

MINI PROJECT REPORT

on

ATTENDANCE MANAGEMENT SYSTEM USING DJANGO

Submitted in partial fulfilment for the completion of

B.E., IV Semester

in

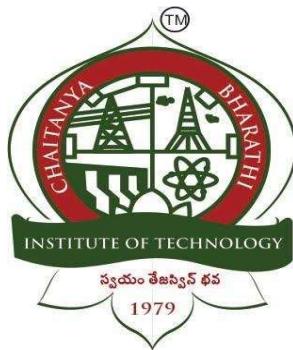
INFORMATION TECHNOLOGY

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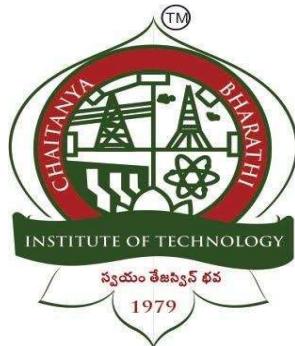
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CERTIFICATE

This is to certify that the project work entitled "**ATTENDANCE MANAGEMENT SYSTEM USING DJANGO**" submitted to **CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY**, in partial fulfilment of the requirements for the completion of IV- semester of B.E. in Information Technology, during the academic year 2020-2021, is a record of original work done by **DEVARAKONDA SHIVA RAJ(160119737171)** and **VENKATESHWARA AKHIL(160119737178)** during the period of study in Department of IT, CBIT, HYDERABAD, under my supervision and guidance.

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Also, We would like to thank the staff members and friends who helped us in finishing the project in limited time.

ABSTRACT

Attendance management system deals with the maintenance of the student's attendance details. It generates the attendance of the student on basis of presence in class. It is maintained on the daily basis of their attendance. The staffs will be provided with the separate username & password to make the student's status.

The staffs handling the particular subjects responsible to make the attendance for all students. Only if the student present on that particular period, the attendance will be calculated. The students attendance reports based on weekly and consolidate will be generated.

Over the years the manual attendance management has been carried across most of educational institutions. To overcome the problems of manual attendance, we have developed this project.

Attendance play significant role in order to justify academic outcome of a student and school as overall.

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CHAPTER -1

INTRODUCTION

Attendance Management System is software developed for daily evaluation of students in their continuous assessment record, and performance in accordance with the principle of the institution. It is facilitated to access the performance and information of attendance of a particular Student in a particular semester of study. The information is sorted by the teachers, instructors and advisors, as provided by the student for a particular day throughout a complete semester. This system will also enable the evaluation of student regular presence in various lectures which will determine the eligibility of the student to sit for a semester examination.

1.1 PURPOSE

The purpose of developing this attendance management system is to computerized the tradition way of taking attendance. Another purpose for developing this software is to generate the report automatically at the end of the semester.

1.2 EXISTING SYSTEM

The Existing system is a manual entry for the students. Here the attendance will be carried out in the hand written registers. It will be a tedious job to maintain the record for the user. The human effort is more here. The retrieval of the information is not as easy as the records are maintained in the hand written registers. This application requires correct feed on input into the respective field. Suppose the wrong inputs are entered, the application resist to work. so the user find it difficult to use.

So, we are not able to get student regularity report and take necessary action on students whenever we want because of having very time consuming process.

Weaknesses In Existing System:

- Not User Friendly**

The existing system is not user friendly because the retrieval of data is very slow and data is not maintained efficiently.

- **Difficulty In Report Generating**

We require more calculations to generate the report so it is generated at the end of the semester. And the student doesn't get a single chance to improve their Attendance.

- **Manual Control**

All calculations to generate report are done manually so there is greater chance of errors.

- **Lots Of Paperwork**

Existing system requires lot of paper work. Loss of even a single register/record led to difficult situation because all the papers are needed to generate the reports

- **Time Consuming**

Every work is done manually so we cannot generate report in the end of the semester or as per the requirement because it is very time consuming

1.3 PROPOSED SYSTEM

To overcome the drawbacks of the existing system, the proposed system has been evolved. This project aims to reduce the paper work and saving time to generate accurate results from the student's attendance. The system provides with the best user interface. The efficient reports can be generated by using this proposed system.

Advantages of Proposed System

1. It is trouble-free to use.
2. It is a relatively fast approach to enter attendance
3. Is highly reliable, approximate result from user
4. Best user Interface
5. Efficient reports

- **Reports are easily generated**

Reports can be easily generated in the proposed system so user can generate the report as per the requirement (weekly, monthly) or in the middle of the semester. User can give the notice to the employees to be regular.

- **User Friendly**

The proposed system is user friendly because the retrieval and storing of data is fast and data is maintained efficiently. Moreover the interface provided in the proposed system, provides user to deal with the system very easily.

- **Very Less Paper Work**

The proposed system requires very less paper work. All the data is feted into the computer immediately and reports can be generated through computers. Moreover work becomes very easy because there is no need to keep data on papers.

2 SOFTWARE AND HARDWARE REQUIREMENTS

2.1 SOFTWARE REQUIREMENTS

- This System is built fully in Django Framework in back-end and HTML,CSS in front end .
- Language used is python 3 and the IDE is pycharm
- For saving the data of students we have used SQLite database.
- To Access this website we can use any type of internet explorer.

Operating System: Windows,Mac OS ,Linux

The minimum software requirement specifications :

- **Web Browser: To run server (eg: Google chrome,Microsoft Edge)**
- **Django: Framework used in this project**
- **Pycharm: IDE used in this project which runs on python**
- **Python 3.7.6: Python version**

2.2 Hardware Requirements

Internet Connection With Good Speed

Graphics : Intel or Nvidia

Hard drive: 5 Giga Bytes

CPU- Single Core 2.4ghz

Network : Broadband Recommended

RAM:512 MB

CHAPTER 3

SOFTWARE REQUIREMENT ANALYSIS

3.1 OVERVIEW

Attendance Management System basically has two main modules for proper functioning.

- Admin module is has rights for creating any new entry of faculty and student details and assigning the courses and the timings of the classes.
- User has a rights of making daily attendance, generating report. Attendance report can be taken by given details of student details, date, class

3.2 PROBLEM DESCRIPTION

This system developed will reduce the manual work and avoid redundant data. By maintaining the attendance manually, then efficient reports cannot be generated. The system can generate efficient weekly, consolidate report based on the attendance. As the attendances are maintained in registers it has been a tough task for admin and staff to maintain for long time. Instead the software can keep long and retrieve the information when needed.

3.3 SOLUTION

To overcome the problems in the manual attendance system we developed this system . Which can be easily handled with students and teachers making it user friendly

3.4 MODULES

Attendance Management System basically has three main modules for proper functioning

- First module is admin which hold the key for editing and updating information. The admin has absolute right to all the users which are the Teachers and Student.
- Second module is handled by the user which can be a Teacher or Instructor. This user has a right of making daily attendance, updating, editing and generating reports to the students.
- Third is handled by a user which is the Student, he has less privilege to the access of the system; the student can only view his own record by providing his username and password.

He will be able to see the daily attendance as well as his results. If any comment or change of class schedule the student can see in his own profile only.

3.5 MODULE DESCRIPTION

The college ERP system has three main user classes. These include the students, teachers and administrator. This section will explain in detail all the features and the working of those for each user class.

3.5.1 Student

Login

Each student in the college is assigned a unique username and password by the administrator. The username is the same as their USN and so is the password. They may change it later according to their wish.

Homepage

After successful login, the student is presented a homepage with their main sections, attendance, marks and timetable. In the attendance section the student can view their attendance status which includes the total classes, attended classes and the attendance percentage for each of their courses.

In the marks section, the student can view the marks for each of their courses out of 20 for 3 internal assessments, 2 events. Also, the semester end examination for 100 marks. Lastly, the timetable provides the classes assigned to that student and day and time of each in a tabular form.

Attendance

On the attendance page, there is a list of courses that is dependent on each student. For each course, the course id and name are display along with the attended classes, total classes and the attendance percentage for that particular course. If the attendance percentage is below 75 for any course, it is displayed in red denoting shortage of attendance, otherwise it is green. If there is any shortage, it specifies the number of classes to attend to make up for it. If you click on each course, it takes you to the attendance detail page.

Attendance Detail

This page displays more details for the attendance in each course. For each the course, there is a list of classes conducted and each is marked with the date, day and whether the student was present or absent on that particular date.

Marks

The Marks page is a table with an entry for each of their courses. The course id and name are specified along the marks obtained in each of the tests and exams. The tests include 3 internal assessments with marks obtained out of a total of 20, 2 events such as project, assignment, quiz etc., with marks out of 20. Lastly, one semester end exam with marks out of 100.

Timetable

This page is a table which lists the day and timings of each of the classes assigned to the student. The row headers are the days of the week and the column headers are the time slots. So, for each day, it specifies the classes in the time slots. The timetable is generated automatically from the assign table, which is a table containing the information of all the teachers assigned to a class with a course and the timings the classes.

3.5.2 Teacher

Login

Each teacher in the college is assigned a unique username and password by the administrator. The username is their teacher ID and the same for password. The teacher may change the password later.

Homepage

After successful login, the student is presented a homepage with their main sections, attendance, marks, timetable and reports. In the attendance section, the teacher can enter the attendance of their respective students for the days on which classes were conducted. There is a provision to enter extra classes and view/edit the attendance of each individual student. In the marks section, the teacher may enter the marks for 3 internals, 2 events and 1 SEE for each student. They can also edit each of the entered marks. The timetable provides the classes assigned to the teacher with the day and timings in a tabular form. Lastly, the teacher can generate reports for each of their assigned class.

Attendance

There is a list of all the class assigned to teacher. So, for each class there are 3 actions available. They are,

Enter Attendance

On this page, the classes scheduled or conducted is listed in the form of a list. Initially, all the scheduled classes will be listed from the start of the semester to the current date. Thus, if there is class scheduled for today, it will automatically appear on top of the list. If the attendance of any day is not marked it will be red, otherwise green if marked. Classes can also be cancelled which will make that date as yellow. While entering the attendance, the list of students in that class is listed and there are two options next to each. These options are in the form of a radio button for present and absent. All the buttons are initially marked as present and the teacher just needs to change for the absent students.

