

## **Abstract**

The purpose of this research is to analyze the use of The Student teacher management system developed by me. In this paper each and every part of the Student teacher management system has been discussed. The key unique feature of The Student teacher management system (STMS) developed by me, is that it will help teachers to record students' attendance directly to college database. Additionally, teachers will be able to schedule their classes and the same will be visible to the students. This will ensure better management of classes by the teachers and will act as a remembrance to the student. The key benefits of the STMS system for the students include they will be able to track their attendance and will be able to communicate directly with the teacher and their peers during the classes through the chat option.

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# **Chapter 1: INTRODUCTION**

## **1.1. Introduction**

A Student teacher management system can be defined as a software application for schools and universities to manage data related to teachers and students. Capabilities of these teacher student databases include attendance, behavioral and medical information, as well as storing assessment information (Humaira, Rachmadtullah & Kardaya, 2019). Majority of the student management systems available till date helps students in managing their online admissions & fees management, tracking the daily student activities, monitoring their grades & performance and direct communication with teachers. When it comes to teacher management systems, majority of such systems helps teachers to manage their activities with the students, planning sessions, record students' attendance and performance. Systems that track both data of the students and teachers are found to be highly limited in number till date.

## **1.2. Domain description**

The domain of this research paper includes teacher student management system. A student management system helps academic institution to manage data, communications, and scheduling. An academic institution generates and uses a large amount of data. This data must be communicated appropriately to students, faculty, and parents. A student management system helps schools to store, manage, and distribute this information.

### **1.2.1. Hardware description**

**Laptop Model - Acer Aspire 3**

**Processor – Ryzen 5 2500U**

**GPU - Radeon™ Vega 8**

**Ram – 8 GB**

**OS – Windows 10 Home Edition (64 bit)**

**Hard Disk – 1 TB**

### **1.2.2. Software description**

In order to write the program for this project, VS code has been used. Visual Studio Code is a code editor redefined and optimized for building and debugging modern web and cloud applications (Holmes & Prieto-Rodriguez, 2018). For collecting data through internet as well as for debugging and output, Google Chrome along with Microsoft Edge has been used. Google Chrome is a cross-platform web browser developed by Google. It was first released in 2008 for Microsoft Windows built with free software components from Apple WebKit and Mozilla Firefox (Bharamagoudar, Geeta, Totad, 2013). Microsoft Edge is the fast and secure browser that helps users to protect data and financial resources. For database, XAMPP has been used as a local host has been used. XAMPP is an abbreviation for cross-platform, Apache, MySQL, PHP and Perl, and it allows users to build WordPress site offline, on a local web server on their computer.

### **1.3. Motivation**

A Student Teacher Management System has become an essential need for every school to operate. It holds so many crucial functions to ensure that the school management runs smoothly. The teachers, staff, and other external parties can collaborate easily through a centralized platform. In this platform, students can download, upload, complete assignments, notes, and projects. The system is accessible if used simultaneously.

During this pandemic and eventual lockdown, as a student, I have evidenced several obstacles faced by both teachers during online sessions. For instance, teachers faced issues in recording the attendance of the students during the online classes. I have evidenced educators to either note down or using third party apps for recording the number of attendees, which bore the risk of data loss. Another major issue included issues and others. All these issues faced by teachers and me as a student, has motivated me to develop a Student Teacher Management System (STMS).

The STMS developed by me, will help teachers faced by teachers and students in scheduling classes, providing crucial instruction while teaching to record students' attendance directly to college database. Additionally, teachers will be able to schedule their classes and the same will be visible to the students. This will ensure better management of classes by the teachers and will act as a remembrance to the student.

The key benefits of the STMS system for the students include they will be able to track their attendance and will be able to communicate directly with the teacher and their peers during the classes through the chat option.

#### **1.4. Scope of Work**

This system will be highly beneficial for all types of academic institutions, be it school, college or university, especially during this pandemic period. Majority of the STMS systems available in the market are either for students or for teachers. Since the STMS system developed by me is for both teachers and students, only one system will be able to serve both teachers and students. Additionally, the chat facility is available in a highly limited number of STMS available in the market. Since my STMS possess this facility, it will act as a major advantage for institutions.

## **Chapter 2: Review of Related Work**

### **2.1. Types of STMS available**

Even before the advent of the pandemic, there exists a good number of STMS software. One major STMS available in India includes Web Based School Teacher Management System. With the advent of technology covering schools and other educational institutions, records are no more maintained in files, no are information required to be stored by human beings. In order to tackle all these mundane jobs, schools are currently employing Teacher management system. Another Student management system available in market enable students top track their attendance along with view the scheduled classes.

### **2.3. Disadvantages of available STMS**

One major disadvantage of the available STMS systems is that highly limited amount of systems are designed for both students and teachers. Secondly, lack of easy access to records like class attendance and directly communicate with the teacher and peers while availing online classes through chat, are other two major disadvantages of the available systems.

## Chapter 3: Methodology

### Design descriptions

To describe a website(project) we have two very useful tools.

1. Data Flow Diagram
2. Entity Relationship Diagram.

Data flow diagram (DFD) is graphical representation of flow of data in an information system. It is capable of depicting incoming data flow, outgoing data flow and stored data. The DFD does not mention anything about how data flows through the system.

We can divide DFD into many levels according to our needs. The first level of DFD is Level 0 DFD which is the most abstract view of software. Then we have Level 1 DFD, Level 2 DFD and so on.

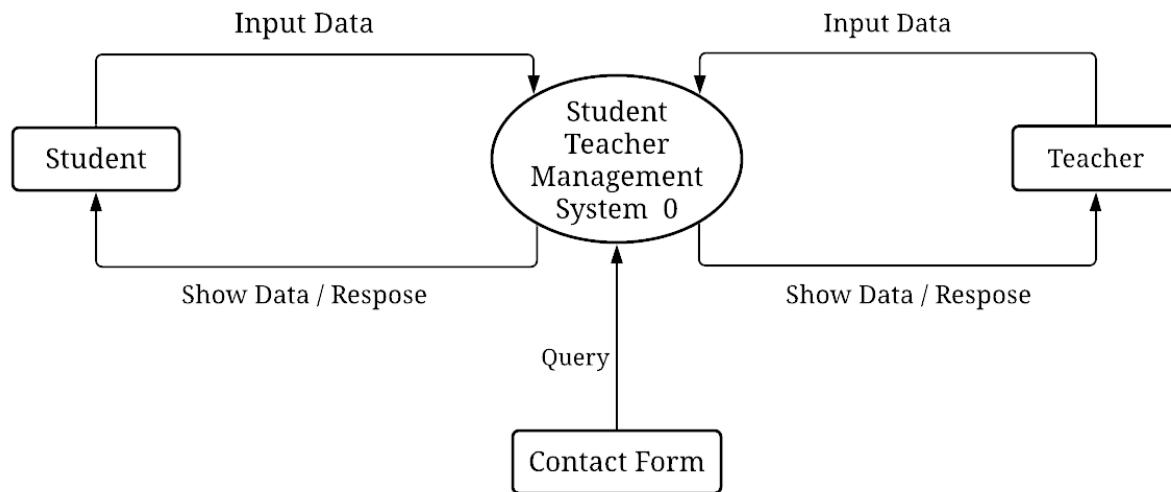


Figure 1: Level 0 Data Flow Diagram

In Figure 1 the Level 0 DFD of my STMS. “Student”, “Teacher” and “Contact Form” are three external entities. The whole system represented as “Student Teacher Management System”. Input data flows from the Student to the system And for teacher, teacher to System. For Contact Form data goes to contact form to system. The System shows data and response to Student and Teacher.

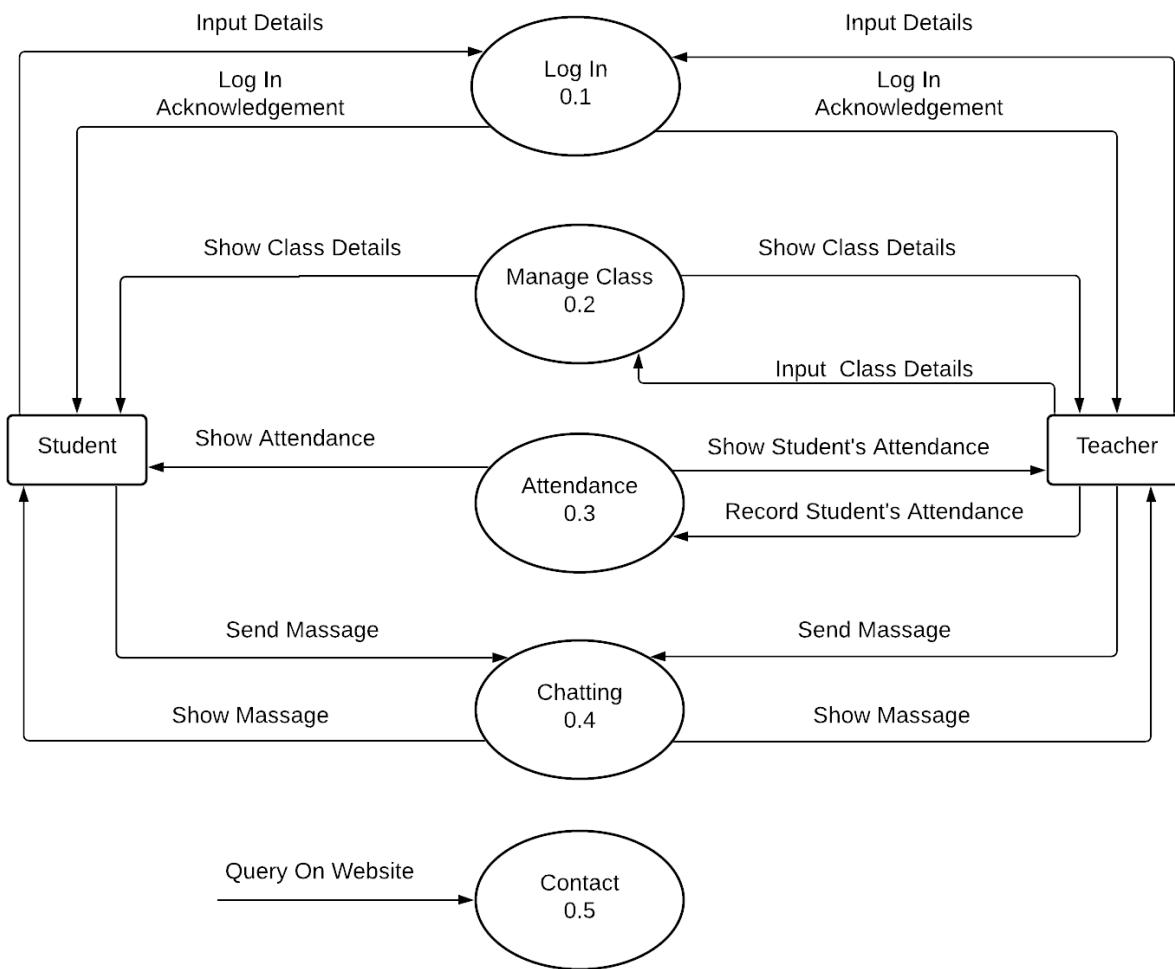


Figure 2: Level 1 Data Flow Diagram

Figure 2 shows the Level 1 diagram of my STMS. Here I decompose Student Teacher Management System to seven 5 Processes namely Log In, Manage Class, Attendance, Chatting and Contact.

