Visvesvaraya Technological University

Belgaum, Karnataka-590 014

A MINI PROJECT REPORT

On

ATTENDANCE MANAGEMENT SYSTEM

Submitted

In partial fulfillment requirement for the award of the Degree

Of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE AND ENGINEERING

by

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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that the project work entitled **ATTENDANCE MANAGEMENT SYSTEM** is a bonafide work carried out by **Mr. P PADMAPRASAD SHENOY (4CB19CS064)** and **Mr. S SREENIVASA SHENOY** (**4CB19CS087),** in partial fulfillment for the award of degree of Bachelor of Engineering in Computer Science and Engineering under the Visvesvaraya Technological University, Belgaum during the year 2021-2022. It is verified that all corrections/suggestions indicated for internal assessment have been incorporated in the report deposited in the department library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed by Bachelor of Engineering Degree.

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Assistant Professor	**Professor**

Name of the Examiners **Signature with Date**

1.

2.

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ABSTRACT

Attendance Management System is a software developed for daily student attendance in schools, colleges and institutes. If facilitates to access the attendance information of a particular student in a particular class. The information is sorted by the operators, which will be provided by the teacher for a particular class. This system will also help in evaluating attendance eligibility criteria of a student. The purpose of developing attendance management system is to computerize the traditional way of taking attendance. Another purpose for developing this software is to generate the report automatically at the end of the session or in the between the session. The scope of the project is the system on which the software is installed, i.e. the project is developed as a desktop application, and it will work for a particular institute. But later on the project can be modified to operate it online. The system being developed is economic with respect to School or College's point of view. It is cost effective, in the sense, it has eliminated the paper work completely. The system working is quite easy to use and learn due to its simple but attractive interface. User requires no special training for operating the system.

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CHAPTER 1

INTRODUCTION

1.1 PURPOSE

The purpose of developing attendance management system is to computerized the traditional way of taking attendance. Another purpose for developing this software is to generate the report automatically at the end of the session or in the between of the session.

1.2 SCOPE

The Scope of the project is as follows:

- To add/remove the staff based on the requirements.
- To add/remove the students based on the requirements.
- To mark the present/absent criteria of the student.

1.3 OVERVIEW

Attendance Management basically has two main modules for proper functioning:-

- Admin which has right for creating space for new batch. Any entry of new faculty or removal of existing faculty is possible.

- User which can be a faculty or an operator. User has a right of making daily attendance, generating report.

CHAPTER 2

REQUIREMENT SPECIFICATION

2.1 FUNCTIONAL REQUIREMENTS

NORMAL USER

USER LOGIN

Description of feature:

This feature is used by the user to login into the system. They are required to enter user id and password before they are allowed to enter the system. The user id and password will be verified and if invalid id is there user is allowed to not enter the system.

Functional requirements

- ➢ User id is provided when they register
- ➢ The system must only allow users with valid id and password to enter the system
- ➢ The system performs an authorization process which decides what user level can access to.
- ➢ The user must be able to logout after they finished using system

REGISTER NEW USER

Description of feature:

This feature can be performed by all users to register new users to create an account.

Functional requirements

- ➢ System must be able to verify information.
- ➢ System must be able to easily track attendance information of students.
- ➢ System must be able to produce attendance bulletin quickly.

2.2 HARDWARE AND SOFTWARE REQUIREMENTS

The hardware requirements of our project are:

- ❖ Processor : Intel core i3 Processor
- ❖ RAM : 4 GB RAM
- ❖ Hard disk : 1TB

The software requirements of our project are:

Operating System : Windows 10

Front End Design : HTML, CSS, JavaScript, Bootstrap

Back End Design : MySql, PHP

2.3 SOFTWARE TOOLS USED

The whole project is divided into two parts, namely, front end and the back end.

2.3.1 Front End:

- The front end is designed using HTML , CSS, Javascript languages along with Bootstrap used for connectivity.
- Hypertext Mark-up Language (HTML) is the standard mark-up language for documents designed to be displayed in a web browser CSS is the language
  describing the presentation of web pages, including color, layout and fonts.
- Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML.
- JavaScript is a text-based programming language used both on the client-side and server-side that allows you to make web pages interactive.
- Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development.

2.3.2 Back End:

- The back end was designed using MYSQL.
- Structured Query Language (SQL) is a standard computer language for
  relational database management and data manipulation.
- SQL is used to query, insert, update and modify data.
- PHP is a general-purpose scripting language that is especially suited to server-side web development, in which case PHP generally runs on a web server.

