

SOFTWARE SPECIFICATION PORTAL

DESIGN FOR GIKI

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2018470

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<i>Signature</i>	<i>Date</i>	<i>Name</i>

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1. INTRODUCTION

GIKI Portal is a web application that provides a platform to the students of GIKI to file their complaints to the administration regarding different departments in the institute. GIKI Portal maintains the record of all the complaints filed by the students and the performed actions on these complaints. In GIKI Portal, a student can create an account, file a complaint, and can also view his/her history as well as statuses of complaints. The administration can view these complaints and forward these for action to be performed.

GIKI Portal is a single efficient platform for the students to record their grievances. As the old manual method of filing complaints is time-consuming and inefficient, this system promises to be efficient, user-friendly and time friendly.

1.1. PURPOSE

This application aims to create an online grievance record system for the students of GIK Institute. The students will be able to create their own accounts. The students will be able to login through his/her credentials and file their complaints. This process will save time, and effort for both the students and the administration. In the old manual method, the student had to annually go to the administration to record his/her complaint. In this application, all the process can be done online sitting in hostels or at home.

Below are some objectives we will cover in this project:

- All the details of the registered students.
- All the student's complaints and history.
- Actions performed by the admin on these complaints.
- Complaint filing from any place any time.

1.2. PRODUCT SCOPE

The purpose of GIKI Portal is to provide a single efficient platform to the students of GIK Institute to file their complaints and suggestions regarding different departments of the Institute. The purpose is to ease the quality control system procedure and to create a convenient and easy-to-use application for students, trying to resolve issues they face during their stay at GIK Institute. In order to replace the current complex and inefficient manual system of complaint management; we are implementing a web application that will enhance the efficiency of the procedure. Students file their complaints regarding any department of the Institute. The administration can view and process the pending complaints. Students will be able check the status of their complaints.

Table 1: Terms used in this document and their description

Name	Description
UI – User interface	The visible front-end which the user can interact with.
Student	User who files complaint
Admin	Administration which can view the complaints and perform action
GIKI Portal	The application under development
Complaint	Grievances recorded by students

1.3. OVERVIEW

The following document contains the architectural design of the product and represents multiple views of the product by using the 4+1 architectural design. This document also shows the user interface of GIKI Portal.

2. THE OVERALL DESCRIPTION

The description of the proposed system is given below. This description defines the product in different directions.

2.1. PRODUCT PERSPECTIVE

The development of this application has been influenced by Pakistan Citizen Portal. The application is developed, keeping in mind the necessities of the Institute, to provide a single platform to ease the complaint management process, which each student of Ghulam Ishaq Khan Institute must go through.

GIKI Portal will have a user-friendly interface that shall provide easy access to all the users. All the user data will be stored in MySQL database, that provides flexibility and security.

Initially, the students will be asked to sign up through the UI by providing an email and password and other details. This data is saved in the database. Students can then access their accounts where they can utilize the product. The student will be able to login and logout anytime he/she wants.

From the admin side, the admin can view all the details of the students as well as the complaints he/she filed. The admin will be able to add another complaint category or subcategory such as sports complex, mess management etc.

