

**STUDENT MANAGEMENT SYSTEM**

**UCS 503 Software Engineering Project Report**

**END-Semester Evaluation**

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**Group No: 2CS-09**

**Submitted to: Dr. Tanu Goyal**



**Computer Science and Engineering Department**

**TIET, Patiala**

**MAY 2023**

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## Software Bid/ Project Teams

### UCS 503- Software Engineering Lab

Dated: 24-FEB-2023

Group : 2CS-09

**Team Name:** Teenagers

**Team ID (will be assigned by Instructor):**

Please enter the names of your Preferred Team Members.

- You are required to form **a three to four person teams**
- Choose your team members wisely. You will not be allowed to change teams.

Name	Roll No	Project Experience	Programming Language used
Garvit Garg	102116001	Student Management System	HTML, CSS, PHP
Armanjeet Singh	102116017	AI Project	Python
Gurkamal Brar	102116030	Student Management System	HTML, CSS, PHP
Ehsaas Dhand	102116110	AI Project	Python

### Programming Language / Environment Experience

List the languages you are most comfortable developing in, **as a team**, in your order of preference. Many of the projects involve Java or C/C++ programming.

1. Python
2. C++
3. PHP

### Choices of Projects:

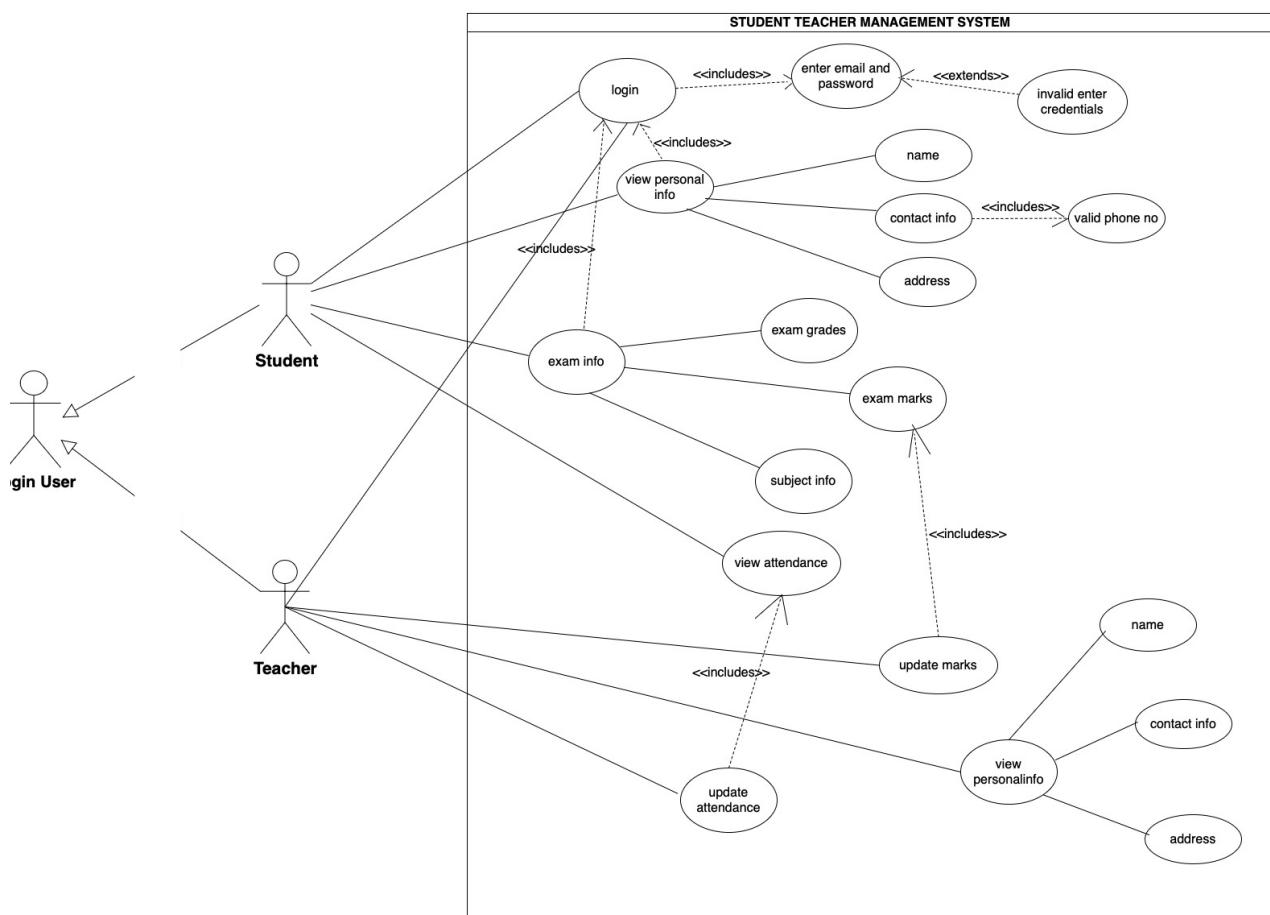
Please select **4 projects** your team would like to work on, by order of preference: [Write at-least one paragraph for each choice (motivation, reason for choice, feasibility analysis, etc.)]

First Choice	Student Management System
Second Choice	Online Retail Application Database
Third Choice	Inventory Management
Fourth Choice	Payroll Management System

## 2. ANALYSIS PHASE

### 2.1 USE CASES

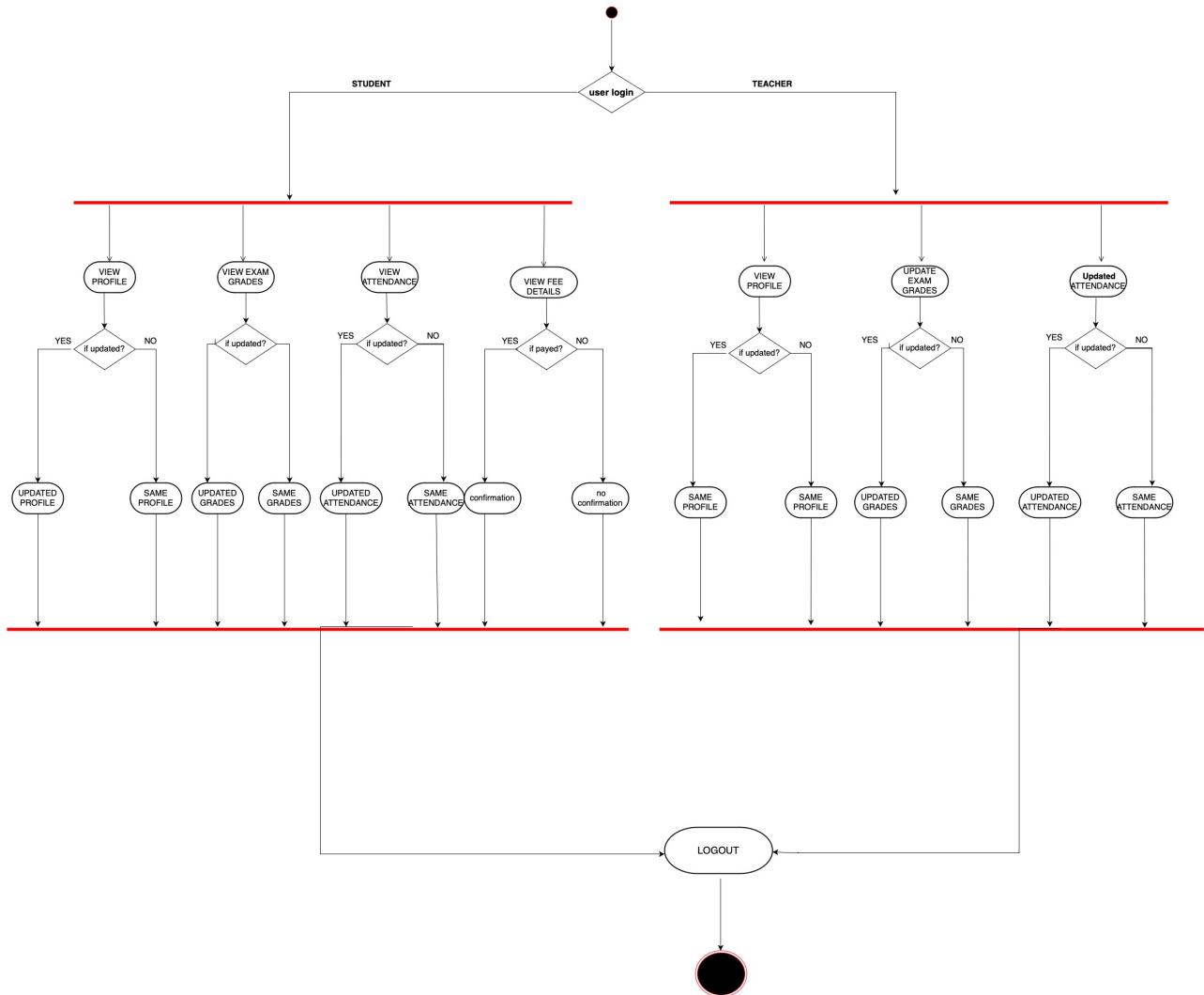
#### 2.1.1 USE-CASE DIAGRAM



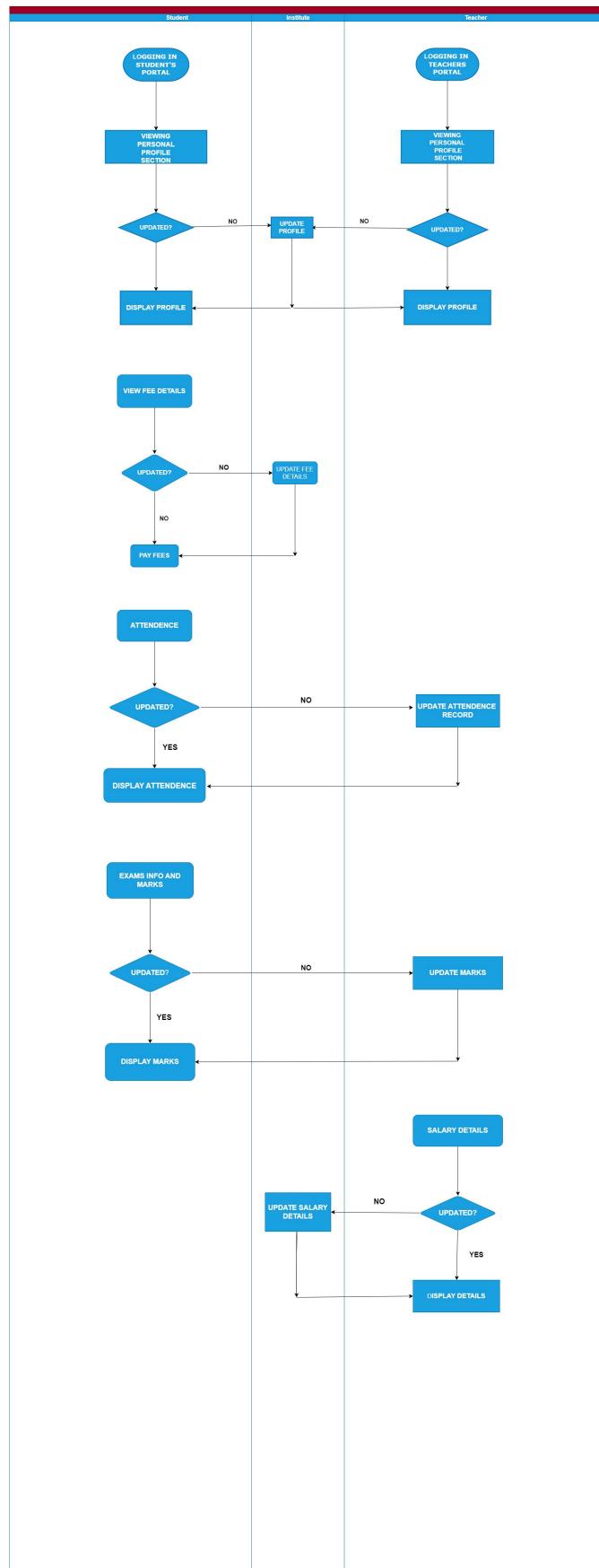
## 2.1.2 USE-CASE TEMPLATE

USE CASE TITLE	SMS : WEB APPLICATION
Use Case ID	1
Actor	User(Student/Teacher)
Description	The user can log in to the website and access the specific portal & can view or update different sections.
Pre-Condition	The user should have access to the internet. The user should be a member of the institute.
Post-Condition	<ol style="list-style-type: none"> <li>1. User logs in</li> <li>2. User goes to his/her profile.</li> <li>3. User chooses from list of options available.</li> <li>4. User jumps in to the specific section.</li> <li>5. Views his/her information Or updates the information if needed.</li> <li>6. Updation is more often used by teacher as a user</li> <li>7. Attendance and marks can be updated by the teacher</li> <li>8. The number of lectures attended can be viewed by the user</li> <li>9. Strength of the students attending the class can be viewed by the teacher</li> </ol>
Modification History	Date : 02–April–2023
Author	Admin