CHAPTER 3

DATABASE DESIGN

3.1 ENTITY RELATIONSHIP DIAGRAM

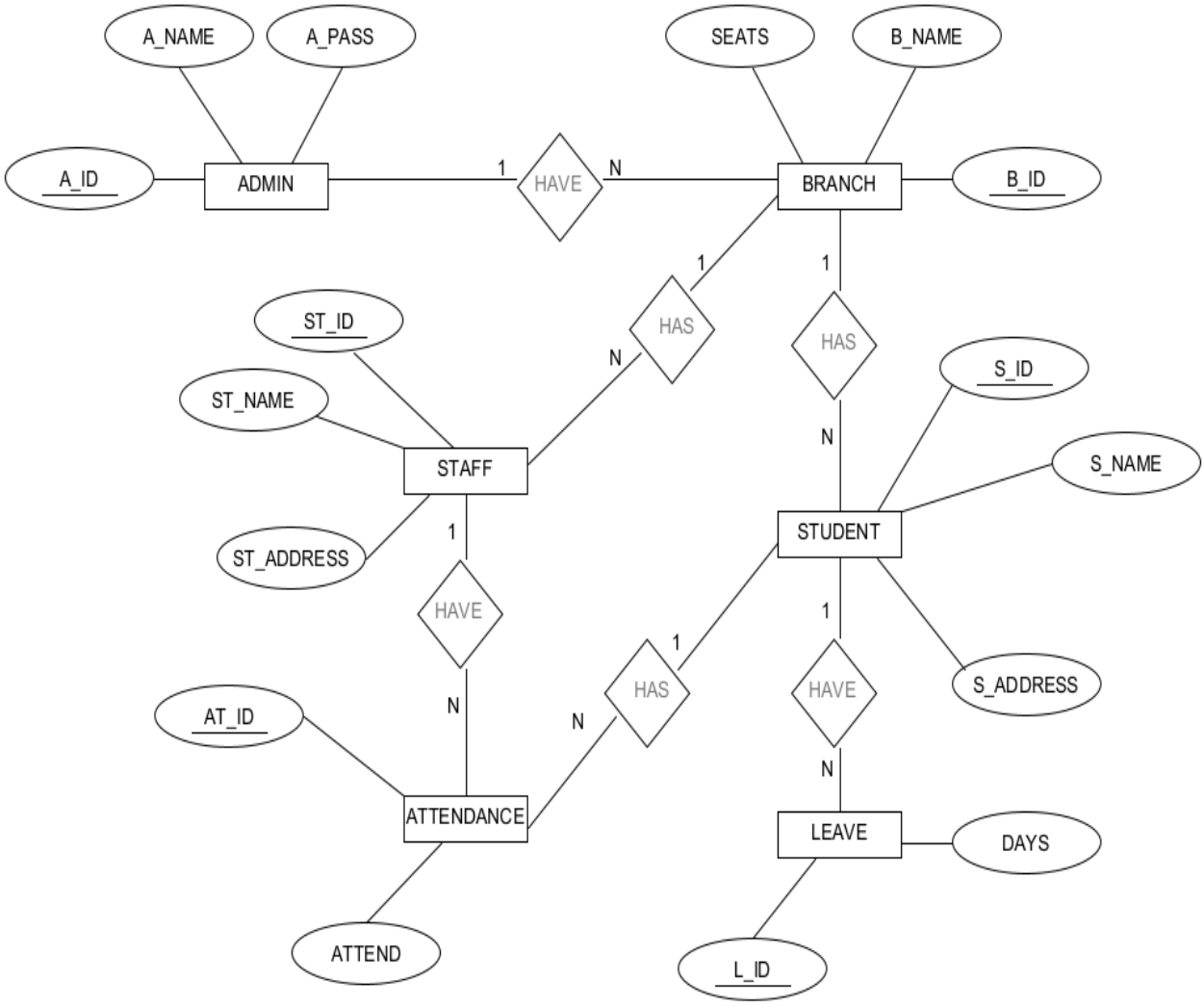

Figure 3.1 : Student Attendance Management Entity Relationship Diagram

3.2 RELATIONAL SCHEMA

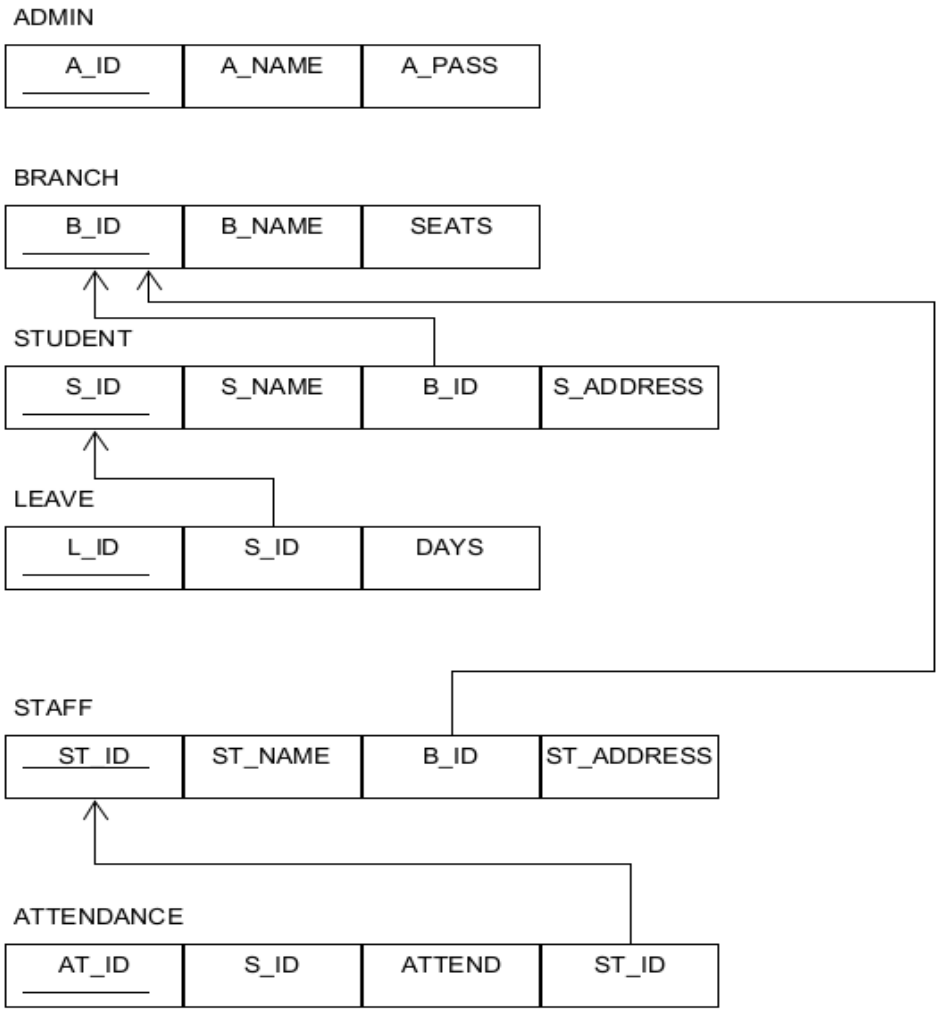

Figure 3.2 : Student Attendance Management Relational Schema Diagram

CHAPTER 4

SYSTEM DESIGN

4.1 TABLE DESIGN

The project requires many relations to store the data and retrieve it. These relations are defined as tables in SQL using CREATE TABLE statements. The following are the tables defined in our project.

