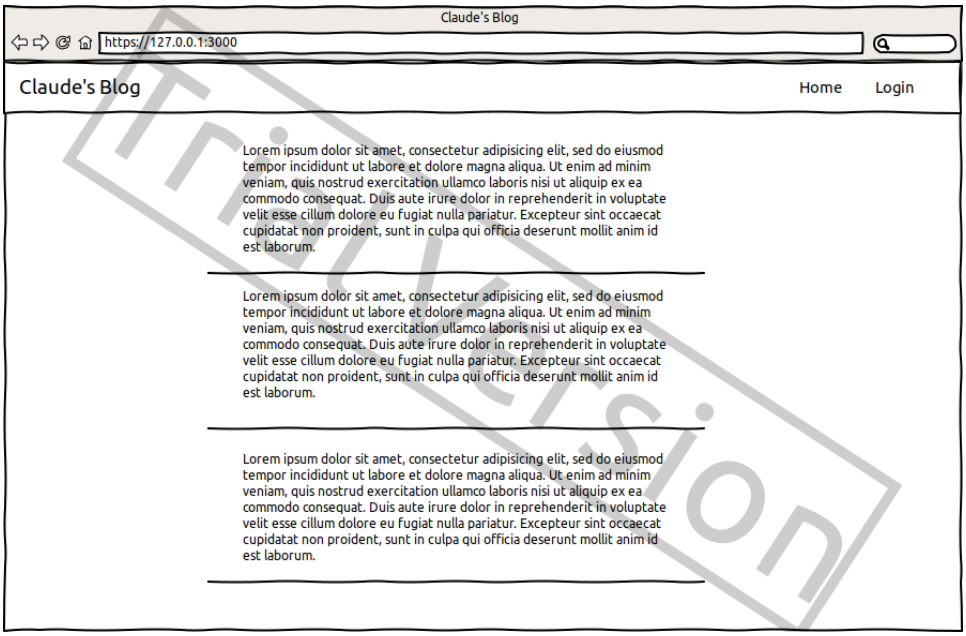


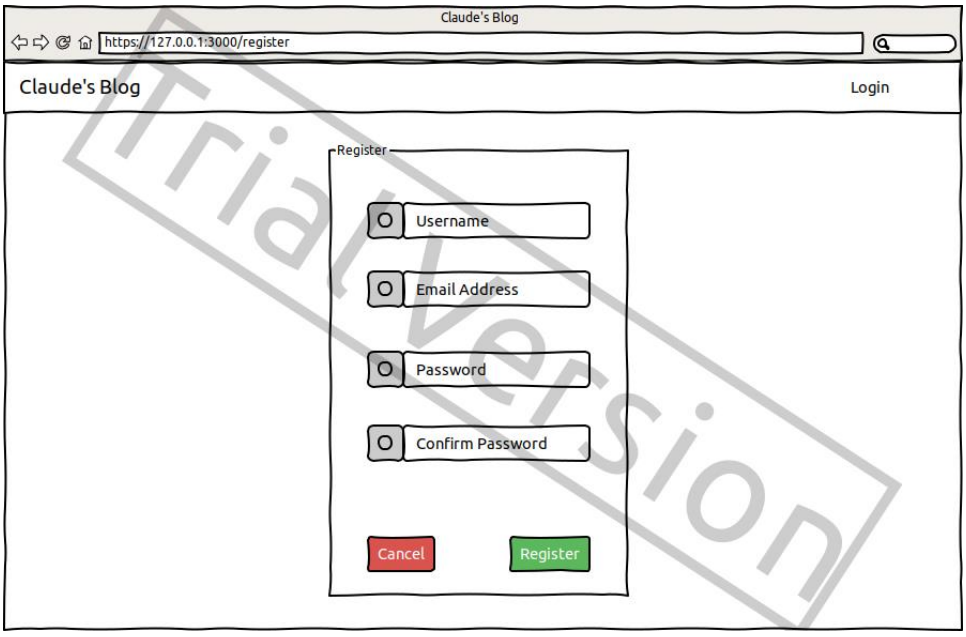
Class Diagram

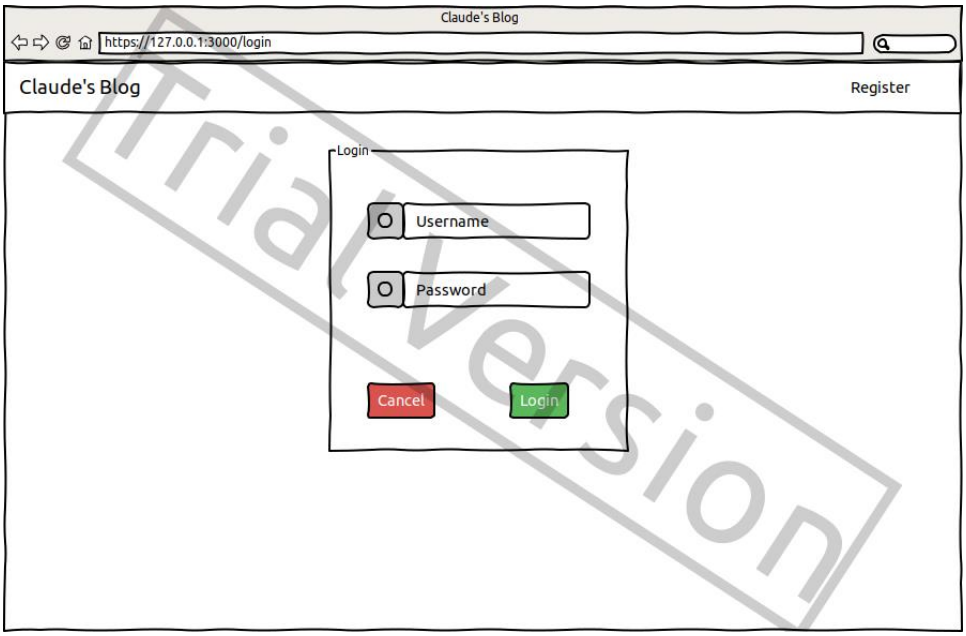
Database Schema



Wireframes




Claude's Blog
https://127.0.0.1:3000/register