Edit Attendance

After entering attendance, the teacher can also edit it. It is similar to screen for entering attendance, only the entered attendance is saved and display. The teacher can change the appropriate attendance and save it.

Extra Class

If a teacher has taken a class other than at the scheduled timings, they may enter the attendance for that as well. While entering the extra class, the teacher just needs to specify the date it was conducted and enter the attendance of each of the students. After submitting extra class, it will appear in the list of conducted classes and thus, it can be edited.

Student Attendance

For each assigned class, the teacher can view the attendance status of the list of students. The number of attended classes, total number of classes conducted and the attendance percentage is displayed. If the attendance percentage of any of the students is below 75, it will be displayed in red. Thus, the teacher may easily find the list of students not eligible to take a test.

Student Attendance Details

The teacher can view the attendance detail of all their assigned students individually. That is, for all the conducted classes, it will display whether that student was present or absent. The teacher can also edit the attendance of each student individually by changing the attendance status for each conducted class.

Marks

On this page, the list of classes assigned to the teacher are displayed along with two actions for each class. These actions are,

Enter Marks

On this page, the teacher can enter the marks for 3 internal assessments, 2 events and one semester end exam. Initially all of them are marked red to denote that the marks have not been entered yet. Once the marks for a test is entered, it turns green. While entering the marks for a particular test, the list of students in that class is listed and marks can be entered for all of them and submitted. Once, the marks are submitted, the students can view their respective marks. Incase if there is a need to change the marks of any student, it is possible to edit the marks.

Edit Marks

Marks for a test can be edited. While editing, the list of students in that class is displayed along with already entered marks. The marks to be updated can be changed and submitted. The students can view this change immediately.

Student Marks

For each assigned class, the teacher has access to the list of students and the marks they obtained in all the tests. This is displayed in a tabular form.

Timetable

This page is a table which lists the day and timings of each of the classes assigned to the teacher. The row headers are the days of the week and the column headers are the time slots. So, for each day, it specifies the classes in the time slots. The timetable is generated automatically from the assign table, which is a table containing the information of all the teachers assigned to a class with a course and the timings the classes.

Free teachers

For each entry in the table, the list of free teachers can be generated. Free teachers are the teachers who assigned to the class and are free for that time slot on that day. This is very useful for the teachers particularly when they are on leave as it helps them find a suitable replacement are that class.

Reports

The last page for the teachers is used to generate reports for each class. The report specifies the list of students in that class and their respective CIE and attendance percentage. CIE is the average of the marks obtained from the tests, 3 internals and 2 events. The CIE is out of 50 and the students with CIE below 25 are marked in red and are not eligible to write the semester end exam. Also, the attendance percentage is displayed with students below 75% marked in red.

3.5.3 Administrator

The administrator is responsible for adding and maintaining all the departments, students, teachers, classes and courses. All this data is stored in the database in their respective tables. The admin is also responsible for adding and maintaining the list of teachers assigned to class with a course and the timings. This information is stored in the Assign table. The admin also has access to the marks and attendance of each student and can modify them.

There are several features in place to ensure that querying the database is quick and efficient for the administrator. As the database has the potential to become huge, there is a search feature for every table including student, teacher etc. The search has get a specific record based on name or id. Also, it can filter the record based on department, class etc.

CHAPTER 4

SOFTWARE DESIGN

4.1 DATA FLOW DIAGRAM

A Data Flow Diagram (DFD) is a graphical representation of the “flow” of data through an information system. It can also be used for the visualization of data processing (structured design).



FIG 4.1 DATA FLOW DIAGRAM

4.2 UML DIAGRAM

4.2.1 USE CASE DIAGRAM

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use cases in which the user is involved. A use case diagram can identify the different types of users of a system and the different use cases and will often be accompanied by other types of diagrams as well. The use cases are represented by either circles or ellipses.

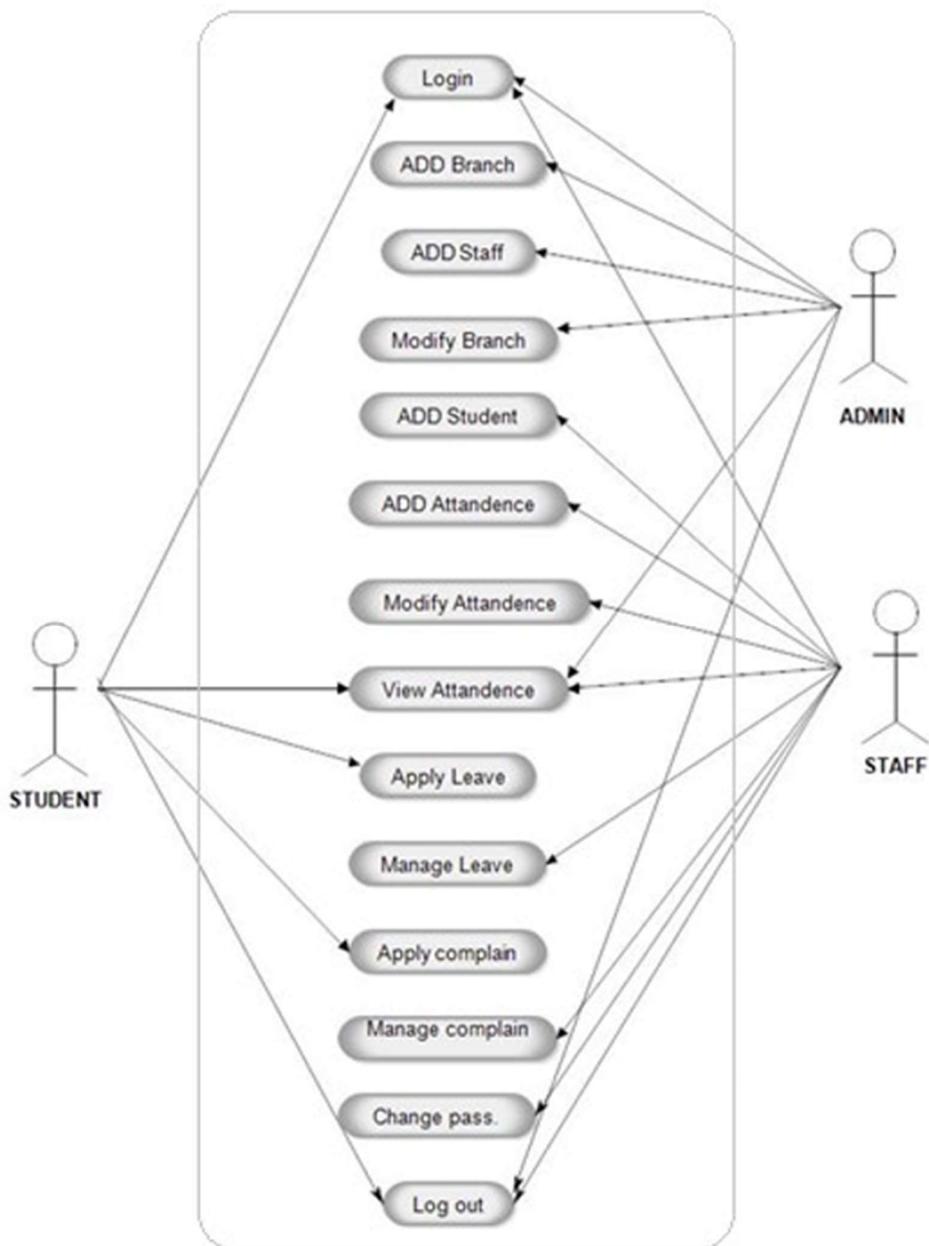


FIG 4.2.1: USE CASE DIAGRAM

4.2.2 CLASS DIAGRAM

The class diagram states the different classes involved in the software. For each class, a set of attributes and method are included. The relationship between the classes are also specified. For example, the teacher class has the attributes Id, name, phone no, address and methods such as marking attendance, declaring marks and preparing report cards. Each instance of the teacher class belongs to a department. This is specified by the relationship between Teacher and Department classes.