3. WORK BREAKDOWN STRUCTURE

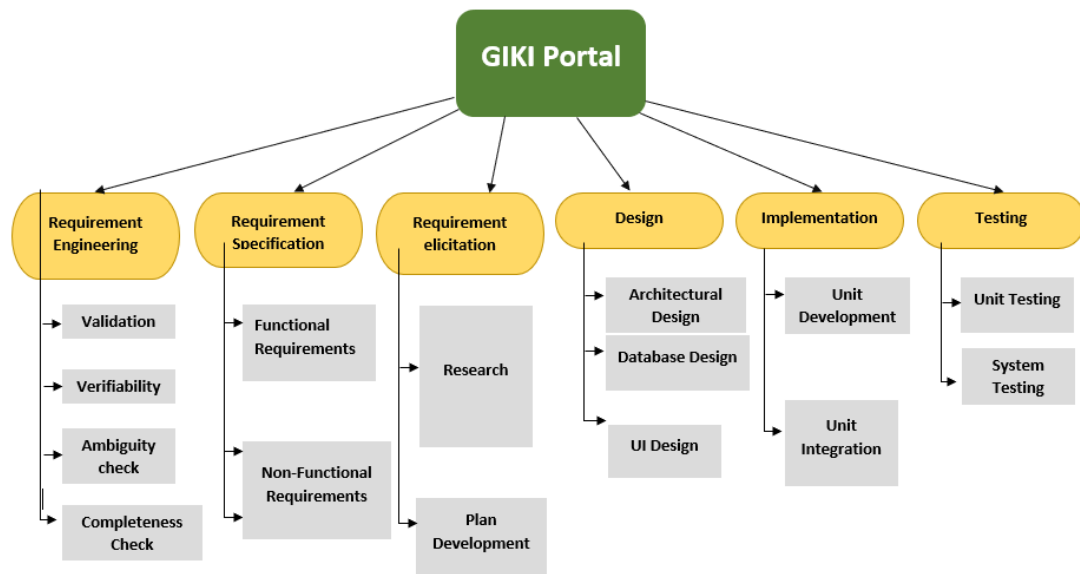


Figure 3-1: Work Breakdown Structure

4. Design

4.1 ARCHITECTURAL DESIGN

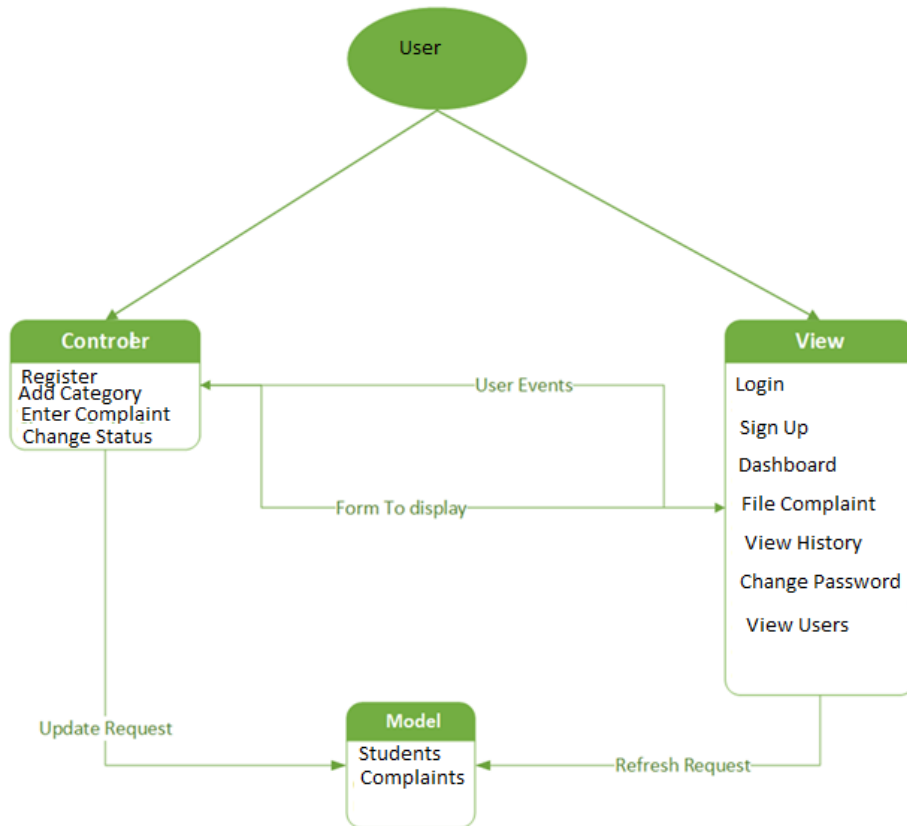


Figure 4-1: Architectural Design

4.2 Why did we choose MVC Architecture Design?

We have used the Model-View-Controller design for the architectural design of GIKI Portal.

Model-view-controller is a design method of software development that divides the related programs into three parts.

- **Model:** Manages the data and operations connected to the data
- **View:** The way data is presented to the user
- **Controller:** This part manages the user interactions.

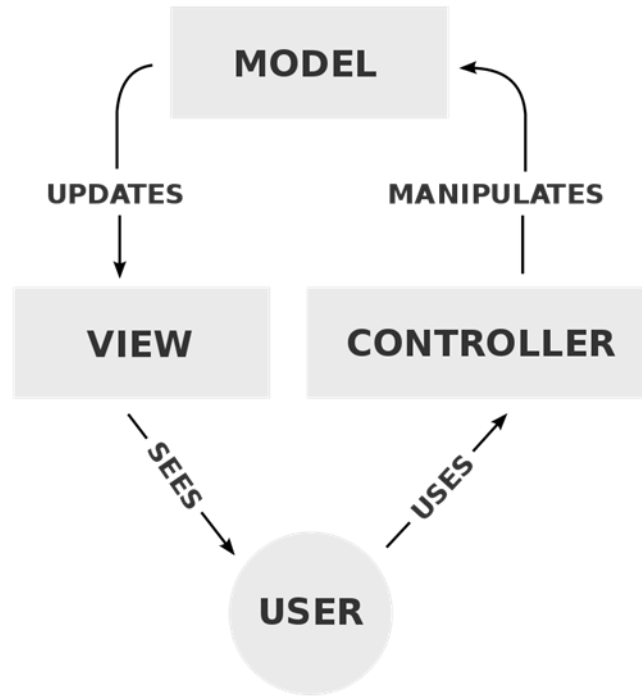


Figure 4-2: MVC Architectural Design

4.2.1 Components

Model

MySQL is our model. Students and Admin are connected to this database.

View

The view part is divided into two main parts, Student and Admin. Both parts require a login to access the interface.

Controller

Controller controls our application. Below are the control elements of our model:

- The user signs up, this information is stored in the database.
- The students can file complaints that are stored in our database.
- When the admin performs an action on a complaint, he/she can change the status of the complaint

4.3 MODULE IDENTIFICATION

Following are the modules of GIKI Portal.

- Register
- Dashboard
- Profile

- Complaints
- History

5. 4+1 ARCHITECTURE VIEW MODEL

In this section, you draw the architecture using the views defined in the “4+1” model.