❖ Table structure for table `admin`

```
CREATE TABLE `admin` (
  `A_ID` int(11) NOT NULL,
  `A_NAME` varchar(255) NOT NULL,
  `A_PASS` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

❖ Table structure for table `branch`

```
CREATE TABLE `branch` (
  `B_ID` varchar(255) NOT NULL,
  `B_NAME` varchar(255) NOT NULL,
  `SEATS` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

❖ Table structure for table `attend`

```
CREATE TABLE `attend` (
  `AT_ID` int(11) NOT NULL,
  `S_ID` varchar(255) DEFAULT NULL,
  `ATTEND` int(11) DEFAULT NULL,
  `ST_ID` varchar(11) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

❖ Table structure for table `leave`

```
CREATE TABLE `leave` (
  `L_ID` int(11) NOT NULL,
  `S_ID` varchar(255) DEFAULT NULL,
  `DAYS` int(11) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

❖ Table structure for table `staff`

```
CREATE TABLE `staff` (
  `ST_ID` varchar(11) NOT NULL,
  `ST_NAME` varchar(255) DEFAULT NULL,
  `B_ID` varchar(255) DEFAULT NULL,
  `ST_ADDRESS` varchar(255) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

❖ Table structure for table `student`

```
CREATE TABLE `student` (
  `S_ID` varchar(255) NOT NULL,
  `S_NAME` varchar(255) DEFAULT NULL,
  `B_ID` varchar(255) DEFAULT NULL,
  `S_ADDRESS` varchar(255) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

4.2 FORM DESIGN

❖ LOGIN FORM : This form is made for security purposes so that only authenticated users can access the project. There are two types of users that can login:

➢ Administrator

➢ User

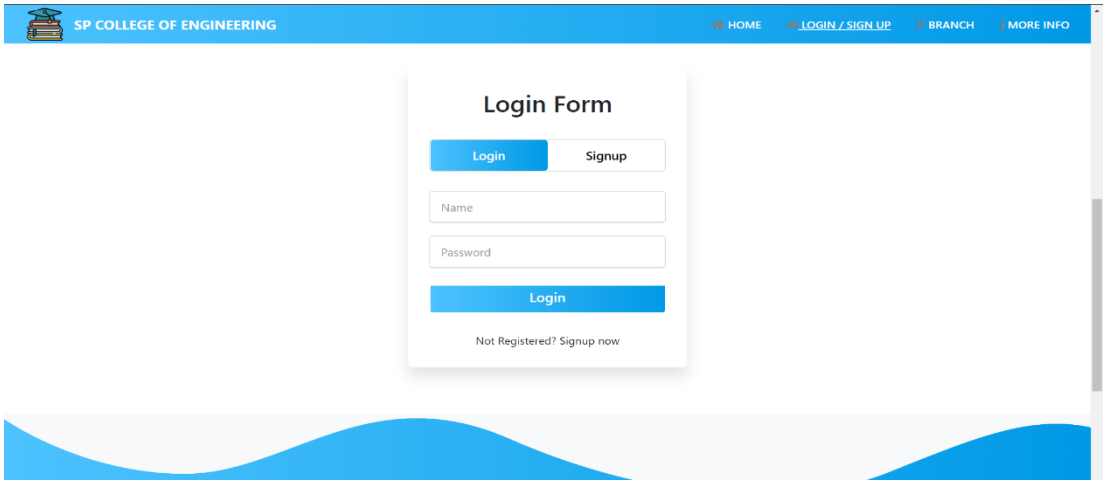

Figure 4.2.1 : Student Attendance Management Relational Schema Diagram

- SIGNUP FORM :A signup form is a web page, popup, or modal where users enter the information required to access that website's services.

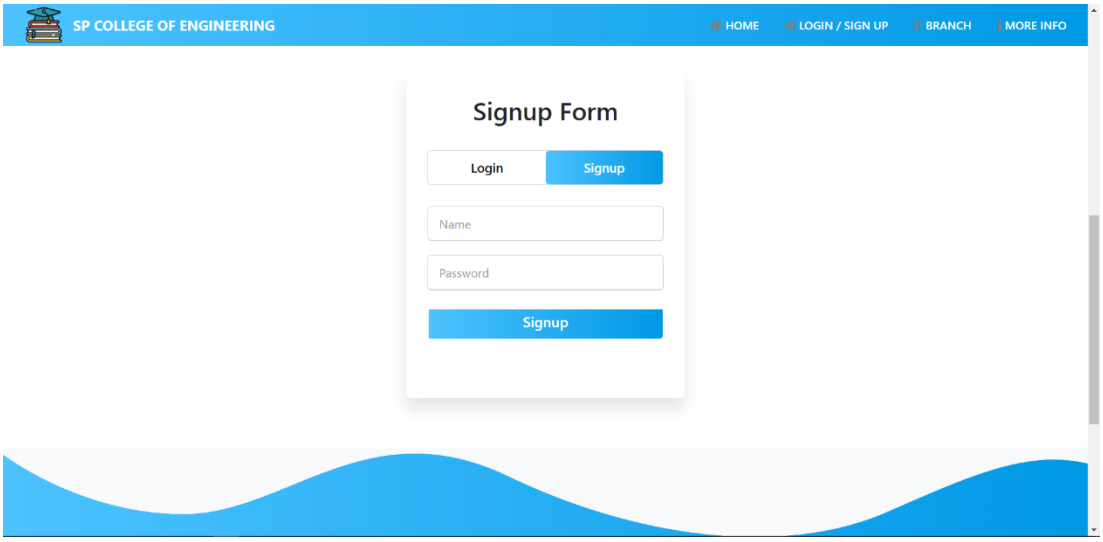

Figure 4.2.2 : Student Attendance Management Relational Schema Diagram

CHAPTER 5

SYSTEM TESTING

The aim of the system testing process was to determine all defects in our project. The program was subjected to a set of test inputs and various observations were made and based on these observations it will be decided whether the program behaves as expected or not.

Our Project went through two levels of testing:

1. Unit testing
2. Integration testing

5.1 UNIT TESTING

Unit testing is undertaken when a module has been created and successfully reviewed. In order to test a single module we need to provide a complete environment where-in besides the module we would require

The procedures belonging to other modules that the module under test calls.

Non local data structures that module accesses.

