

Software Design Documentation

for

<mE-ngadu>

Version 1.0 approved

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1.0 INTRODUCTION

1.1 Purpose

This SDD describes the detailed design, data design, system architecture and user interface design of mE-ngadu. mE-ngadu can be used by students in CSIT faculty who want to send complaints to the higher ups in CSIT faculty.

1.2 Scope

mE-ngadu is a web-based application that will allow users to manage their contents and leave through an intuitive, easy-to-use interface. In this system, students can make complaints, view complaints and track the status of their complaints.

1.3 Overview

mE-ngadu is a system that allows the students in CSIT faculty to send any complaints that they want to do. They also can view all the complaints and can track the status of their complaints whether the complaints have already taken action by the higher ups or not.

1.4 Reference Materials

mE-ngadu SRS document version 1.0

2.0 SYSTEM ANALYSIS

mE-ngadu is a web application system that allows students in CSIT faculty to make any complaints the right way in the faculty . mE-ngadu provides a platform for the students to make their own complaints. Students also can view the status of their complaints either the complaints are still pending or have taken action. Other than that, students can see all complaints that has been made by other students.

2.1 Product Function

mE-ngadu is a platform that will allow the users to login as a student or a staff member. This system will allow the user to access the website to write a complaint about the faculty. It will also allow the user to track the complaint whether the complaint is already read or already take an action on it.

2.2 Third Party Component

In this system, Google Maps will be used as the third party services. Google Maps will help in directing the user to see the person in charge in the faculty.