## 2.2 ACTIVITY DIAGRAM

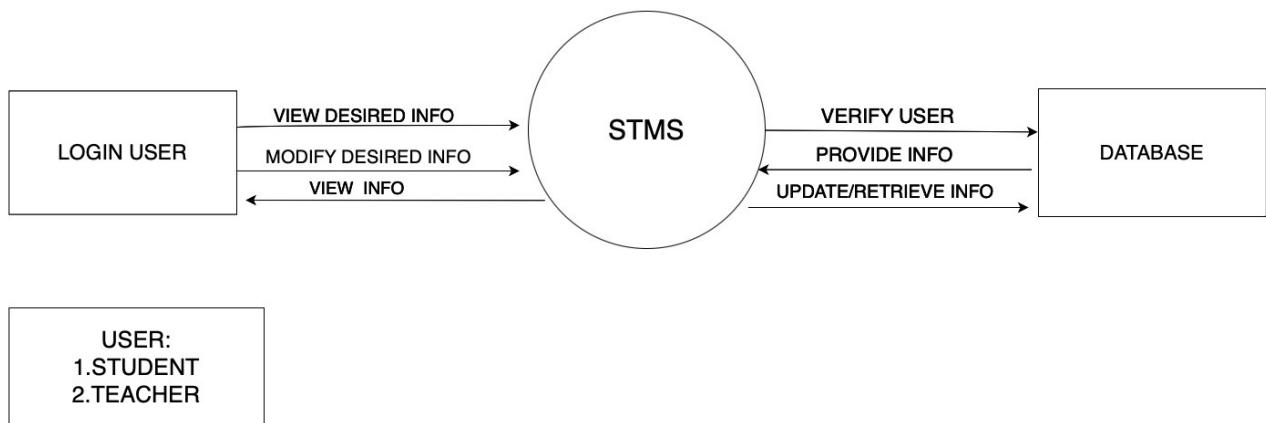


## 2.2 SWIMLANE DIAGRAM

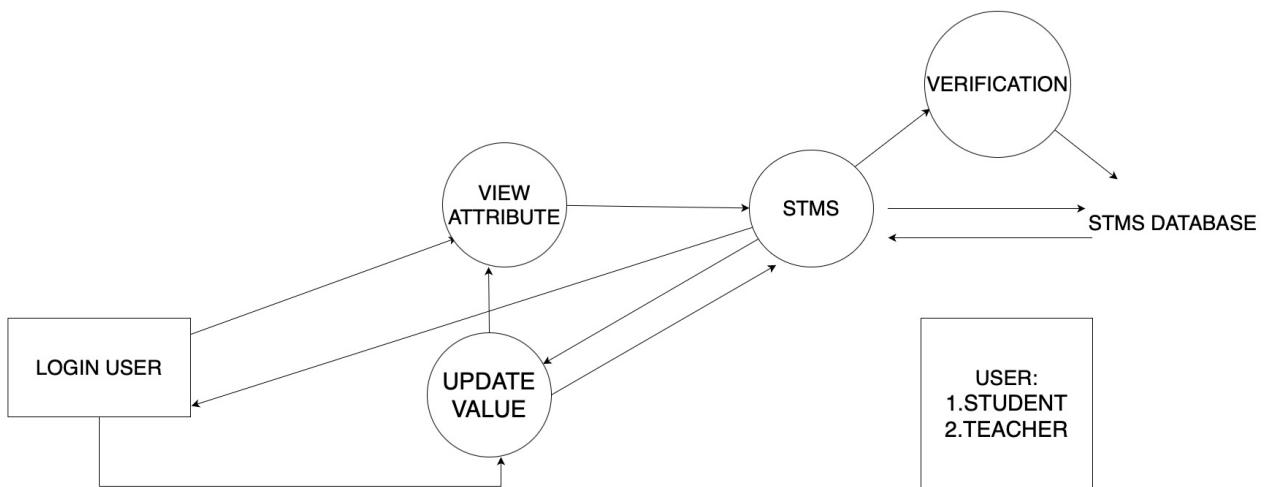


## 2.3 DATA FLOW DIAGRAMS (DFD'S)

### 2.3.1 DFD LEVEL 0

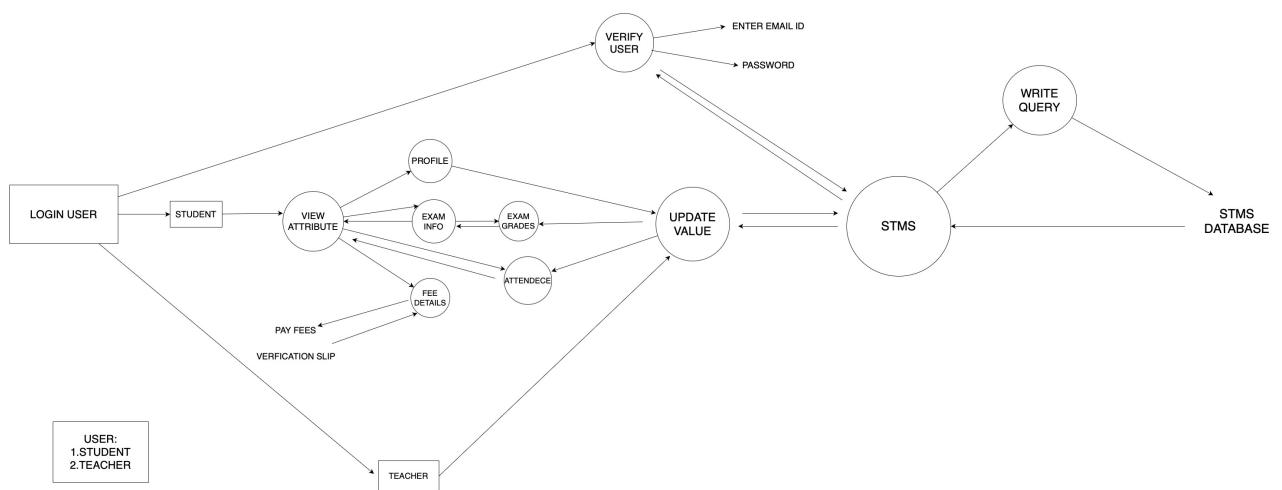


### 2.3.1 DFD LEVEL 1



### 2.3.3 DFD LEVEL 2

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### DATA FLOW DIAGRAMS :-

**DFD** is the abbreviation for **Data Flow Diagram**. The flow of data of a system or a process is represented by DFD. It also gives insight into the inputs and outputs of each entity and the process itself. DFD does not have control flow and no loops or decision rules are present.

It is a graphical tool, useful for communicating with users ,managers and other personnel. it is useful for analysing existing as well as proposed system. It provides an overview of

- What data is system processes.
- What transformation are performed.
- What data are stored.
- What results are produced , etc.

## A CASE STUDY (IEEE FORMAT)

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### **SOFTWARE REQUIREMENTS SPECIFICATION DOCUMENT**

**VERSION 1.0**

**ACCESS CONTROL AND ATTENDANCE MONITORING**

<b>S. NO.</b>	<b>TOPIC</b>	<b>PAGE NO.</b>
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## 1. INTRODUCTION

### 1.1 PURPOSE OF THE DOCUMENT

The purpose of this SRS document is to provide a detailed overview of our Student Management System, its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements.

The purpose of Student Management System is to automate the existing manual system by the help of computerised equipments and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same. The required software and hardware are easily available and easy to work with.

### 1.2 SCOPE OF THE DEVELOPMENT PROJECT

The goal is to design a web-based tool called the Student Management System to handle academic records for college students or for educational institutions in an effective manner. The practising manual system had issues, which were overcome by the creation of the student management system. Moreover this system is designed for the particular need of the university to carry out operations in a smooth and effective manner. For handling student profiles, attendance, fee information, and courses, the system strives to offer a thorough and user-friendly interface. Both instructors and administrators as well as students will have access to the website.

The software must be able to perform the following operations:

- **Identification and authentication:** the system must be able to identify and authenticate the user by matching his/her email and corresponding password against the values stored in its database.
- **Check schedule:** the system must be equipped with such functionality as if the user either student or teacher wish to check his/her timetable then they can seamlessly check the latter.
- **Record data:** the system must be able to keep the record of the data entered by the user in its database to be used latter, like managing information about courses and recording attendance.
- **Module access:** The user must be able to access his module and use the privileges allotted to him freely.
- **Privacy:** The software must be able to respect the privacy of the users (phone numbers shouldn't be made accessible by the software, it should be users call to share or not).
- **Scalable:** The system should be scalable so that it can extend further upto other universities and other educational institutes in the country.

Initially we plan to implement the system as a prototype with these functionalities for the class of 2CS9 having audience of about 30 people. Then we plan to go in pilot phase (initial development phase) and extend the system access to all students and teachers in LM Thapar school of management. Once the Pilot Phase is successful then we plan increase its functionalities by including Library managing system, online assessment systems, doubt clearing portals and many more and eventually implement and open its functionality to all branches in TIET University campus providing its facility to all students.

The scope of this student management system is not just limited to one university campus because the same mechanism can be used in other campuses as well. This system can also be implemented in other universities across the country and our goal is to reach all those universities.

## Document Conventions

Typeface	Indicates
<b>Font</b>	Josefin Sans
<b>Bold</b>	Partially
<b>Italics</b>	Partially
<b>Blue-underline</b>	Partially

## 1.3 DEFINITIONS, ABBREVIATIONS AND ACRONYMS

### DEFINITIONS

Table 1 gives explanation of the most commonly used terms in this SRS document.

S. NO.	TERM	DEFINITION
1	Artifact	Items that support software development.
2	Acquisition process	This process obtains the personnel and resources necessary for project work.

**Table 1: Definitions for most commonly used terms**

### ABBREVIATIONS

S.NO	MNEMONIC	FULL FORM
1	XAMPP	CROSS PLATFORM APACHE MYSQL PHP PERL

S.NO	MNEMONIC	FULL FORM
2	SMS	Student Management System

**Table 2: Full form for most commonly used mnemonics**

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## 1.4 REFERENCES

- <https://en.m.wikipedia.org/wiki/XAMPP>
- [https://www.google.com/aclk?sa=l&ai=DChcSEwihsHd7sX-AhWQtpYKHSxAAwYYABAAGgJObA&sig=AOD64\\_09AHUMhmr4kkx3WEBgZJExtzA3fA&q&adurl&ved=2ahUKEwiqy7rd7sX-AhXxmIYBHWaqCuMQOQx6BAgHEAE](https://www.google.com/aclk?sa=l&ai=DChcSEwihsHd7sX-AhWQtpYKHSxAAwYYABAAGgJObA&sig=AOD64_09AHUMhmr4kkx3WEBgZJExtzA3fA&q&adurl&ved=2ahUKEwiqy7rd7sX-AhXxmIYBHWaqCuMQOQx6BAgHEAE)
- [https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.smartdraw.com/uml-diagram/uml-diagram-tool.htm&ved=2ahUKEwjOhaDu7sX-AhXjmIYBHTPjCeEQFnoECBQQAQ&usg=AOvVawlgwUattHyaZq6Tmxl\\_Oz18](https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.smartdraw.com/uml-diagram/uml-diagram-tool.htm&ved=2ahUKEwjOhaDu7sX-AhXjmIYBHTPjCeEQFnoECBQQAQ&usg=AOvVawlgwUattHyaZq6Tmxl_Oz18)

## 1.5 OVERVIEW

The **Student Management System** is a web-based application designed to efficiently manage the academic records of college students or of a educational institute. The system aims to provide an comprehensively and user-friendly interface for managing student profiles, attendance, fee details, and courses. The website will be accessible to both students and administrators/teachers.

The **Student Management System** has been developed to override the problems prevailing in the practicing manual

system. This software is supported to eliminate and in some cases reduce the hardships faced by this existing system.