Student and Teacher input their details to Log In system and then Log in system give acknowledgement to Student and Teacher then they log in to dashboard or show error. Teacher can Input New Class and Show the details of classes. Student can only Show the details of the class. Teacher can Record the attendance of student. Both Student and Teacher can send and show Chats. Any one as a guest can leave their query on the system.

In Figure 3 the level 1 DFD decomposed in Level 2 DFD and show more detailed Data Flow of my STMS. In Level 2 DFD data store are use to show how data are fetch from database. Data Stores are Log In Details, Security Answer, Personal Details, Class Details, Class Participants, Attendance, Massages and Contact Us.

In Figure 4 Entity Relationship Diagram of my STMS is shown. It shows the detailed structure how data are connected to each other.

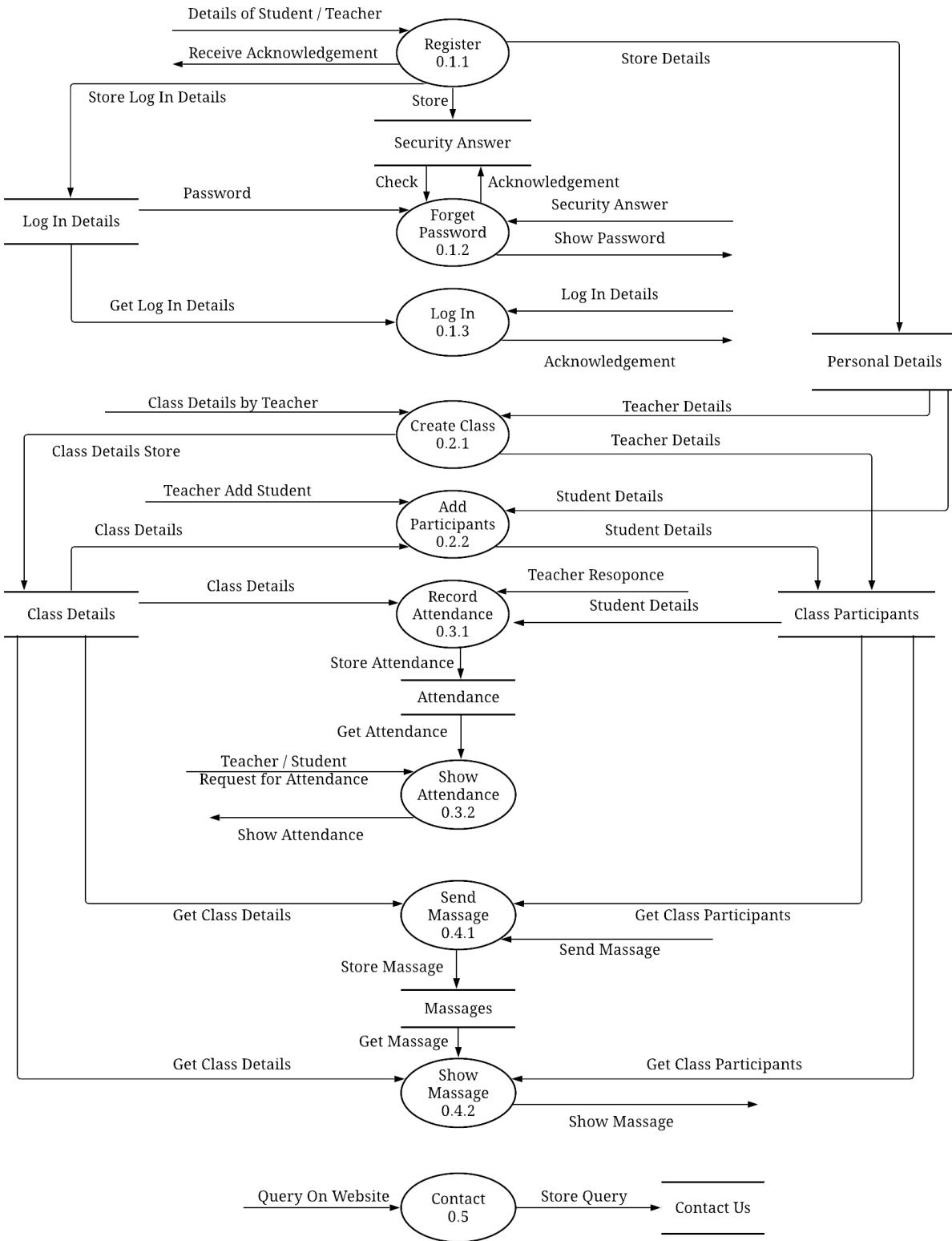


Figure 3: Level 3 Data Flow Diagram

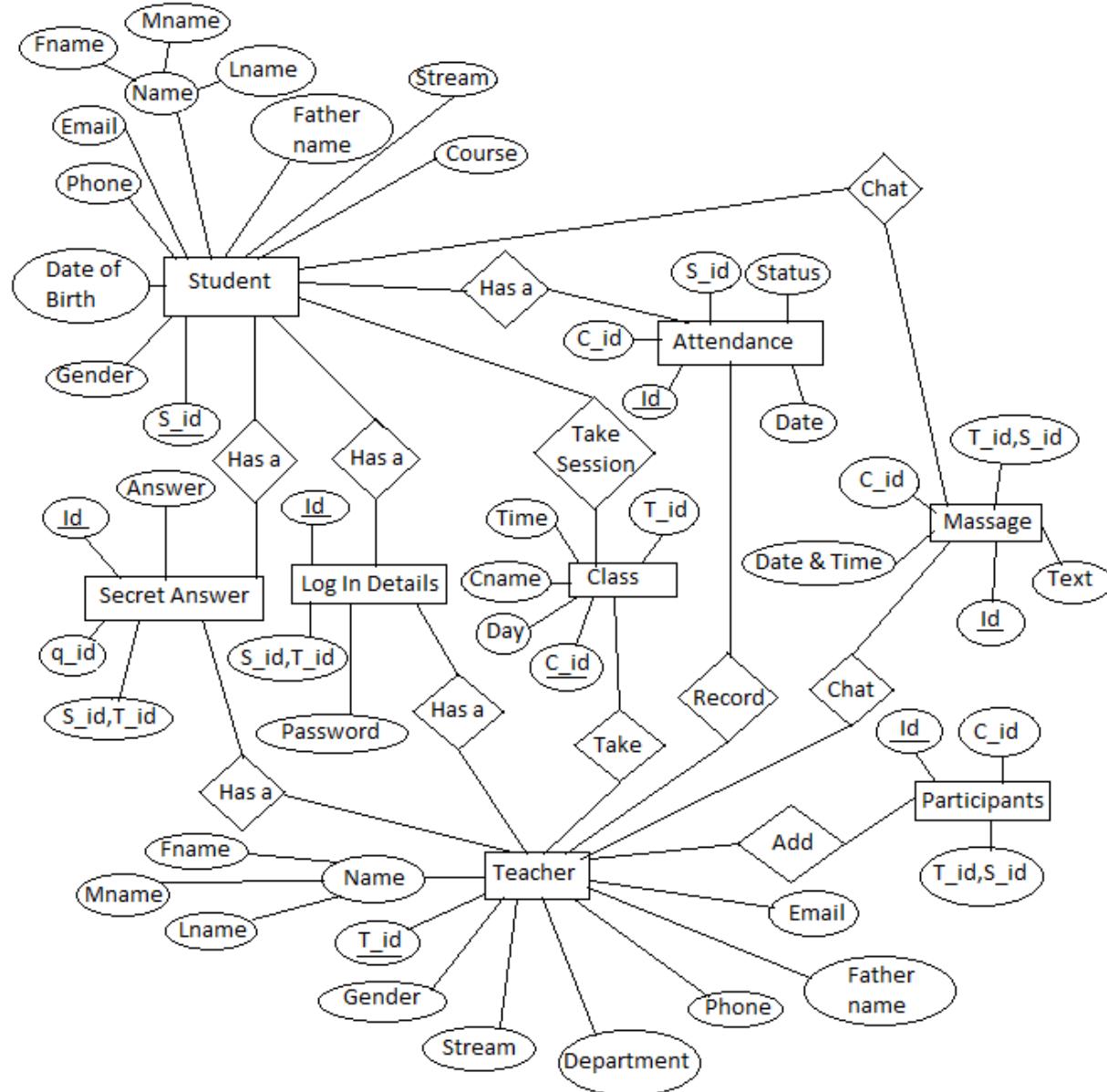


Figure 4: ER Diagram

## Chapter 4: Results and Discussion

In this chapter I give screenshot of my STMS as result to show how my STMS work. This chapter has multiple screenshot describing my STMS.