A procedure to call the functions of the module under test with appropriate parameters Unit testing was done on each and every module that is described under form design description.

1. Test For the admin module: Testing admin login form-

This form is used for the login of the administrator of the system. In this we enter the username and password if both are correct administration page will open otherwise if any of data is wrong it will get redirected back to the login page and again ask for username and password.

Teacher account addition:- In this section, the admin is able to add new staff as well as remove staff based on the requirements.

2. Test for User login module :

Test for User login Form- This form is used for login of User. In this we enter the username and password and if all these details are correct student login page will open otherwise if any of data is wrong it will get redirected back to the login page and again ask for username and password.

Test for account creation- This form is used for new account creation. When a new student has to be added (admission of new student), the teacher will look after it and perform this operation. Same applies for deletion of students (incase the student leaves the school/college).

CHAPTER 6

SNAPSHOTS

❖ ADMIN PAGE-ADD STAFF

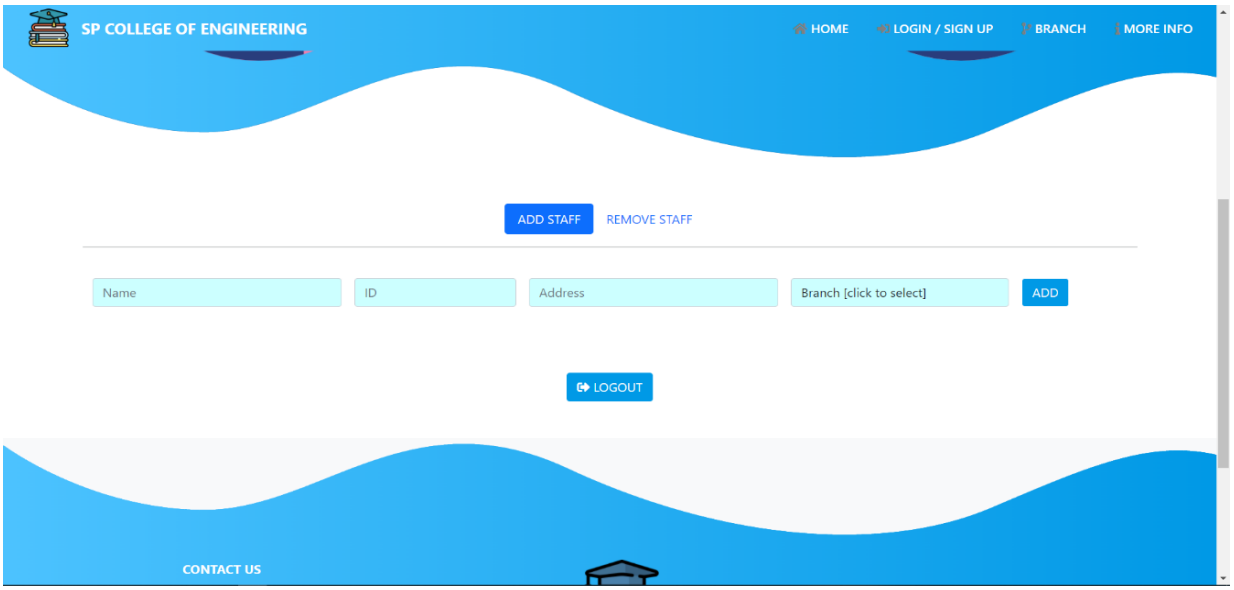

Figure 6.1.1 : Admin Page-Add Staff

❖ ADMIN PAGE-REMOVE STAFF

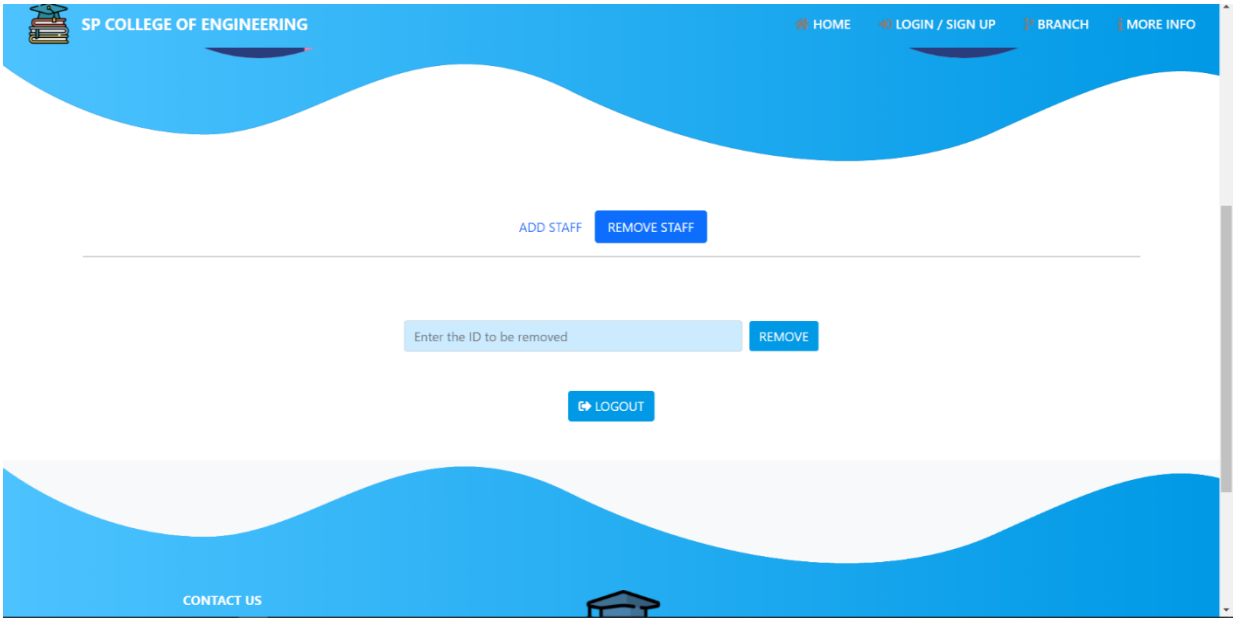

Figure 6.1.2 : Admin Page-Remove Staff

❖ LOGIN PAGE

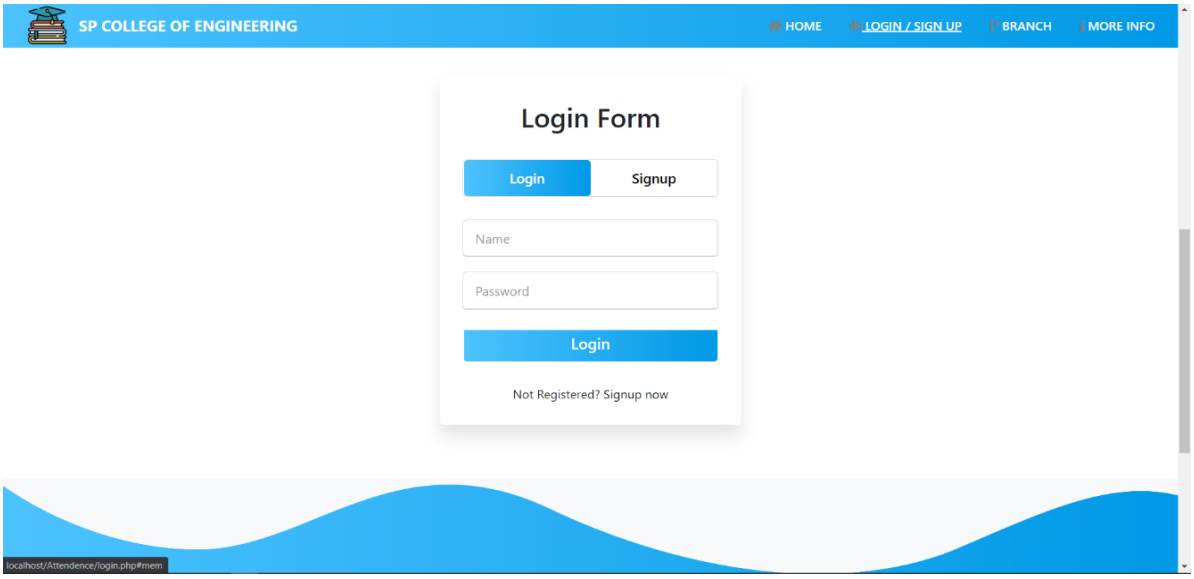

Figure 6.2 : Login Page

❖ SIGNUP PAGE

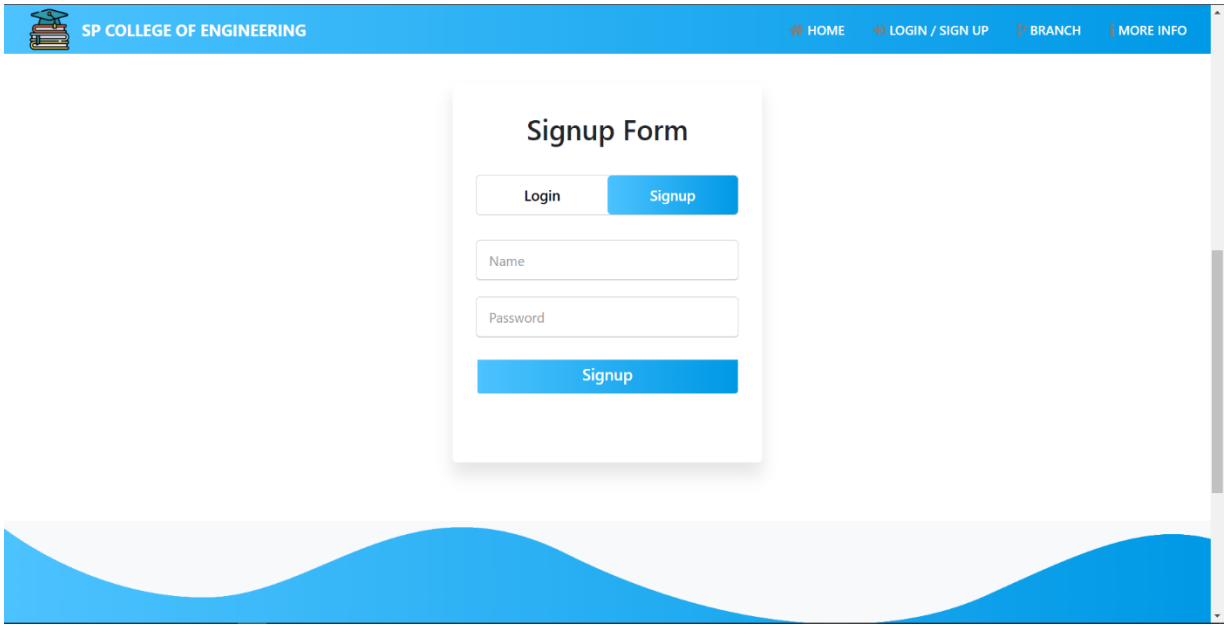

Figure 6.3 : Signup Page

❖ BRANCH PAGE

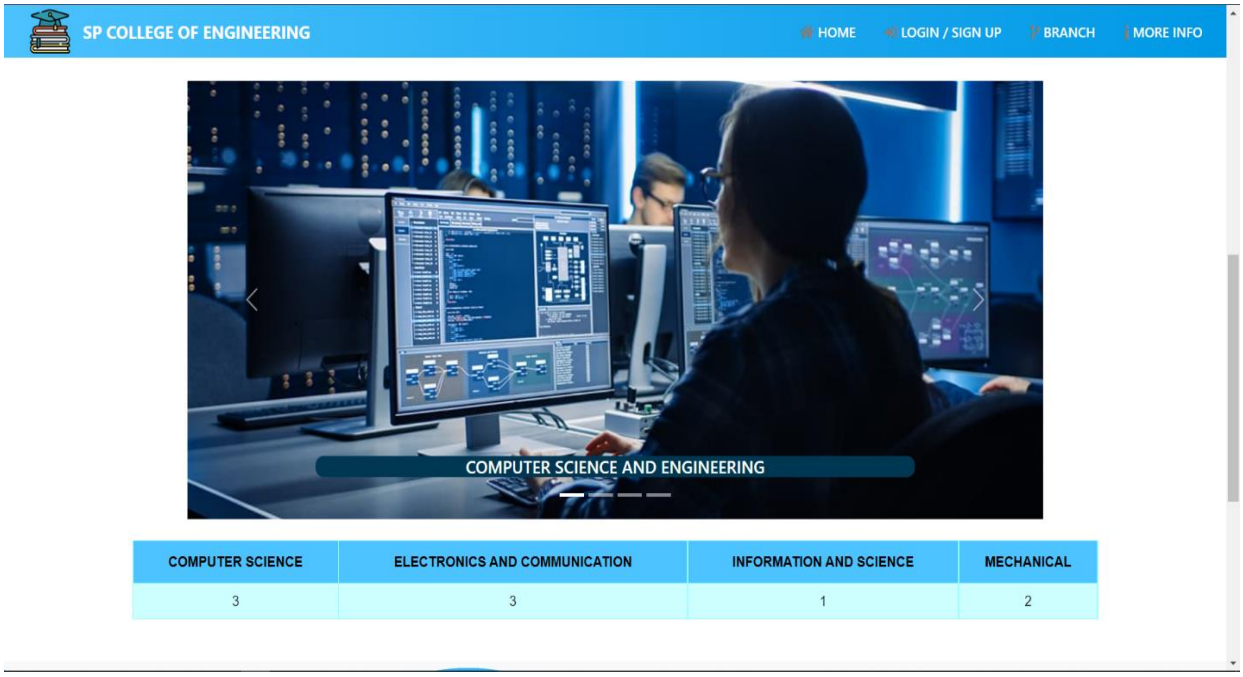

Figure 6.4 : Branch Page

❖ WELCOME PAGE

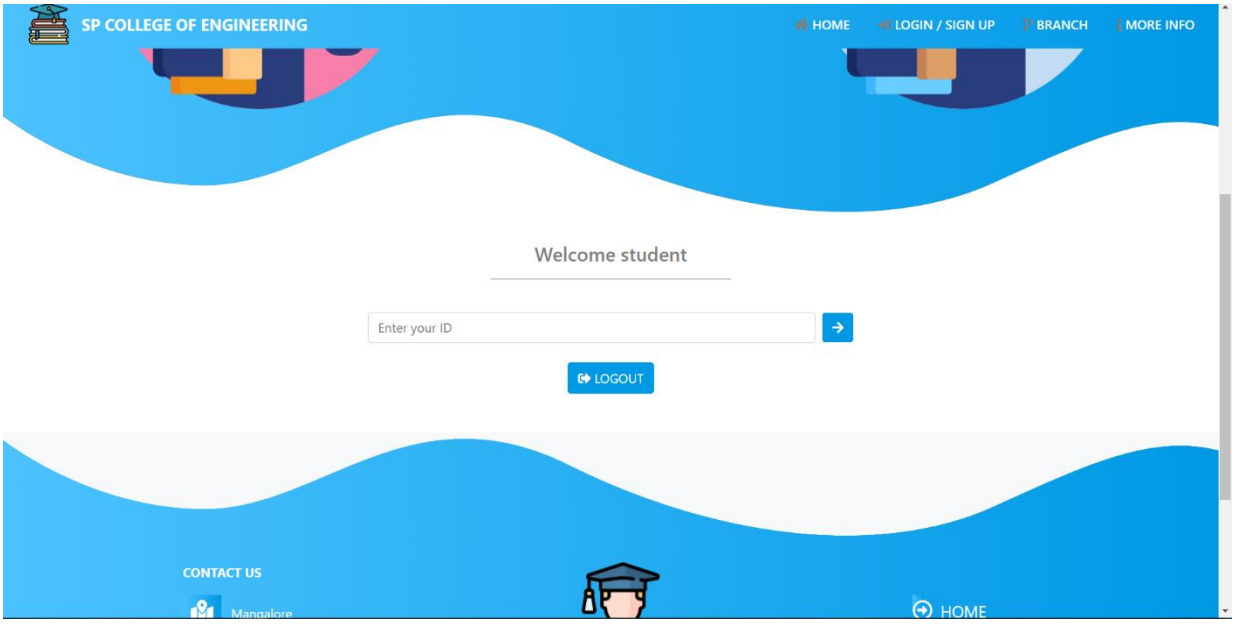

Figure 6.5 : Welcome Page

❖ STUDENT DASHBOARD