This system can also be implemented in other universities across the country and our goal is to reach all those universities. For handling student profiles, attendance, fee information, and courses, the system strives to offer a thorough and user-friendly interface. Both instructors and administrators as well as students will have access to the website. The system aims to provide an comprehensively and user-friendly interface for managing student profiles, attendance, fee details, and courses. The website will be accessible to both students and administrators/teachers.

## **2. OVERALL DESCRIPTION**

### **2.1 PRODUCT PERSPECTIVE**

- **Student profile management:** The system will allow students to manage their personal details like contact information, address, profile, etc.
- **Administrator profile management:** The system will allow the administrator/teacher to create and manage their own profiles, including personal details, and contact information. Administrator will be authorised to change or upload academic details of the student like their marks, attendance, schedule.
- **Fee management system:** The system will provide student the information about his/her fee details, and there is an option to pay fee online through a portal.
- **Course management:** The administrator/teacher is authorised to change or update course details of a student including course schedule.
- **Attendance tracking:** The system provides a mechanism for recording and tracking student attendance in various courses and classes. It allows faculty members to mark attendance, view attendance reports, and generate attendance statistics.
- **User access and Security:** The system includes role-based access control, ensuring that users only have access to the features and information relevant to their roles. It also incorporates security measures, such as data encryption and authentication, to protect sensitive student information.
- **User friendly interface:** The system is designed with a user-friendly interface, making it easy for administrators, faculty, and students to navigate and use the system efficiently.

### **2.2 PRODUCT FUNCTIONS**

The product should be able to perform the following operations:

1. It must be able to authenticate the card user by matching the ID no. / PSRN no. and the access code against the values stored in the database.
2. It must be able to check the lab/room status by querying the database for any reservation requests made earlier.

3. It must be able to record the user's presence by writing the user's ID no. / PSRN no. in the corresponding database table. Thus for one swipe, two write operations will be performed: one into the central repository and other into the backup

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4. database server. For each swipe the time in/out will also be recorded and the total time spent in the lab will be computed by subtracting the time when user entered the lab with the time when the user came out of the lab.
5. The software must be able to update the access privileges onto a particular user's card and the database where the privileges themselves will be modifiable only by the system administrators (or some authorised staff members).
6. The software must be able to determine whether a particular user has been denied access from a particular lab due to some policy violation. The results of this operation will be viewable by the security officer only.

### **2.3 USER CHARACTERISTICS**

The goal is to design website for different users. **These user types are listed below as follows:**

1. Student
2. Teacher

As one can see from the list, each user will have different educational background and expertise level in using the system. Our goal is to develop software that should be easy to use for all types of users.

### **2.4 GENERAL CONSTRAINTS, ASSUMPTIONS & DEPENDENCIES**

- The system has to be user-friendly. A user using Student management system website must have a brief idea about how to navigate through the website, further taking full benefit of the website along with a little bit knowledge about computers is required.
- Since we are storing a lot of information as records of students and teachers in databases, we do need memory requirements, which should be dynamic.
- Our database server and backup servers should be regularly updated, due to the new user entries. Additional latencies may arise due to multiple updates/deletions/creations of records which need to be taken care of.
- It is assumed that the site will be open-source and will be available to use to anyone and everyone that wishes to use it for its intended purpose.

## 2.5 APPORTIONING OF REQUIREMENTS

The student management system is to be implemented in the following phases:

**Prototype phase:** In the beginning and development phase, we intend to develop the system as a prototype for the 2CS9 class, which will have an audience of roughly 30 individuals and about 5 professors. Initially we will be providing access privileges for two types of users: Students and Teachers cum staff as they will be ones most involved in this phase. This student management system can be used on more than one campus of a university; it is not just limited to one school. Our goal is to provide this technology, which can be used at other universities around the country, to every university that might need it.

**Pilot phase:** Following the successful completion of the we plan to deploy the system to a larger audience. So we intend to enter the pilot phase (the first stage of development) and give all faculty members and students at the LM Thapar School of Management access to the system. This student management system can be used on more than one campus of a university; it is not just limited to one school. Our goal is to provide this technology, which can be used at other universities around the country, to every university that might need it.

**Expending phase:** Once the Pilot Phase is successful, we intend to expand its functionalities by including a library management system, online assessment systems, question-clearing portals, and many more. Ultimately, we intend to implement and open its functionality to all branches in the TIET University campus, thereby making it available to all students. The use of this student management system is not simply restricted to one campus of a university but additional campuses may utilise the same process. Our objective is to reach every university that might use this technology, which can also be used in other institutions around the nation. This student management system can be used on more than one campus of a university; it is not just limited to one school. Our goal is to provide this technology, which can be used at other universities around the country, to every university that might need it.

The functionalities will be improved and increased after each phase. Some new features will be included that will make the system more productive in nature.

### **3. SPECIFIC REQUIREMENTS**

#### **3.1 EXTERNAL INTERFACE**

The following list presents the external interface requirements:

- The product requires very **limited graphics usage** with just a simple keypad for taking the user input.
- The product **does not require usage of sound or animation**. The hardware and operating system requires a screen resolution not more than 320 x 240 pixels (owing to the small form factor).
- Sound is not an essential feature but it can be considered for future variants of the system wherein the user will be greeted by his name as he swipes his card against the reader-writer terminal.

#### **3.2 DETAILED DESCRIPTION OF FUNCTIONAL REQUIREMENTS**

Table 3 shows a template that I'll be using to describe functional requirements for three types of users: student, staff, student cum staff as one can easily deduce the functional requirements for other user types with this template.

<b>Purpose</b>	A description of the functional requirements and its reasons
<b>Inputs</b>	What are the inputs; in what form will they arrive; from what sources can the inputs come; what are the legal domains of each input.
<b>Processing</b>	Describes the outcome rather than the implementation; includes any validity checks on the data, exact timing of operation (if needed), how to handle unexpected or abnormal situations
<b>Outputs</b>	The form, shape, destination and volume of output; output timing; range of parameters in the output; unit of measure of the output; process by which output is stored or destroyed; process for handling error message produced as output.

**Table 3: Template for describing functional requirements**

### 3.2.1 FUNCTIONAL REQUIREMENTS FOR STUDENT LOGIN SCREEN

Table 4 gives the functional requirements for Student Login Screen.

<b>Purpose</b>	This screen asks for the username and password of the student being part of the institute. The data being entered is transferred to the database which is linked.
<b>Inputs</b>	Username and Password are the inputs.
<b>Processing</b>	The menu responds to selections by displaying a page containing the pre-defined text requested information.
<b>Outputs</b>	Output consists of a screen of information specific to a student. For example:- Student A will be provided with the profile details, fee details, attendance records etc. which by clicking he/she will be able to fetch the specific information.

**Table 4: Functional Requirements for Student Login Screen**

### 3.2.2 FUNCTIONAL REQUIREMENTS FOR TEACHER LOGIN SCREEN

Table 4 gives the functional requirements for Teacher Login Screen.

<b>Purpose</b>	This screen asks for the username and password of the student being part of the institute. The data being entered is transferred to the database which is linked.
<b>Inputs</b>	Username and Password are the inputs.
<b>Processing</b>	The menu responds to selections by displaying a page containing the pre-defined text requested information.
<b>Outputs</b>	Output consists of a screen of information specific to a student. For example:- Teacher A will be provided with the profile details, salary details, marks record etc. which by clicking he/she will be able to fetch the specific information.

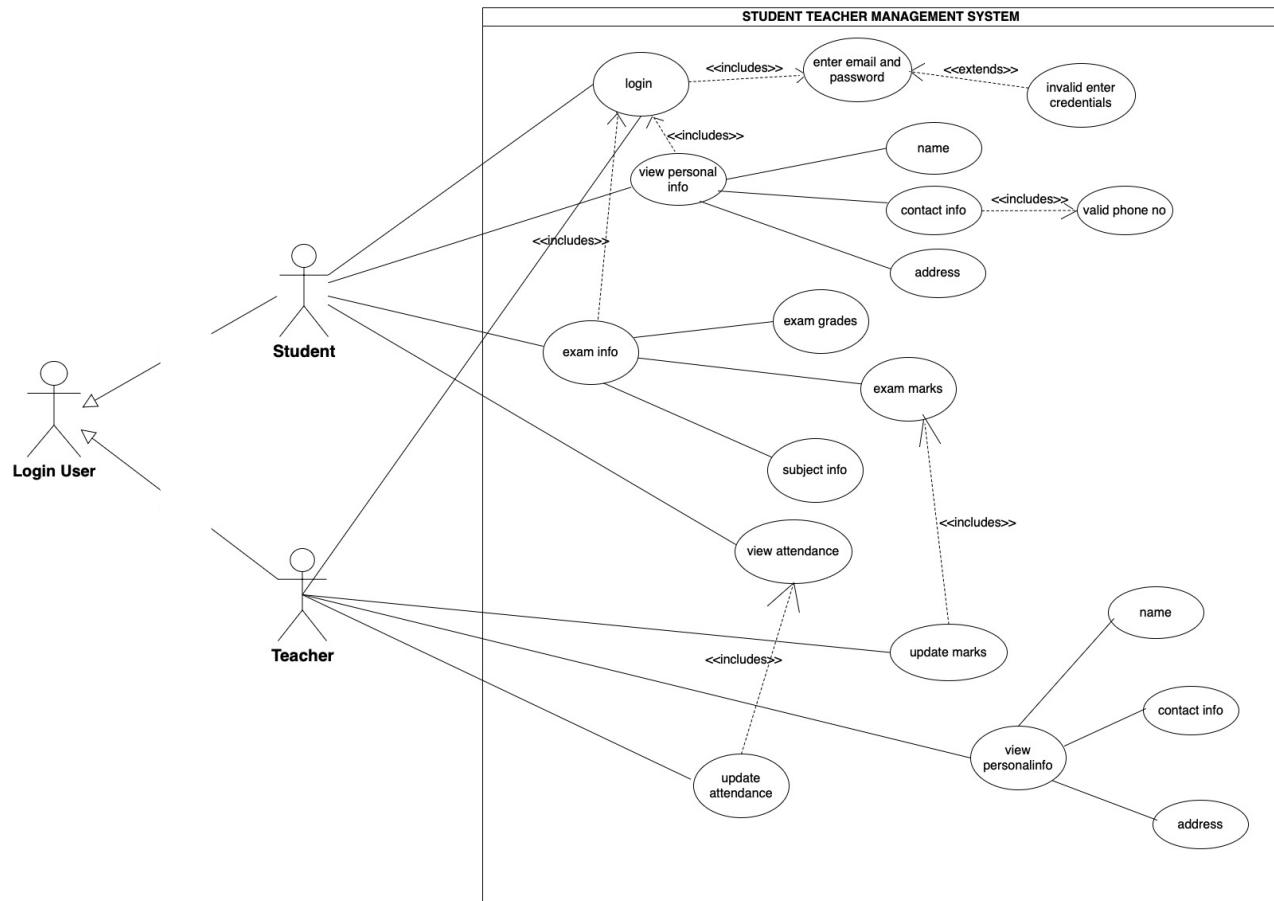
**Table 4: Functional Requirements for Teacher Login Screen**

### 3.3 PERFORMANCE REQUIREMENTS

- The software is designed for the smart card reader-writer terminal and cannot run from a standalone desktop PC.
- The software will support simultaneous user access only if there are multiple terminals.
- Only textual information will be handled by the software. Amount of information to be handled can vary from user to user.
- For normal conditions, 95% of the transactions should be processed in less than 5 seconds.

### 3.4 LOGICAL DATABASE REQUIREMENTS

Figure 3 shows the E-R diagram for the entire system.



### 3.5 QUALITY ATTRIBUTES

The product is target towards a wide variety of users such as **Student, staff, student cum staff**, etc. The product must **load quickly** and work well on a variety of terminals. It must also tolerate wide variety of input possibilities from a user, such as **incorrect responses or unforeseen keystrokes**.

### 3.6 OTHER REQUIREMENTS

None at this time.