3.0 DETAILED DESIGN

3.1 Component Diagram

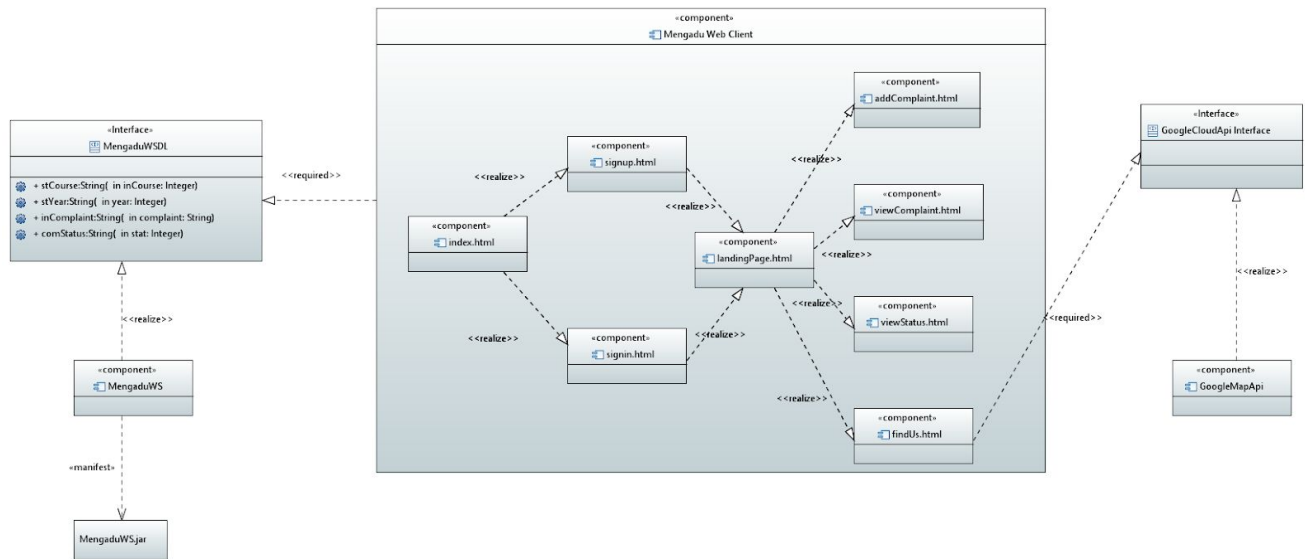


Figure 3.1: Component diagram for mE-ngadu

3.2 Sequence Diagram

3.2.1 SD1 - Sign Up

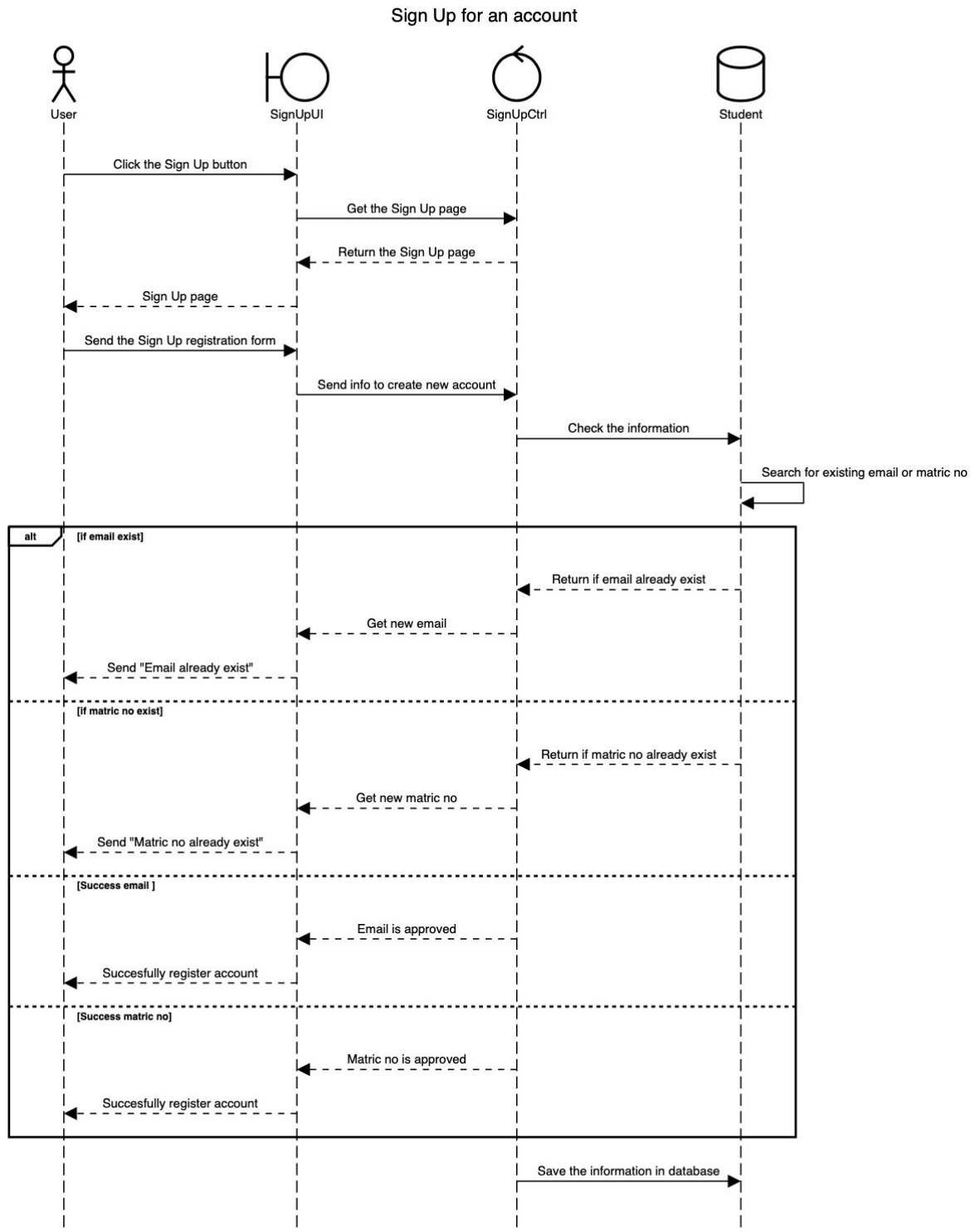


Figure 3.2: Sequence diagram for Sign Up.

This is the sequence diagram when the user wants to sign up for an account. This sequence diagram shows the flow of the user's action and also includes some of the alternate versions of

cases.

3.2.2 SD2 - Sign In

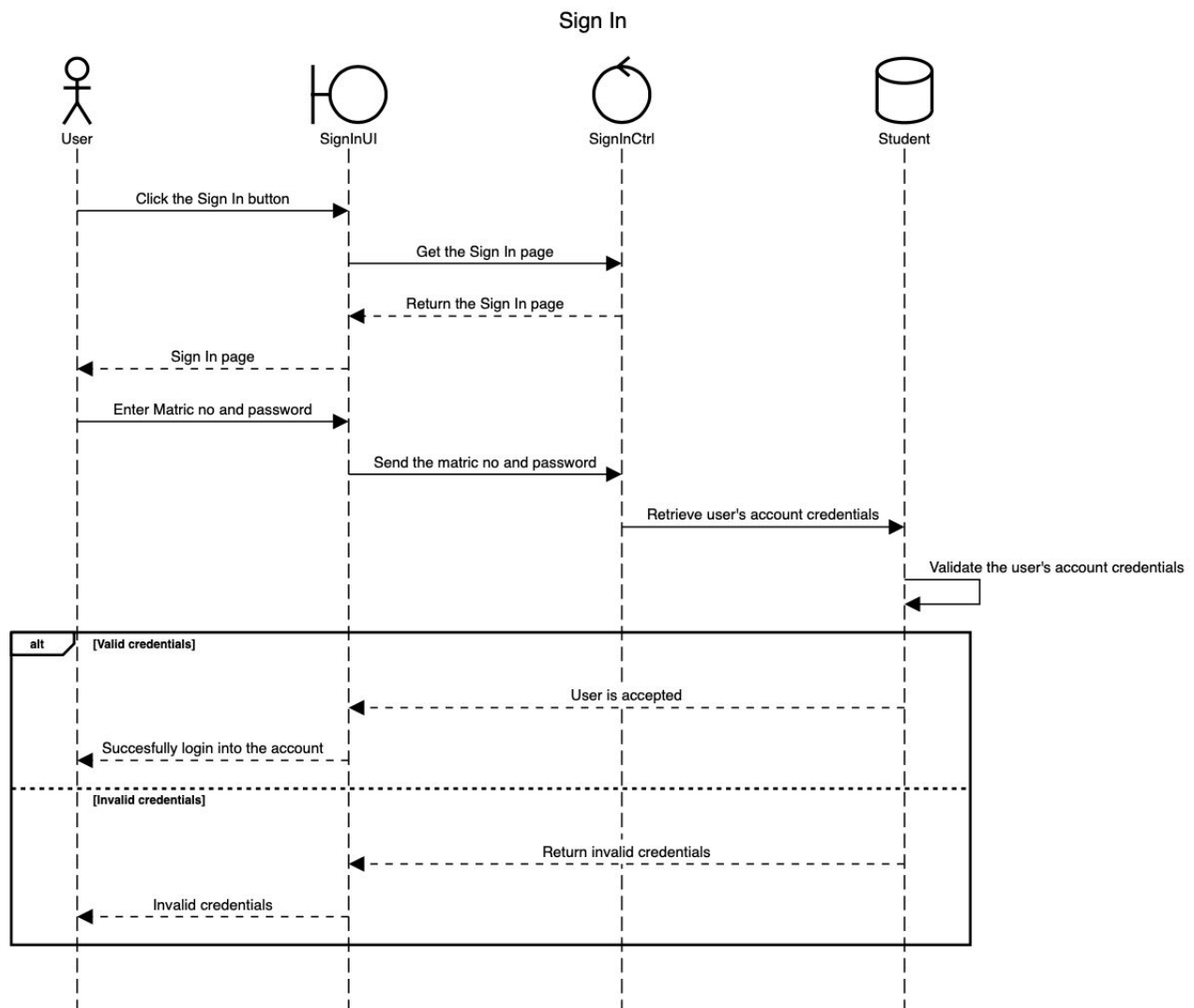


Figure 3.3: Sequence diagram for Sign In

This is the sequence diagram when the user wants to sign in for an account. This sequence diagram shows the flow of the user's action and also includes some of the alternate versions of cases.