Claude's Blog
Login
Register
Username
Email Address
Password
Confirm Password
Cancel
Register
Trial Version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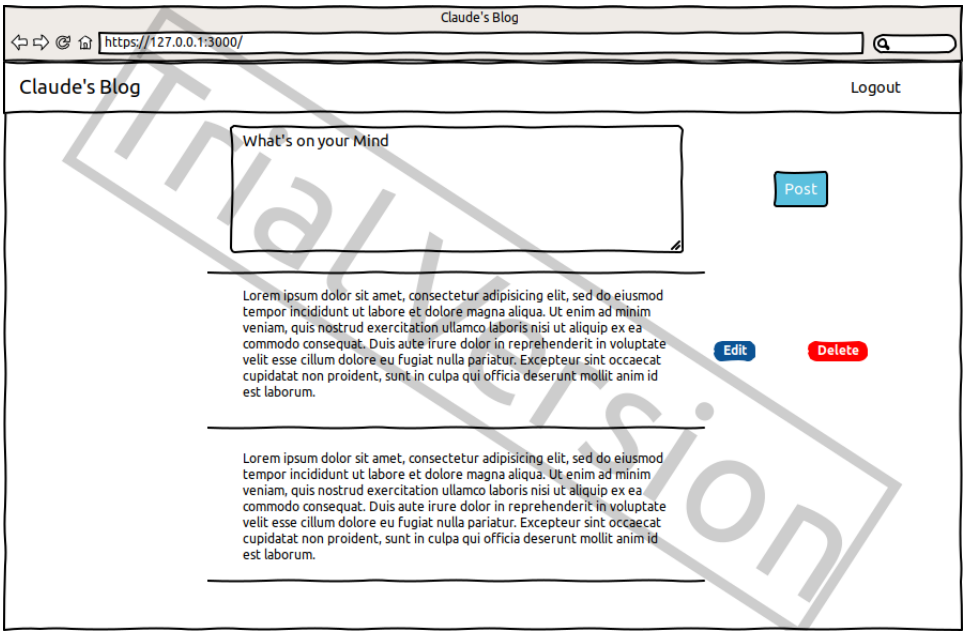