## 4. CHANGE HISTORY

24-FEB-2023	VERSION 1.0 INITIAL RELEASE
02-APRIL-2023	VERSION 2.0 RE-RELEASED

## 5. DOCUMENT APPROVERS

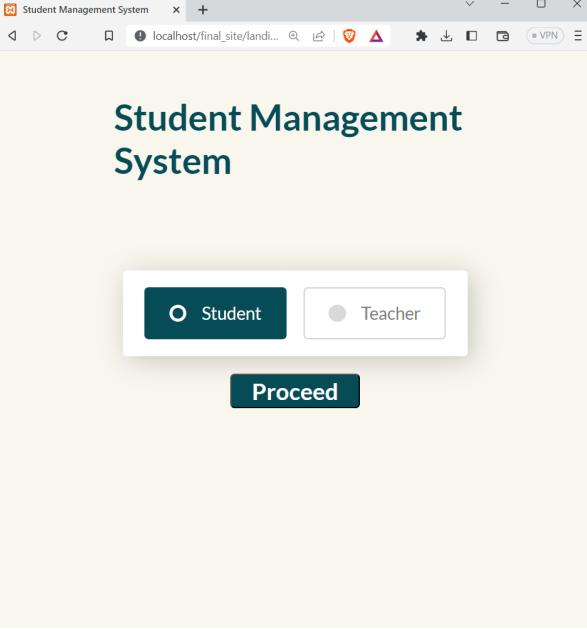
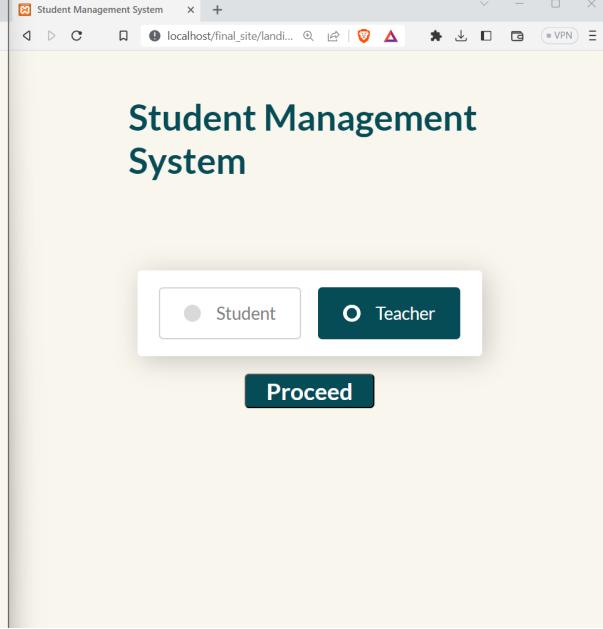
SRS for Student Management System based approved by:

\_\_\_\_\_ (Name)

Designation

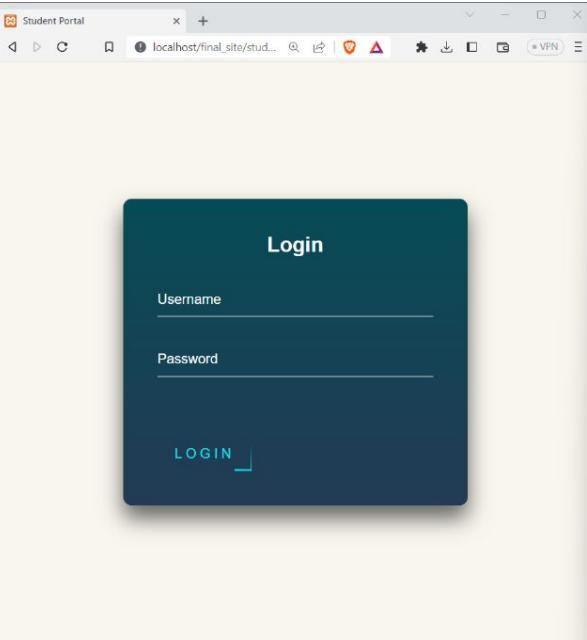
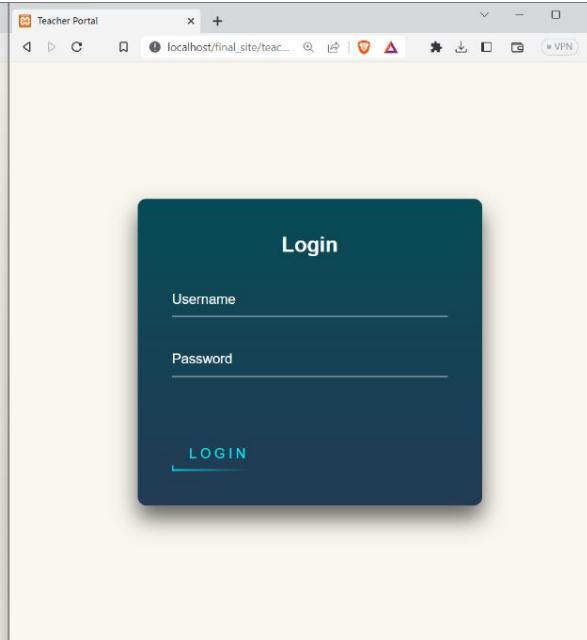
Date: 26-April-2023

## 2.4 USER STORIES AND STORY CARDS

0001	New user Login
As an existing user you can choose your role for login.	
	

**Confirmation:**

User can choose the appropriate role for him and will be served accordingly.

0002	User login
As an existing user, user can login to their portals	
 A screenshot of a web browser window titled "Student Portal". The address bar shows "localhost/final_site/stud...". The main content area displays a dark teal "Login" form. It has two input fields: "Username" and "Password", both with placeholder text. Below the fields is a blue "LOGIN" button with a downward arrow.	 A screenshot of a web browser window titled "Teacher Portal". The address bar shows "localhost/final_site/teac...". The main content area displays a dark teal "Login" form, identical in structure to the student portal's, with "Username" and "Password" fields and a "LOGIN" button.

**Confirmation:**

User can login to their portal safely.

User can access all of its attributes.

0003	<a href="#">View profile</a>
------	------------------------------

As a user, I want to view my profile

Profile   Class Info   Update Marks   Update Attendance   Schedules   Logout

# Welcome, teacher1

CSED

— Thapar Institute of Engineering and Technology —

I'm a competitive programmer and a huge fan of coding. I love to experiment and discover new things. The quality that I enjoyed the most about myself was that once I started something I liked, I didn't stop until I got the most out of it. Right now, I'm developing a Web application. Why wait to discover more about me? Simply scroll down!

**Confirmation:**  
User can view their profile.

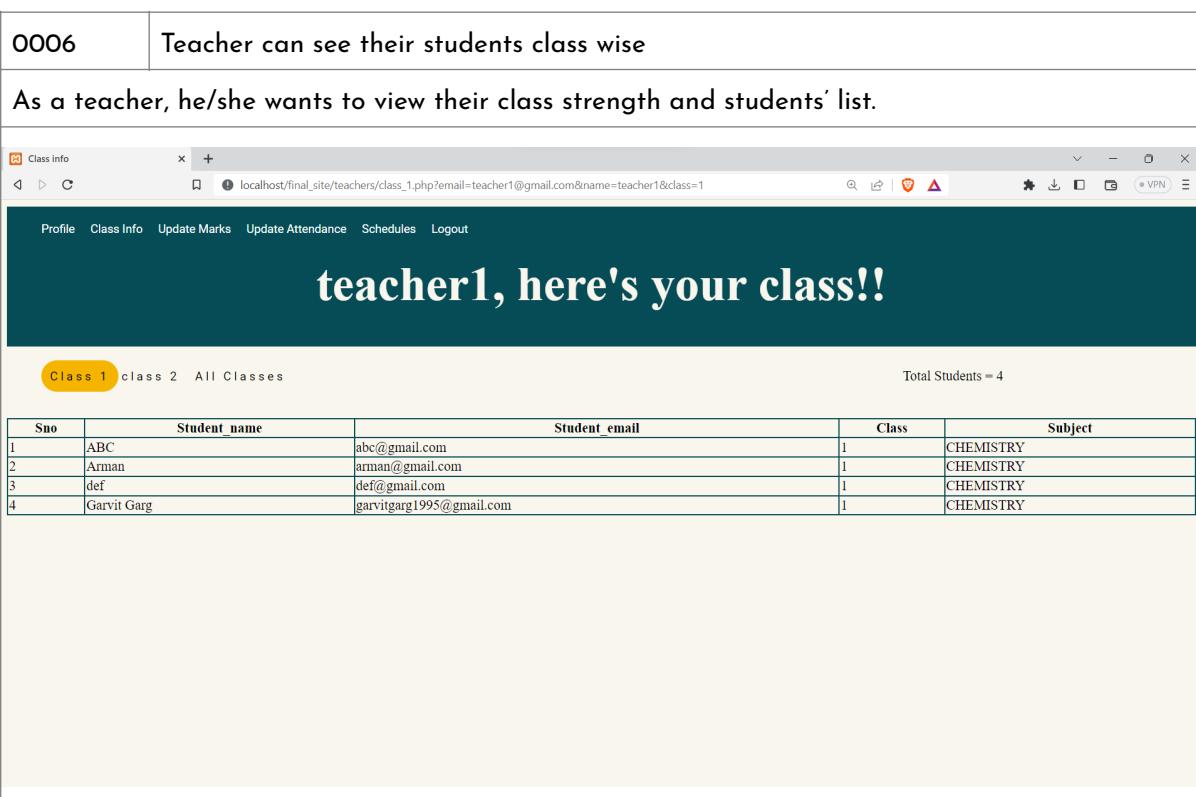
0004	<b>View Marks</b>															
<b>As a student, I can view my marks</b>																
<p>Sem 1 Sem 2 Sem 3 Sem 4</p> <table border="1"> <thead> <tr> <th>SUBJECT</th> <th>EXAM CODE</th> <th>MARKS OBTAINED</th> <th>MAX. MARKS</th> <th>GRADE AWARDED</th> </tr> </thead> <tbody> <tr> <td>CN</td> <td>UCS210</td> <td>30</td> <td>100</td> <td>E</td> </tr> <tr> <td>PHYSICS</td> <td>UCS310</td> <td>20</td> <td>100</td> <td>A</td> </tr> </tbody> </table>		SUBJECT	EXAM CODE	MARKS OBTAINED	MAX. MARKS	GRADE AWARDED	CN	UCS210	30	100	E	PHYSICS	UCS310	20	100	A
SUBJECT	EXAM CODE	MARKS OBTAINED	MAX. MARKS	GRADE AWARDED												
CN	UCS210	30	100	E												
PHYSICS	UCS310	20	100	A												

**Confirmation:**  
User can view their profiles safely.

0005	User can view their attendance subject wise																
As a user, user can view their attendance subject wise																	
<p>Attendance Record</p> <table border="1"> <thead> <tr> <th colspan="4">Required attendance Percentage for getting pass grade &gt; 75%</th> </tr> <tr> <th>Subject</th> <th>Attended Lectures</th> <th>Total Lectures</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>CN</td> <td>28</td> <td>65</td> <td>43.08%</td> </tr> <tr> <td>PHYSICS</td> <td>8</td> <td>43</td> <td>18.6%</td> </tr> </tbody> </table>		Required attendance Percentage for getting pass grade > 75%				Subject	Attended Lectures	Total Lectures	Percentage	CN	28	65	43.08%	PHYSICS	8	43	18.6%
Required attendance Percentage for getting pass grade > 75%																	
Subject	Attended Lectures	Total Lectures	Percentage														
CN	28	65	43.08%														
PHYSICS	8	43	18.6%														

**Confirmation:**

User can view their attendance subject wise.

0006	Teacher can see their students class wise			
As a teacher, he/she wants to view their class strength and students' list.				
				