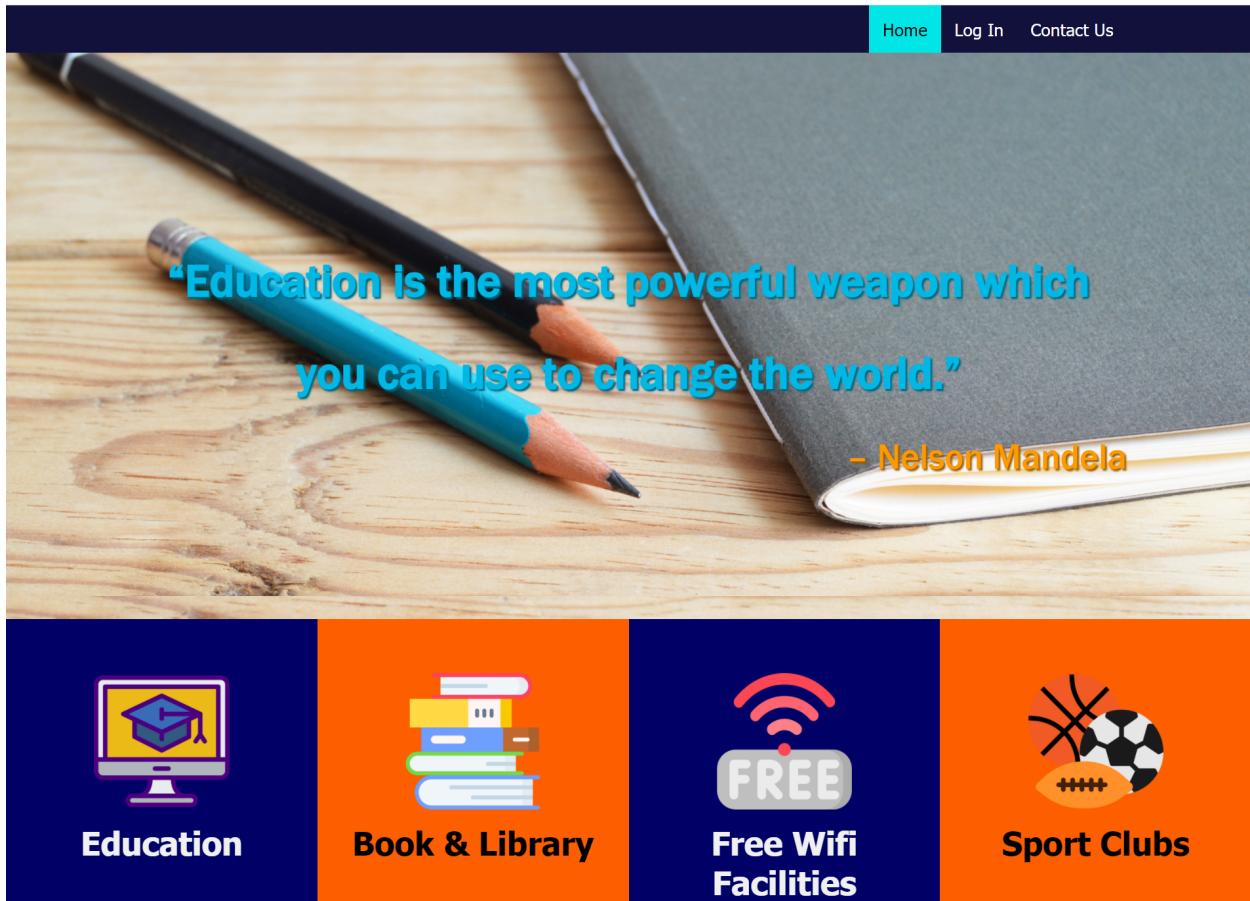


Figure 5: Index or home page

Figure 5 is the home page or index page it contains basic information about institute. From home page if we click to Log In tab we redirected to Log In page. If we click on Contact Us tab redirected Contact Us page.

Figure 6 is the Log In page. It contains two options, one is Student Log In second is Teacher Log In. If we click on Student Log In and Teacher Log In it redirected to Student Log In and Teacher Log In page.

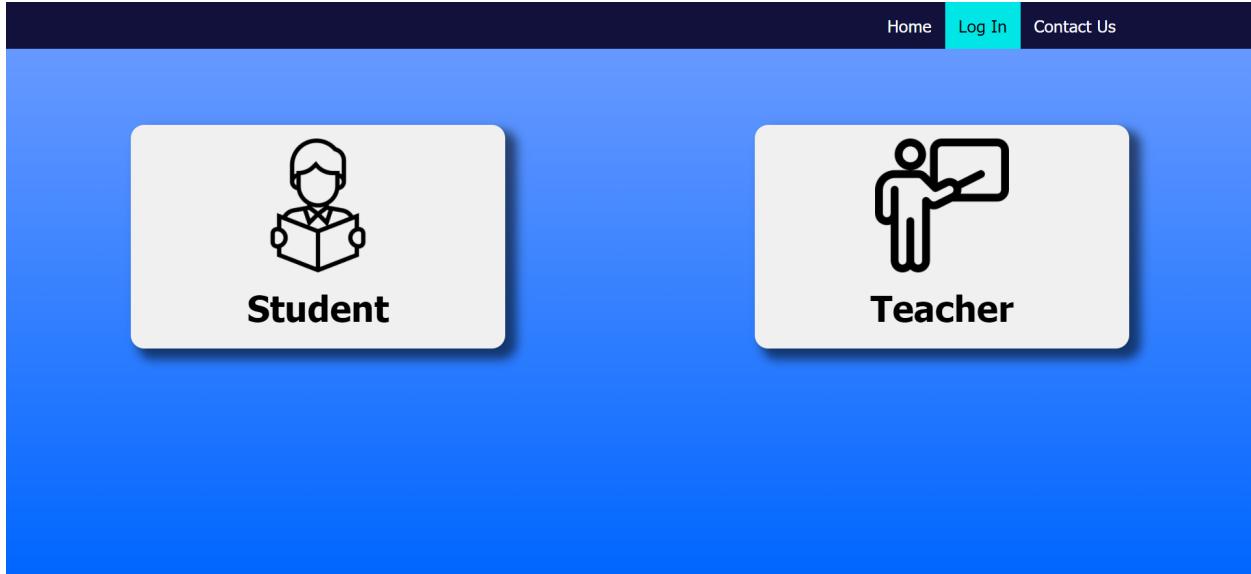


Figure 6: Log In page

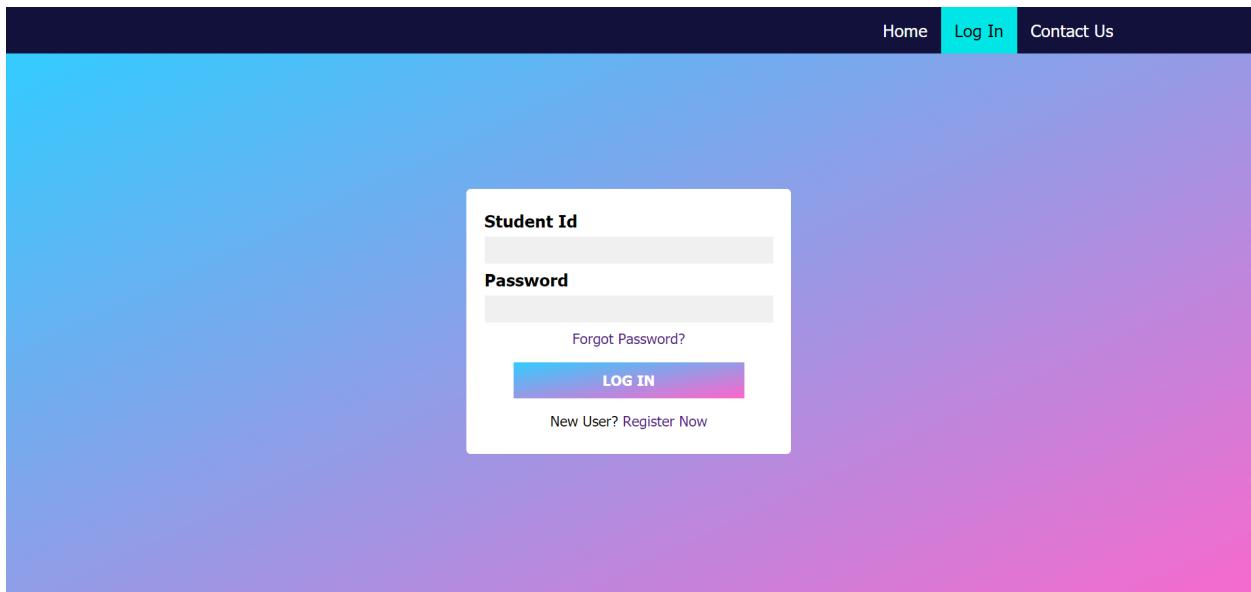


Figure 7: Student Log In page

Figure 7 is the Student Log In page. It has Forgot Password and for Register New Student link.

First Name*	Biswa
Middle Name	
Last Name*	Sarkar
Date of Birth*	11-11-1999 <input type="button" value="Calendar"/>
Gender*	Male <input type="button" value="Down"/>

Figure 8: Student Register / Sign Up page

Figure 8 is the student register page. In this page students need to fill their information correctly then click on Sign Up.

The figure consists of three vertically stacked screenshots of a web-based student registration form. The background of the form features a blue-to-pink gradient.

**Top Screenshot:** Shows the initial state of the registration form. The fields filled are:

- Frist Name\*: Biswa
- Middle Name: [redacted]
- Last Name\*: Sarkar
- Date of Birth\*: 11-11-1999
- Gender\*: Male
- Father Name\*: Akhilesh Sarkar
- Contact Number\*: 9830307045
- E mail\*: biswa99@gmail.com
- Student Id\*: stusc080
- Stream\*: --Select Stream--
- Course\*: --Select Course--
- Password\*: [redacted]
- Confirm Password\*: [redacted]
- Security Question\*: What is your pet name?
- Answer\*: rabin

A red "Sign Up" button is located at the bottom right of this section.

**Middle Screenshot:** Shows the same form after the Stream dropdown has been opened. The Stream dropdown menu is visible, containing the following options:

- Select Stream--
- Science
- Mathematics
- Computer Science
- Physics

The "Science" option is currently selected.

**Bottom Screenshot:** Shows the Stream dropdown closed, with the previously selected option "Science" now displayed in the Stream field. The rest of the form remains the same as the middle screenshot.



Figure 10: Dynamic change in course name

In Figure 10 shows that the courses are change dynamically according to selection of stream. This courses are directly fetch from database and shows to the user. If new courses add in database it will reflect in the courses.