3.2.3 SD3 - Submit Complaint

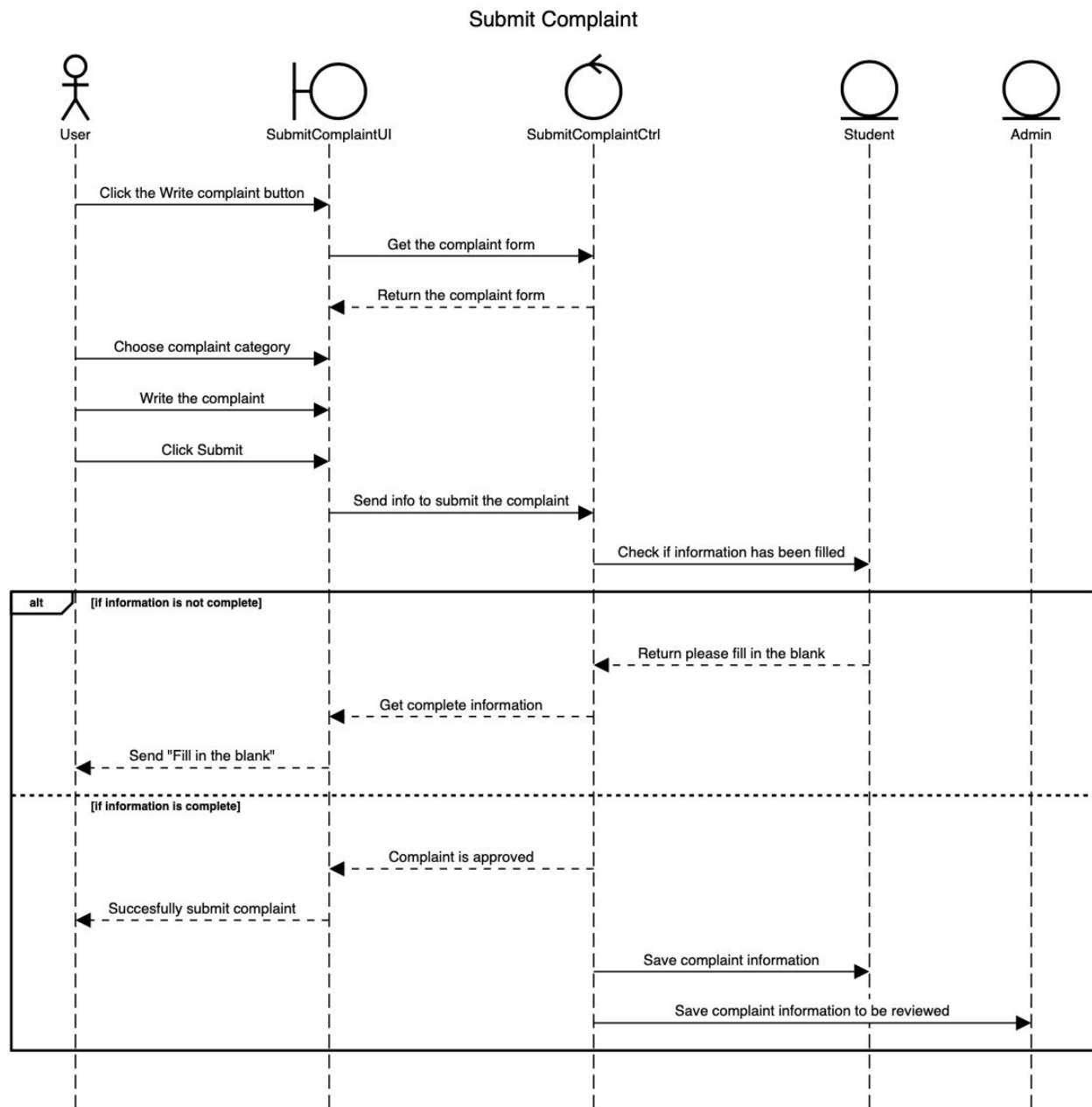


Figure 3.4: Sequence diagram for Submit Complaint

This is the sequence diagram when the user wants to submit their complaint. This sequence diagram shows the flow of the user's action and also includes some of the alternate versions of cases.

3.2.4 SD4 - View Status

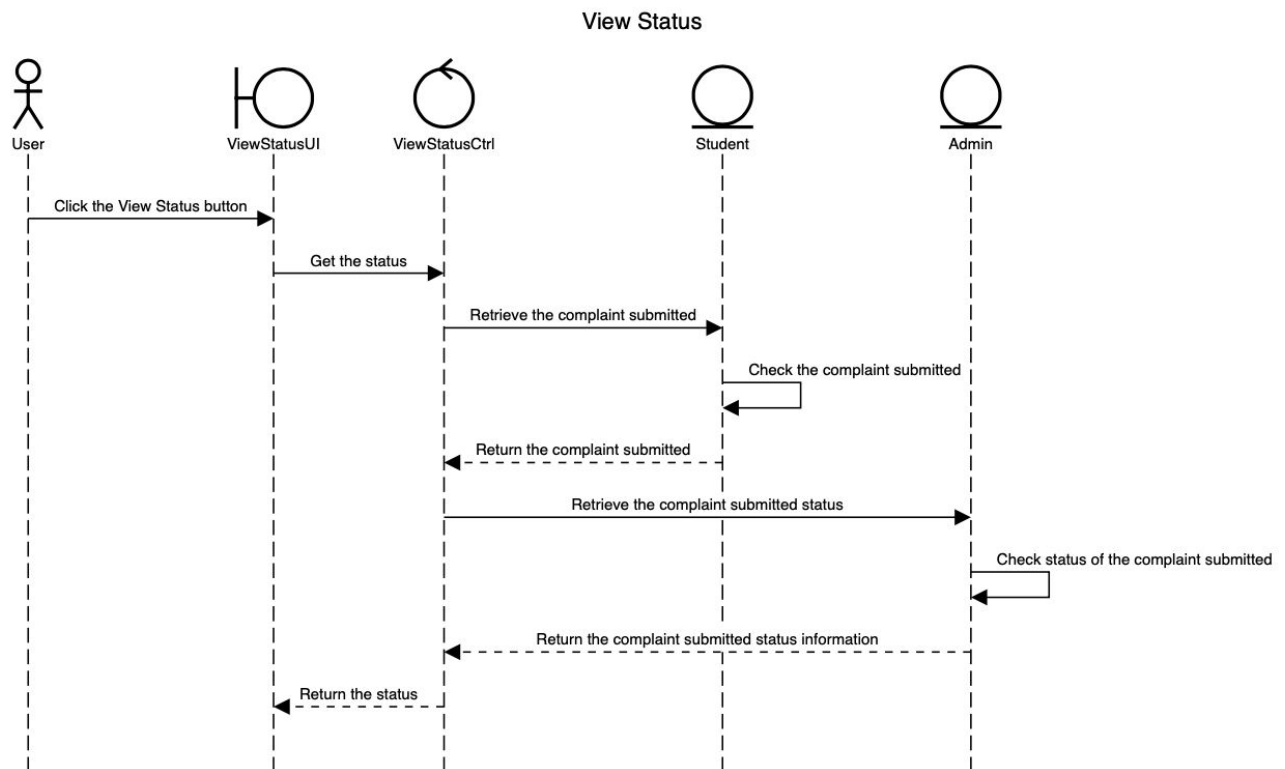


Figure 3.5: Sequence diagram for View Status.

This is the sequence diagram when the user wants to view the status of their complaint. This sequence diagram shows the flow of the user's action.