Sno	Student name	Student_email	Class	Subject
1	ABC	abc@gmail.com	1	CHEMISTRY
2	Arman	arman@gmail.com	1	CHEMISTRY
3	def	def@gmail.com	1	CHEMISTRY
4	Garvit Garg	garvitgarg1995@gmail.com	1	CHEMISTRY

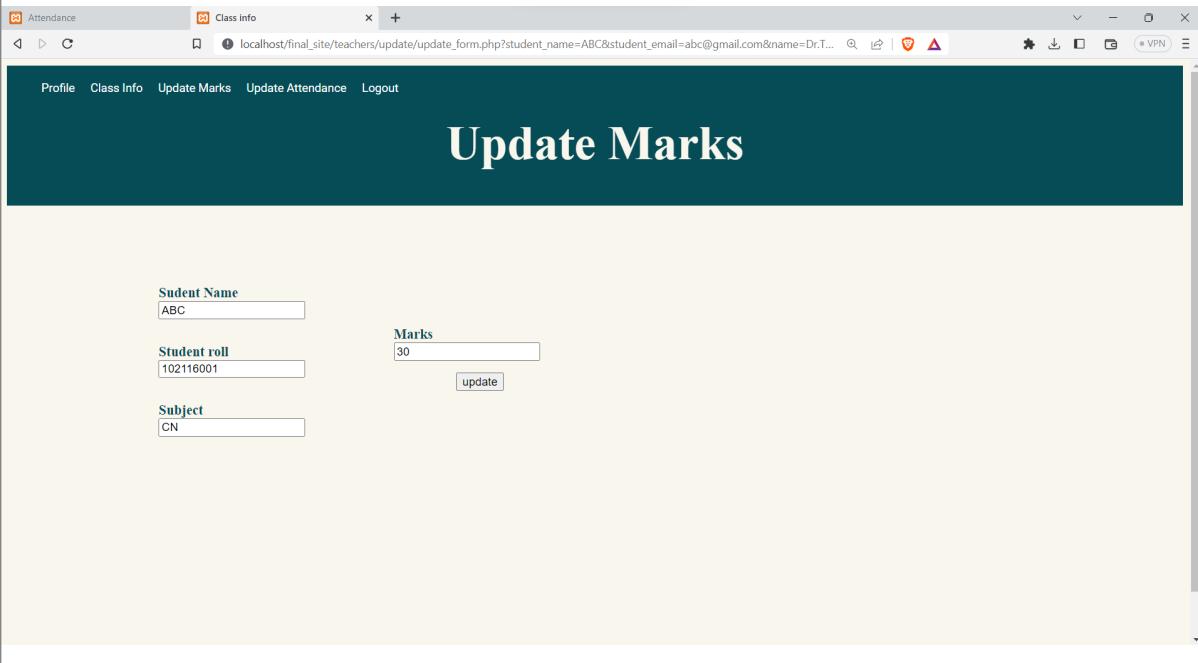
**Confirmation:**

Teacher can click on class for he/she want to see the class details.

0007	Update marks
------	--------------

As a teacher, teacher can view and update student's marks.

**Confirmation:**  
By clicking on the edit button teacher can edit the student's marks.

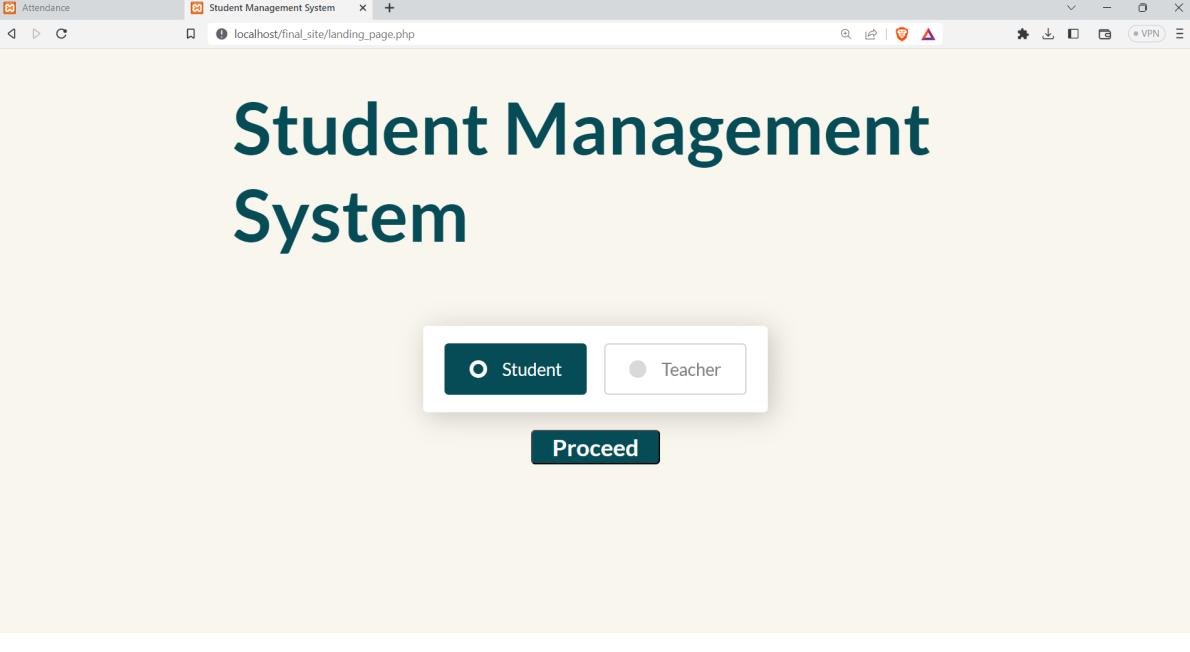
0008	Update marks form
Update marks form for teacher to update marks	
 <p>The screenshot shows a web browser window with the title 'Attendance' and 'Class info'. The URL in the address bar is 'localhost/final_site/teachers/update/update_form.php?student_name=ABC&amp;student_email=abc@gmail.com&amp;name=Dr.T...'. The page header includes 'Profile', 'Class Info', 'Update Marks', 'Update Attendance', and 'Logout'. The main content area has a dark teal header with the text 'Update Marks'. Below the header are three input fields: 'Student Name' (value 'ABC'), 'Student roll' (value '102116001'), and 'Subject' (value 'CN'). To the right of the 'Subject' field is a 'Marks' input field containing '30'. A small 'update' button is located below the marks field.</p>	
<p><b>Confirmation:</b>        By clicking on the update button, student's marks will definitely update from the database and will also reflect in student's portal.</p>	

0009	Update attendance
------	-------------------

As a teacher, teacher can increase student's attendance.

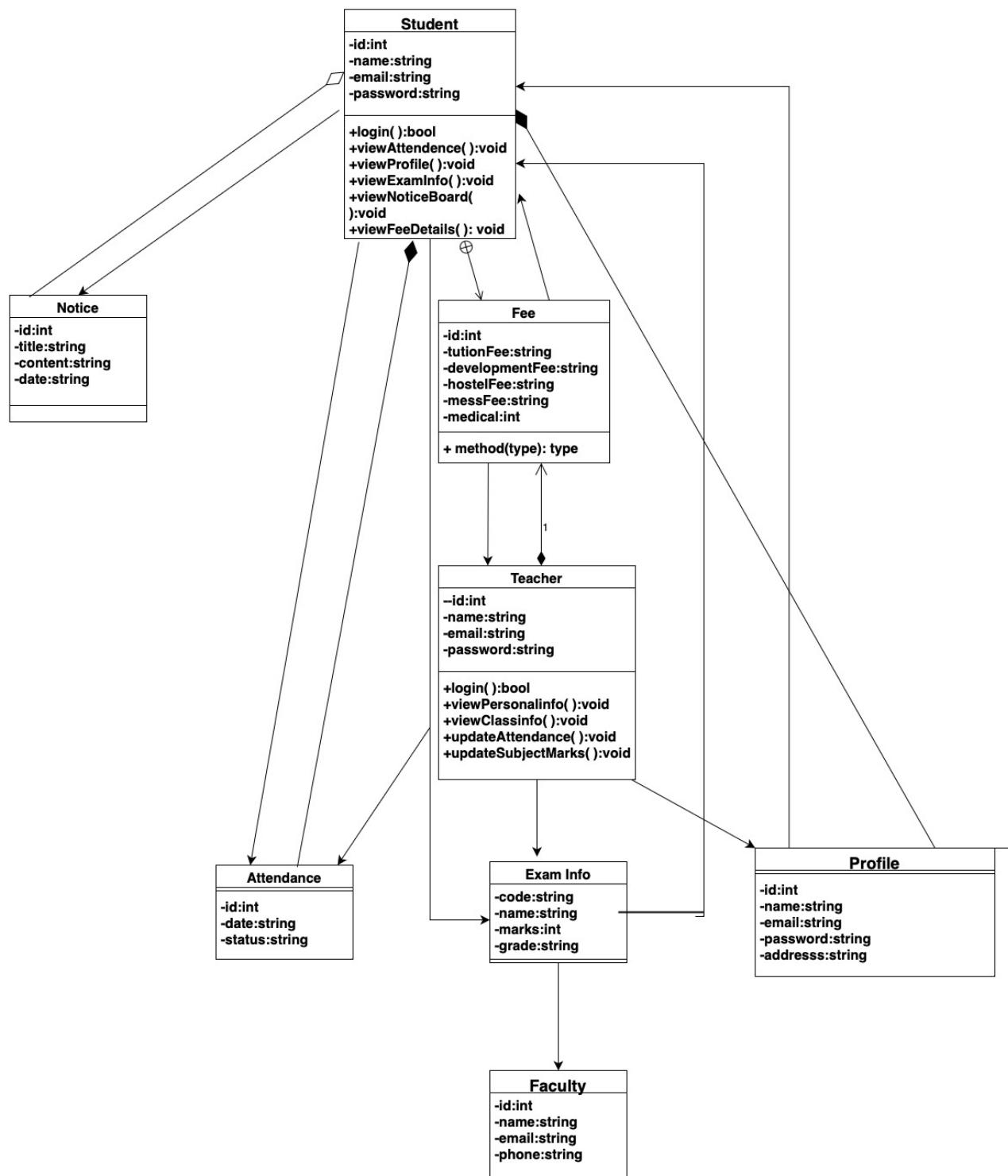
SNo	Student_name	Class	Subject	Attendance
1	ABC	1	CN	28
2	Arman	1	CN	16
3	def	1	CN	11
4	Garvit Garg	1	CN	22

**Confirmation:**  
By clicking on '+' button student's attendance will surely increase and will reflect in both database and student's portal.

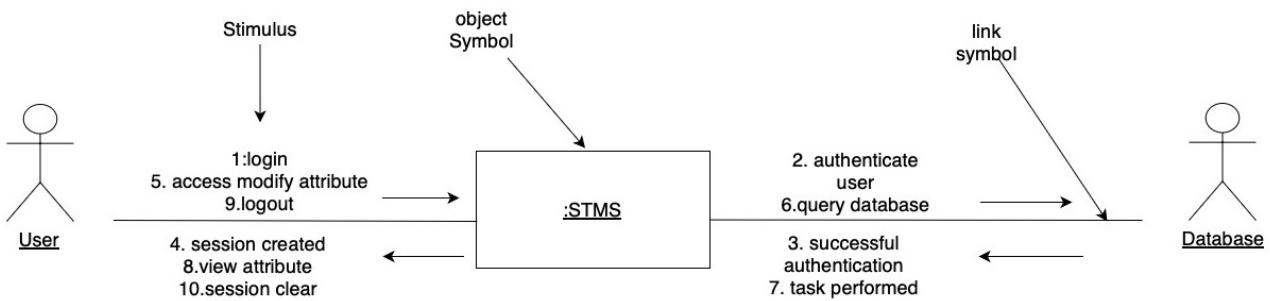
00010	<a href="#">Logout</a>
As a user, user can logout from the system securely.	
	