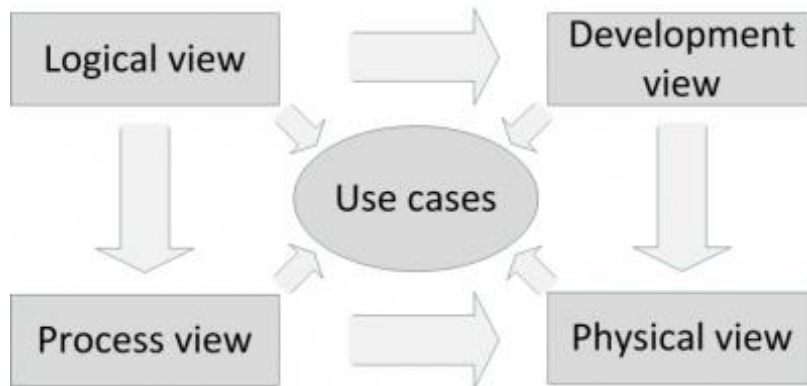


Figure 5-1: 4+1 Architecture View

5.1 Use Case View

Below are the use cases that representing the functionality of GIKI Portal:

5.1.1 Complaints Use case

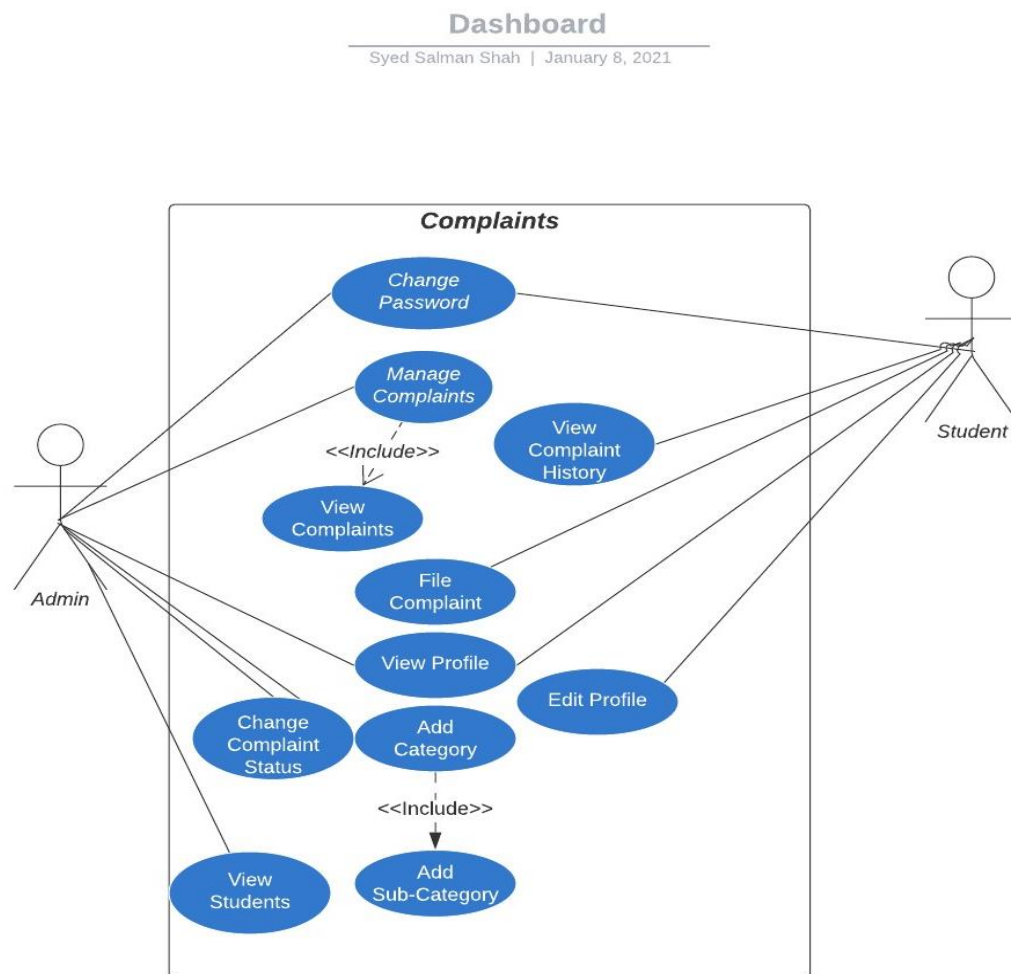


Figure 5-2: System Use case

5.1.2 Login and Registration Use Case

Login And Registration

Syed Salman Shah | January 8, 2021

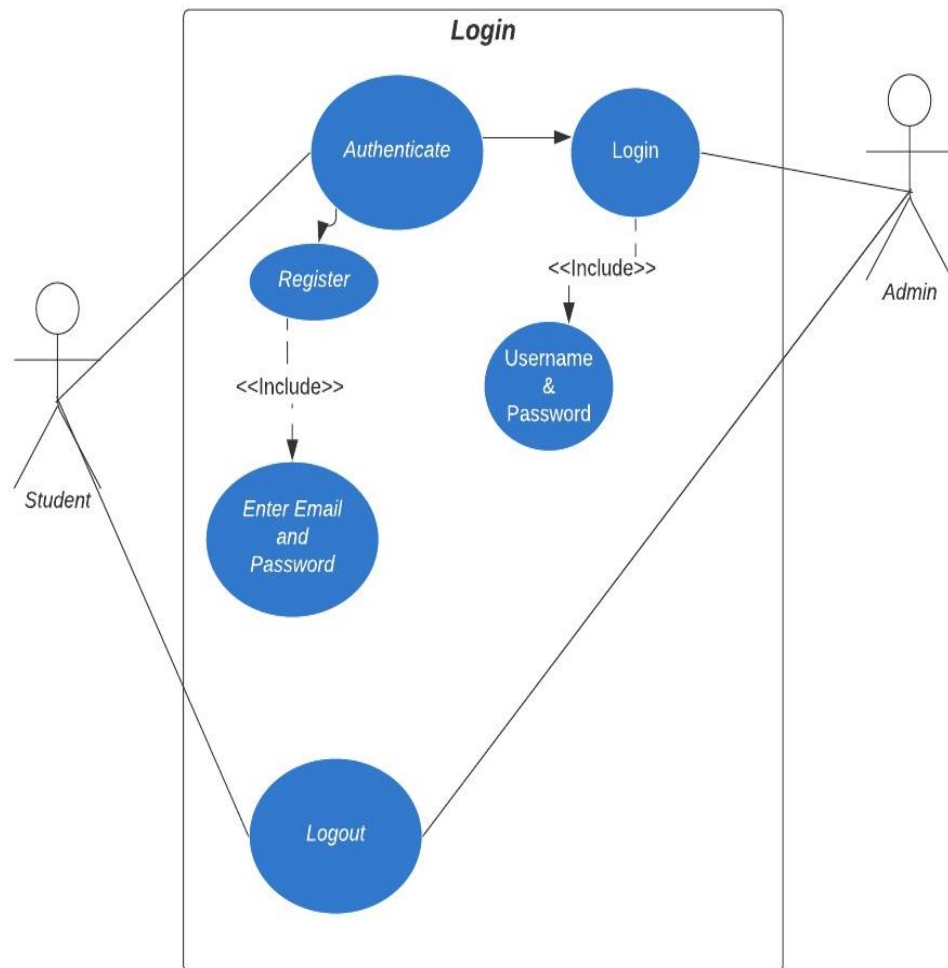