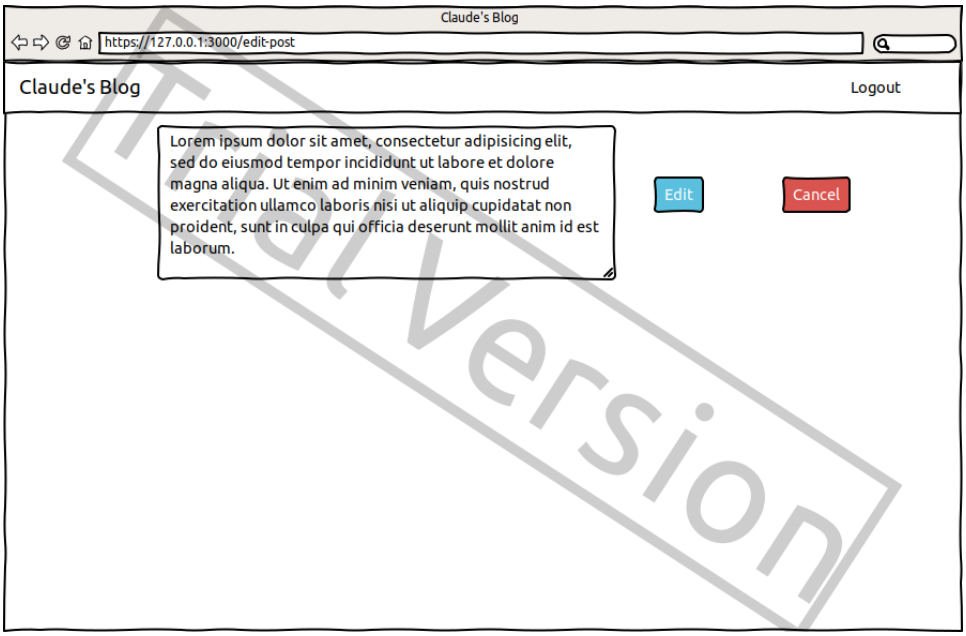

Trial Version
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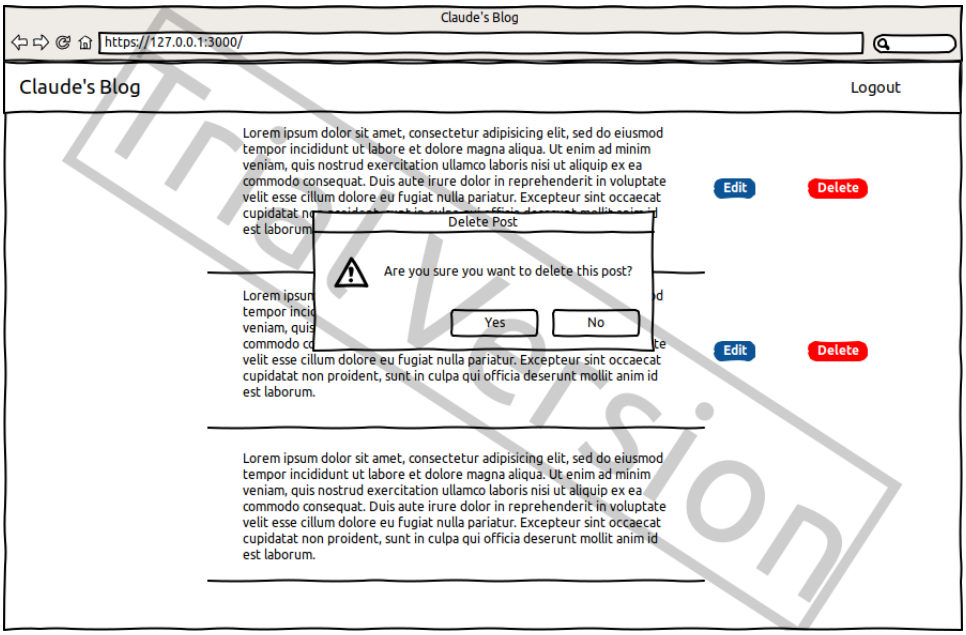
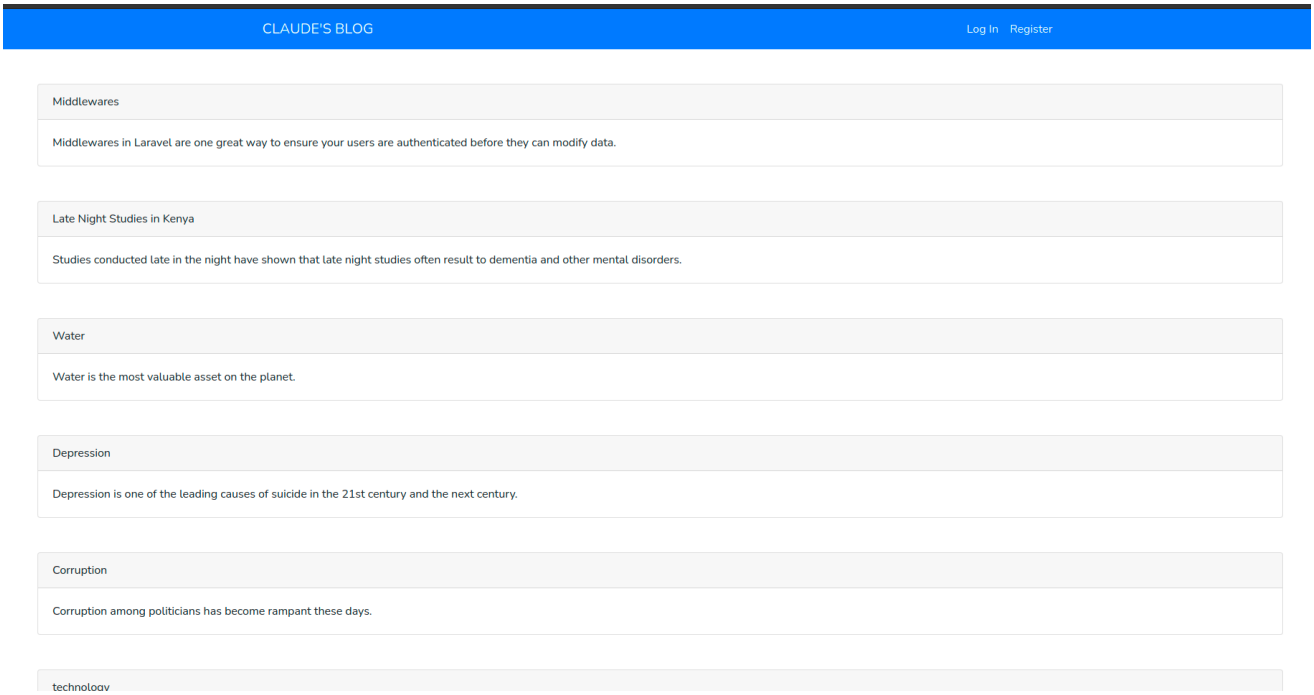


Tests

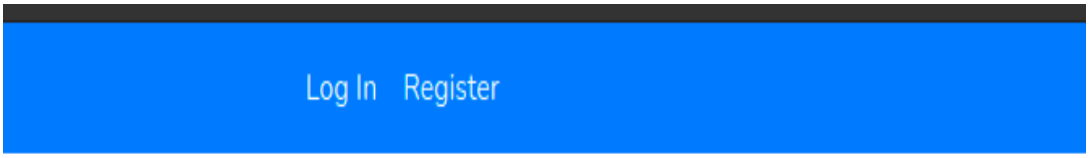
Component	**Test**	**Status** **Pass** –Performed as expected **Fail** – Did not perform as expected
Sign In	Enter invalid credentials	Pass
Sign In	Enter valid credentials	Pass
Post	Create post	Pass
Post	Edit post	Pass
Post	Delete post	Pass