<p><b>Confirmation:</b> User get logged out from the system securely and safely .</p>	

### 3. DESIGN PHASE

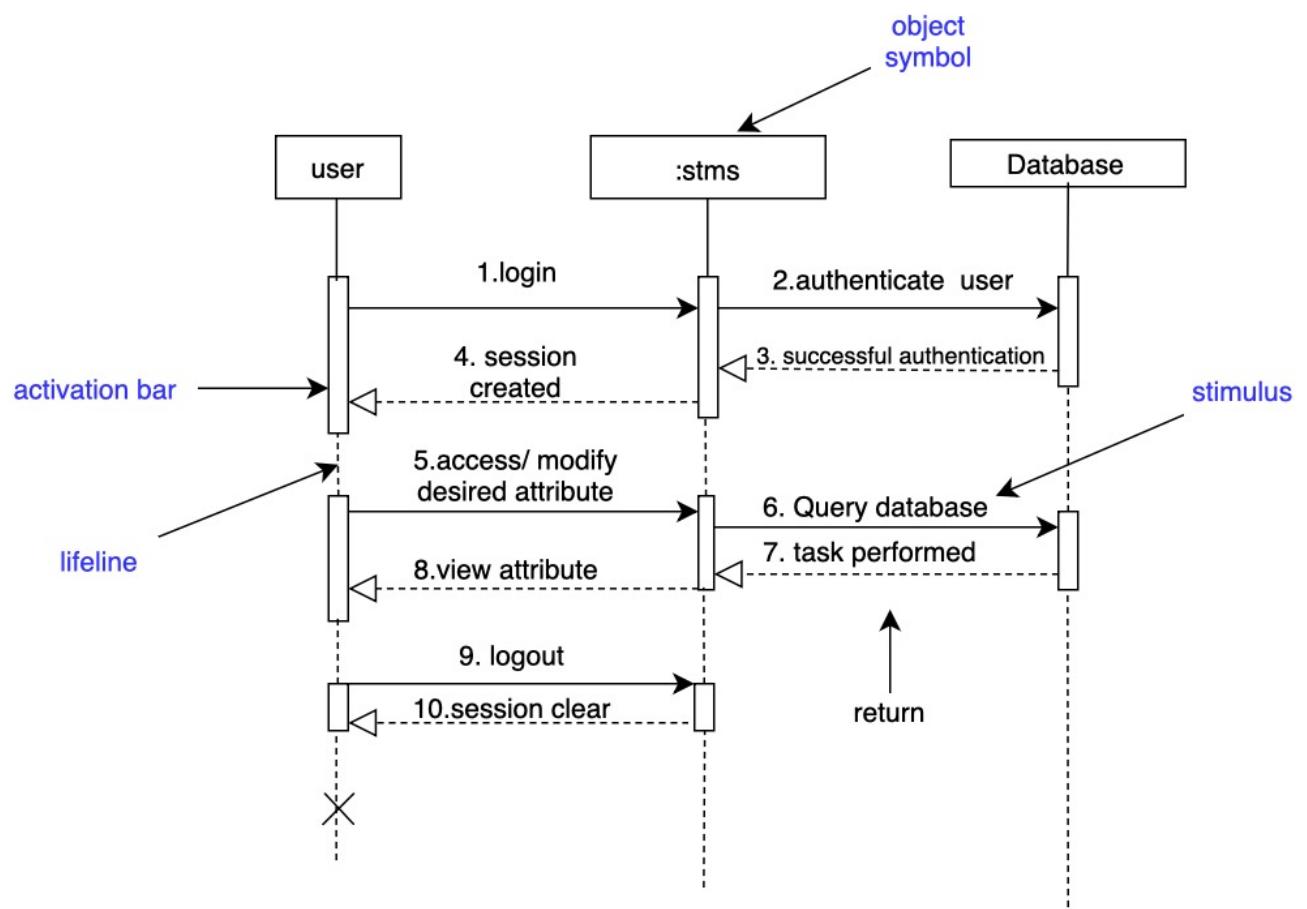
#### 3.1 CLASS DIAGRAM



## 3.2 COLLABORATION DIAGRAM

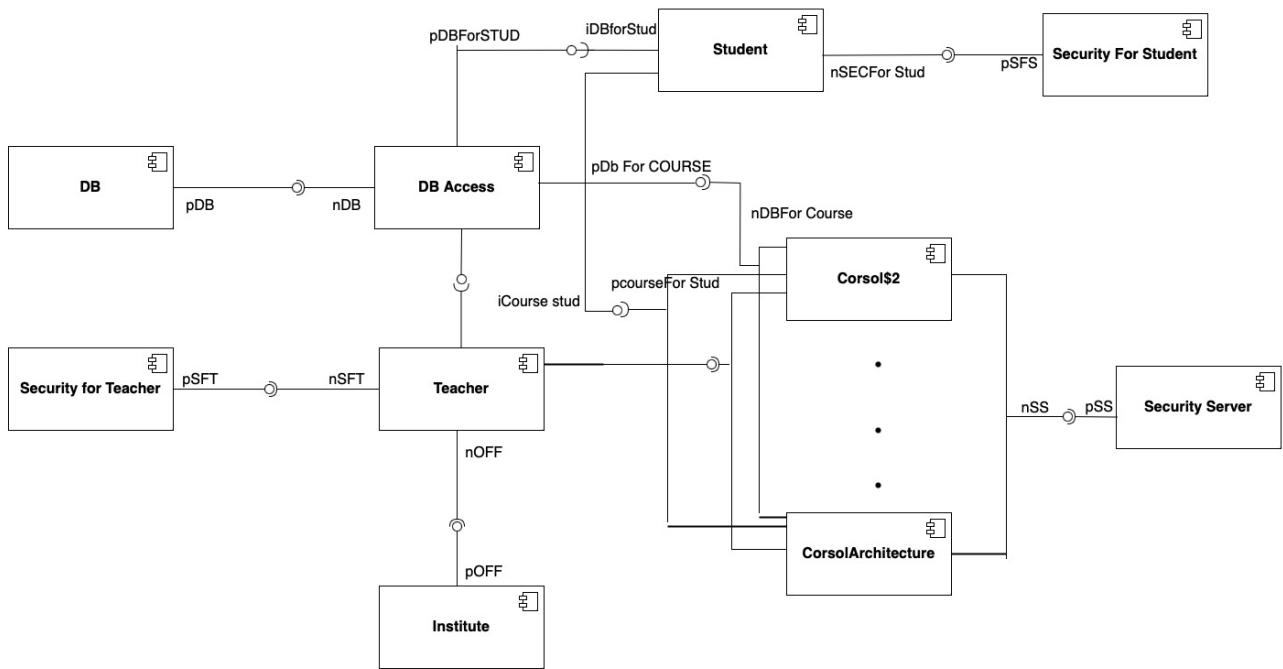


## 3.3 SEQUENCE DIAGRAM

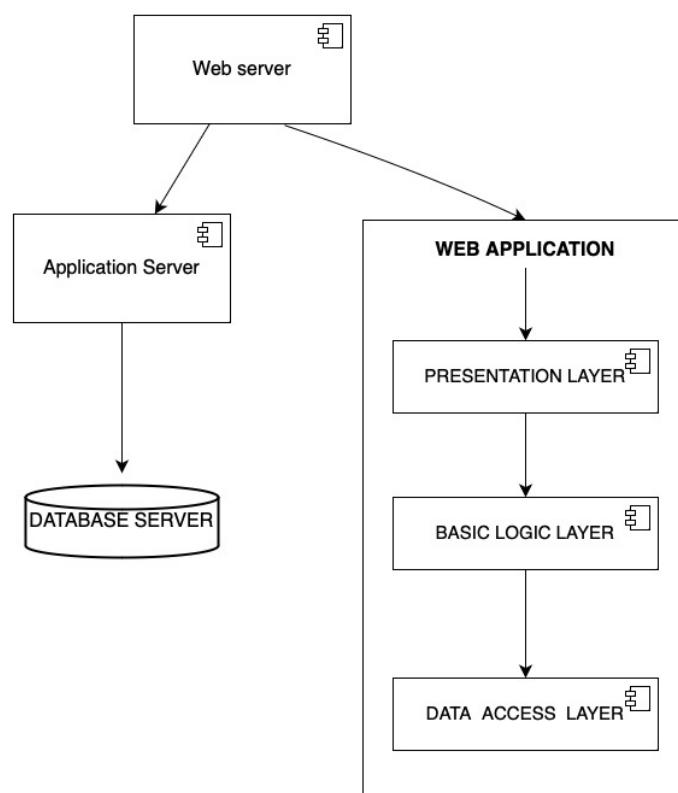


## 4. IMPLEMENTATION

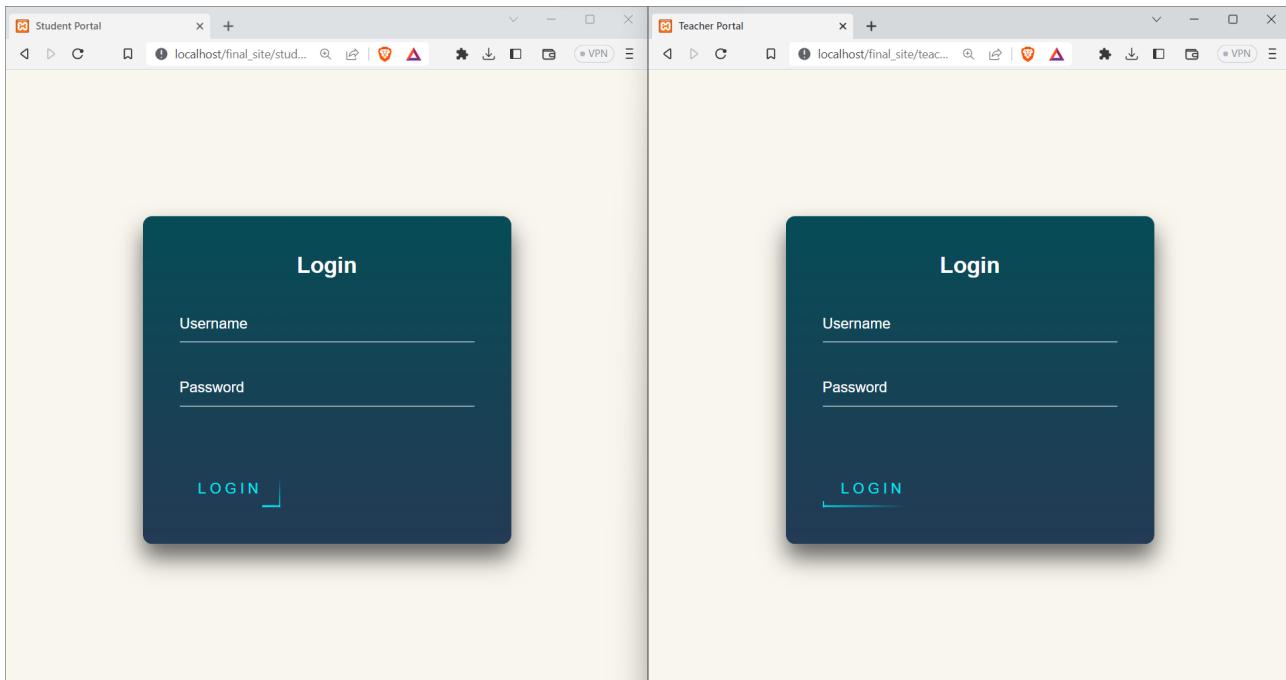
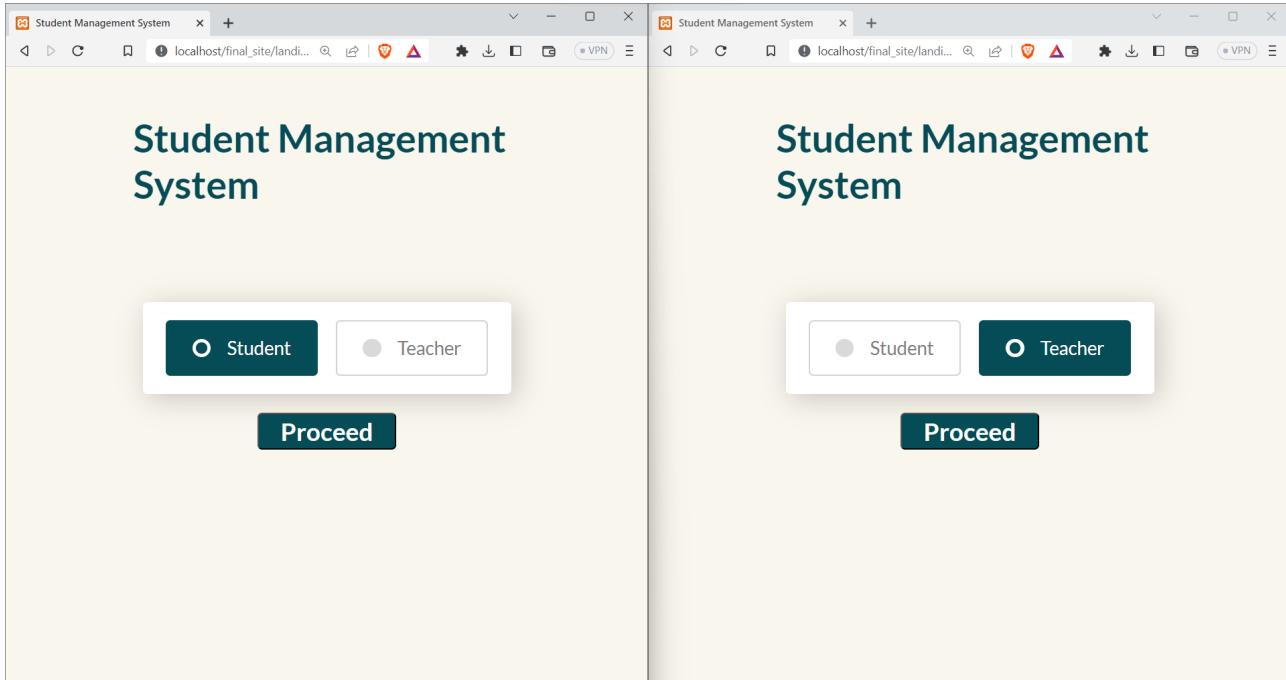
### 4.1 COMPONENT DIAGRAM