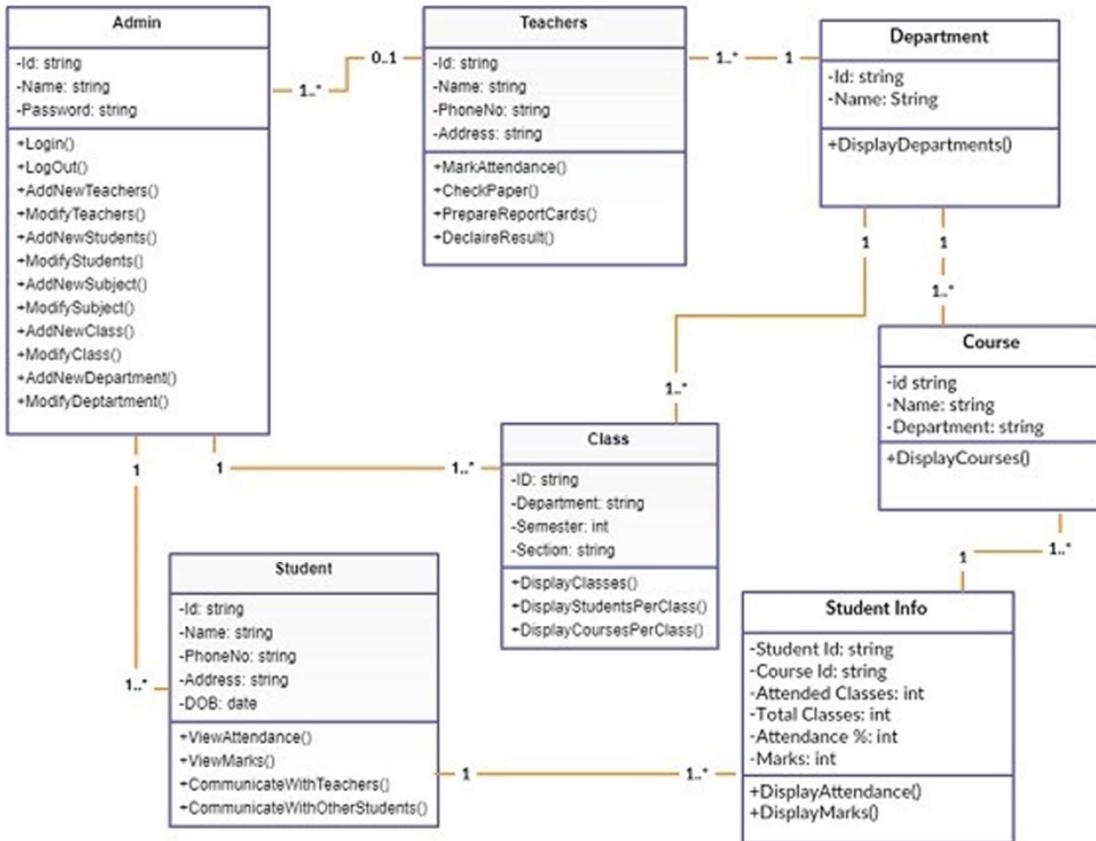


FIG 4.2.2 CLASS DIAGRAM

4.3 CONTROL FLOW DIAGRAM

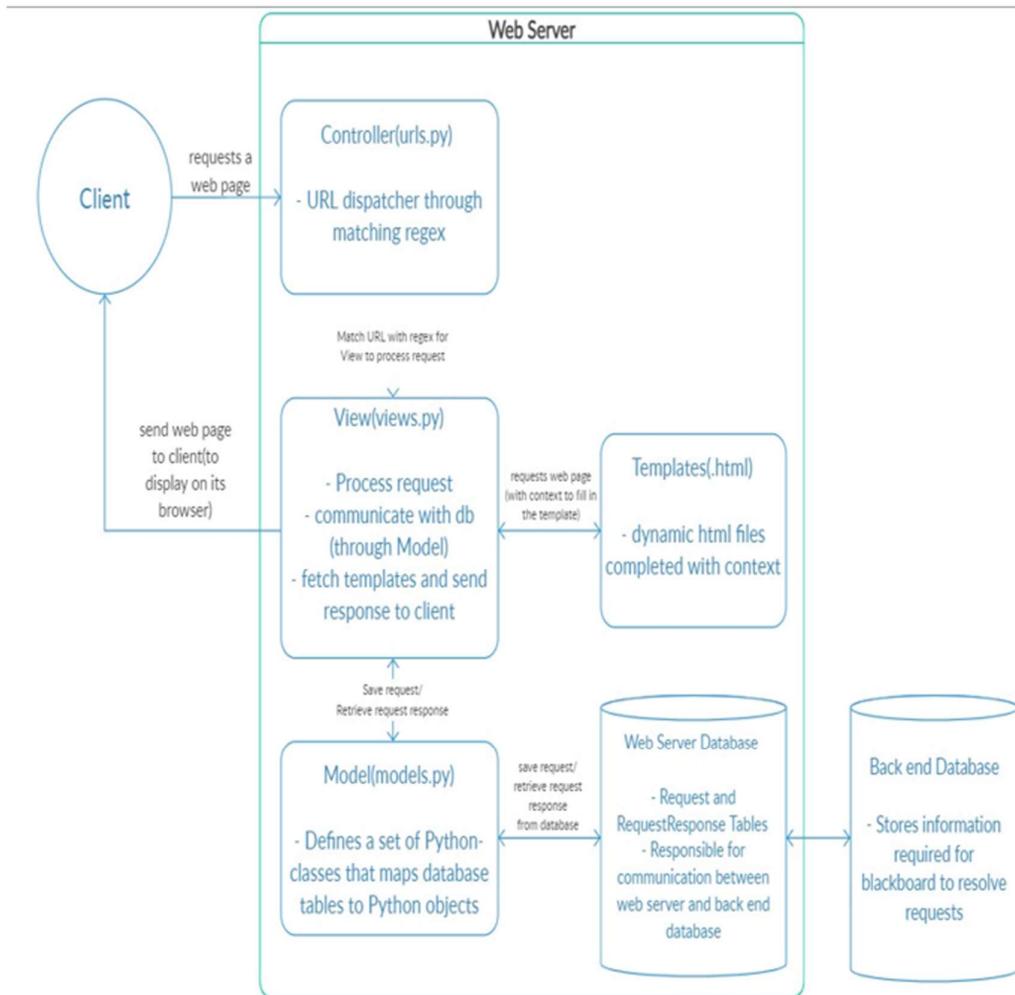


FIG :4.3.1 CONTROL FLOW DIAGRAM

ADMIN

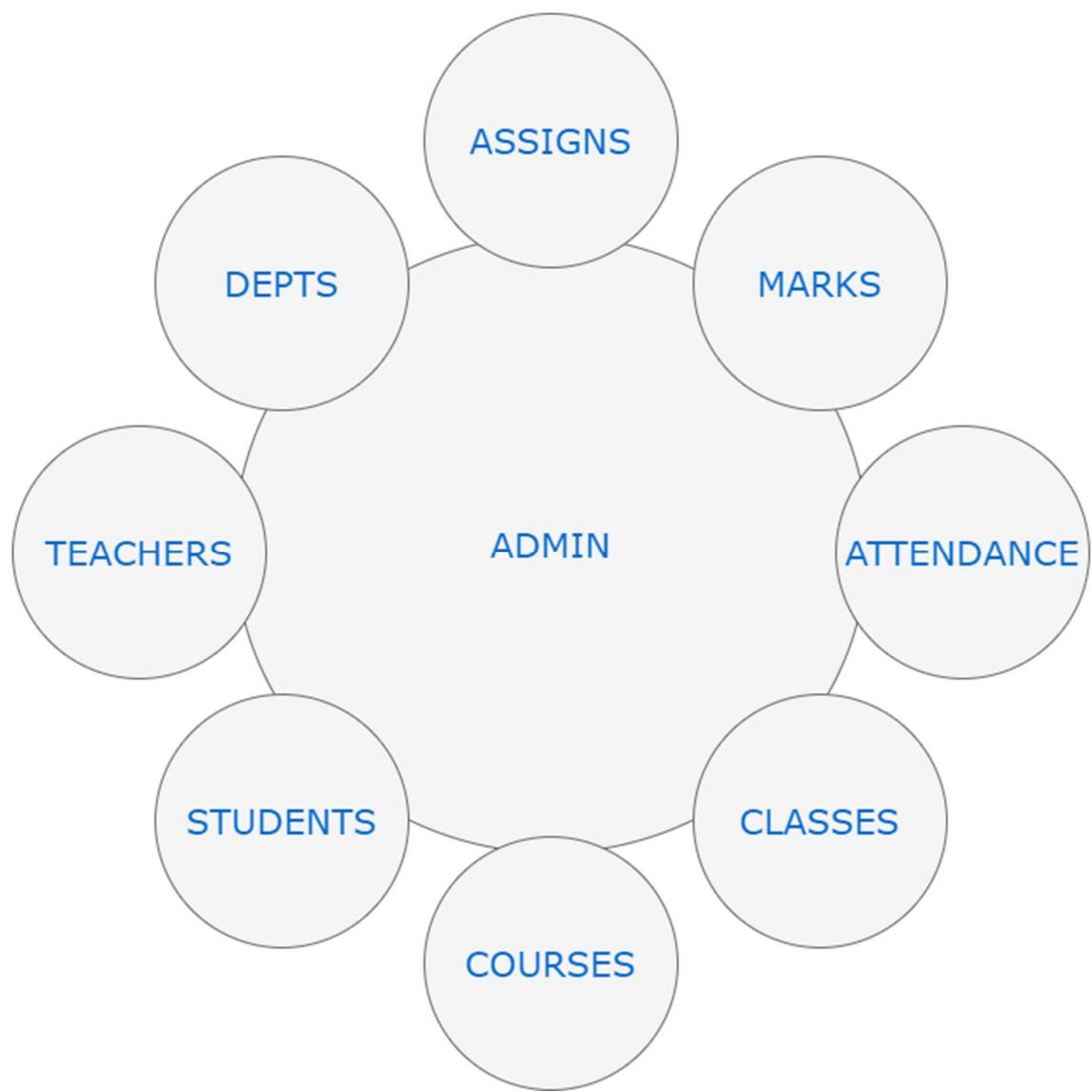


FIG:4.3.2 Admin diagram

STUDENT:

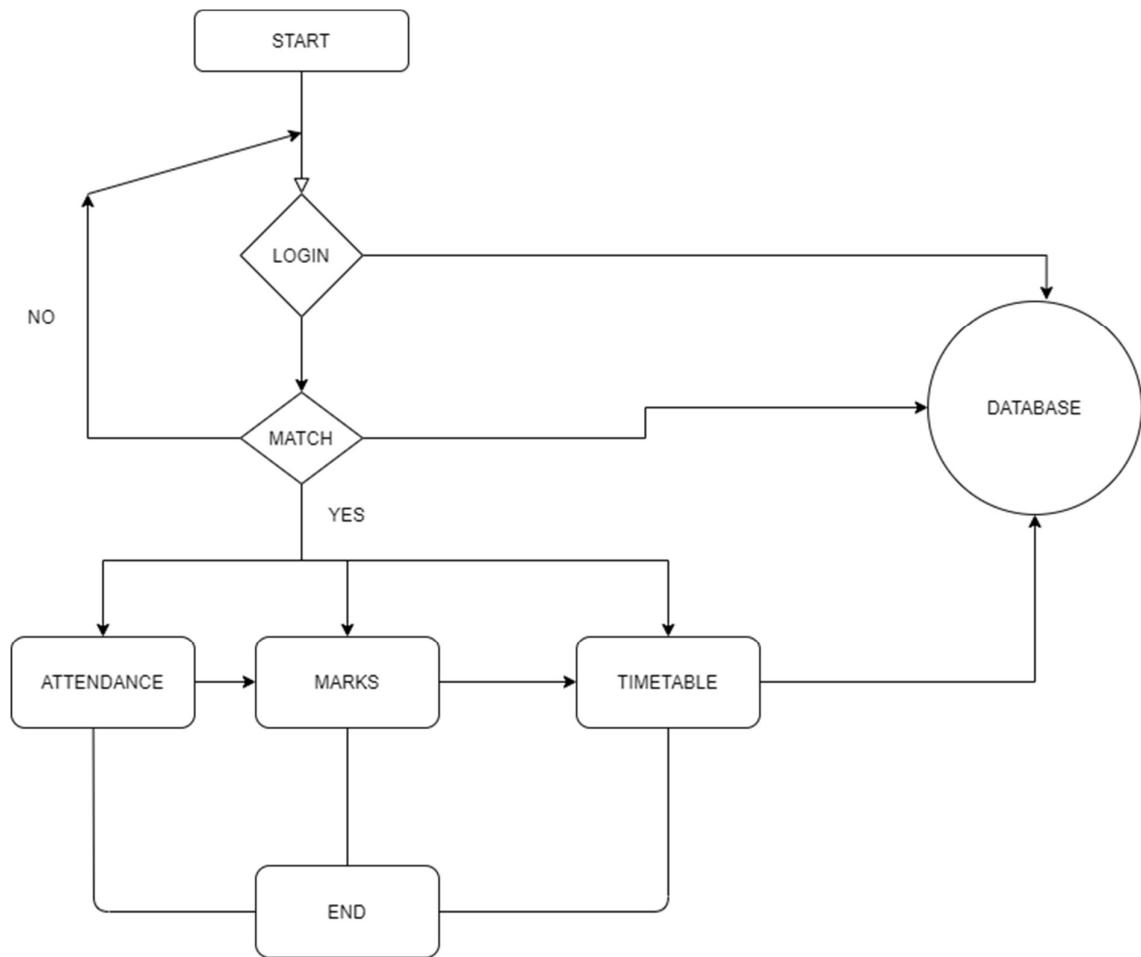


FIG 4.3.3: Student diagram

TEACHER:

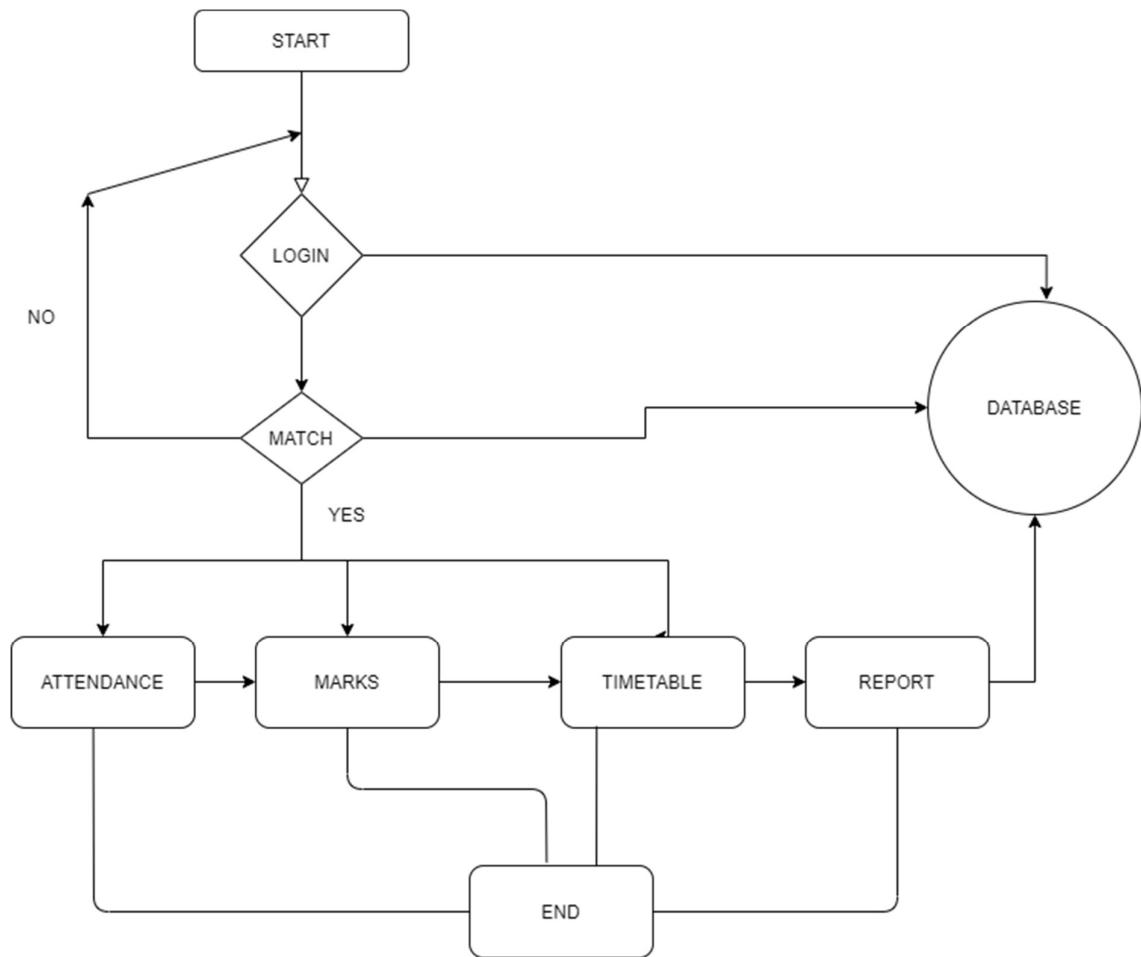


FIG 4.3.4 Teacher diagram

4.4 DATA BASE DESIGN

4.4.1 ENTITY RELATIONSHIP DIAGRAM

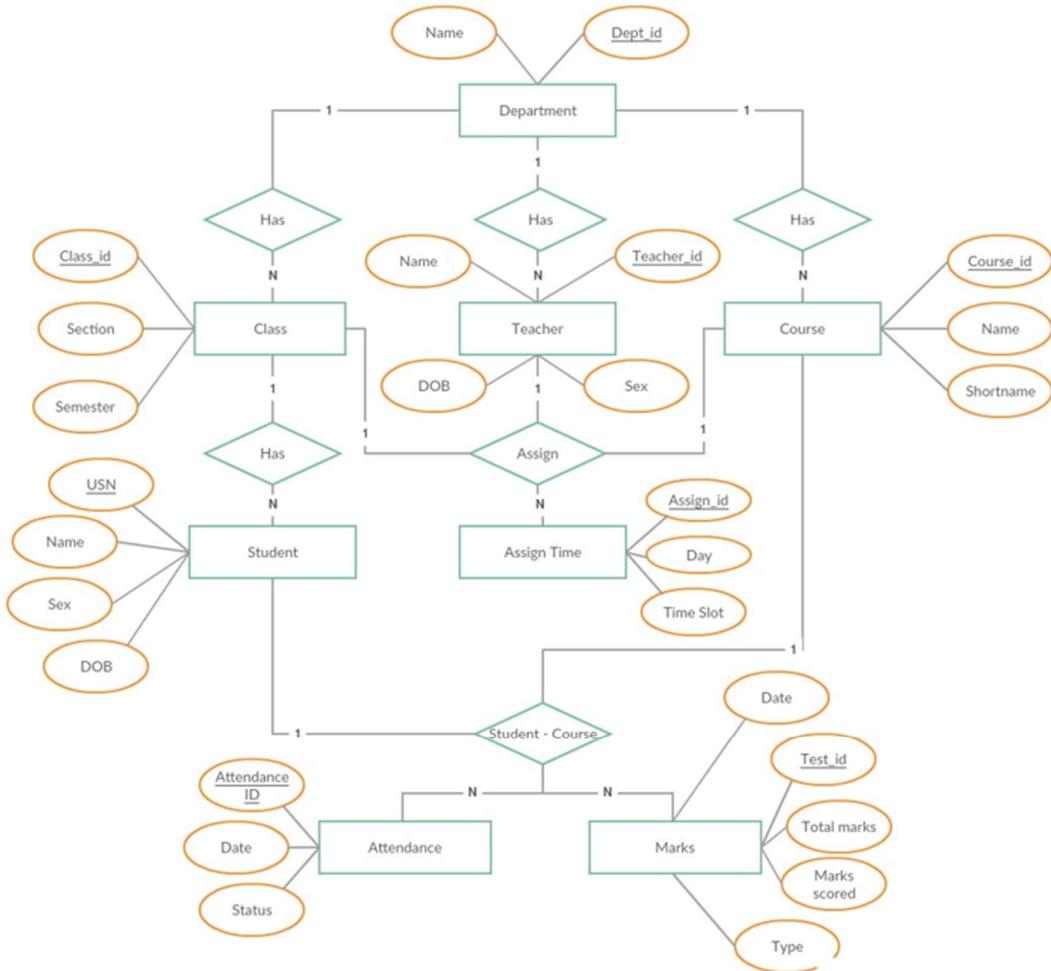


FIG 4.4.1 ENTITY RELATIONSHIP DIAGRAM

CHAPTER 5

CODE IMPLEMENTATION

HTML

HTML (Hyper Text Markup Language) is the set of markup symbols or codes inserted in a file intended for display on a World Wide Web browser page. The markup tells the web browser how to display a web page's words and images for the user. Each individual markup code is referred to as an element (but many people also refer to it as a tag). Some elements come in pairs that indicate when some display effect is to begin and when it is to end.

CASCADING STYLE SHEET (CSS)

Cascading Style Sheets (CSS) are a collection of rules we use to define and modify web pages. CSS are similar to styles in Word. CSS allow Web designers to have much more control over their pages look and layout. For instance, you would create a style that defines the body text to verdana, 10 point. Later on, you may easily change the body text to times new roman, 12 point by just changing the rule in CSS. Instead of having to change the font on each page of your website, all you need to do is redefine the style on the style sheet, and it will instantly change on all of the pages that the style sheet has been applied to. With HTML styles, the font change would be applied to each instance of that font and have to be changed in each spot.