Figure 5-3: Login and Registration Use Case

5.2 Logical View:

5.2.1 Class Diagram



Figure 5-4: Class Diagram

5.3 Development View

5.3.1 Component Diagram

UML Component Diagram: GIKI Portal

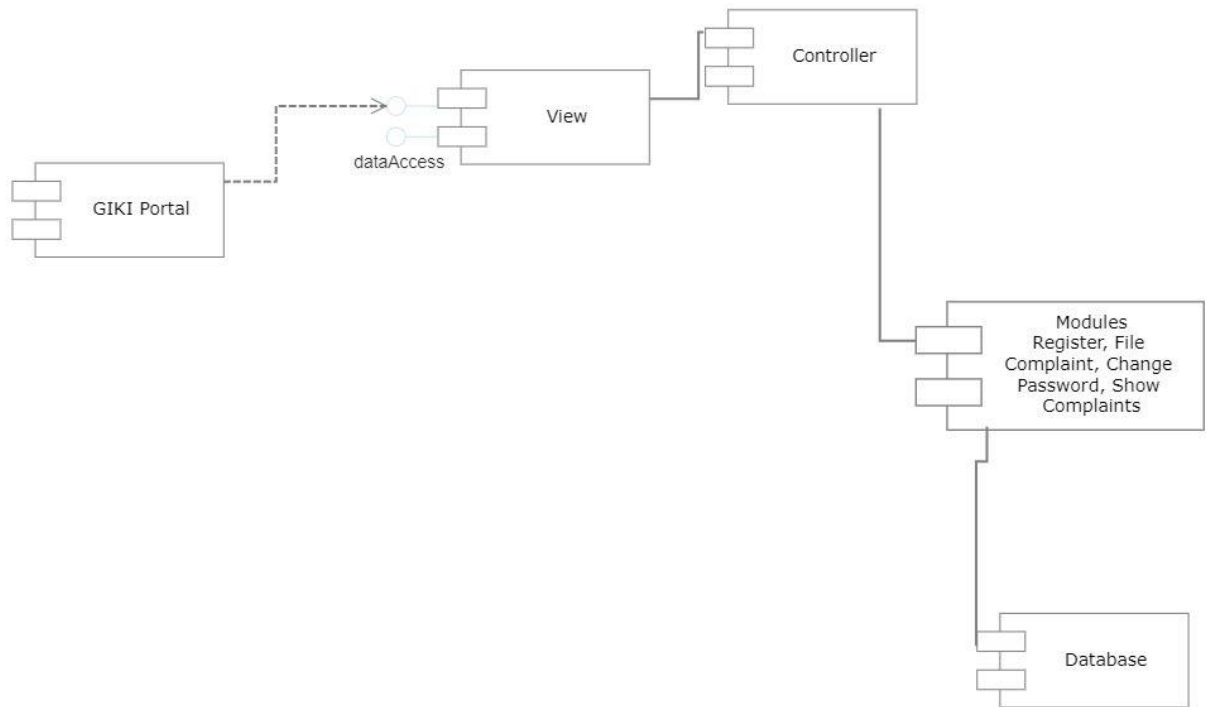


Figure 5-5: Component Diagram

5.4 Process View

5.4.1 Student Side Sequence Diagram

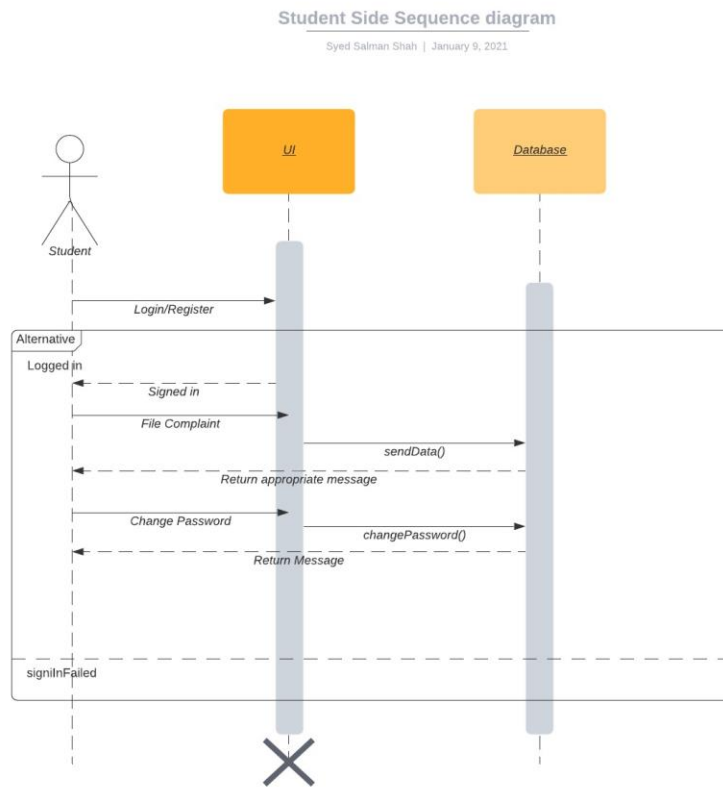


Figure 5-6: Restaurant Side Sequence Diagram