The screenshot shows a web-based student registration form. At the top, there is a dark header bar with three buttons: "Home", "Log In", and "Contact Us". Below the header, the main form area has a light blue gradient background. The form fields are as follows:

- Frist Name\***: Biswa
- Middle Name**: (empty)
- Last Name\***: Sarkar
- Date of Birth\***: 11-11-1999
- Gender\***: Male
- Father Name\***: Akhilesh Sarkar
- Contact Number\***: 9830307045
- E mail\***: biswa99@gmail.com
- Student Id\***: stusc080
- Stream\***: Science
- Course\***: COMPUTER SCIENCE HONOURS
- Password\***: (redacted)
- Confirm Password\***: (redacted)
- Security Question\***: What is your pet name?
- Answer\***: rabin

At the bottom of the form, there is a red "Sign Up" button and a green success message box containing the text "Record Stored succesfully".

Figure 11: Student record stored

In Figure 11 shows student register successfully.

The screenshot shows a student profile page with the following details:

- ID :** stusc080
- Name :** Biswa Sarkar
- Date of Birth :** 1999-11-11
- Father Name :** AKHILESH SARKAR
- Gender :** MALE
- Contact Number :** 9830307045
- Email :** biswa99@gmail.com
- Stream :** SCIENCE
- Course :** CMSA

A purple "Edit Details" button is located in the top right corner.

Figure 12: Details of student

This Figure 12 shows the details of student also student can change their mobile number and email.

The screenshot shows a student profile page with the following details, but with validation errors:

- ID :** stusc080
- Name :** Biswa Sarkar
- Date of Birth :** 1999-11-11
- Father Name :** AKHILESH SARKAR
- Gender :** MALE
- Contact Number :** 98303070
- Email :** biswa99@gmail.com
- Stream :** SCIENCE
- Course :** CMSA

A red error message at the bottom states: "Invalid Contact Number or Email".

Figure 13: mobile number or email is invalid

Figure 13 shows If input mobile number or email is invalid student get error notification.

The screenshot shows a student profile update form. The top navigation bar includes links for Home, Log In, Contact Us, and Log Out. The user ID is displayed as "ID : stusc080". On the left, a sidebar menu lists Details, Classes, Chat Group, and Attendance. The main form area contains fields for Name (Biswa Sarkar), Date of Birth (1999-11-11), Father Name (AKHILESH SARKAR), Gender (MALE), Contact Number (9830307089), Email (biswa99@gmail.com), Stream (SCIENCE), and Course (CMSA). A green success message at the bottom states "Details Updated".

Figure 14: mobile number or email updated

Figure 14 If input mobile number or email is valid student get (Details Updated) success notification.

The screenshot shows a student profile page. The top navigation bar includes links for Home, Log In, Contact Us, and Log Out. The user ID is displayed as "ID : stusc080". On the left, a sidebar menu lists Details, Classes, Chat Group, and Attendance. A red error message box displays the text "You are not enrolled to any Class".

Figure 15: student is not enrolled to any class

Figure 15 shows If student is not enrolled to any class this type of message shows to student.

The screenshot shows a student's dashboard with a dark blue header containing 'Home', 'Log In' (highlighted in cyan), 'Contact Us', and a red 'Log Out' button. Below the header, the student's ID is displayed as 'ID : stusc080'. A vertical orange sidebar on the left lists 'Details', 'Classes', 'Chat Group', and 'Attendance'. Three blue rectangular boxes represent enrolled classes:

- NETWORKING SEM IV**: Total Participants: 8. Day: MONDAY, Time: 10:01:00
- ALGORITHM**: Total Participants: 8. Day: SATURDAY, Time: 16:00:00
- PHYSICS GENARAL SEM IV**: Total Participants: 9. Day: MONDAY, Time: 11:00:00

Figure 16: Student view of class where they enrolled

Figure 16 shows the Student view of class where they enrolled in class.

This screenshot is identical to Figure 16, showing the same student dashboard and course enrollment details. The only difference is the background color of the main content area, which is white here instead of light blue.

Figure 17: Student chatting page

Figure 17 shows the chat groups.

Home Log In Contact Us Log Out

ID : stusc080

Details Classes Chat Group Attendence

**Priya (Teacher)**  
hi  
2021-07-24 14:19:31

**Priya (Teacher)**  
class timing Monday 10 to 12  
2021-07-24 14:29:38

**Priya (Teacher)**  
Meeting link  
<https://meet.google.com/bvn-valq-hii>  
2021-07-24 15:09:25

**Debijyoti**  
Ok Ma'am  
2021-07-24 15:09:42

Type Message within 255 words **Send**

Home Log In Contact Us Log Out

ID : stusc080

Details Classes Chat Group Attendence

**Priya (Teacher)**  
hi  
2021-07-24 14:19:31

**Priya (Teacher)**  
class timing Monday 10 to 12  
2021-07-24 14:29:38

**Priya (Teacher)**  
Meeting link  
<https://meet.google.com/bvn-valq-hii>  
2021-07-24 15:09:25

**Debijyoti**  
Ok Ma'am  
2021-07-24 15:09:42

ok mam| **Send**

Home Log In Contact Us Log Out

ID : stusc080

Details Classes Chat Group Attendence

hi  
2021-07-24 14:19:31

**Priya (Teacher)**  
class timing Monday 10 to 12  
2021-07-24 14:29:38

**Priya (Teacher)**  
Meeting link  
<https://meet.google.com/bvn-valq-hii>  
2021-07-24 15:09:25

**Debijyoti**  
Ok Ma'am  
2021-07-24 15:09:42

Biswa  
ok mam  
2021-07-24 15:36:58

Type Message within 255 words **Send**

Figure 18: Steps to send massage

Figure 18 Step to send chat. This chat system is real time. We don't need to refresh page to show new massages

The screenshot shows a student's portal interface. At the top, there is a dark blue header bar with the text "Home", "Log In" (highlighted in green), "Contact Us", and "Log Out". Below the header, the user ID "ID : stusc080" is displayed. On the left side, there is a vertical orange sidebar with the following menu options: "Details", "Classes", "Chat Group", and "Attendance". The "Attendance" option is currently selected. The main content area is divided into three blue rectangular boxes, each representing a class's attendance details:

- NETWORKING SEM IV**  
Total Participants: 8  
Day : MONDAY  
Time : 10:01:00
- ALGORITHM**  
Total Participants: 8  
Day : SATURDAY  
Time : 16:00:00
- PHYSICS GENARAL SEM IV**  
Total Participants: 9  
Day : MONDAY  
Time : 11:00:00

Figure 19: Attendance section of student's portal

Figure 19 shows the attendance section of student's portal,

		<a href="#">Home</a>	<a href="#">Log In</a>	<a href="#">Contact Us</a>
ID : stusc080		<a href="#">Log Out</a>		
Details  Classes  Chat Group  Attendance	Date	Status		
	2021-07-24	Absent		
	2021-07-26	Present		
	2021-07-29	Absent		
	2021-08-02	Present		
	2021-08-03	Present		

Figure 20: Attendance of student in particular class

In Figure 20 shows Attendance of student in particular class.

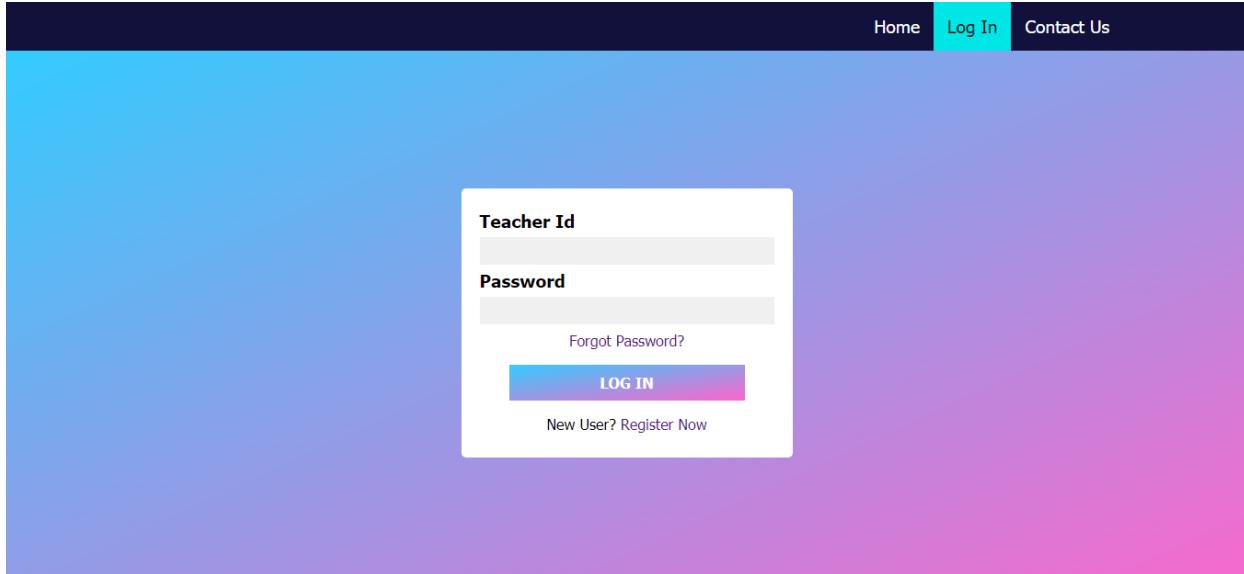


Figure 21: Teacher log in

Figure 21 shows Teacher log in. To register new teacher we click on “Register Now” option.

Fill the form to sign up

Home | Log In | Contact Us

Frist Name\*

Middle Name

Last Name\*

Date of Birth\*  mm/dd/yyyy

Gender\*

Father Name\*

Contact Number\*

E mail\*

Teacher Id\*

Stream\*

Stream\*

Department\*

Password\*

Confirm Password\*

Security Question\*

Answer\*

Home | Log In | Contact Us

Frist Name\*

Middle Name

Last Name\*

Date of Birth\*

Gender\*

Father Name\*

Contact Number\*

E mail\*  \*\*Enter a valid email

Teacher Id\*

Stream\*

Department\*

Password\*

Confirm Password\*  \*\*Confirm password donot match with password

Security Question\*

Answer\*

Figure 23: Teacher register interface wrong input

Figure 23 shows If you enter wrong values it shows the wrong fields.