CSS can control the placement of text and objects on your pages as well as the look of those objects.

HTML information creates the objects (or gives objects meaning), but styles describe how the objects should appear. The HTML gives your page structure, while the CSS creates the "presentation". An external CSS is really just a text file with .css extension. These files can be created with Dreamweaver, a CSS editor, or even Notepad.

LANGUAGE USED : PYTHON

Python is a widely used general-purpose, high-level programming language. It was mainly developed for emphasis on code readability, and its syntax allows programmers to express concepts in fewer lines of code. Python is dynamically typed and garbage collected. It supports multiple programming paradigms, including procedural, object-oriented and functional programming.

PYCHARM is an Integrated Development Environment (IDE) used in Computer Programming specifically for python language . It is developed by the Czech company,Jetbrains. It provides code analysis,a graphical debugger.,and supports web development with Django as well as Data science with anaconda.

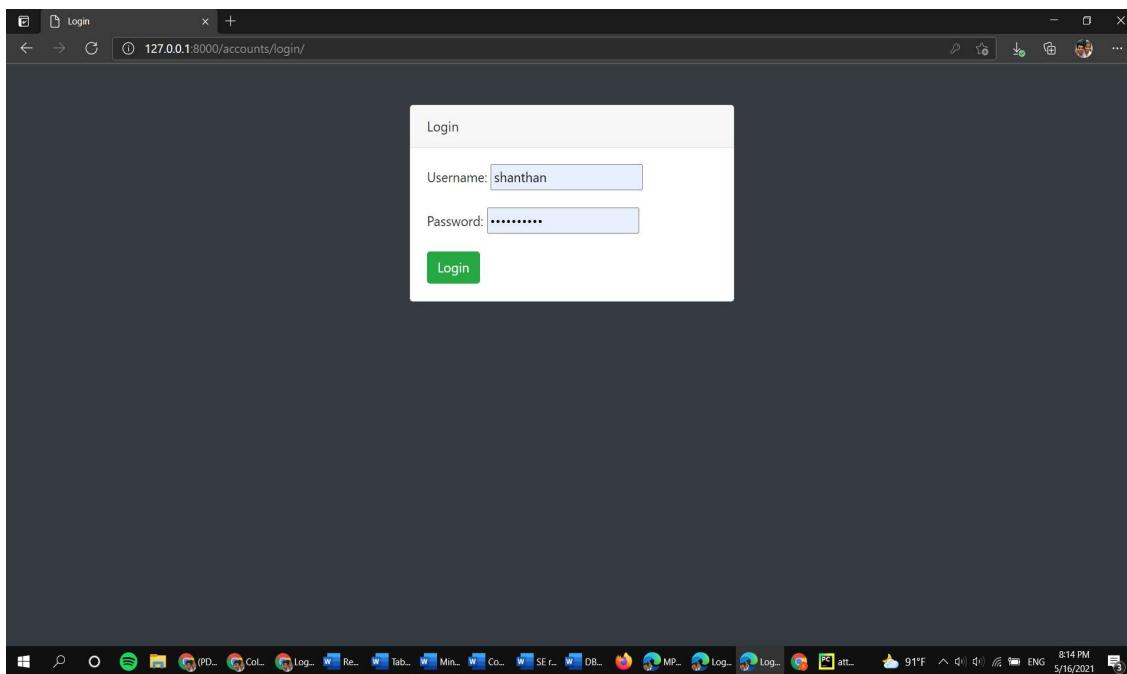
Django is an web application framework written in python programming language. It is based on MVT(Model view Template) design pattern.Django project is intended for productive web development with Django ,Pycharm takes care of creating specific directory structure and files required for a Django application ,and providing the Correct settings

The college ERP system has three main user classes. These include the students, teachers and administrator. This section will explain in detail all the features and the working of those for each user class.

5.1 STUDENT

5.1.1 LOGIN

Each student in the college is assigned a unique username and password by the administrator. The username is the same as their USN and so is the password. They may change it later according to their wish

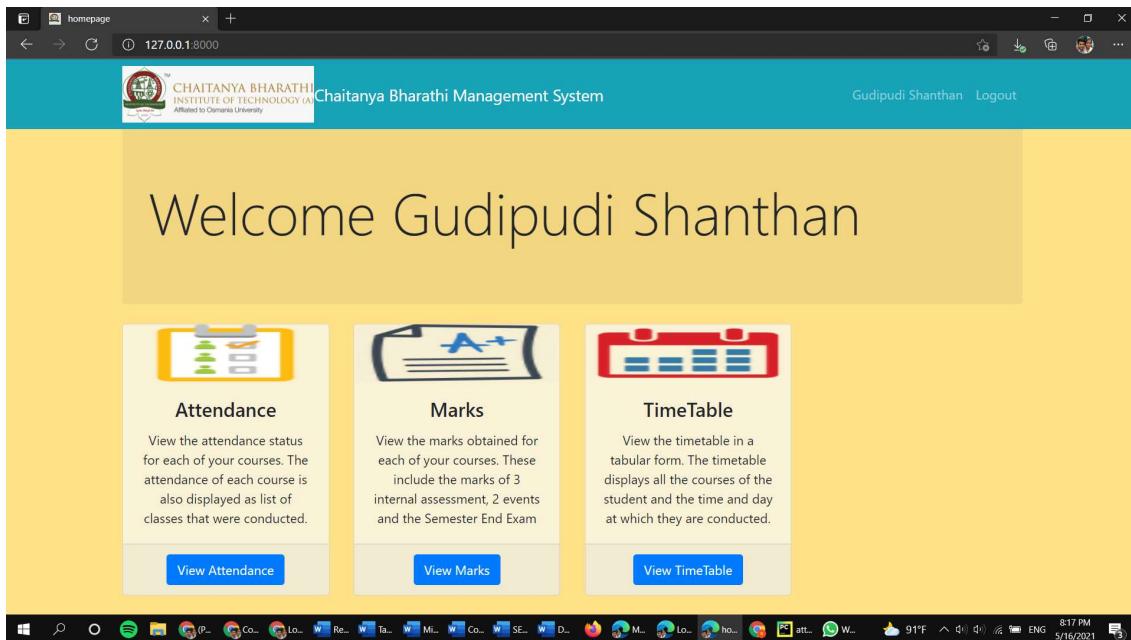


5.1: Student login page

5.1.2 HOME PAGE

After successful login, the student is presented a homepage with their main sections, attendance, marks and timetable. In the attendance section the student can view their attendance status which includes the total classes, attended classes and the attendance percentage for each of their courses.

In the marks section, the student can view the marks for each of their courses out of 30 for 3 internal assessments, 2 events. Also, the semester end examination for 70 marks. Lastly, the timetable provides the classes assigned to that student and day and time of each in a tabular form



5.2: Student Home page

5.1.3 ATTENDANCE

On the attendance page, there is a list of courses that is dependent on each student. For each course, the course id and name are displayed along with the attended classes, total classes and the attendance percentage for that particular course. If the attendance percentage is below 75 for any course, it is displayed in red denoting shortage of attendance, otherwise it is green. If there is any shortage, it specifies the number of classes to attend to make up for it. If you click on each course, it takes you to the attendance detail page.

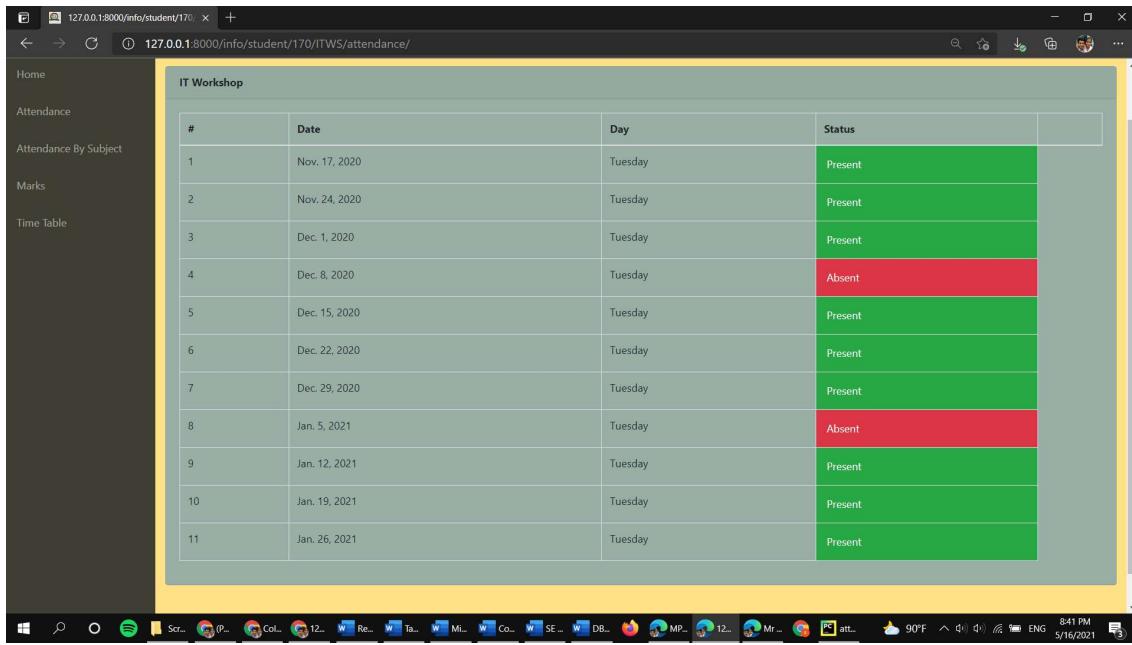
This page displays more details for the attendance in each course. For each course, there is a list of classes conducted and each is marked with the date, day and whether the student was present or absent on that particular date.