3.2.5 SD5 - View Complaint

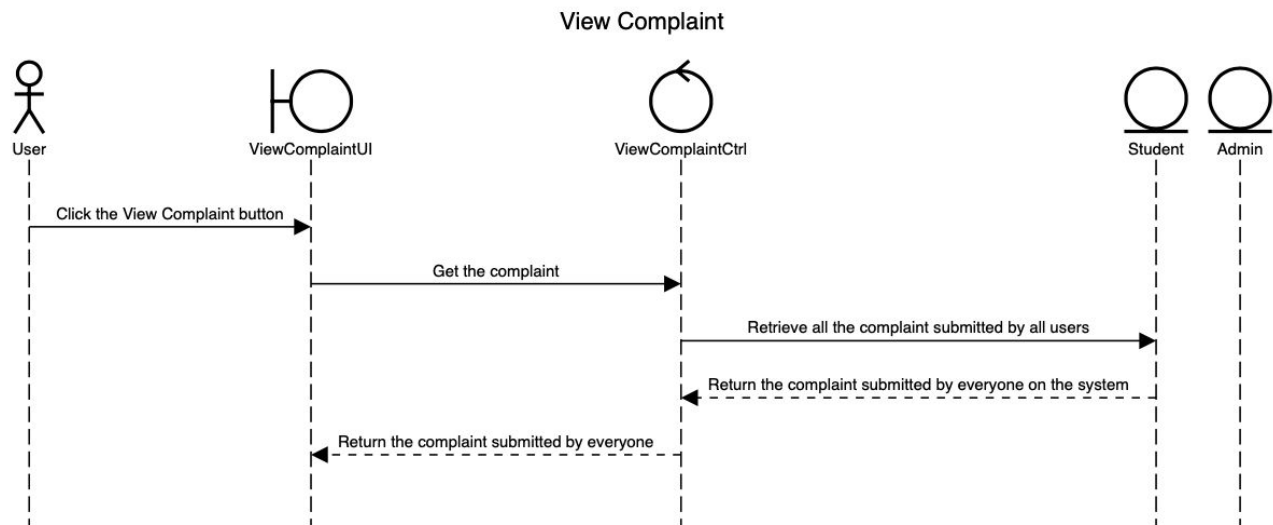


Figure 3.6: Sequence diagram for View Complaint

This is the sequence diagram when the user wants to view all complaints. This sequence diagram shows the flow of the user's action where it will display all complaints that has been submitted through the website.

3.2.6 SD6 - Manage Complaint

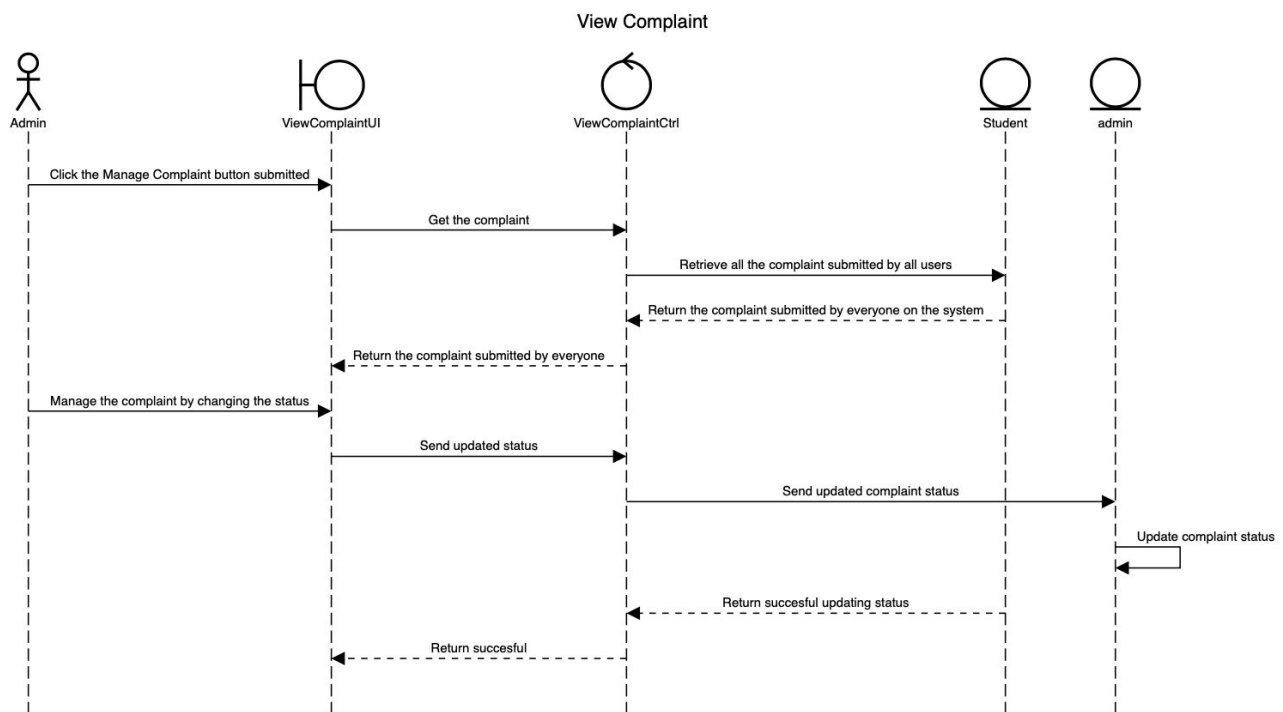


Figure 3.7: Sequence diagram for View Complaint

This is the sequence diagram when the admin wants to manage the user's complaint. This sequence diagram shows the flow of the admin's action when they want to manage the complaint that has been submitted by the users.

3.3 Activity Diagram

3.3.1 AD1 - Sign Up

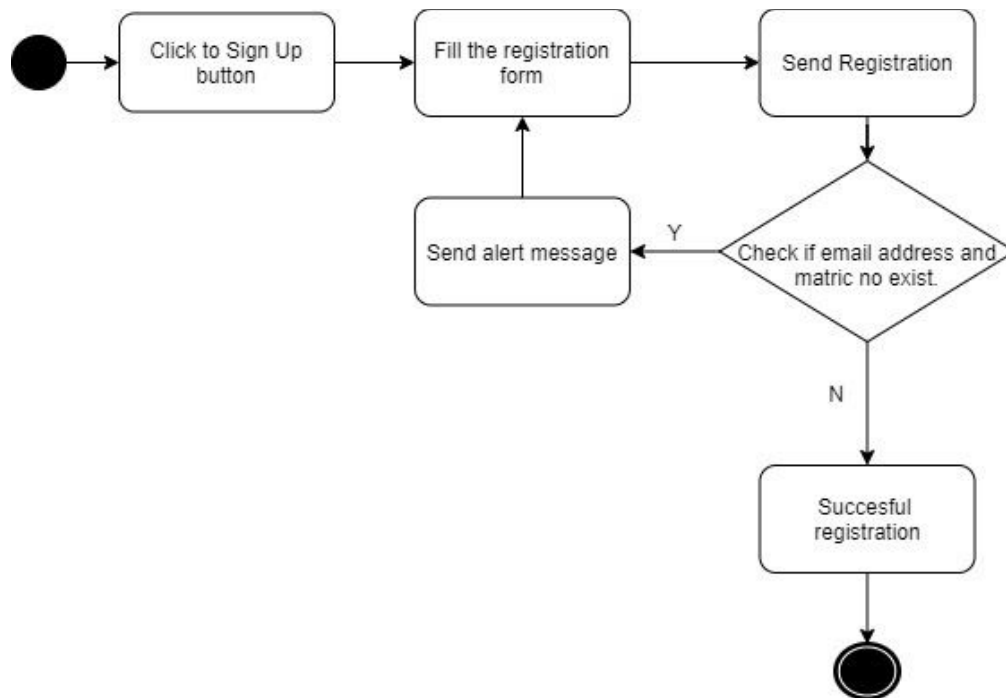


Figure 3.8 : Activity diagram for Sign Up activity.