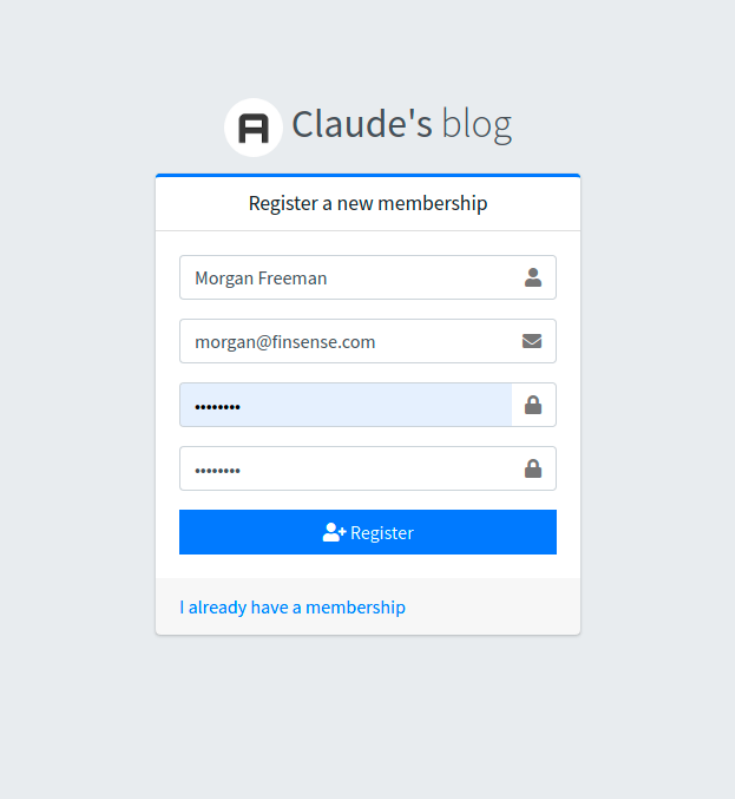
User Manual

To access the blog, type the blog URL (https://localhost:8000) in any browser using any smart device. This will give you access to the Main page of the blog where you can be able to view posts created by different users.

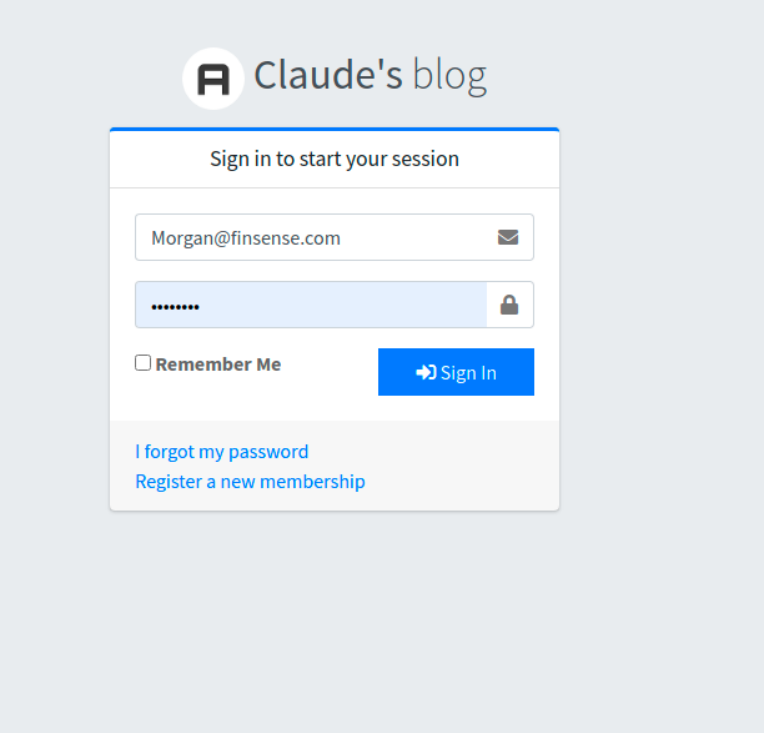


To create your own post or make changes to it. Log in to the system by clicking on the login link at the top right part of the page and using the set of credentials you supplied during registration.