The above is a sequence diagram of student side. After logging in or signing up, the student files a complaint. After that, the student changes his/her account password.

5.4.2 Admin Side Sequence Diagram

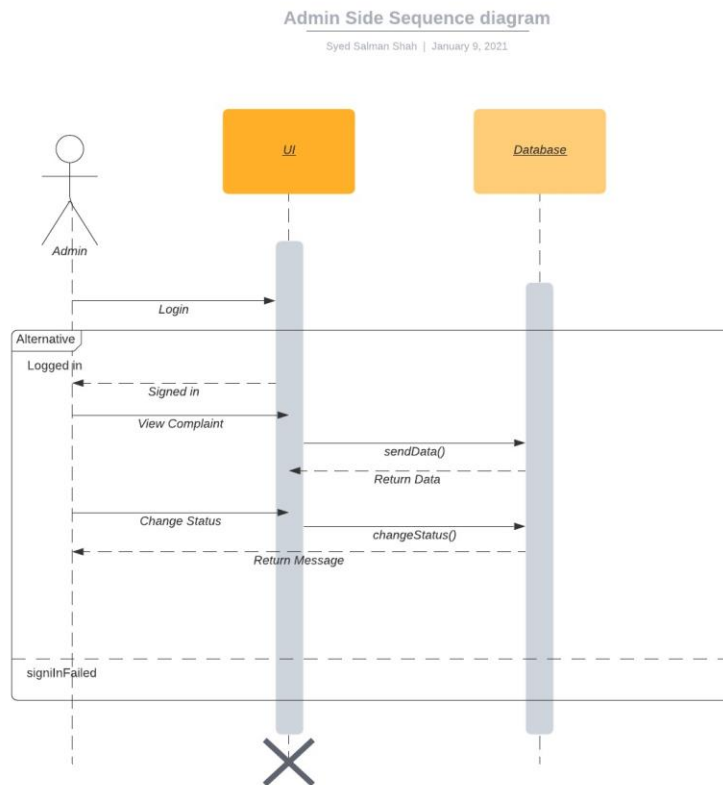


Figure 5-7: Customer Side Sequence Diagram

Above is a sequence diagram from admin side viewing a complaint. Later, the admin changes the status of the complaint.