The screenshot shows a web application interface for student attendance. On the left, a sidebar menu includes Home, Attendance, Attendance By Subject, Marks, and Time Table. The main content area is titled "Attendance" and displays a table of course attendance data.

Course ID	Course name	Attended classes	Total classes	Attendance %	Classes to attend
DLCA	Digital logic and computer architecture	17	21	80.95	0
DAA	Design And Analysis of Algorithms	16	22	72.73	2
DBMS	Data Base Management System	0	0	0	0
JP	Java Programming	0	0	0	0
PS	Probability And Statistics	0	0	0	0
IC	Indian Constitution	11	14	78.57	0
ITWS	IT Workshop	9	11	81.82	0
MP-II	Mini Project -II	5	7	71.43	1
JPLAB	Java Programming Lab	5	6	83.33	0
DBMSLAB	Data Base Management System Lab	0	0	0	0

5.3: Student Attendance Page



The screenshot shows a web application interface for student attendance details. On the left, a sidebar menu includes Home, Attendance, Attendance By Subject, Marks, and Time Table. The main content area is titled "IT Workshop" and displays a table of attendance records.

#	Date	Day	Status	
1	Nov. 17, 2020	Tuesday	Present	
2	Nov. 24, 2020	Tuesday	Present	
3	Dec. 1, 2020	Tuesday	Present	
4	Dec. 8, 2020	Tuesday	Absent	
5	Dec. 15, 2020	Tuesday	Present	
6	Dec. 22, 2020	Tuesday	Present	
7	Dec. 29, 2020	Tuesday	Present	
8	Jan. 5, 2021	Tuesday	Absent	
9	Jan. 12, 2021	Tuesday	Present	
10	Jan. 19, 2021	Tuesday	Present	
11	Jan. 26, 2021	Tuesday	Present	

5.4 Student Attendance Details Page

5.1.4 MARKS

The Marks page is a table with an entry for each of their courses. The course id and name are specified along the marks obtained in each of the tests and exams. The tests include 3 internal assessments with marks obtained out of a total of 20, 2 events such as project, assignment, quiz etc., with marks out of 20.

20. Lastly, one semester end exam with marks out of 70.

A screenshot of a web browser displaying the 'Marks' page of the Chaitanya Bharathi Management System. The page shows a table of student marks for various courses. The columns are Course ID, Course name, Mid 1, Mid 2, Assignments, SlipTest 1, SlipTest 2, and SEE. The rows list courses such as DLCA, DAA, DBMS, JP, PS, IC, ITWS, MP-II, JPLAB, and DBMSLAB, along with their respective marks.

Course ID	Course name	Mid 1	Mid 2	Assignments	SlipTest 1	SlipTest 2	SEE
DLCA	Digital logic and computer architecture	17	20	10	9	8	52
DAA	Design And Analysis of Algorithms	20	18	9	10	8	50
DBMS	Data Base Management System	18	20	9	8	10	62
JP	Java Programming	0	0	0	0	0	0
PS	Probability And Statistics	0	0	0	0	0	0
IC	Indian Constitution	0	0	0	0	0	0
ITWS	IT Workshop	0	0	0	0	0	0
MP-II	Mini Project -II	0	0	0	0	0	0
JPLAB	Java Programming Lab	0	0	0	0	0	0
DBMSLAB	Data Base Management System Lab	0	0	0	0	0	0

5.5 : Student Marks Page

5.1.5 TIME TABLE

This page is a table which lists the day and timings of each of the classes assigned to the student. The row headers are the days of the week and the column headers are the time slots. So, for each day, it specifies the classes in the time slots. The timetable is generated automatically from the assign table, which is a table containing the information of all the teachers assigned to a class with the timings the classes.

	9:10 - 10:10	10:20 - 11:20	11:30 - 12:30	Lunch	1:10 - 2:10	2:20 - 3:20	3:30 - 4:30
Monday	MP-II	MP-II	DLCA		JP	DBMS	
Tuesday	DAA	DBMS	ITWS		ITWS	PS	PS
Wednesday	DAA	DLCA	DBMS		PS	PS	
Thursday	IC	DBMSLAB	DBMSLAB		JP		
Friday	DLCA		IC		DAA	JPLAB	JPLAB
Saturday							

5.6: Student Time Table Page

5.2 TEACHER

5.2.1 LOGIN

Each teacher in the college is assigned a unique username and password by the administrator. The username is their teacher ID and the same for password. The teacher may change the password later.

Login

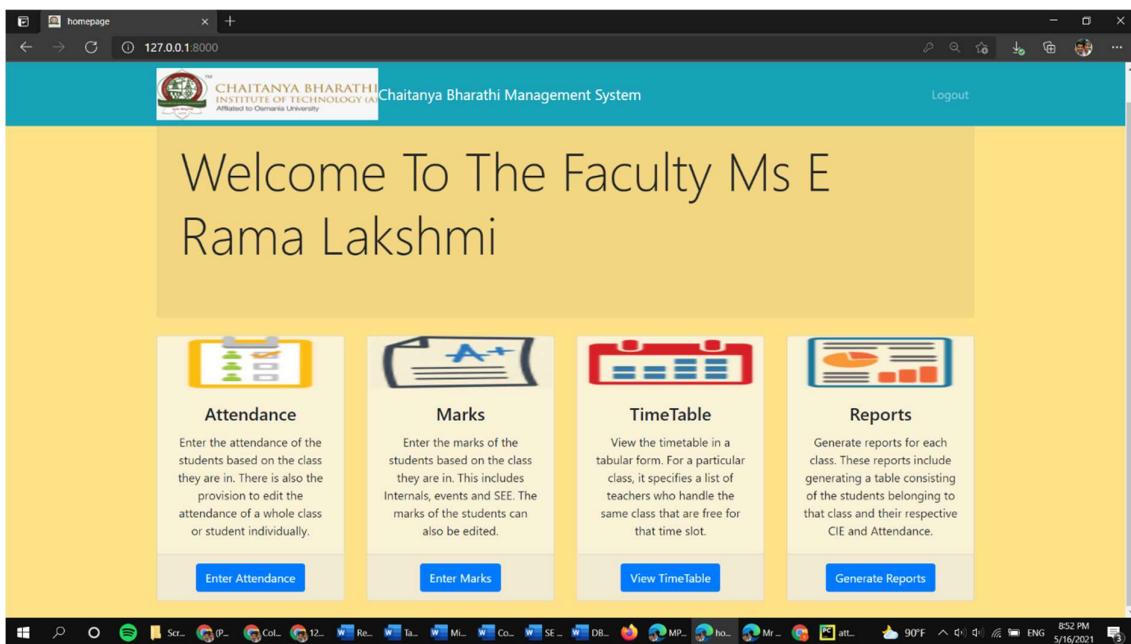
Username:

Password:

5.7 : Teacher Login Page

5.2.2 HOMEPAGE

After successful login, the student is presented a homepage with their main sections, attendance, marks, timetable and reports. In the attendance section, the teacher can enter the attendance of their respective students for the days on which classes were conducted. There is a provision to enter extra classes and view/edit the attendance of each individual student. In the marks section, the teacher may enter the marks for 3 internals, 2 events and 1 SEE for each student. They can also edit each of the entered marks. The timetable provides the classes assigned to the teacher with the day and timings in a tabular form. Lastly, the teacher can generate reports for each of their assigned class.



5.8: Teacher Home Page

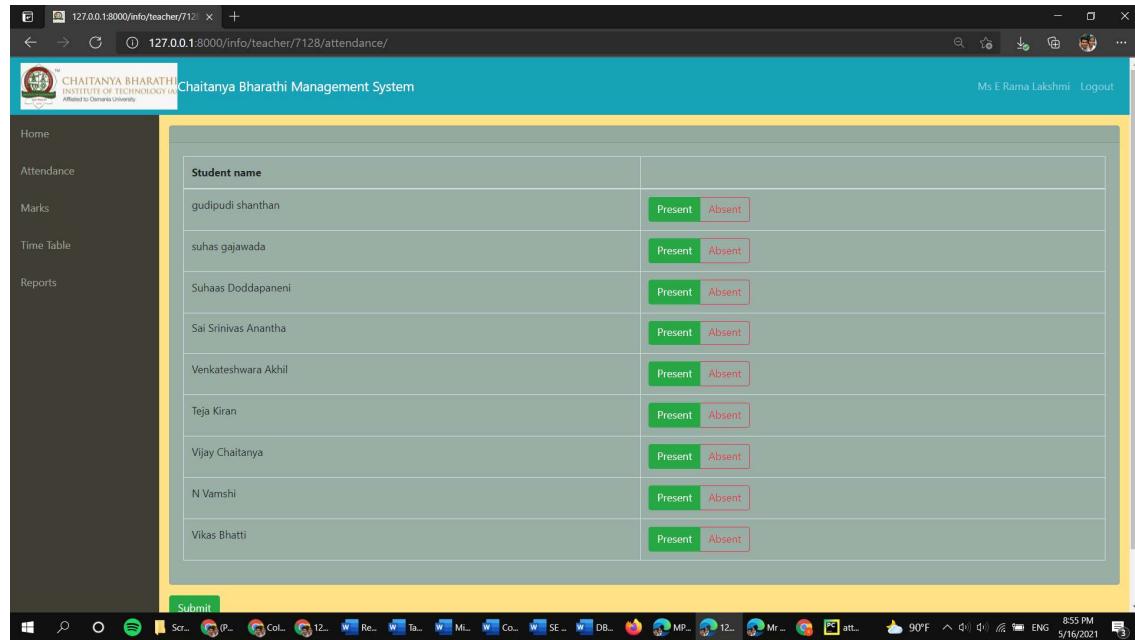
5.2.3 ATTENDANCE

There is a list of all the class assigned to teacher. So, for each class there are 3 actions available. They are,

- **ENTER ATTENDANCE**

On this page, the classes scheduled or conducted is listed in the form of a list. Initially, all the scheduled classes will be listed from the start of the semester to the current date. Thus, if there is class scheduled for today, it will automatically appear on top of the list. If the attendance of any day is not marked it will be red, otherwise green if marked. Classes can also be cancelled which will make that date as yellow. While entering the attendance, the list of students in that class is listed and there are two options next to each. These options are in

the form of a radio button for present and absent. All the buttons are initially marked as present and the teacher just needs to change for the absent students