The above diagram is an Activity diagram of Sign Up activity in use case diagram of mE-ngadu. This activity diagram contains activities such as click Sign Up button, fill in the registration form, send registration, check if the email address and matric no is exist, send alert messages if email address and matric no exist, and successful registration if email address and matric no is not existed..

3.3.2 AD2 - Sign In

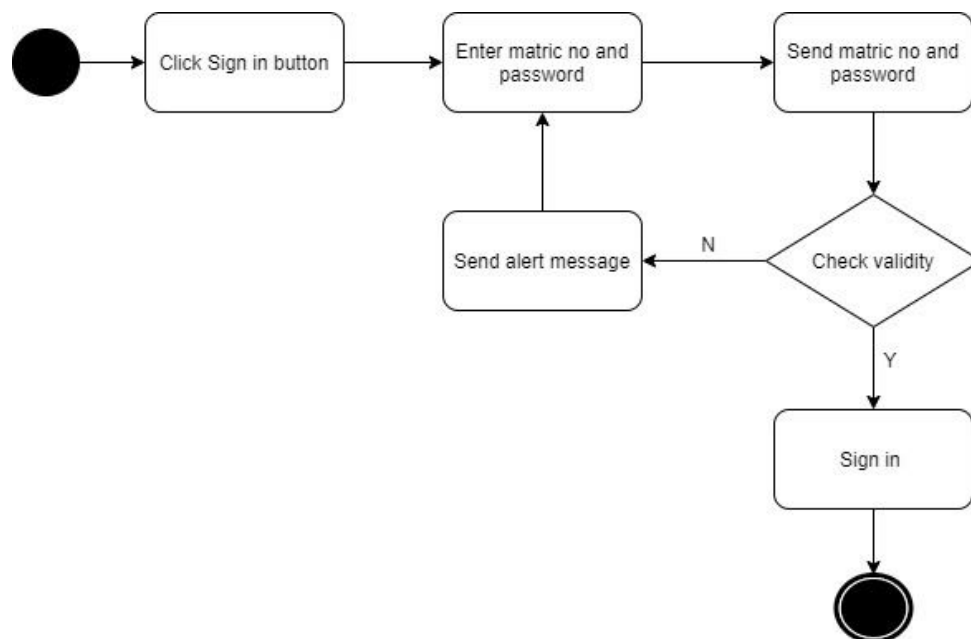


Figure 3.9: Activity diagram for Sign In activity.

The above diagram is an Activity diagram for Sign in activity in use case diagram of mE-ngadu. This activity diagram contains activities such as click sign in button, enter matric no and password, send username and password, check validity of the matric no and password, send an alert message if the validity is wrong, and the user can login if the validity is correct.

3.3.3 AD3 - Submit Complaint

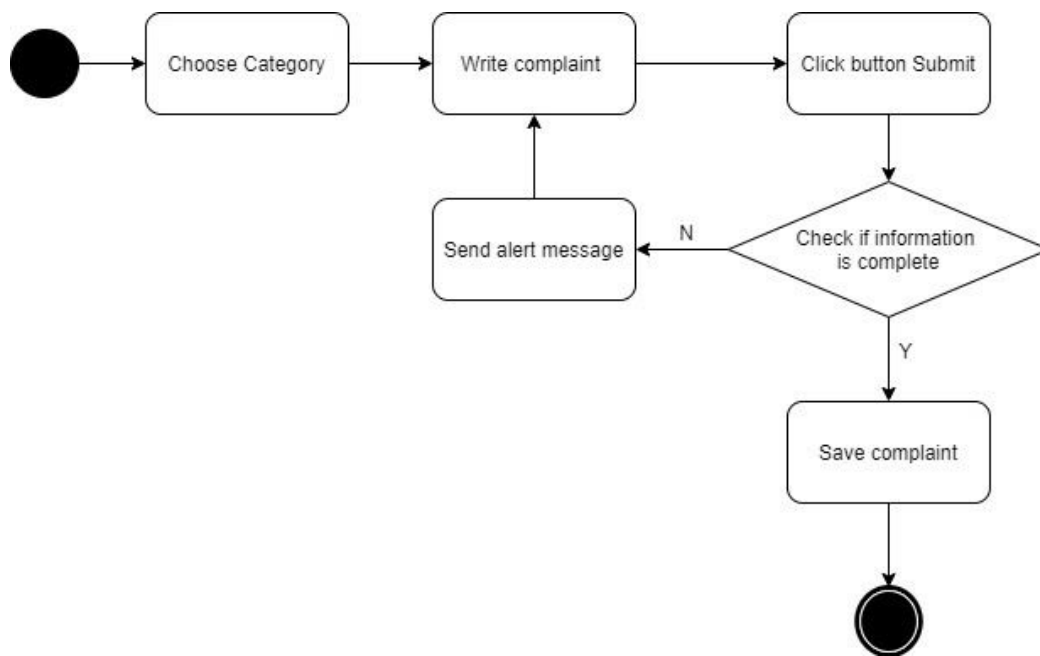


Figure 3.10: Activity diagram for Submit Complaint activity.

The above diagram is an Activity diagram for Submit Complaint activity in use case diagram of mE-ngadu. This activity diagram contains activities such as choosing the category of the complaint, write complaints, clicking the submit button, system will check if information is complete. If not complete it will send alert message. If complete, the system will save complaint.

3.3.4 AD4 - View Status

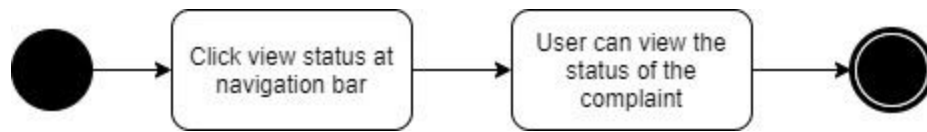


Figure 3.11: Activity diagram for View Status activity for User.

The above diagram is an Activity diagram for View Status activity for users in use case diagram of mE-ngadu. This activity diagram contains activities such as user click view status at navigation bar and then the user can view the status of the complaint that has been sent by them.

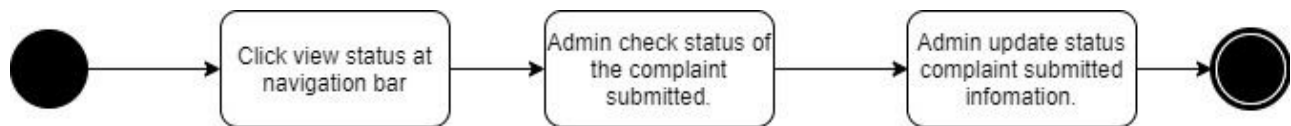


Figure 3.12: Activity diagram for View Status activity for Admin.