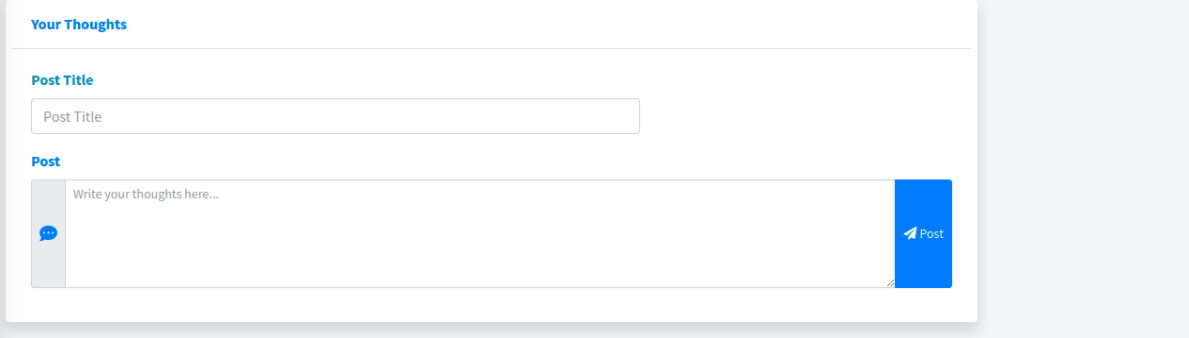


If you have not registered, you can do it by clicking on the Register link at the top left of the page. Ensure you supply a valid email address and check and remember your password.



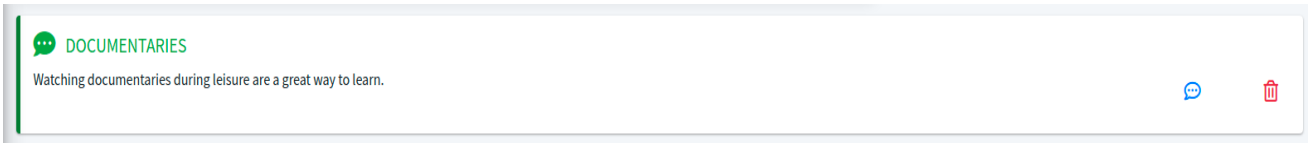
After successfully login into the system. You will be able to create your own posts as well as delete them and modify their content.

To create a post, write your topic of concern as well as the message on the input fields provided at the top of the page.

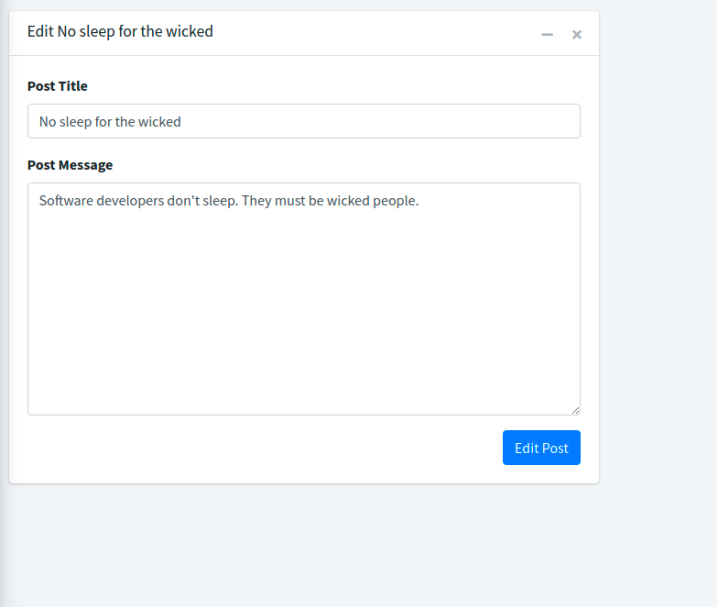


The created post will appear immediately below the form above.

A user can edit or delete a post that was created only by them. To edit a post, locate your post in the list of posts from the home page and click on the blue message icon located on the extreme right of the post. If you can see your post but you cannot see the edit icon, ensure that you are logged in using the set of credentials used to create the post.



After reviewing and editing the post, press the edit post button to persist the changes.



To delete the post, press the red trash-can button on the extreme right of the post you created and wish to delete. Select OK on the appearing modal if you are sure that you want to delete the post. Please note that deleting a post cannot be undone.

Project Schedule

Monday 14th Sept. 2021 – Planning and requirements analysis gathering.

Tuesday 15th Sept. 2021 – System design and implementation.

Wednesday 16th Sept. 2021 – implementation and testing.

Thursday 17th Sept 2021 – deployment and documentation.

Friday 18th Sept 2021 – Project presentation

Saturday 19th Sept 2021 - Maintenance