The screenshot shows a registration form for a teacher. The form fields and their current values are:

Field	Value
Frist Name*	Soumik
Middle Name	
Last Name*	Dey
Date of Birth*	06/05/1990
Gender*	Male
Father Name*	Samir Dey
Contact Number*	9830365658
E mail*	soumik99@gmail.com
Teacher Id*	tesc040
Stream*	Science
Department*	COMPUTER SCIENCE HONOURS
Password*	*****
Confirm Password*	*****
Security Question*	What is your pet name?
Answer*	bapi

A red error message "Record Store failed" is displayed at the bottom of the form.

Figure 24: Teacher details registered successfully

Figure 24 shows after giving the proper input the details registered successfully and message

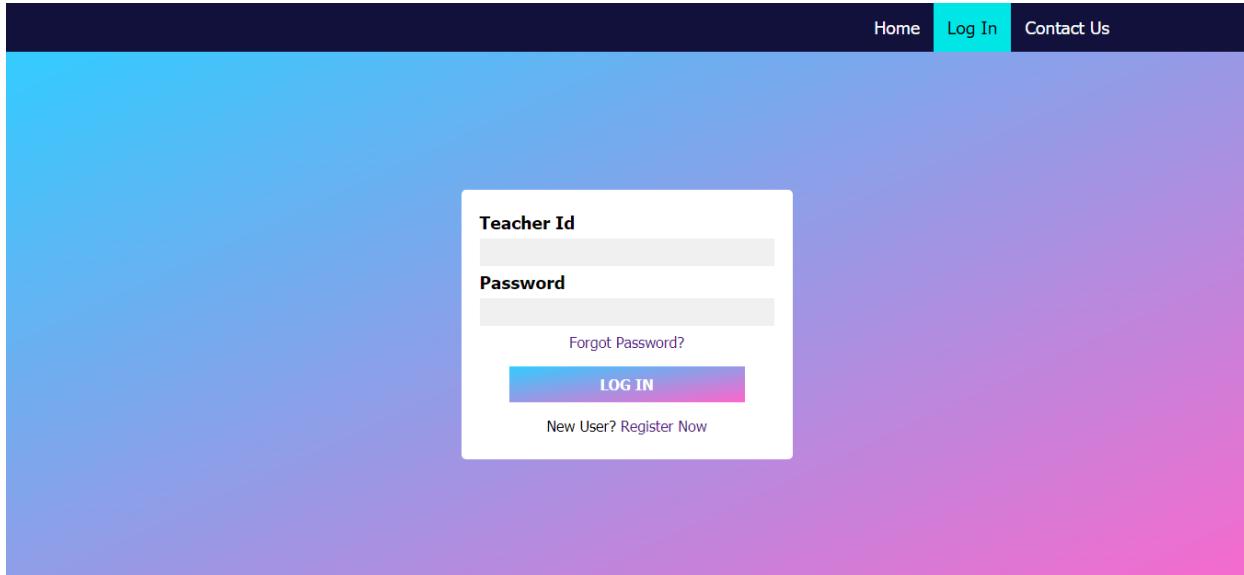


Figure 25: Teacher forgot password link

In Figure 25 page shows to get password click to forgot password

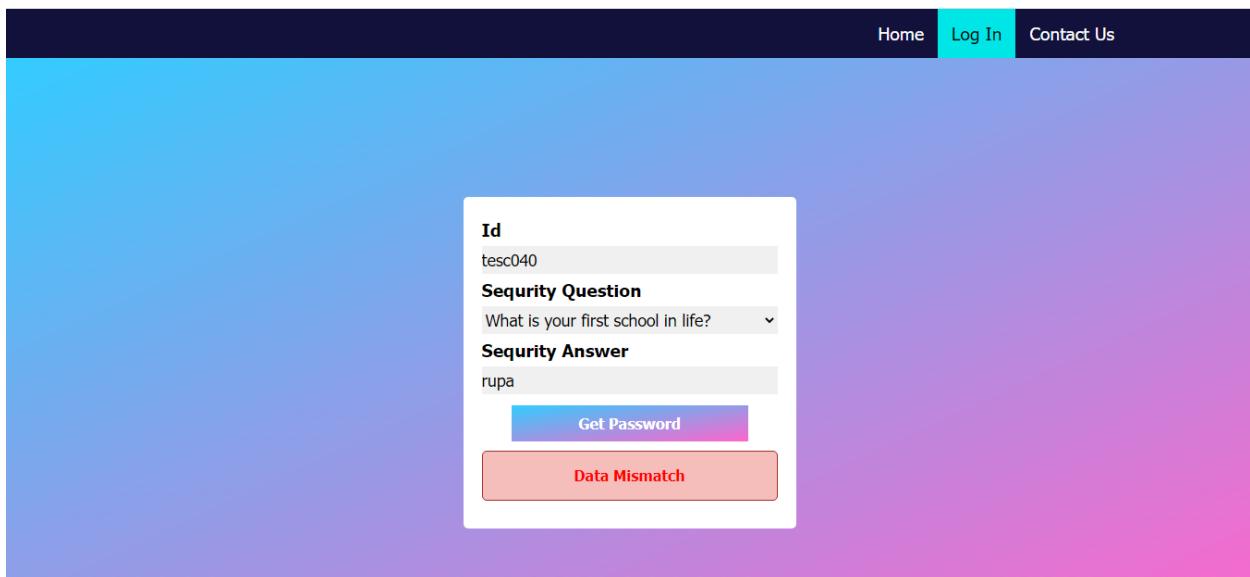


Figure 26: Forgot password details are wrong

Figure 26 shows If enter details are wrong.

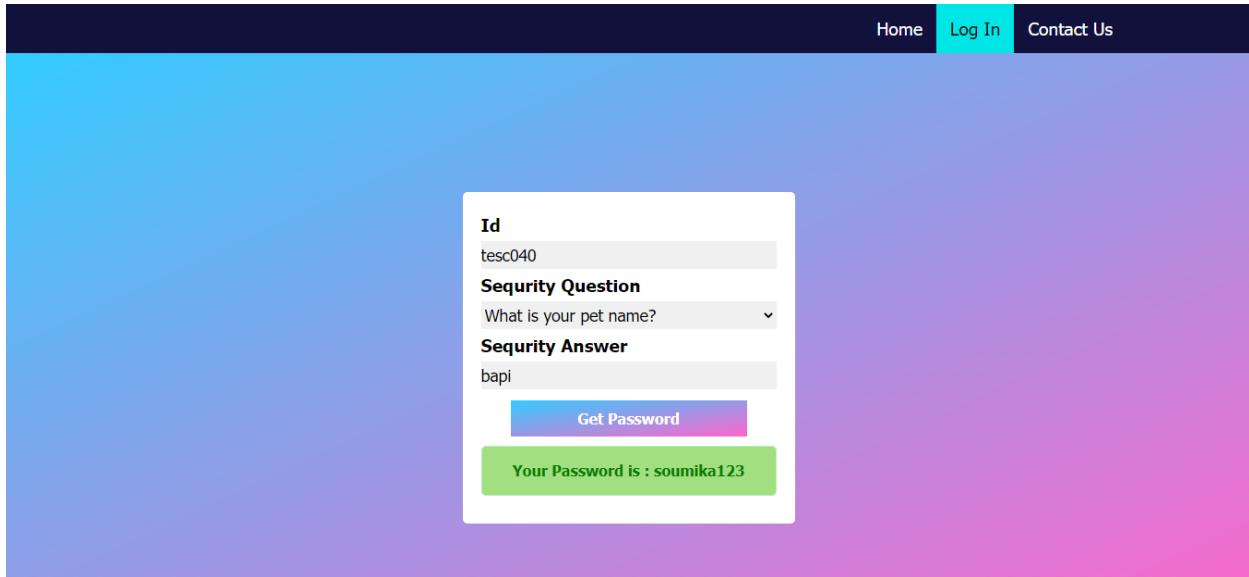


Figure 27: Get password

Figure 27 show how to get the password.

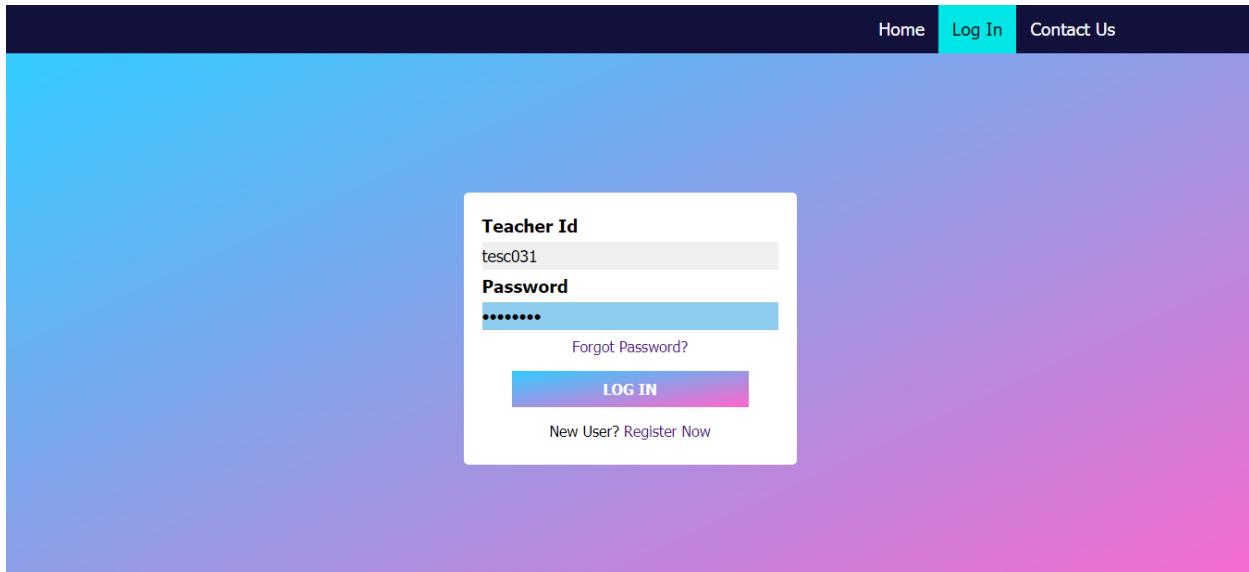


Figure 28: Teacher log in form

Figure 28 page shows teacher log in form.