The above diagram is an Activity diagram for View Status activity for admin in use case diagram of mE-ngadu. This activity diagram contains activities such as admin click view status at navigation bar, admin check status of the complaint submitted and admin update the status of the submitted complaint.

3.3.5 AD5 - View Complaint

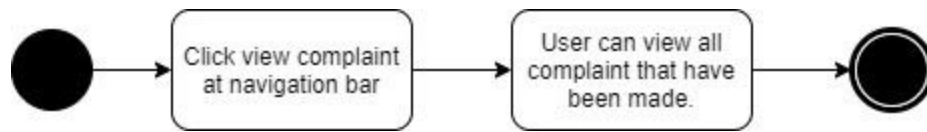


Figure 3.13: Activity diagram for View Complaint activity for user.

The above diagram is an Activity diagram for View Complaint activity for users in use case diagram of mE-ngadu. This activity diagram contains activities such as user click view status at the navigation bar and then the user can view all the complaints that have been made by all users of mE-ngadu.

3.3.6 AD6 - Manage Complaint

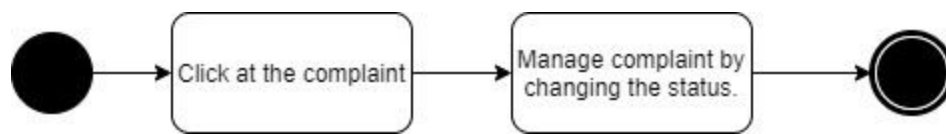


Figure 3.14: Activity diagram for Manage Complaint activity.

The above diagram is an Activity diagram for Manage Complaint activity in use case diagram of mE-ngadu. This activity diagram contains activities such as admin of the system, clicking at the complaint and manage complaint by changing the status.

4.0 SYSTEM ARCHITECTURE

4.1 Architectural Design

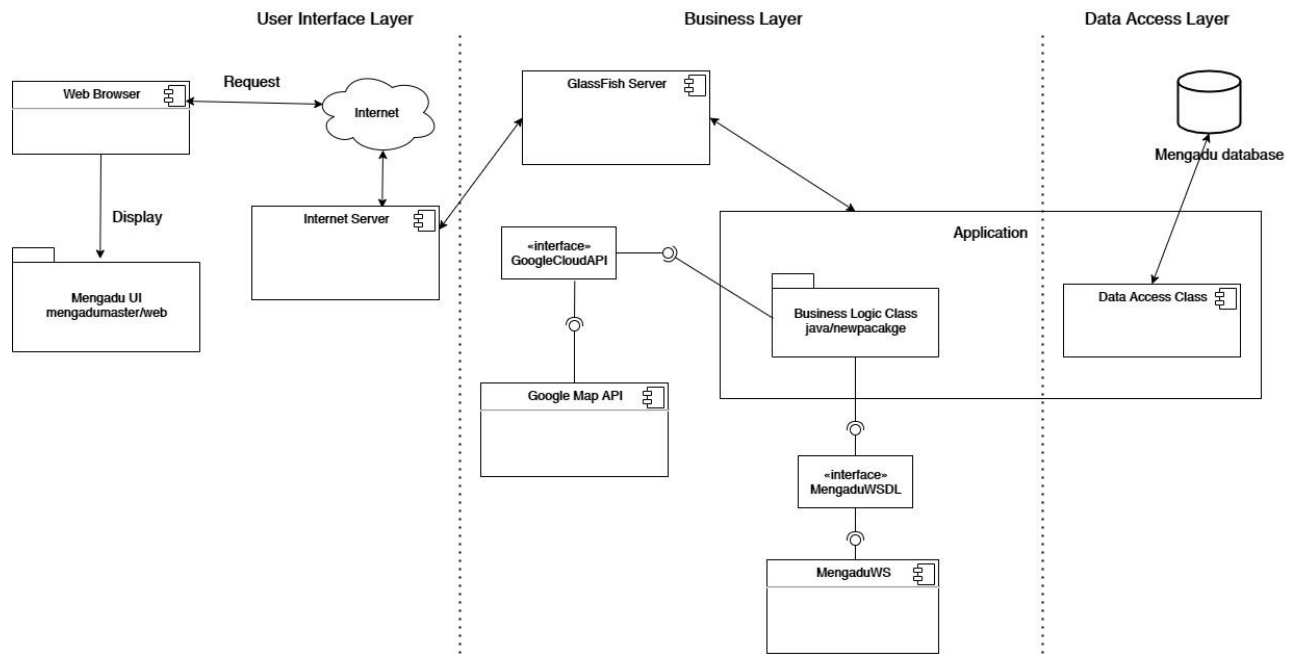


Figure 4.1: Architecture design for mE-ngadu.

4.2 Design Rationale

mE-Ngadu uses Model-View-Controller (MVC) architecture as it is implemented by using PrimeFaces framework that promotes the style. MVC enables effective use of separation of concern which is critical in developing component based websites. It will allow better maintainability and testability for each component and function.

5.0 DATA DESIGN

5.1 Data Description

mE-ngadu uses SQL in netbeans to store the record of the student, complaint and status. The database name is mE-ngadu. There will be 3 entities in mE-ngadu database which are STUDENT, COMPLAINT and STATUS.

5.2 Data Dictionary

Entity Name	Entity Description	Column Name	Column Description	Data Type	Length
STUDENT	Student is someone that use mE-ngadu website.	MATRIC	Matric no for student	Integer	10
		PASSWORD	Password to login into this website.	varchar	24
		USERNAME	Username to login into this website	varchar	32
		COURSE	Student's course	varchar	24
		SYEAR	Student's year of studies	varchar	20
COMPLAINT	Complaint is sent by the student in mE-ngadu website.	COMID	The complaint ID	integer	10
		COMTYPE	The type of complaint	varchar	20
		USERID	Id for user who write a complaint	integer	10
		COMDETAIL	The complaint that has been sent by the user.	varchar	255
		COMDATE	Date of when complaint is sent.	timestamp	29
		STATUS	Status of the complaint.	varchar	12
STATUS	Status is the status of the complaint that has been sent by the user.	COMID	Complaint ID	integer	10
		LOOK	Whether the complaint has been read or not	varchar	10
		ACT	What action has been made for the complaint	varchar	255

6.0 USER INTERFACE DESIGN

6.1 Overview of User Interface

mE-ngadu is a system or website that allows students in CSIT faculty to send their complaints using the right platform. Firstly, users need to sign up their account first before they can login into mE-ngadu. If users already have an account, they can just login into the website. After login, users are allowed to submit complaints, view status or view complaints. Users can submit any complaint that they want according to the category of complaint they want to make. Next, users can view the status of their complaint whether the action is already taken or not. Lastly, users can view all complaints that have been made by the users of mE-ngadu. As for the admin of the system, they can manage the complaints and update if they already take action on the complaints or read the complaints.