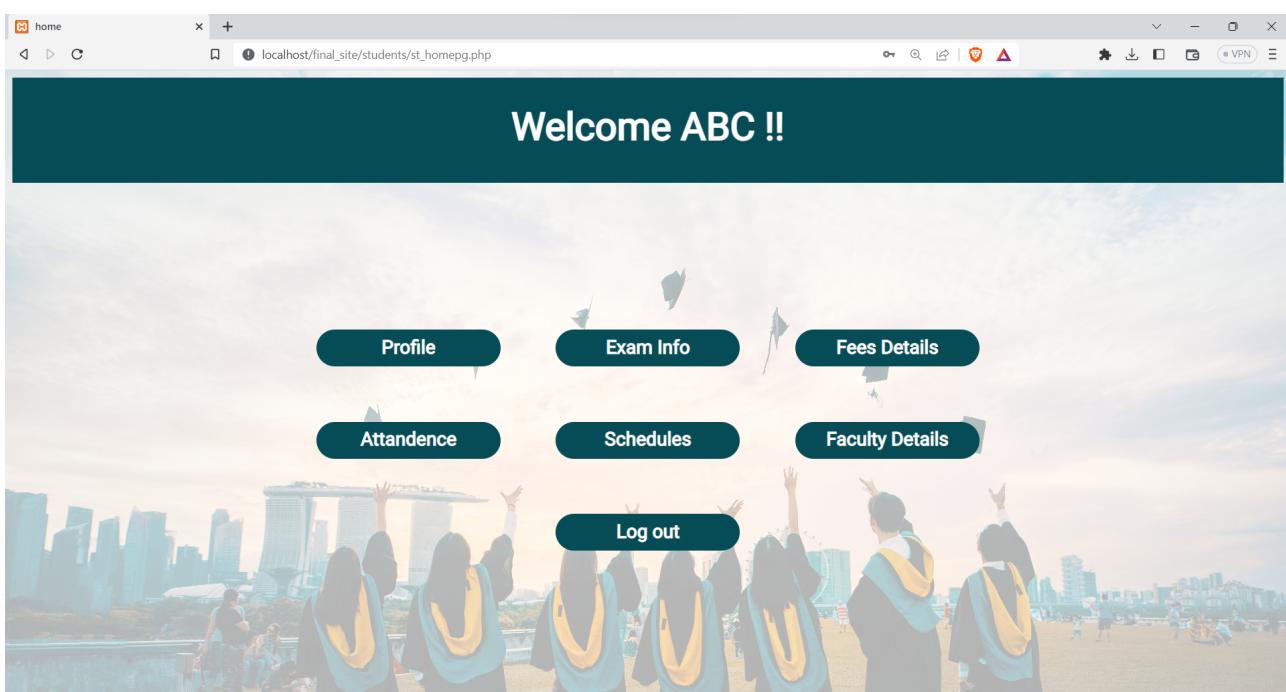
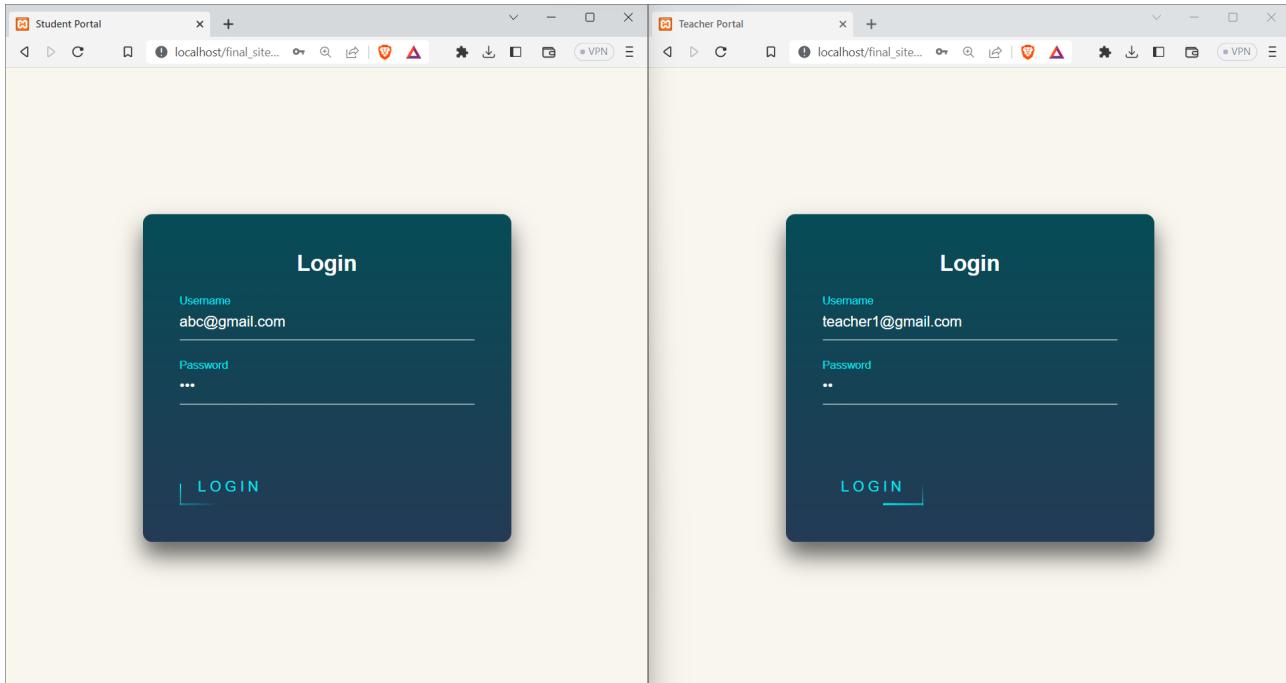


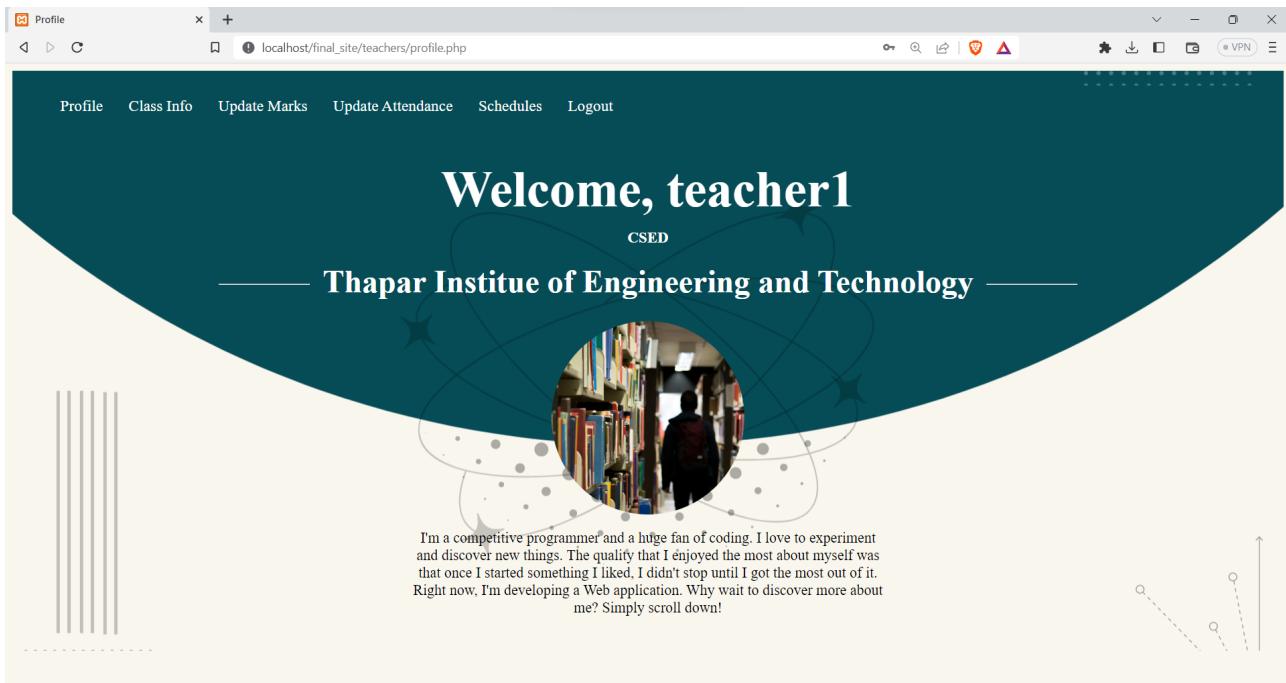
### 4.2 DEPLOYMENT DIAGRAM



## 4.3 SCREENSHOTS







**ABC, Know Your Progress!!**

Sem 1 Sem 2 Sem 3 Sem 4

SUBJECT	EXAM CODE	MARKS OBTAINED	MAX. MARKS	GRADE AWARDED
CHEMISTRY	UCS210	90	100	A
PHYSICS	UCS310	20	100	A

**Update Marks**

Class 1 class 2

Sno	Student Name	Student Email	Class	Subject	Marks
1	ABC	abc@gmail.com	1	CHEMISTRY	90 <input checked="" type="checkbox"/>
2	Arman	arman@gmail.com	1	CHEMISTRY	80 <input checked="" type="checkbox"/>
3	def	def@gmail.com	1	CHEMISTRY	80 <input checked="" type="checkbox"/>
4	Garvit Garg	garvitgarg1995@gmail.com	1	CHEMISTRY	80 <input checked="" type="checkbox"/>

## UCS503- Software Engineering Lab

The screenshot displays two browser windows side-by-side. The left window, titled 'Exam info', shows a navigation bar with links: Home, Profile, Exam Info, Fees Details, Attendance, Schedules, Faculty Details, and Logout. Below the navigation is a dark teal header with the text 'ABC, Know Your Progress!!'. Underneath is a yellow button labeled 'Sem 1' and other options: Sem 2, Sem 3, Sem 4. A table follows:

SUBJECT	EXAM CODE	MARKS OBTAINED	MAX. MARKS	GRADE AWARDED
CHEMISTRY	UCS210	90	100	A
PHYSICS	UCS310	20	100	A

The right window, titled 'Class info', also has a navigation bar with the same links. It features a dark teal header with 'Update Marks' centered. Below it is a form:

Student Name:  Subject:

Student roll:  Marks:

This screenshot shows the same two browser windows after changes have been made. In the left window, the table now reflects the updated marks:

SUBJECT	EXAM CODE	MARKS OBTAINED	MAX. MARKS	GRADE AWARDED
CHEMISTRY	UCS210	30	100	E
PHYSICS	UCS310	20	100	A

In the right window, the 'Marks' field in the update form now contains '30'.