The screenshot shows a teacher login interface. At the top right are links for 'Home', 'Log In' (highlighted in blue), 'Contact Us', and 'Log Out'. Below this, the user ID 'ID : tesc031' is displayed. A sidebar on the left contains links for 'Details', 'Classes', 'Chat Group', and 'Attendance'. The main content area displays the following user details:

- Name :** Priya Banerjee
- Date of Birth :** 1995-07-12
- Father Name :** DINESH BANERJEE
- Gender :** FEMALE
- Contact Number :**
- Email :**
- Stream :** SCIENCE
- Department :** CMSA

A purple 'Edit Details' button is located at the bottom right.

Figure 29: Teacher details

Figure 29 show Teacher details after log in. Here teacher can update his/her contact number and email.

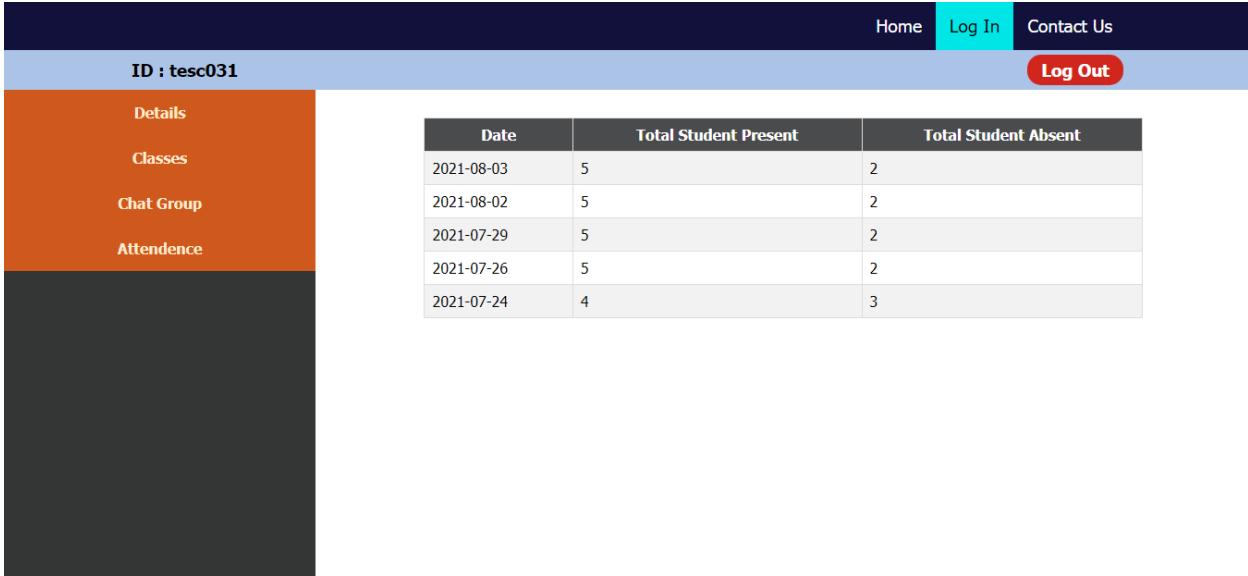
The screenshot shows a list of classes for the teacher. At the top right are links for 'Home', 'Log In' (highlighted in blue), 'Contact Us', and 'Log Out'. Below this, the user ID 'ID : tesc031' is displayed. A sidebar on the left contains links for 'Details', 'Classes', 'Chat Group', and 'Attendance'. The main content area shows two class entries in blue boxes:

- ADD a New Class**
- NETWORKING SEM IV**  
Total Participants: 8  
Day : MONDAY  
Time : 10:01:00
- ALGORITHM**  
Total Participants: 8  
Day : SATURDAY  
Time : 16:00:00

A brown 'Add Participants' button is located at the bottom center.

Figure 30: Teacher's classes list

Figure 30 shows When we click on classes list of all classes is shown. If we click on particular class the class attendance will show. We can add new class by “ADD a New Class” option. Also we can add participants by clicking “Add Participants” option.

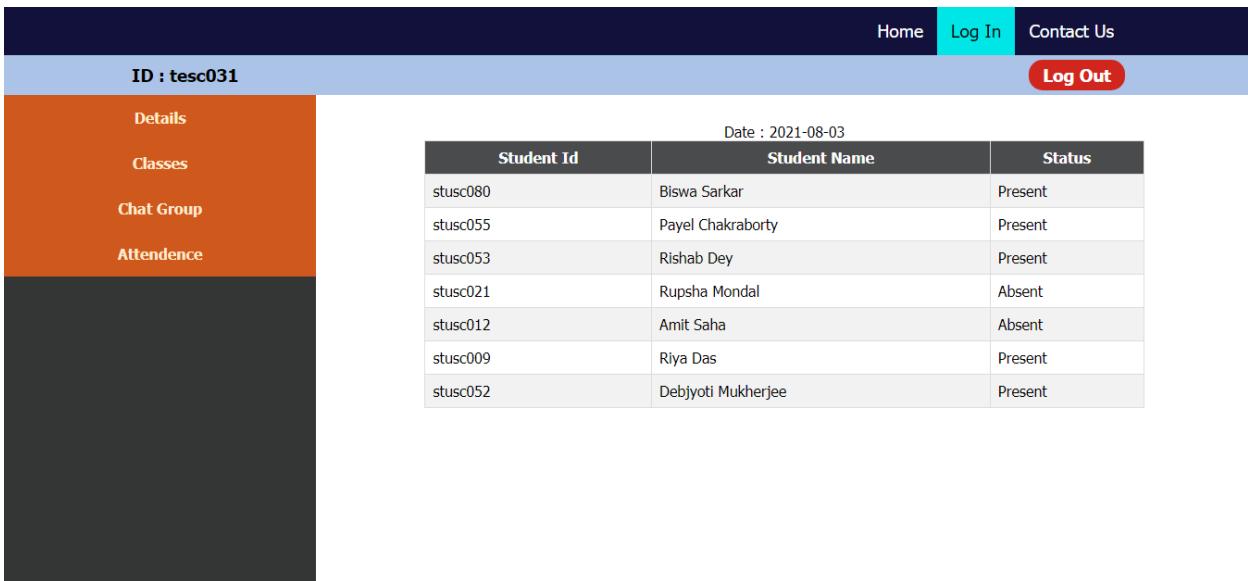


The screenshot shows a web application interface. At the top, there is a dark blue header bar with navigation links: "Home" (white text), "Log In" (cyan background), "Contact Us" (white text), and "Log Out" (red button). Below the header, the text "ID : tesc031" is displayed. On the left side, there is a vertical orange sidebar menu with options: "Details", "Classes", "Chat Group", and "Attendance". The "Attendance" option is highlighted with a red background. To the right of the sidebar, there is a table titled "Attendance Details" with the following columns: "Date", "Total Student Present", and "Total Student Absent". The table contains five rows of data:

Date	Total Student Present	Total Student Absent
2021-08-03	5	2
2021-08-02	5	2
2021-07-29	5	2
2021-07-26	5	2
2021-07-24	4	3

Figure 31: Particular class student's attendance

In Figure 31 show student's attendance are shown in tabular format. When we click on particular row the detailed attendance of this date is shown.



The screenshot shows a web application interface similar to Figure 31. At the top, there is a dark blue header bar with navigation links: "Home" (white text), "Log In" (cyan background), "Contact Us" (white text), and "Log Out" (red button). Below the header, the text "ID : tesc031" is displayed. On the left side, there is a vertical orange sidebar menu with options: "Details", "Classes", "Chat Group", and "Attendance". The "Attendance" option is highlighted with a red background. To the right of the sidebar, there is a table titled "Attendance Details" with the following columns: "Student Id", "Student Name", and "Status". Above the table, the text "Date : 2021-08-03" is displayed. The table contains seven rows of data:

Student Id	Student Name	Status
stusc080	Biswa Sarkar	Present
stusc055	Payel Chakraborty	Present
stusc053	Rishab Dey	Present
stusc021	Rupsha Mondal	Absent
stusc012	Amit Saha	Absent
stusc009	Riya Das	Present
stusc052	Debjyoti Mukherjee	Present

Figure 32: Particular class detailed attendance

Figure 32 describe the detailed attendance of date 2021-08-03 of a particular class.

The screenshot shows a web application interface. At the top, there is a dark header bar with navigation links: "Home" (white text), "Log In" (blue background), "Contact Us" (white text), and "Log Out" (red background). Below the header, the user ID "ID : tesc031" is displayed. On the left, a vertical orange sidebar menu lists "Details", "Classes", "Chat Group", and "Attendance". The main content area is divided into two blue boxes. The left box contains a button labeled "ADD a New Class". The right box displays attendance details for "NETWORKING SEM IV" with "Total Participants: 8", "Day : MONDAY", and "Time : 10:01:00". Another blue box to the right shows details for "ALGORITHM" with "Total Participants: 8", "Day : SATURDAY", and "Time : 16:00:00". A red "Add Participants" button is located at the bottom center.

Figure 33: ADD a New Class

Figure 33 have “ADD a New Class” option

The screenshot shows a web application interface. At the top, there is a dark header bar with navigation links: "Home" (white text), "Log In" (blue background), "Contact Us" (white text), and "Log Out" (red background). Below the header, the user ID "ID : tesc031" is displayed. On the left, a vertical orange sidebar menu lists "Details", "Classes", "Chat Group", and "Attendance". The main content area contains a form for adding a new class. It includes fields for "Class Name\*" (with "networking" entered), "Class Day\*" (with "wednesday" entered), "Class Time\*" (with "10:45 AM" entered), and a "Submit" button. A green success message "Class Added Successfully" is displayed below the form.

Figure 34: Addition of a New Class

Figure 34 shows after successful added successfully.

**ID : tesc031**

- Details
- Classes
- Chat Group
- Attendance

**ADD a New Class**

**NETWORKING SEM IV**  
Total Participants: 8  
Day : MONDAY  
Time : 10:01:00

**ALGORITHM**  
Total Participants: 8  
Day : SATURDAY  
Time : 16:00:00

**NETWORKING**  
Total Participants: 1  
Day : WEDNESDAY  
Time : 10:45:00

Add Participants

Figure 35: Add Participants

In Figure 35 we observe how new classes added. Now add participants by clicking “Add Participants”.