6.2 Screen Objects and Actions

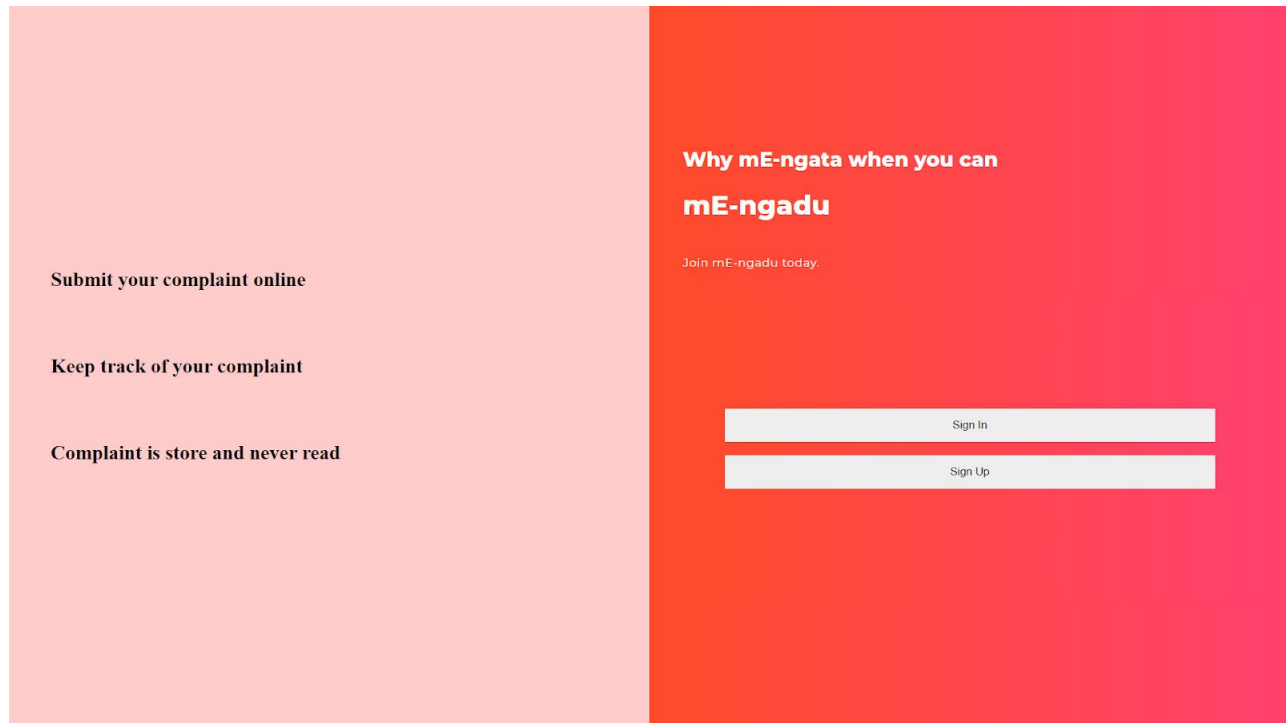


Figure 6.1: Landing Page

This page is the landing page before the user can login into mE-ngadu. This page contains Sign In and a Sign Up button. Users can choose to sign in if they already have an account or choose Sign Up to register an account.

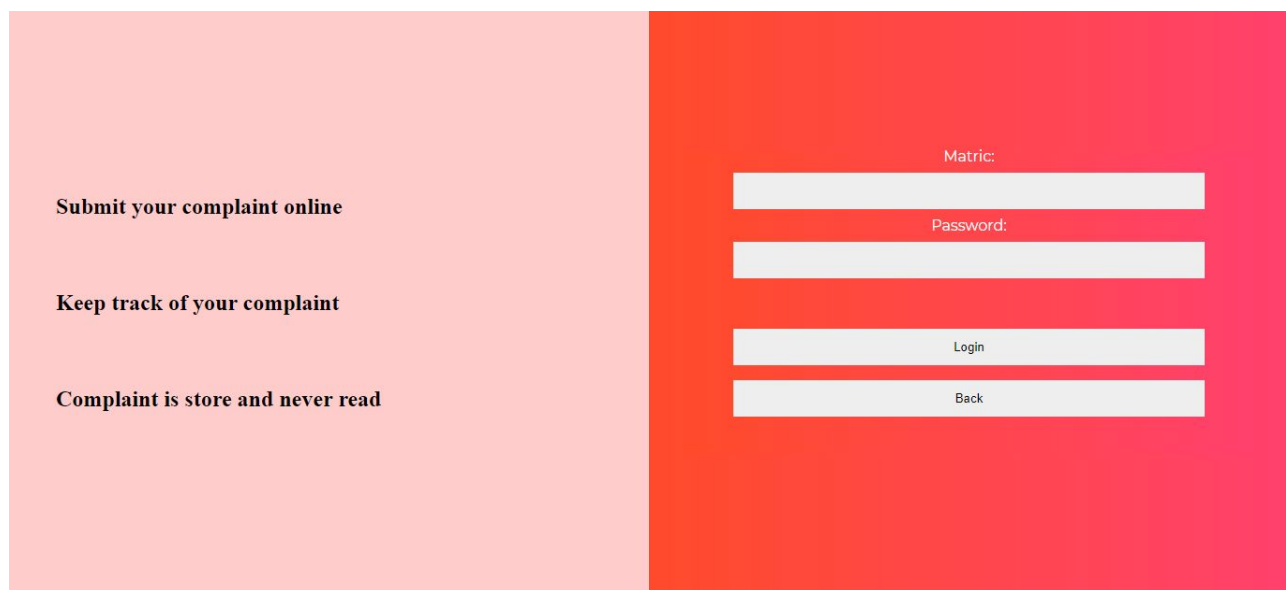


Figure 6.2: Login Page

This is the login page where users can login into mE-ngadu. Users need to enter their matric no and their password. After that, they can click at login button.

The image shows a web page for signing up. The left side has a light pink background with three lines of text: "Submit your complaint online", "Keep track of your complaint", and "Complaint is store and never read". The right side has a red background with a form. The form contains the following fields: "Matric no:" with the value "192049", "Password:" with four asterisks, "Name:" with the value "Akmal", "Course:" with a dropdown menu showing "SOFTWARE ENGINEERING", and "Year:" with a dropdown menu showing "THIRD YEAR". Below these fields are two buttons: "Sign Up" and "Back".

Figure 6.3: Signup Page

This is the Sign Up page of mE-ngadu. This page requires users to fill in their details such as matric no, password, name, course, year of studies and then click at the sign up button.