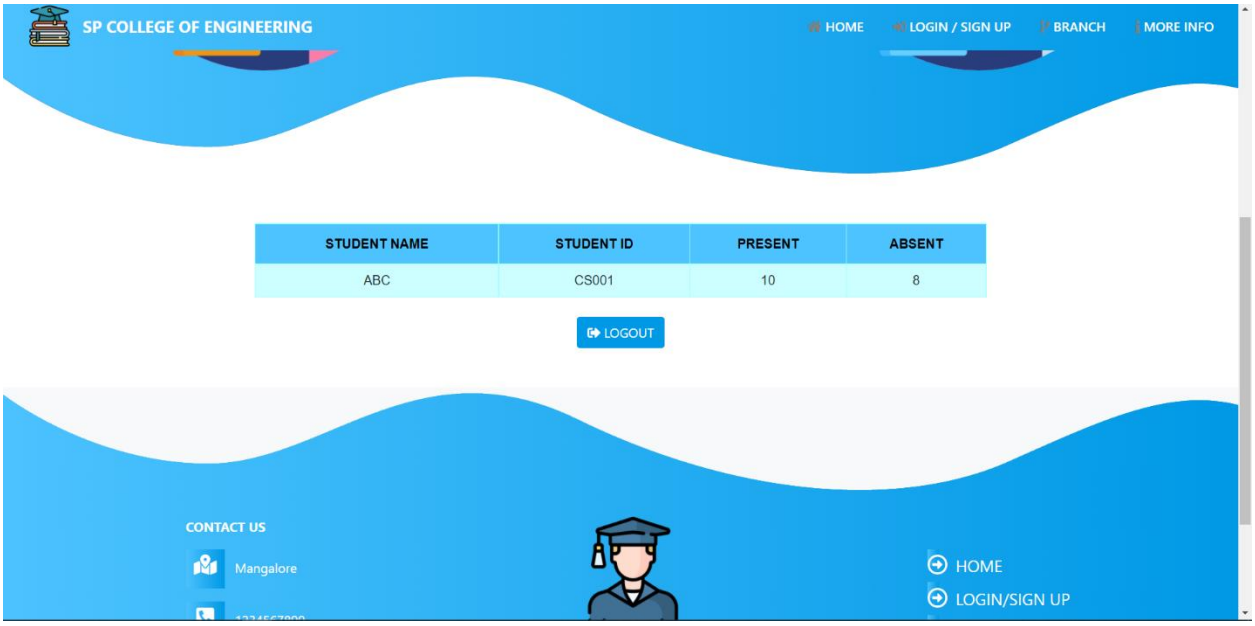

Figure 6.6 : Student Dashboard

❖ STAFF DASHBOARD-SHOW ATTENDANCE

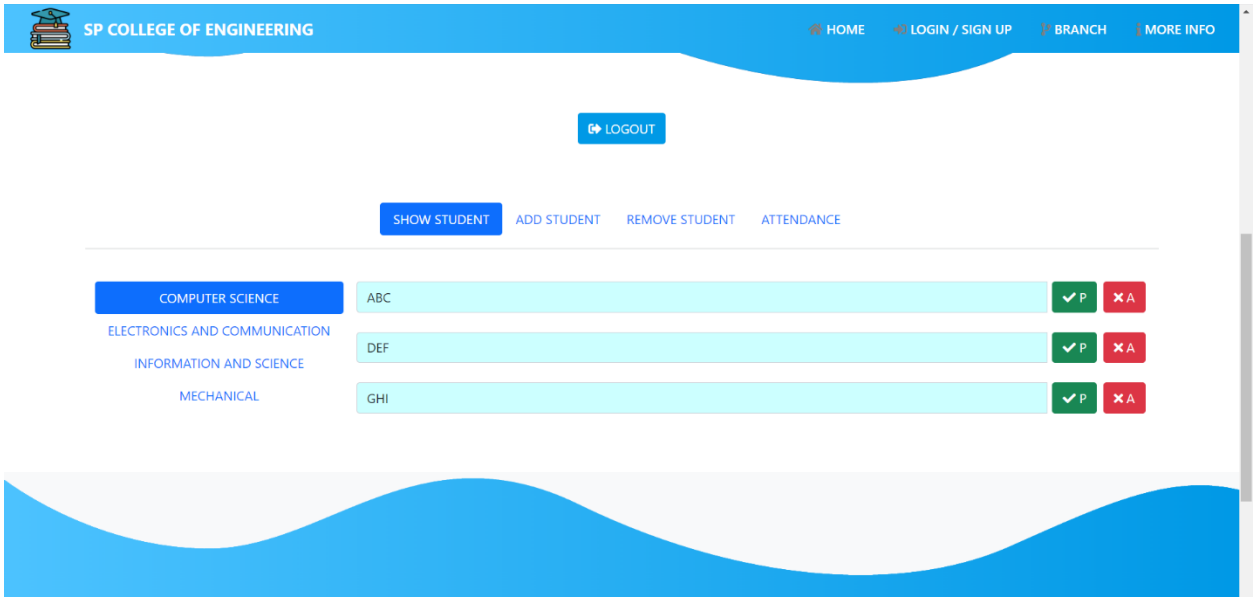

Figure 6.7.1 : Student Dashboard-Show Attendance

❖ STAFF DASHBOARD-ADD STUDENT

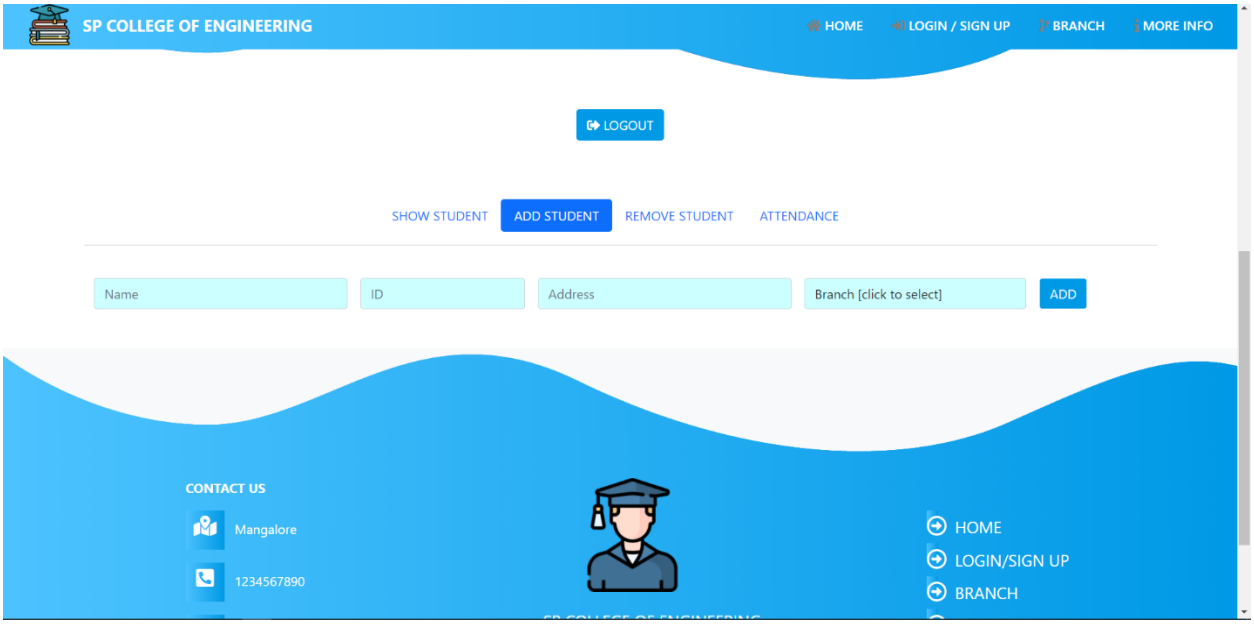

Figure 6.7.2 : Staff Dashboard-Add Student

❖ STAFF DASHBOARD-REMOVE STUDENT

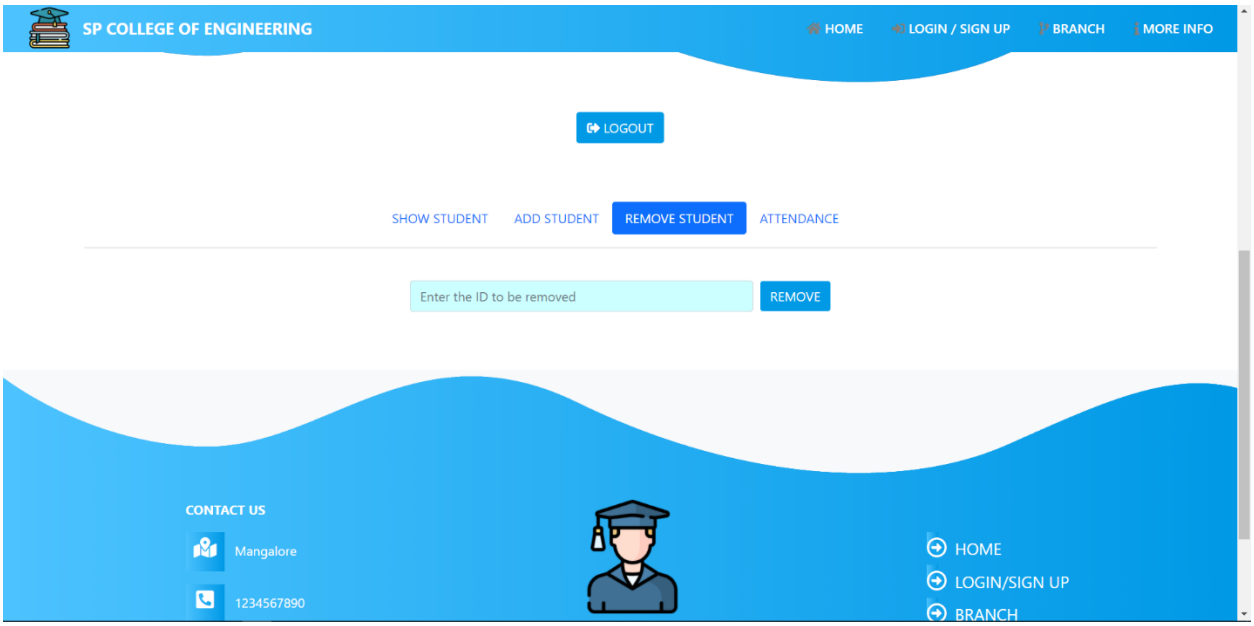

Figure 6.7.3 : Staff Dashboard-Remove Student

❖ STAFF DASHBOARD-ATTENDANCE

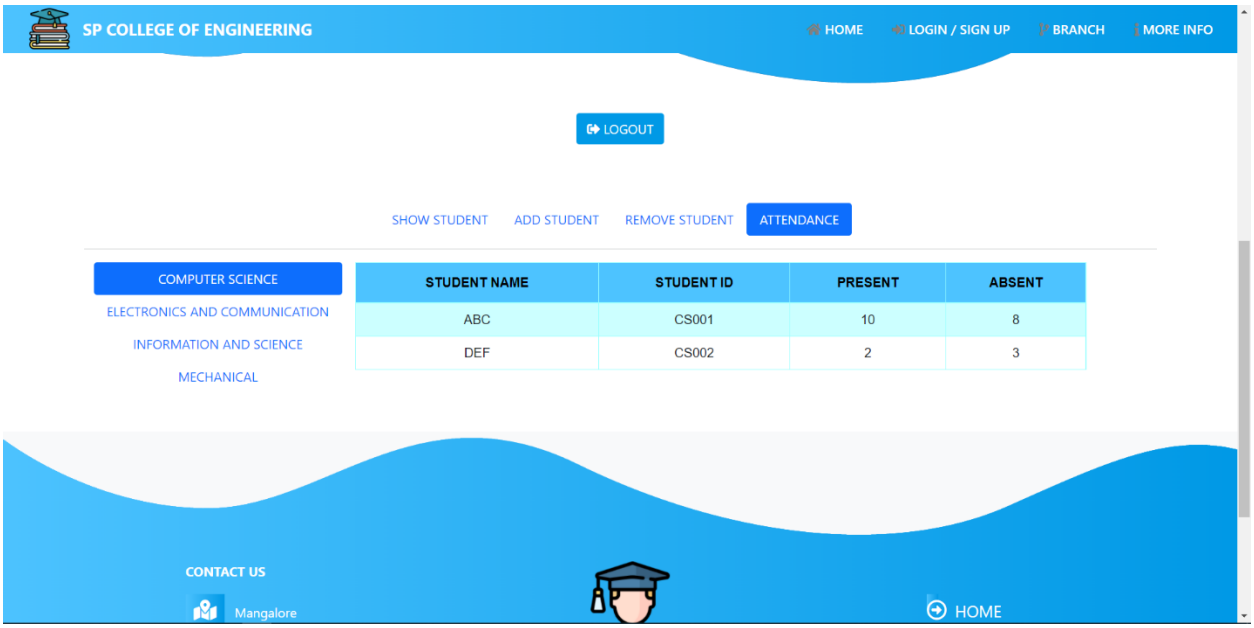

Figure 6.7.4 : Staff Dashboard-Attendance

CHAPTER 7

CONCLUSION AND SCOPE FOR FUTURE WORK

Conclusion:-

To conclude, Project Data Grid works like a component which can access all the databases and picks up different functions. It overcomes the many limitations incorporated in the attendance.

- Easy implementation Environment
- Generate report Flexibly

Scope for future work :-

The project has a very vast scope in future. The project can be implemented on intranet in future. Project can be updated in near future as and when requirement for the same arises, as it is very flexible in terms of expansion. We can run the entire work in a much better, accurate and error free manner.

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