**ID : tesc031**

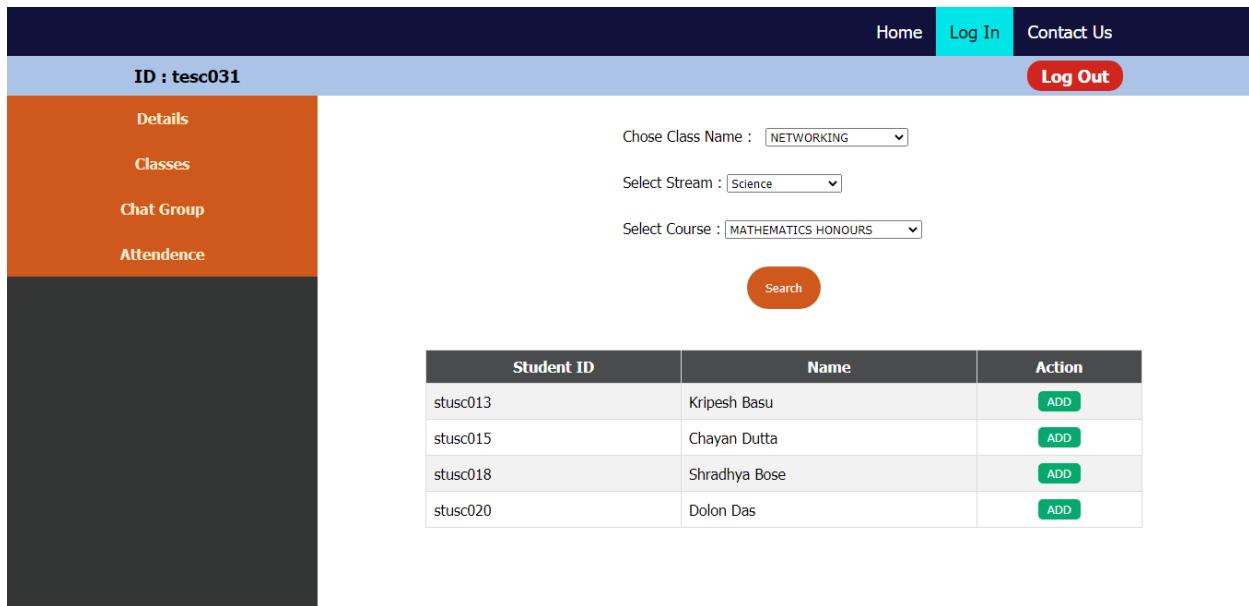
- Details
- Classes
- Chat Group
- Attendance

Chose Class Name : **NETWORKING SEM IV**  
Select Stream : **NETWORKING SEM IV**  
Select Course : **NETWORKING**

Search

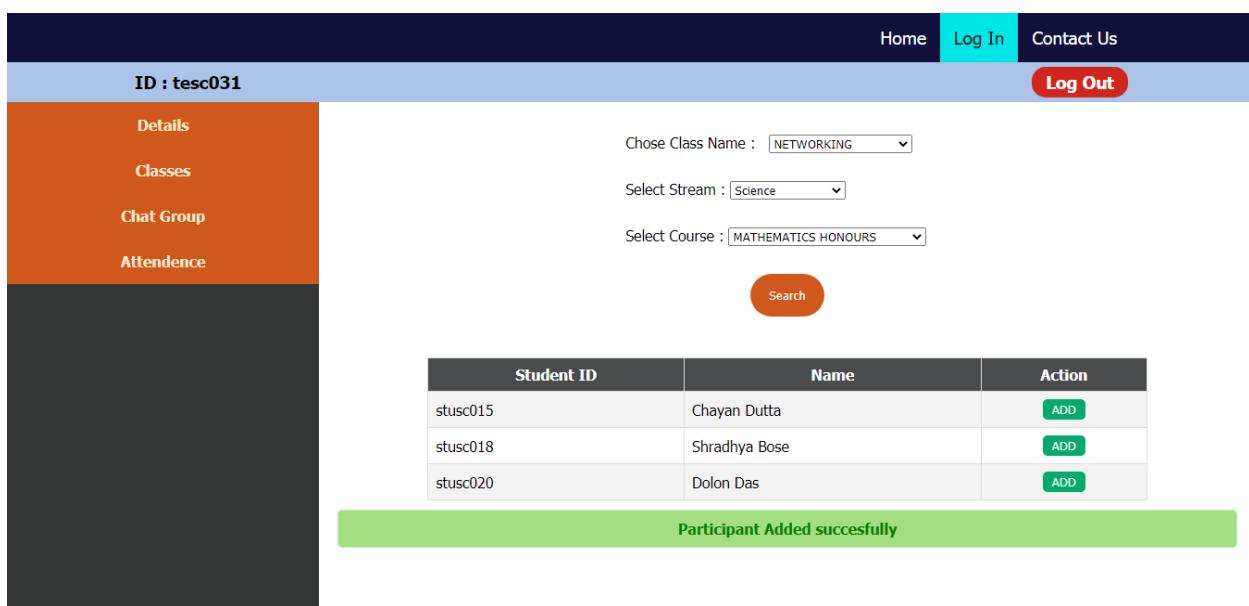
Figure 36: Form to add Students

In Figure 38's form teacher can add students in class all fields are fetch from database dynamically. So it is very organized for teacher to add student in class.



Student ID	Name	Action
stusc013	Kripesh Basu	<button>ADD</button>
stusc015	Chayan Dutta	<button>ADD</button>
stusc018	Shradhya Bose	<button>ADD</button>
stusc020	Dolon Das	<button>ADD</button>

In Figure 37, After click on Search button. List of all student who are not enrolled in this class also satisfy the input field are shown in tabular form.



Participant Added succesfully

Figure 38: Students added

After clicking ADD button notification shows and student is added to the class. Also student row is deleted.

**Home** **Log In** **Contact Us** **Log Out**

**ID : tesc031**

- Details**
- Classes**
- Chat Group**
- Attendance**

**ADD a New Class**

**NETWORKING SEM IV**  
Total Participants: 8  
Day : MONDAY  
Time : 10:01:00

**ALGORITHM**  
Total Participants: 8  
Day : SATURDAY  
Time : 16:00:00

**NETWORKING**  
Total Participants: 2  
Day : WEDNESDAY  
Time : 10:45:00

**Add Participants**

Figure 39: The class participants count increases

In Figure 39 we observe how class participants count increases.

**Home** **Log In** **Contact Us** **Log Out**

**ID : tesc031**

- Details**
- Classes**
- Chat Group**
- Attendance**

**NETWORKING SEM IV**  
Total Participants: 8  
Day : MONDAY  
Time : 10:01:00

**ALGORITHM**  
Total Participants: 8  
Day : SATURDAY  
Time : 16:00:00

**NETWORKING**  
Total Participants: 2  
Day : WEDNESDAY  
Time : 10:45:00

Figure 40: Chat Groups

After clicking “Chat Group” all classes is show. When we click on specific class it's chats are visible.

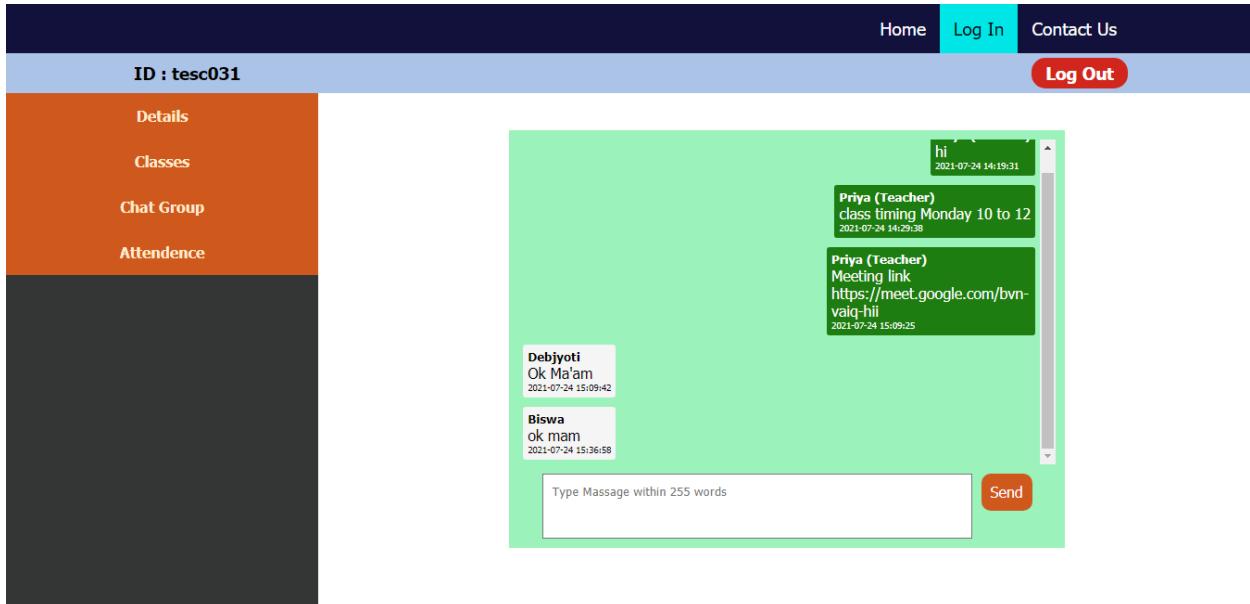


Figure 41: Chat option for teacher

Figure 41 show the chats of chat group according to class

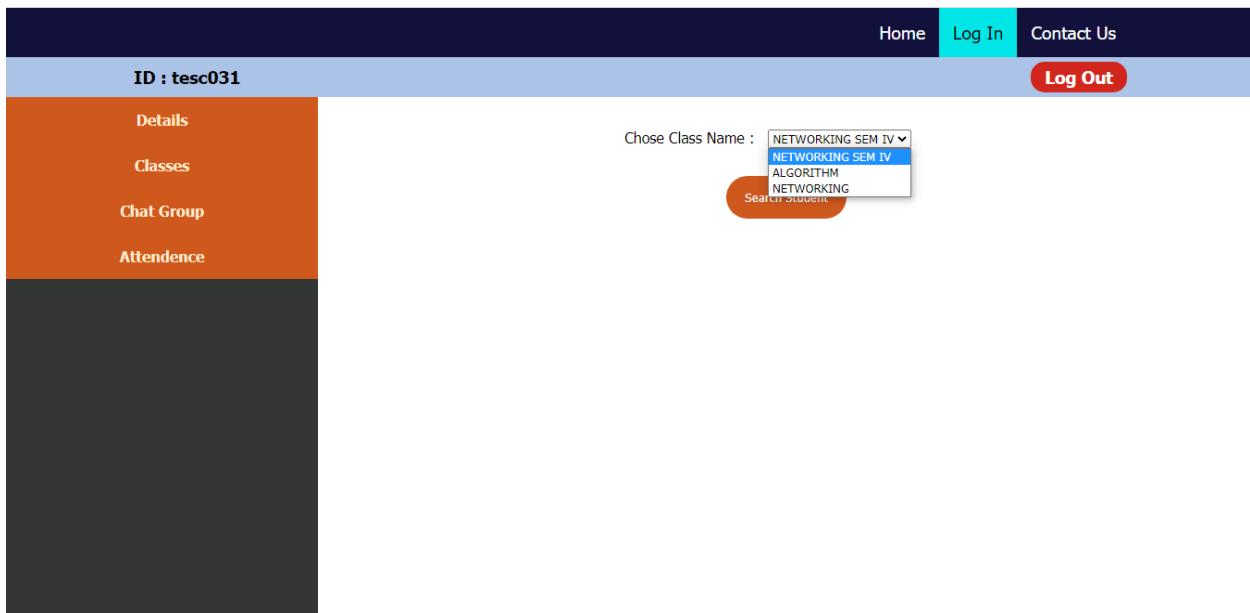


Figure 42: Attendance form

In Figure, 42 after clicking attendance this page opens. Here teacher chose the class. And click search button.