5.5 Physical View

5.5.1 Deployment Diagram

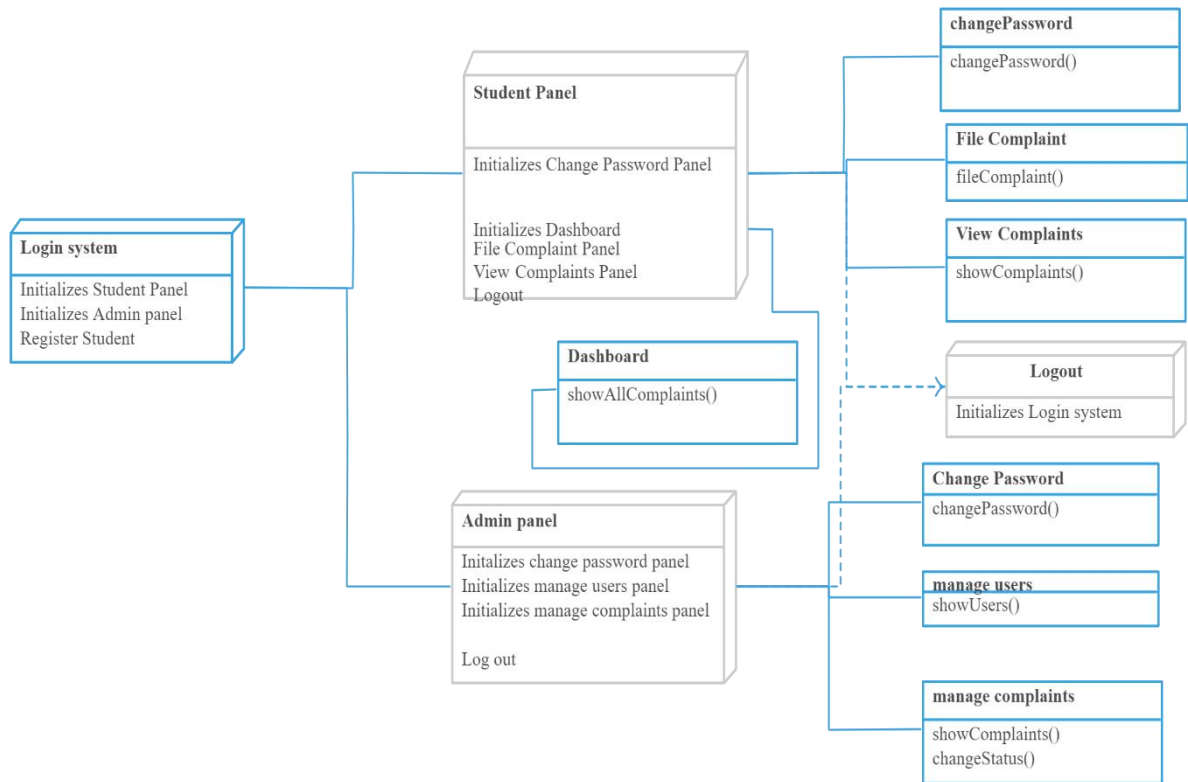
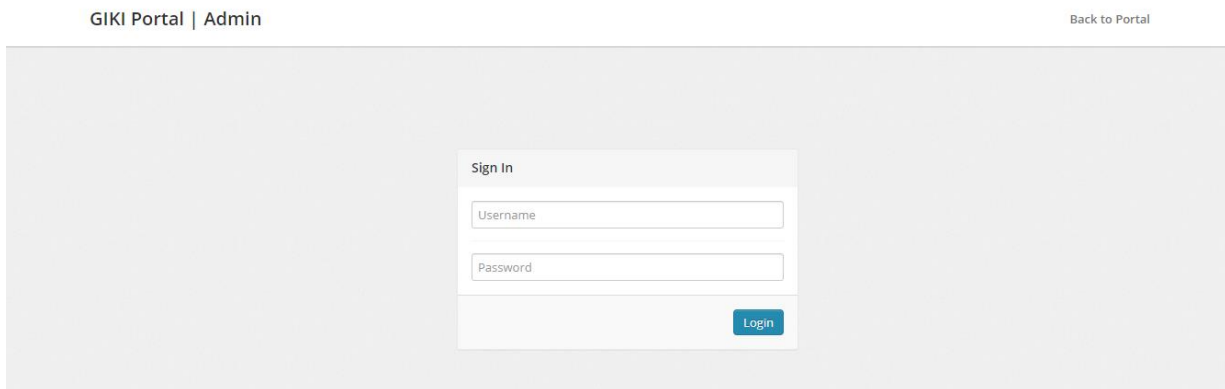
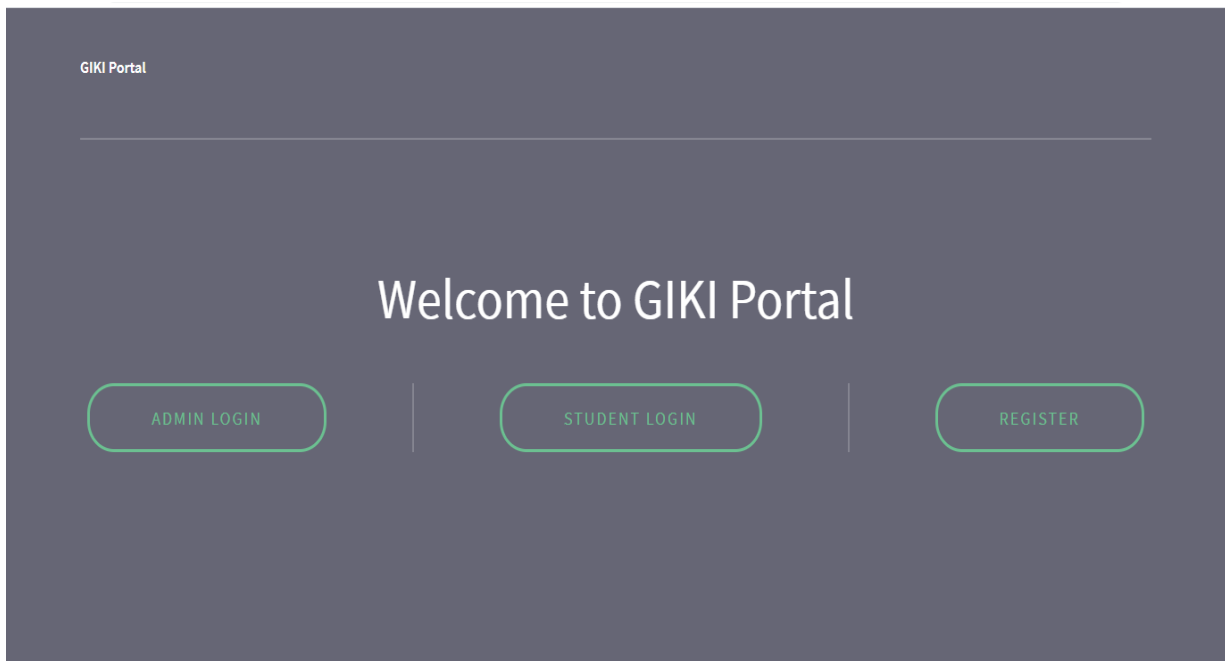