## UCS503- Software Engineering Lab

Class info

localhost/final\_site/teachers/class\_1.php?email=teacher1@gmail.com&name=teacher1&class=1

Profile Class Info Update Marks Update Attendance Schedules Logout

# teacher1, here's your class!!

Class 1 class 2 All Classes Total Students = 4

Sno	Student_name	Student_email	Class	Subject
1	ABC	abc@gmail.com	1	CHEMISTRY
2	Arman	arman@gmail.com	1	CHEMISTRY
3	def	def@gmail.com	1	CHEMISTRY
4	Garvit Garg	garvitgarg1995@gmail.com	1	CHEMISTRY

Class info

localhost/final\_site/teachers/class\_2.php?email=teacher1@gmail.com&name=teacher1&class=2

Profile Class Info Update Marks Update Attendance Schedules Logout

# teacher1, here's your class!!

Class 1 class 2 All Classes Total Students = 4

Sno	Student_name	Student_email	Class	Subject
1	GHI	ghi@gmail.com	2	CHEMISTRY
2	Gurkamal	gurkamal@gmail.com	2	CHEMISTRY
3	s1	s1@gmail.com	2	CHEMISTRY
4	XYZ	xyz@gmail.com	2	CHEMISTRY

## UCS503- Software Engineering Lab

**Class info**

localhost/final\_site/teachers/class\_info.php?email=teacher1@gmail.com&name=teacher1&class=1

Profile Class Info Update Marks Update Attendance Schedules Logout

# teacher1, here's your class!!

Class 1 class 2 All Classes Total Students = 8

sno	Student_name	Student_email	Class	Subject
1	ABC	abc@gmail.com	1	CHEMISTRY
2	Garvit Garg	garvitgarg1995@gmail.com	1	CHEMISTRY
3	Arman	arman@gmail.com	1	CHEMISTRY
4	def	def@gmail.com	1	CHEMISTRY
5	s1	s1@gmail.com	2	CHEMISTRY
6	GHI	ghi@gmail.com	2	CHEMISTRY
7	XYZ	xyz@gmail.com	2	CHEMISTRY
8	Gurkamal	gurkamal@gmail.com	2	CHEMISTRY

localhost/final\_site/teachers/class\_info.php?email=teacher1@gmail.com&name=teacher1&class=1

**Attendance**

localhost/final\_site/stud... VPN

Home Profile Exam Info Fees Details Attendance Schedules Faculty Details Logout

## Attendance Record

**Required attendance Percentage for getting pass grade > 75%**

Subject	Attended Lectures	Total Lectures	Percentage
CHEMISTRY	27	64	42.19%
PHYSICS	8	43	18.6%

**Update Attendance**

localhost/final\_site/teac... VPN

Profile Class Info Update Marks Update Attendance Schedules Logout

# teacher1, here's your class!!

Class 1 class 2 + Add class 1

sno	Student_name	Class	Subject	Attendance
1	ABC	1	CHEMISTRY	27 <span style="color: red;">+</span>
2	Arman	1	CHEMISTRY	16 <span style="color: red;">+</span>
3	def	1	CHEMISTRY	11 <span style="color: red;">+</span>
4	Garvit Garg	1	CHEMISTRY	22 <span style="color: red;">+</span>

## UCS503- Software Engineering Lab

**Attendance Record**

**Required attendance Percentage for getting pass grade > 75%**

Subject	Attended Lectures	Total Lectures	Percentage
CHEMISTRY	28	65	43.08%
PHYSICS	8	43	18.6%

**teacher1, here's your class!!**

**Class 1**   **class 2**   **+ Add class 1**

sno	Student_name	Class	Subject	Attendance
1	ABC	1	CHEMISTRY	28
2	Arman	1	CHEMISTRY	16
3	def	1	CHEMISTRY	11
4	Garvit Garg	1	CHEMISTRY	22

**Time Table**

	08:50 am - 9:40 am	9:40 am- 10:30 am	10:30 am - 11:20 am	11:20 am- 12:10 pm	12:10 pm- 01:00 pm	01:00 pm- 1:50 pm	1:50 pm- 2:40 pm	2:40 pm- 3:30 pm	3:30 pm- 4:20 pm	4:20 pm-5:10 pm
MON	OT(2CS11) (Lab1) DAA(2CS9)(Lab2)	OT(2CS9) (Lab1) SE (2CS10)(Lab2)		SE(L)			CN(L)	DBMS(L)	OT(2CS10)(Lab1)	
TUES	DAA(L)	OT(L)	CN(L)	DAA(L)	SE(L)		DBMS(L)	AI(L)	AI(2CS9) (Lab1)	
WED		DBMS(2CS10) (Lab2) CN(2CS9)(Lab1)		DBMS(2CS9) (Lab2) CN(2CS10) (Lab1)			DBMS(2CS12) (Lab2) SE(2CS9)(Lab1)		OT(L)	AI(L)
THUR	SE(L)	OT(L)	DAA(L)	AI (2CS11)(Lab1) DAA(2CS10)(Lab2)			AI(2CS10) (Lab1) DAA(2CS12)(Lab2)	SE (2CS11) (Lab1) OT(2CS12) (Lab2)		
FRI	DBMS(2CS11)(Lab2) CN(2CS12)(Lab1)		DBMS(L)	SE(2CS12) (Lab2) CN(2CS11)(Lab1)			AI(2CS12)(Lab1) DAA(2CS11)(Lab2)	AI(L)		

**Schedules**

localhost/final\_site/students/schedules.php?email=abc@gmail.com&name=ABC

**Time Table**

	08:50 am - 9:40 am	9:40 am- 10:30 am	10:30 am - 11:20 am	11:20 am- 12:10 pm	12:10 pm- 01:00 pm	01:00 pm- 1:50 pm	1:50 pm- 2:40 pm	2:40 pm- 3:30 pm	3:30 pm- 4:20 pm	4:20 pm-5:10 pm
MON	OT(2CS11) (Lab1) DAA(2CS9)(Lab2)	OT(2CS9) (Lab1) SE (2CS10)(Lab2)		SE(L)			CN(L)	DBMS(L)	OT(2CS10)(Lab1)	
TUES	DAA(L)	OT(L)	CN(L)	DAA(L)	SE(L)		DBMS(L)	AI(L)	AI(2CS9) (Lab1)	
WED		DBMS(2CS10) (Lab2) CN(2CS9)(Lab1)		DBMS(2CS9) (Lab2) CN(2CS10) (Lab1)			DBMS(2CS12) (Lab2) SE(2CS9)(Lab1)		OT(L)	AI(L)
THUR	SE(L)	OT(L)	DAA(L)	AI (2CS11)(Lab1) DAA(2CS10)(Lab2)			AI(2CS10) (Lab1) DAA(2CS12)(Lab2)	SE (2CS11) (Lab1) OT(2CS12) (Lab2)		
FRI	DBMS(2CS11)(Lab2) CN(2CS12)(Lab1)		DBMS(L)	SE(2CS12) (Lab2) CN(2CS11)(Lab1)			AI(2CS12)(Lab1) DAA(2CS11)(Lab2)	AI(L)		

Fees\_Details    x +  
localhost/final\_site/students/fees\_details.php?email=abc@gmail.com&name=ABC  
Home Profile Exam Info Fees Details Attandence Schedules Faculty Details Logout

# Your Cart

Semester 4 fee details :

STUDENT SECURITY :	Rs 10000.0
TUITION FEE :	Rs 104100.0
STUDENT ACTIVITIES & WELFARE CHARGES :	Rs 7500.0
DEVELOPMENT FEES :	Rs 57000.0
EXAMININATION FEES :	Rs 3000.0
MEDICAL FEE AND INSURANCE CHARGES :	Rs 500.0
ADMISSION FEES :	Rs 13000.0

**Paya ble Amount: Rs 195100.0**

**Place Order**

Faculty Details    x +  
localhost/final\_site/students/faculty\_details.php?email=abc@gmail.com&name=ABC  
Home Profile Exam Info Fees Details Attandence Schedules Faculty Details Logout



## Know Your Faculty

- Pankaj Narula
- Tanu Goyal
- Shruti Agarwal
- Deep Maan
- Manisha Kaushal
- Varun

## 5. TESTING

### 5.1 TEST PLAN

**Objectives:** Testing of login, logout, show exam and attendance info in students' portal and update/edit marks and attendance in teachers' portal.

**Test methodology:** It includes certain steps that are:-

Functional testing → Database testing → Integration testing → System testing → Usability testing → Reliability testing → Recovery testing.

**Approach:** Make module by module and then test it module by module.

**Role & Responsibility:**

**Role:** Test Manager

**Name:** Admin

**Responsibility:**

Conduct the meeting with the development team

Conduct the meeting with the testing team

Handling Escalations and issues

**Role:** Test Lead

**Name:** Admin

**Responsibility:**

Prepare( write and review) the test plan

Conduct daily stand up meeting

Review and approve the test case

Prepare Reports

Assign modules

Handling schedule

**Role:** Test Engineer 1 and Test Engineer 2

**Assign modules:** M1, M2, and M3

**Responsibility:**

Write, Review, and Execute the test documents which consists of test case and test scenarios  
Read, review, understand and analysis the requirement  
Write the flow of the application  
Execute the test case  
Defect tracking  
Prepare the test execution report and communicate it to the Test.

**Result:** Developed a prototype by overcoming different challenges with the help of all teams.

## 5.2 TEST CASES

<b>Test Case: 1</b>	<b>Test Case Name:</b> Login
<b>Designed by:</b> Admin-1	<b>Subsystem:</b> Login
<b>Executed by:</b> Admin-2	<b>Design Date:</b> 15-04-2023
<b>Short Description:</b> Login and Logout page testing	<b>Execution Date:</b> 17-04-2023

**Pre-Conditions:**  
User must have a valid email ID  
For login the user must have valid account

Step	Action	Expected System Response	Pass/Fail	Comment
1	Login with valid email id and password	Login successfully	Pass	
2	Incorrect password entered	Incorrect Password	Pass	
3	Logout from the system	Logged out successfully	Pass	

**Post-conditions:**  
For successful login, user credentials must be matched from the database.  
User must be logged into the system  
All user login credentials must be removed from the device after user logout.

**UCS503- Software Engineering Lab**

**Test Case: 2**

**Test Case Name:** View details for students

**Designed by:** Admin-1

**Subsystem:** View details

**Executed by:** Admin-2

**Design Date:** 15-04-2023

**Short Description:** Exam and attendance info page testing

**Execution Date:** 17-04-2023

**Pre-Conditions:**

System should be working with full functionalise

<b>Step</b>	<b>Action</b>	<b>Expected System Response</b>	<b>Pass/Fail</b>	<b>Comment</b>
1	Exam info	Show marks with both semester and subject wise.	Pass	
2	Attendance details	Show attendance with both semester and subject wise.	Pass	

**Post-conditions:**

All the information will get retrieve from the system database correctly.

<b>Test Case:</b> 3	<b>Test Case Name:</b> Update students details
<b>Designed by:</b> Admin-1	<b>Subsystem:</b> Update details
<b>Executed by:</b> Admin-2	<b>Design Date:</b> 19-04-2023
<b>Short Description:</b> Updating Students' details including marks and attendance.	<b>Execution Date:</b> 21-04-2023

**Pre-Conditions:**

System should be working with full functionalise

<b>Step</b>	<b>Action</b>	<b>Expected System Response</b>	<b>Pass/Fail</b>	<b>Comment</b>
1	Exam info	Show marks with both semester and subject wise.	Pass	
2	Attendance details	Show attendance with both semester and subject wise.	Pass	

**Post-conditions:**

All the information will get retrieve from the system database correctly.

<b>Test Case:</b> 4	<b>Test Case Name:</b> System responsiveness
<b>Designed by:</b> Admin-1	<b>Subsystem:</b> Update details
<b>Executed by:</b> Admin-2	<b>Design Date:</b> 19-04-2023
<b>Short Description:</b> Updating Students' details including marks and attendance.	<b>Execution Date:</b> 21-04-2023

**Pre-Conditions:**

System should be working with full functionalise and must be connected with database.

<b>Step</b>	<b>Action</b>	<b>Expected System Response</b>	<b>Pass/Fail</b>	<b>Comment</b>
1	Testing the system on laptop	Responsive to the device	Pass	
2	Testing the system on different screen seizes	Responsive to the device	Pass	
3	Testing system on mobile phone dimensions	Responsive to the device	Pass	

**Post-conditions:**

Should work on laptop without errors  
 Should work on tablet mode without errors  
 Should work on mobile layout without errors

### 5.3 TEST REPORT

SUMMARY	
TEST PERFORMED	Tests performed are like implementation of login and logout system, then details viewing by the students including their marks, attendance, profile and then updation of marks and attendance by teachers for their students in database.
DEVIATION (VARIANCES) & RESIDUAL RISK	N/A
TEST COMPLETION EVALUATION	As the project met all the objectives so there are no residual risks and incomplete work.
FACTORS THAT BLOCKED PROGRESS	N/A
TEST MEASURES	The major defect in the project is the backend is not much good as it hinders the security of the users. The updation in most of the attributes may prove to be wrong.
TEST DELIVERABLES & REUSABLE ASSETS	The main storage location is at Local Machine.
LESSON LEARNED	Working with good team, productivity and efficiency can be scaled up to much greater extent.
FINAL RECOMMENDATION	<ul style="list-style-type: none"> <li>• Tests are administered in a similar way to how a login and logout system is put into place, with students accessing their profile, grades, and attendance before teachers update those factors for their students' records in the database.</li> <li>• The project's main flaw is that the backend isn't very good because it jeopardises user security. The majority of the attributes' updates could turn out to be incorrect.</li> <li>• Productivity and efficiency can be scaled up significantly while working in a solid team.</li> </ul>