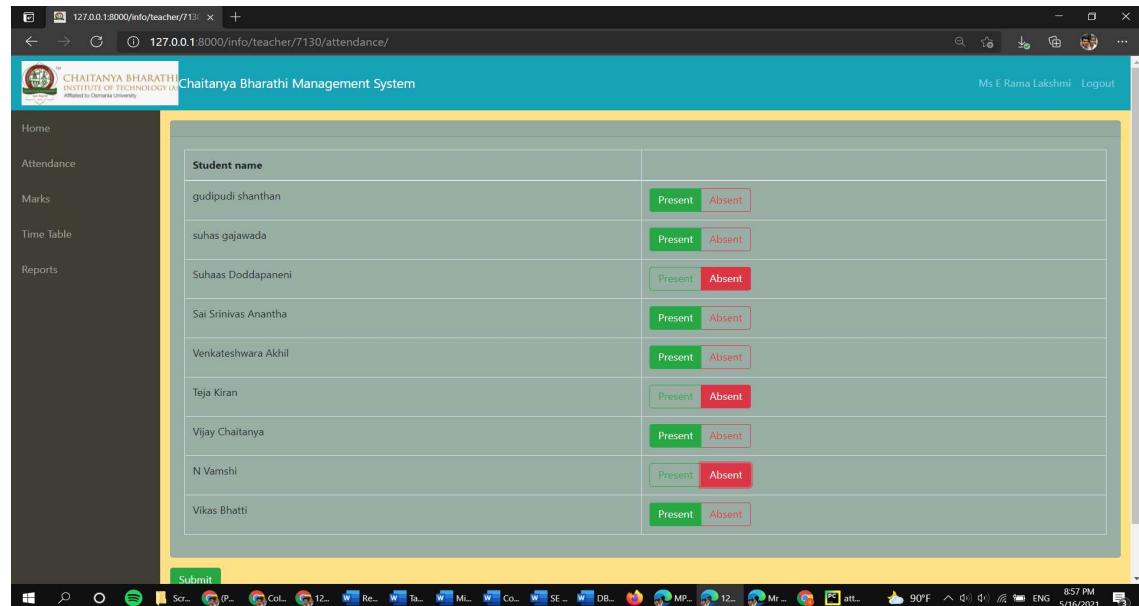
The screenshot shows a web-based management system for Chaitanya Bharathi Institute of Technology. The main content area displays a table of student attendance. Each row contains a student's name and two buttons: 'Present' (green) and 'Absent' (red). The table has a header row labeled 'Student name'. A 'Submit' button is located at the bottom left of the table area. The browser address bar shows the URL `127.0.0.1:8000/info/teacher/7128/attendance/`. The top right corner shows the user 'Ms E Rama Lakshmi' and a 'Logout' link.

Student name	
gudipudi shanthan	<input type="radio"/> Present <input checked="" type="radio"/> Absent
suhas gajawada	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Suhaas Doddapaneni	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Sai Srinivas Anantha	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Venkateshwara Akhil	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Teja Kiran	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Vijay Chaitanya	<input type="radio"/> Present <input checked="" type="radio"/> Absent
N Vamshi	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Vikas Bhatti	<input type="radio"/> Present <input checked="" type="radio"/> Absent

5.9: Entering Attendance

EDIT ATTENDANCE

After entering attendance, the teacher can also edit it. It is similar to screen for entering attendance, only the entered attendance is saved and display. The teacher can change the appropriate attendance and save it.



This screenshot is identical to the one above, showing the same list of student attendance with 'Present' and 'Absent' buttons. The browser address bar shows the URL `127.0.0.1:8000/info/teacher/7130/attendance/`. The top right corner shows the user 'Ms E Rama Lakshmi' and a 'Logout' link.

Student name	
gudipudi shanthan	<input type="radio"/> Present <input checked="" type="radio"/> Absent
suhas gajawada	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Suhaas Doddapaneni	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Sai Srinivas Anantha	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Venkateshwara Akhil	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Teja Kiran	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Vijay Chaitanya	<input type="radio"/> Present <input checked="" type="radio"/> Absent
N Vamshi	<input type="radio"/> Present <input checked="" type="radio"/> Absent
Vikas Bhatti	<input type="radio"/> Present <input checked="" type="radio"/> Absent

5.10: Editing Attendance

EXTRA CLASS

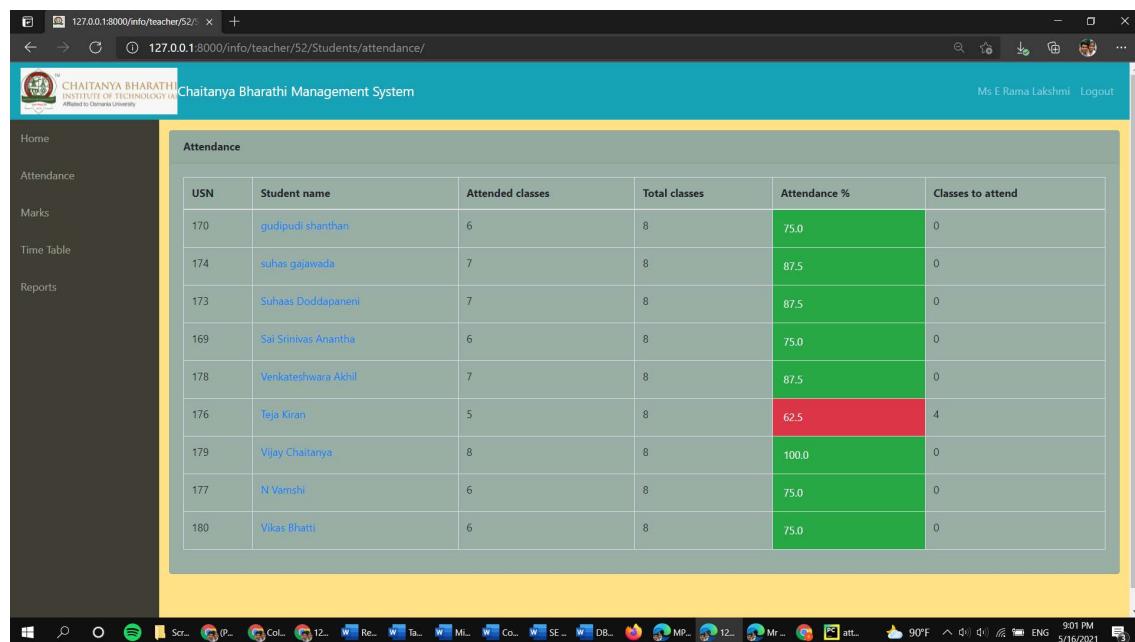
If a teacher has taken a class other than at the scheduled timings, they may enter the attendance for that as well. While entering the extra class, the teacher just needs to specify the date it was conducted and enter the attendance of each of the students. After submitting extra class, it will appear in the list of conducted classes and thus, it can be edited.

STUDENT ATTENDANCE

For each assigned class, the teacher can view the attendance status of the list of students. The number of attended classes, total number of classes conducted and the attendance percentage is displayed. If the attendance percentage of any of the students is below 75, it will be displayed in red. Thus, the teacher may easily find the list of students not eligible to take a test.

STUDENT ATTENDANCE DETAILS

The teacher can view the attendance detail of all their assigned students individually. That is, for all the conducted classes, it will display whether that student was present or absent. The teacher can also edit the attendance of each student individually by changing the attendance status for each conducted class.



A screenshot of a web browser displaying the Chaitanya Bharathi Management System. The page shows a table of student attendance details. The columns are: USN, Student name, Attended classes, Total classes, Attendance %, and Classes to attend. The rows list students from 170 to 180. The attendance percentage for student 176 (Teja Kiran) is highlighted in red as 62.5, while others range from 75.0 to 100.0.

USN	Student name	Attended classes	Total classes	Attendance %	Classes to attend
170	gudipudi shanthan	6	8	75.0	0
174	suhas gajawada	7	8	87.5	0
173	Suhaas Doddapaneni	7	8	87.5	0
169	Sai Srinivas Anantha	6	8	75.0	0
178	Venkateshwara Akhil	7	8	87.5	0
176	Teja Kiran	5	8	62.5	4
179	Vijay Chaitanya	8	8	100.0	0
177	N Vemshi	6	8	75.0	0
180	Vikas Bhatti	6	8	75.0	0

5.11 : Attendance of a Students in a class

#	Date	Day	Status	
1	Dec. 7, 2020	Monday	Present	Change
2	Dec. 14, 2020	Monday	Absent	Change
3	Dec. 21, 2020	Monday	Present	Change
4	Dec. 28, 2020	Monday	Present	Change
5	Jan. 4, 2021	Monday	Absent	Change
6	Jan. 11, 2021	Monday	Present	Change
7	Jan. 18, 2021	Monday	Present	Change
8	Jan. 25, 2021	Monday	Present	Change

5.12 : Attendance Details of an individual Student

5.2.4 MARKS

On this page, the list of classes assigned to the teacher are displayed along with two actions for each class. These actions are,

ENTER MARKS

On this page, the teacher can enter the marks for 3 internal assessments, 2 events and one semester end exam. Initially all of them are marked red to denote that the marks have not been entered yet. Once the marks for a test is entered, it turns green. While entering the marks for a particular test, the list of students in that class is listed and marks can be entered for all of them and submitted. Once, the marks are submitted, the students can view their respective marks. Incase if there is a need to change the marks of any student, it is possible to edit the marks.

Name	Status	
Internal test 1	Marked	Edit Marks
Internal test 2	Marked	Edit Marks
Internal test 3	Marked	Edit Marks
Event 1	Marked	Edit Marks
Event 2	Not Marked	Enter Marks
Semester End Exam	Not Marked	Enter Marks

5.13 : Entering Marks

EDIT MARKS

Marks for a test can be edited. While editing, the list of students in that class is displayed along with already entered marks. The marks to be updated can be changed and submitted. The students can view this change immediately.