Figure 5-8: Deployment Diagram

5.6 User Interface

Given below are some screenshots of the UI of GIKI Portal:



GIKI Portal | Admin

Admin 

Manage Complaints

Manage users

Add Category

Add Sub-Category

Admin Change Password

Current Password

Enter your current Password

New Password

Enter your new current Password


Current Password

Enter your new Password again

Submit

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GIKI Portal | Admin

Admin 

Manage Complaints

Manage users

Add Category

Add Sub-Category

Admin Change Password

Current Password

Enter your current Password

New Password

Enter your new current Password


Current Password

Enter your new Password again

Submit

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GIKI Portal | Admin

Admin 

Manage Complaints

Not Processed Yet 0

Pending Complaints 0

Closed Complaints 0

Manage users

Add Category

Add Sub-Category

Closed Complaints


Show 10 entries Search:

Complaint No	complainant Name	Reg Date	Status	Action
No data available in table				

Showing 0 to 0 of 0 entries

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GIKI Portal | Admin

Admin 

Manage Complaints

Manage users

Add Category

Add Sub-Category

Category

Category Name Enter category Name

Description

Create


Manage Categories

Show 10 entries Search:

#	Category	Description	Creation date	Last Updated	Action
No data available in table					

Showing 0 to 0 of 0 entries

GIKI Portal | Admin

Admin 

Change Password

Logout

Manage Complaints

Not Processed Yet 0

Pending Complaints 0

Closed Complaints 0

Manage users

Add Category

Add Sub-Category

Sub Category

Category Select Category

SubCategory Name Enter SubCategory Name

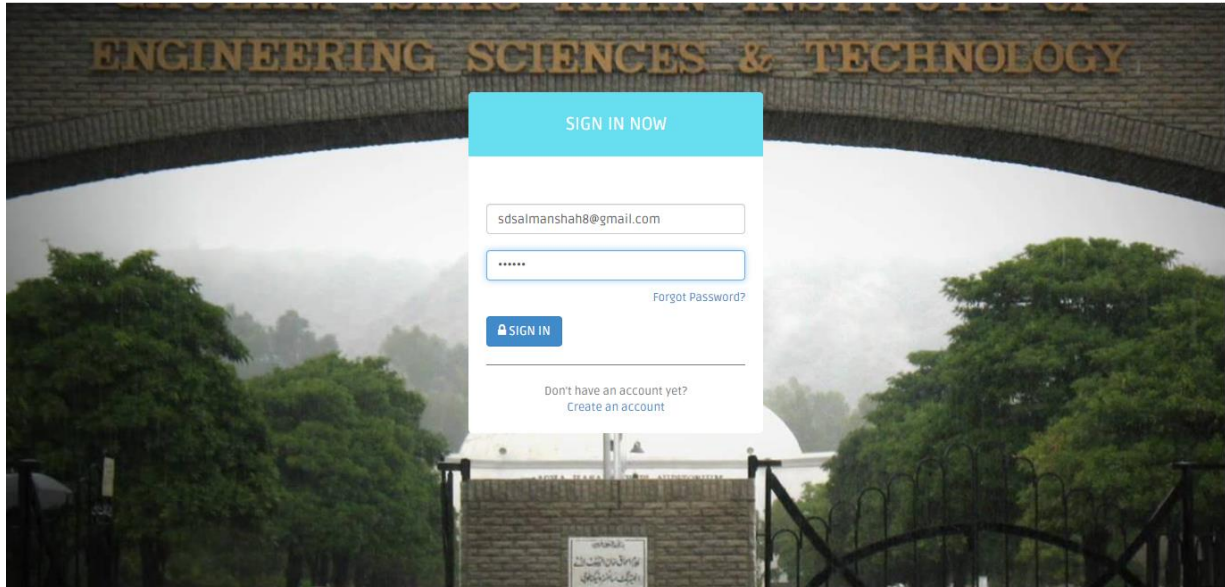
Create

Sub Category


Show 10 entries Search:

#	Category	Description	Creation date	Last Updated	Action
No data available in table					

Showing 0 to 0 of 0 entries



GIKI PORTAL



Salman Shah

Dashboard

Account Setting

Lodge Complaint

Complaint History

Logout

> Change Password

> User Change Password

Current Password


New Password

Confirm Password

Submit

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GIKI PORTAL



Salman Shah


Dashboard

Account Setting

Lodge Complaint


Complaint History

Logout




0

0 Complaints not Process yet




0



0

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GIKI PORTAL



Salman Shah

Dashboard

Account Setting

Profile

Change Password

Lodge Complaint

Complaint History

Logout

> Register Complaint

Category

Select Category

Sub Category

Select Subcategory

Complaint Type

Complaint

Nature of Complaint

Complaint Details (max 2000 words)


Complaint Related Doc(if any)

Choose File

No file chosen

Submit

GIKI PORTAL



Salman Shah

Dashboard

Account Setting

Lodge Complaint

Complaint History

Logout

> Profile info

Salman Shah's Profile

Last Updated at : 0000-00-00 00:00:00

Full Name

Salman Shah

User Email

sdsalmanshah@gmail.com

Contact

300000000


Registration Date

2021-01-02 11:41:33

Submit

© 2020 GIKI All rights reserved.