The screenshot shows a web-based attendance management system. At the top, there is a dark blue header bar with navigation links: 'Home' (white text), 'Log In' (cyan background), 'Contact Us' (white text), and 'Log Out' (red button). Below the header, the user ID 'ID : tesc031' is displayed. On the left, a vertical orange sidebar menu lists 'Details', 'Classes', 'Chat Group', and 'Attendance' (which is highlighted in white). In the center, a form section includes a dropdown menu 'Chose Class Name : NETWORKING SEM IV' and a 'Search Student' button. To the right is a table showing student attendance details:

Student ID	Name	Present?
stusc080	Biswa Sarkar	<span>Present</span> <span>Absent</span>
stusc055	Payel Chakraborty	<span>Present</span> <span>Absent</span>
stusc053	Rishab Dey	<span>Present</span> <span>Absent</span>
stusc052	Debjyoti Mukherjee	<span>Present</span> <span>Absent</span>
stusc021	Rupsha Mondal	<span>Present</span> <span>Absent</span>
stusc012	Amit Saha	<span>Present</span> <span>Absent</span>
stusc009	Riya Das	<span>Present</span> <span>Absent</span>

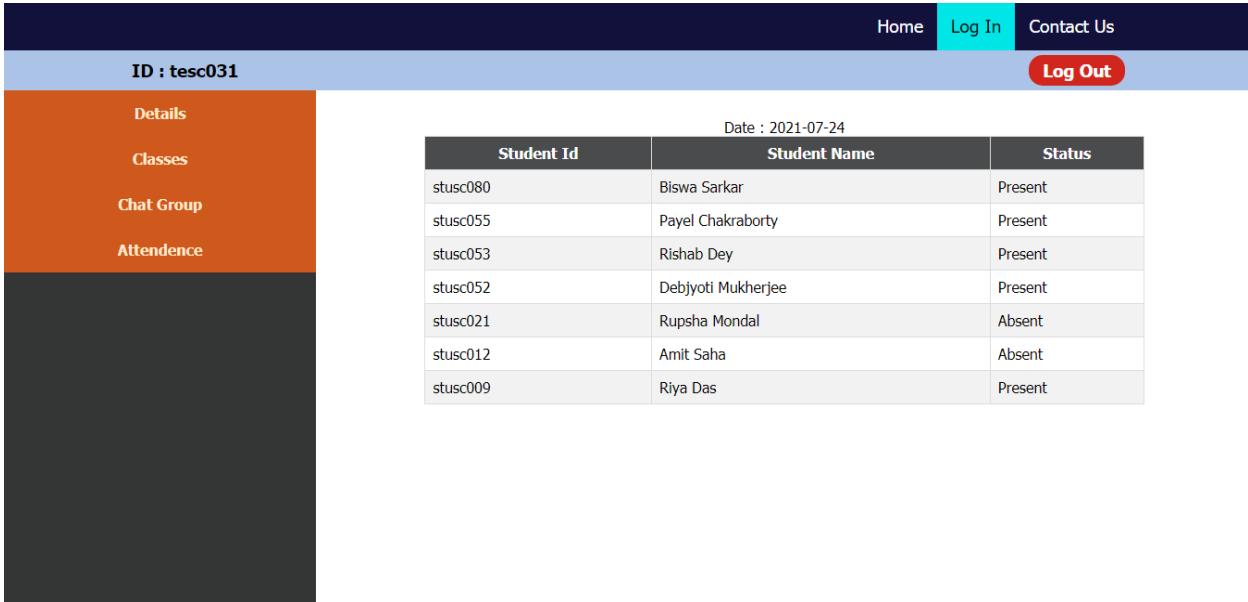
Figure 43: Attendance checklist

Figure 43 shows list of enrolled student in the class are shown in table. And two button absent and present helps to records student attendance.

This screenshot is identical to Figure 43, showing the attendance checklist interface. The table displays the same student list and present/absent buttons. A green horizontal bar at the bottom of the page contains the message 'Attendance done successfully for Student Id : stusc080'.

Figure 44: Attendance recorded for particular student

In Figure 44, After clicking Absent/Present notification shown and student name delete from table.



The screenshot shows a web interface for managing student attendance. At the top, there is a dark header bar with navigation links: "Home" (white text), "Log In" (blue background), "Contact Us" (white text), and a red "Log Out" button. Below the header, the text "ID : tesc031" is displayed. On the left side, there is a vertical sidebar with orange headers for "Details", "Classes", "Chat Group", and "Attendance". The "Attendance" section is currently active, indicated by its orange background. To the right of the sidebar, the main content area displays a table of student attendance data. The table has a header row with columns: "Student Id", "Student Name", and "Status". Below the header, there are seven data rows. The data is as follows:

Student Id	Student Name	Status
stusc080	Biswa Sarkar	Present
stusc055	Payel Chakraborty	Present
stusc053	Rishab Dey	Present
stusc052	Debjyoti Mukherjee	Present
stusc021	Rupsha Mondal	Absent
stusc012	Amit Saha	Absent
stusc009	Riya Das	Present

This Figure 45 denotes attendance recorded for whole class.

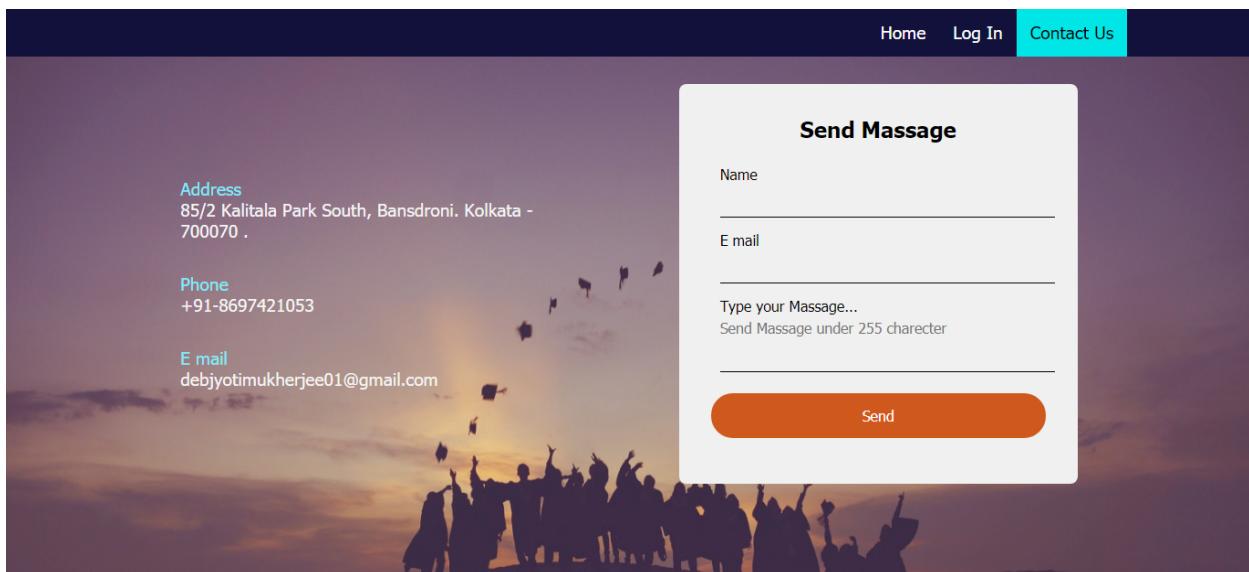


Figure 46: Contact Us page

Figure 46 is Contact Us page. It helps to contact with college. User can send message to Admin or college through this form. User has to give a valid name, valid email and message between 1 to 255 characters.

## Chapter 5: Conclusion

From the above discussion, it can be concluded that, the Student teacher management system is a software application for schools and universities to manage data related to teachers and students. the major benefit of the Student Teacher Management System developed by me includes it will help teachers to record students' attendance directly to college database. Teachers will also be able to arrange their lessons, and students will be able to see them. This will allow professors to better organize their classrooms and will serve as a reminder to the students. Students will be able to check their participation and engage directly with the teacher and peers during class using the chat option, which is one of the most important features of the STMS system.

The STMS developed by me, will help teachers to record students' attendance directly to college database. Additionally, teachers will be able to schedule their classes and the same will be visible to the students. This will ensure better management of classes by the teachers and will act as a remembrance to the student. The key benefits of the STMS system for the students include they will be able to track their attendance and will be able to communicate directly with the teacher and their peers during the classes through the chat option.

During this Covid 19 outbreak, this method will be extremely useful to all sorts of academic institutions, including schools, colleges, and universities. The majority of STMS systems on the market are designed for either students or teachers. Only one system should be able to assist both instructors and students since the STMS system I designed is for both teachers and students. Additionally, the chat feature is only accessible in a few number of STMS on the market. Because my STMS has this capability, it will be a significant benefit to institutions.

## References

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