Figure 6.4: Home Page

This is the homepage of mE-ngadu. Users can choose any page that they want at the navigation bar at the bottom of the page.

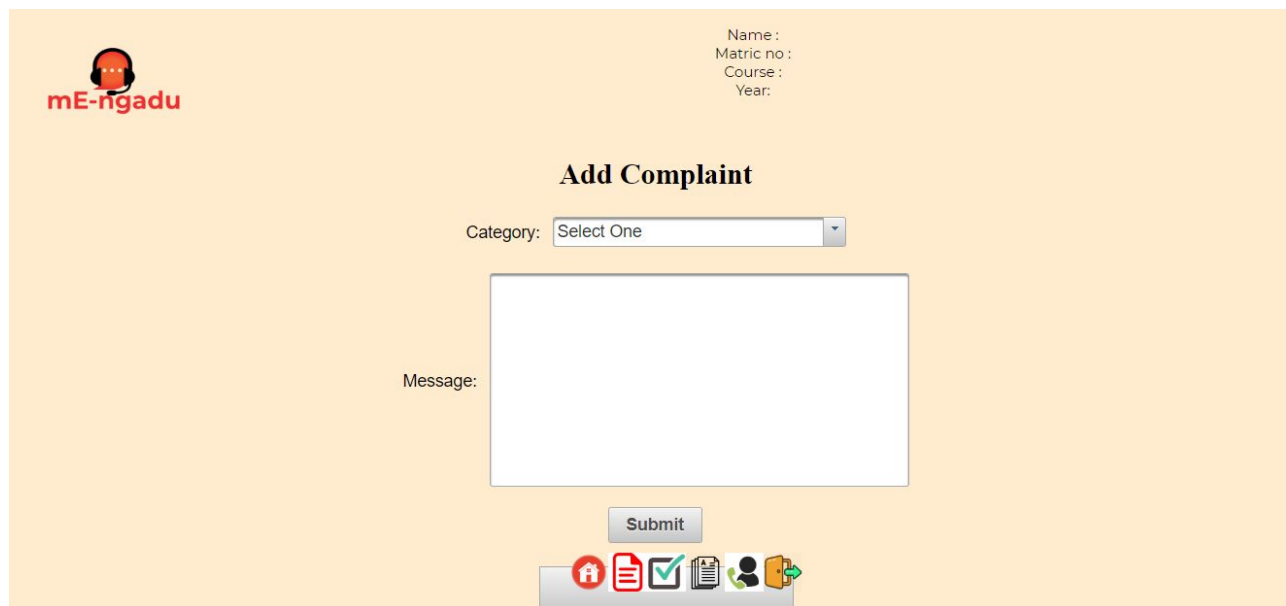


Figure 6.5: Submit Complaint Page

This is a page where users can add any complaint that they want. They need to choose the category of their complaint and then, they can type their complaint at the text area.

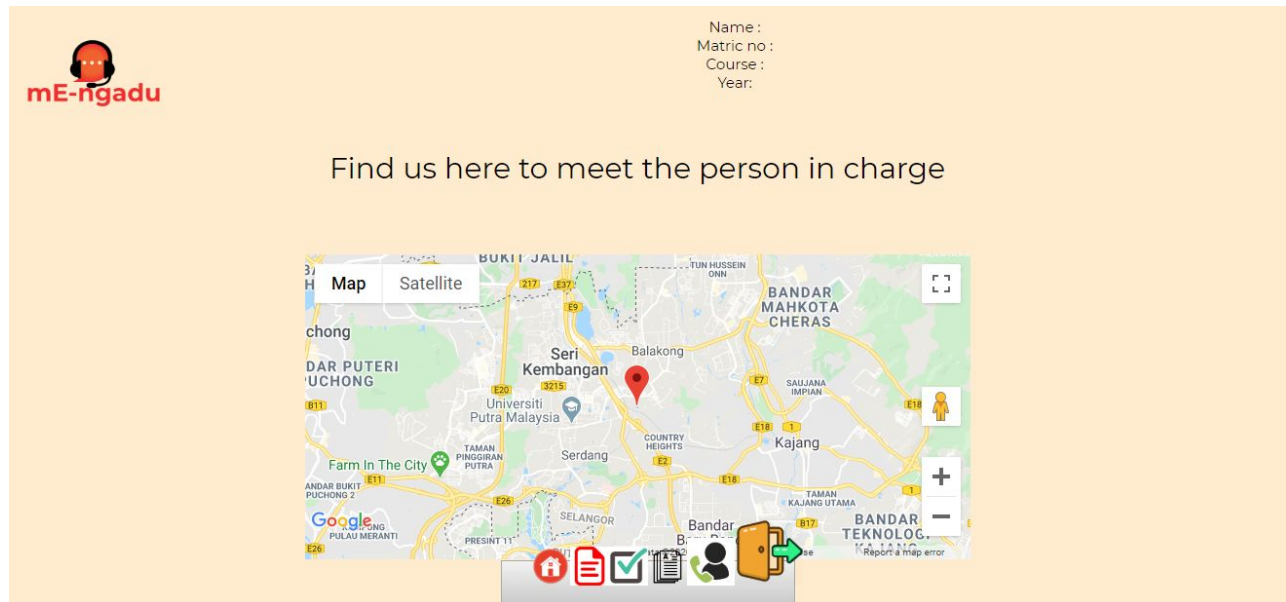


Figure 6.6: Find Us Page

This page is the find us page. In this page, users can have a directory for them to find the person in charge. They can use the google map to find the person in charge in the faculty.


Name : JOJO
Matric no : 192627
Course : SOFTWARE ENGINEERING
Year : 3RD YEAR

STATUS

COMPLAINT ID	READ	ACTION
113	NOT READ	NO ACTION YET
114	NOT READ	NO ACTION YET

Figure 6.7: Complaint Status Page

This is the complaint status page. In this page, users can see the status of the complaint that they have been sent. Either the status is already read or a;ready to take action.



Name : JOJO
Matric no : 192627
Course : SOFTWARE ENGINEERING
Year: 3RD YEAR

COMPLAINT

Category	Complaint	UserID	Date
Management	Test	192627	2020-07-25 23:13:24.753
Cafeteria	Test kali ke 2	192627	2020-07-25 23:17:43.198




Figure 6.8: View All Complaint Page

This is the view complaint page. In this page, every user can see all complaints made by everyone. This is to avoid users submitting the same complaint again and again.

7.0 REQUIREMENTS MATRIX

Use Case Identifier	Functional Requirement	Design Component
1.1	Sign Up	SD1, AD1
1.2	Log In	SD2, AD2
2.1	Submit Complaint	SD3, AD3
2.2	View Status	SD4, AD4
3.1	View Complaint	SD5, AD5
3.2	Manage Complaint	SD6, AD6