GIKI PORTAL



Salman Shah

Dashboard

Account Setting

Lodge Complaint

Complaint History

Logout

>Your Complaint History

Complaint Number	Reg Date	last Updation date	Status	Action
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ENGINEERING SCIENCES & TECHNOLOGY

STUDENT REGISTRATION

Full Name

Email

Password

Contact no

Register

Already Registered
Sign in

ENGINEER

Forgot Password ?

Enter your details below to reset your password.

Email

contact No

New Password

Confirm Password

Cancel

Submit

Don't have an account yet?
Create an account

CHNOLOGY

6. Backend:

Below are some screenshots from the backend of the project.

The screenshot shows the phpMyAdmin interface for the 'gikiportal' database. The left sidebar displays the database structure, including tables like 'admin', 'category', 'complaintremark', 'subcategory', 'tblcomplaints', 'users', 'information_schema', 'mysql', 'performance_schema', 'phpmyadmin', and 'test'. The main panel shows the 'Structure' tab for the 'gikiportal' database. A table list is displayed with columns: Table, Action, Rows, Type, Collation, Size, and Overhead. The table 'admin' is selected, and its structure is shown below the list. The 'Create table' form is visible at the bottom, showing the table name 'admin' and the number of columns '4'.

Table	Action	Rows	Type	Collation	Size	Overhead
admin	Browse Structure Search Insert Empty Drop	1	InnoDB	latin1_swedish_ci	16.0 K18	-
category	Browse Structure Search Insert Empty Drop	3	InnoDB	latin1_swedish_ci	16.0 K18	-
complaintremark	Browse Structure Search Insert Empty Drop	0	InnoDB	latin1_swedish_ci	16.0 K18	-
subcategory	Browse Structure Search Insert Empty Drop	3	InnoDB	latin1_swedish_ci	16.0 K18	-
tblcomplaints	Browse Structure Search Insert Empty Drop	3	InnoDB	latin1_swedish_ci	16.0 K18	-
users	Browse Structure Search Insert Empty Drop	4	InnoDB	latin1_swedish_ci	32.0 K18	-
6 tables	Sum	14	InnoDB	utf8mb4_general_ci	112.0 K18	0.8

The screenshot shows the phpMyAdmin interface for the 'gikiportal' database, specifically the 'Table structure' view for the 'admin' table. The table structure is displayed with columns: #, Name, Type, Collation, Attributes, Null, Default, Comments, Extra, and Action. The table 'admin' has four columns: 'id' (int(11)), 'username' (varchar(250)), 'password' (varchar(250)), and 'updateDate' (varchar(255)). The 'id' column is the primary key. The 'Create table' form is visible at the bottom, showing the table name 'admin' and the number of columns '4'.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	username	varchar(250)	latin1_swedish_ci		No	None			Change Drop More
3	password	varchar(250)	latin1_swedish_ci		No	None			Change Drop More
4	updateDate	varchar(255)	latin1_swedish_ci		No	None			Change Drop More

The image shows two screenshots of the phpMyAdmin web interface. The top screenshot displays the 'Table structure' view for the 'tblcomplaints' table in the 'gikiportal' database. The table has 9 columns: complaintNumber (int(11), AUTO_INCREMENT), userid (int(11)), category (varchar(11), latin1_swedish_ci), subcategory (varchar(255), latin1_swedish_ci), complaintType (varchar(255), latin1_swedish_ci), complaintDetails (mediumtext, latin1_swedish_ci), complaintFile (varchar(255), latin1_swedish_ci), regDate (timestamp, current_timestamp()), and status (varchar(50), latin1_swedish_ci). The bottom screenshot shows the 'Table: users' view, displaying 4 rows of user data. The columns are id, fullName, userEmail, password, contactNo, userImage, regDate, and status. The data includes users like Azlan Shah, Syed Salman Shah, and Salman Shah.

Table structure: tblcomplaints

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	complaintNumber	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	userid	int(11)			No	None			Change Drop More
3	category	varchar(11)	latin1_swedish_ci		No	None			Change Drop More
4	subcategory	varchar(255)	latin1_swedish_ci		No	None			Change Drop More
5	complaintType	varchar(255)	latin1_swedish_ci		No	None			Change Drop More
6	complaintDetails	mediumtext	latin1_swedish_ci		No	None			Change Drop More
7	complaintFile	varchar(255)	latin1_swedish_ci		Yes	NULL			Change Drop More
8	regDate	timestamp			No	current_timestamp()			Change Drop More
9	status	varchar(50)	latin1_swedish_ci		Yes	NULL			Change Drop More

Table: users

	id	fullName	userEmail	password	contactNo	userImage	regDate	status
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	1	Azlan Shah	azlan@gmail.com	202cb962ac59075b964b07152d234b70	9999999999	NULL	2020-05-08 19:10:50	1
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	2	Syed Salman Shah	u2018470@giki.edu.pk	03346657f6ea0490a4d4f677faa0583d	2018470	NULL	2021-01-10 12:57:28	1
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	3	Salman	salman@gmail.com	03346657f6ea0490a4d4f677faa0583d	0	NULL	2021-01-10 13:21:39	1
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	4	Syed Saliman Shah	2018470@giki.edu.pk	03346657f6ea0490a4d4f677faa0583d	0	NULL	2021-01-10 13:27:27	1