Student Name	Total Marks	Enter Marks
gudipudi shanthan	20	20
suhas gajawada	20	19
Suhaas Doddapaneni	20	18
Sai Srinivas Anantha	20	16
Venkateshwara Akhil	20	20
Teja Kiran	20	20
Vijay Chaitanya	20	15
N Vamshi	20	18
Vikas Bhatti	20	20

Submit

5.14 : Editing Marks

STUDENT MARKS

For each assigned class, the teacher has access to the list of students and the marks they obtained in all the tests. This is displayed in a tabular form.

Student USN	Student Name	Internals 1	Internals 2	Internals 3	Event 1	Event 2	SEE
169	Sai Srinivas Anantha	16	16	7	10	0	0
170	gudipudi shanthan	20	20	10	9	0	0
173	Suhaas Doddapaneni	18	16	8	12	0	0
174	suhas gajawada	19	10	9	10	0	0
176	Teja Kiran	20	20	9	8	0	0
177	N Vamshi	18	15	10	10	0	0
178	Venkateshwara Akhil	20	16	6	9	0	0
179	Vijay Chaitanya	15	18	10	7	0	0
180	Vikas Bhatti	20	20	10	14	0	0

5.15: Marks of all students in a class

5.2.5 Timetable

This page is a table which lists the day and timings of each of the classes assigned to the teacher. The row headers are the days of the week and the column headers are the time slots. So, for each day, it specifies the classes in the time slots. The timetable is generated automatically from the assign table, which is a table containing the information of all the teachers assigned to a class with a course and the timings the classes.

	9:10 - 10:10	10:20 - 11:20	11:30 - 12:30	Lunch	1:10 - 2:10	2:20 - 3:20	3:30 - 4:30
Monday							
Tuesday		IT DAA					
Wednesday		IT DAA					
Thursday							
Friday					IT DAA		
Saturday							

5.16 : Teacher Timetable

FREE TEACHERS

For each entry in the table, the list of free teachers can be generated. Free teachers are the teachers who assigned to the class and are free for that time slot on that day. This is very useful for the teachers particularly when they are on leave as it helps them find a suitable replacement are that class.

	9:30	Lunch	1:10 - 2:10	2:20 - 3:20	3:30 - 4:30
IT DAA					

5.17: List of Free Teachers

5.2.6 REPORTS

The last page for the teachers is used to generate reports for each class. The report specifies the list of students in that class and their respective CIE and attendance percentage. CIE is the average of the marks obtained from the tests, 3 internals and 2 events. The CIE is out of 50 and the students with CIE below 25 are marked in red and are not eligible to write the semester end exam. Also, the attendance percentage is displayed with students below 75% marked in red.



A screenshot of a web-based management system. The title bar says "Chaitanya Bharathi Management System". The left sidebar has links for Home, Attendance, Marks, Time Table, and Reports, with "Marks" being the active link. The main content area is titled "Marks" and contains a table with student data. The table has columns for Student USN, Student Name, Attendance, and CIE. The rows show the following data:

Student USN	Student Name	Attendance	CIE
170	gudipudi shanthan	75.0	30
174	suhas gajawada	87.5	24
173	Suhaas Doddapaneni	87.5	27
169	Sai Srinivas Anantha	75.0	25
178	Venkateshwara Akhil	87.5	26
176	Teja Kiran	62.5	29
179	Vijay Chaitanya	100.0	25
177	N Vanishi	75.0	27
180	Vikas Bhatti	75.0	32

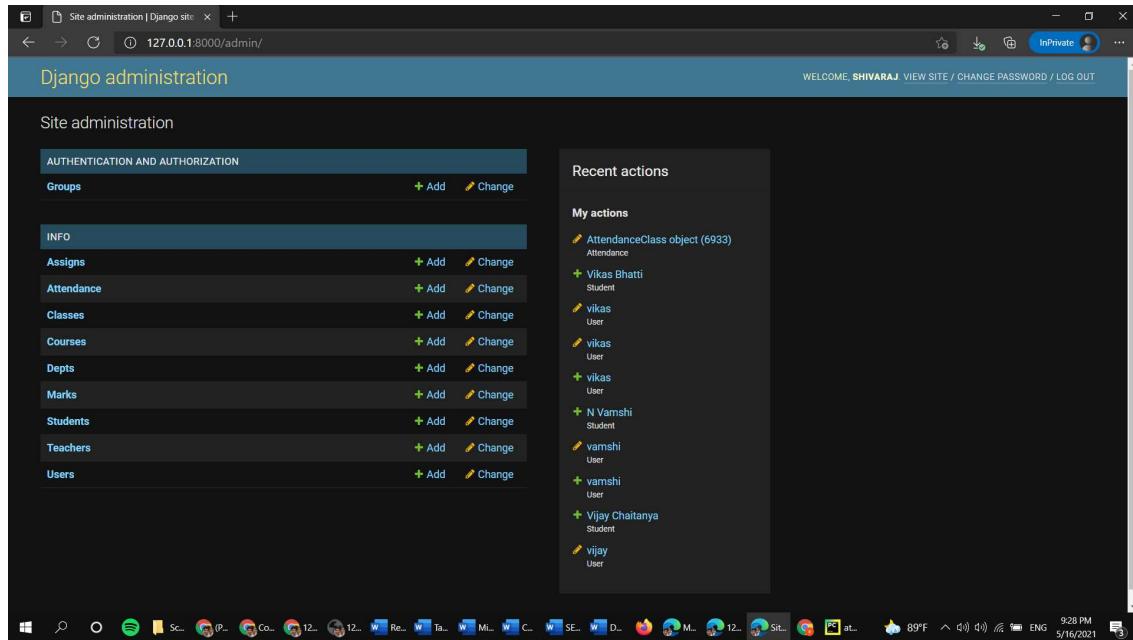
5.18 : CIE and Attendance of students in a class

5.3 Administrator

The administrator is responsible for adding and maintaining all the departments, students, teachers, classes and courses. All this data is stored in the database in their respective tables. The admin is also responsible for adding and maintaining the list of teachers assigned to class with a course and the timings. This information is stored in the Assign table. The admin also has access to the marks and attendance of each student and can modify them.

There are several features in place to ensure that querying the database is quick and efficient for the administrator. As the database has the potential to become huge, there is a search feature for every table including student, teacher etc. The search has get a specific record based on name or id. Also, it can filter the record based on department, class etc.

Figure 3.19 shows the homepage for the admin, it lists all the different tables in the database. Figure 3.20 shows the details of the class table. Each class consists of a list of students as shown.



5.19 : Admin HomePage

Change class						
Information Technology : 4 3						
STUDENTS						
USER	USN	NAME	SEX	DOB	DELETE?	
Sai Srinivas Anantha	saistriv	169	Sai Srinivas Anantha	Male	1998-01-01	<input type="checkbox"/>
gudipudi shanthan	shanthan	170	gudipudi shanthan	Male	1998-01-01	<input type="checkbox"/>
Suhais Doddapaneni	suhaasd	173	Suhais Doddapaneni	Male	1998-01-01	<input type="checkbox"/>

5.20 Admin Students Table Page

CHAPTER 6

TESTING

The completion of a system will be achieved only after it has been thoroughly tested. Though this gives a feel the project is completed, there cannot be any project without going through this stage. Hence in this stage it is decided whether the project can undergo the real time environment execution without any break downs, therefore a package can be rejected even at this stage.

Black Box Testing

Black box testing treats the software as a "black box," without any knowledge of internal implementation. Black box testing methods include: equivalence partitioning, boundary value analysis, all-pairs testing, fuzz testing, model-based testing, traceability matrix, exploratory testing and specification-based testing.

We performed black box testing on the teacher page to make sure every page was working as desired. We took into consideration various test cases and noted down the results. Below we have recorded various test cases and their respective results

Test Case: 1

Request the attendance page for a teacher with no assigned classes.

The web page loaded with message "Teacher has no classes assigned".

Test Case: 2

Request the attendance page for a teacher with 1 assigned class.

The web page displayed the assigned class and options to enter attendance and view the students

Test Case: 3

Request to enter the attendance for an assigned class with one test student

The web page displays the student with his/her details and an options to mark present or absent. On marking absent, it can be viewed by the student.

Test Case: 4**Request to edit the attendance for an assigned class with one test student**

The student is listed with his/her details and is initially marked as absent from the previous test. On marking present, the attendance for that student and can be viewed by the student.

Test Case: 5**Request to enter the marks for an assigned class with one student**

Initially, a list of tests is displays such as internals 1, SEE etc. On selecting one of internals 1, the teacher can enter the marks for the student out of 20. On submitting, the status for that test turns green denoting that it has been successfully entered.

Test Case: 6**Request to edit the marks for an assigned class with one student**

For each class, there is a list of tests such as internals 1, SEE etc. As the marks for internals 1 was already entered in the previous test, it is marked green and there is an option to edit. When editing, the marks already stored is displayed and appropriate changes can be made and saved.

Test Case: 7**Request to view the student information for an assigned class with no students**

The requested page is display with no content and a message stating "This class has no students assigned"

Test Case: 8**Request to view the student information for an assigned class with 1 student**

The web page is the form of a table with entries for student name, USN and their attendance percentage, marks in each test including 3 internals, 2 events and 1 SEE. IF the attendance status is below 75%, it is marked in red.

7 CONCLUSION

By using Existing System accessing information from files is a difficult task and there is no quick and easy way to keep the records of students and staff. Lack of automation is also there in the Existing System. The aim of Our System is to reduce the workload and to save significant staff time.

Title of the project as College ERP System is the system that deals with the issues related to a particular institution. It is the very useful to the student as well as the faculties to easy access to finding the details. The college ERP provides appropriate information to users based on their profiles and role in the system. This project is designed keeping in view the day to day problems faced by a college system.

The fundamental problem in maintaining and managing the work by the administrator is hence overcome. Prior to this it was a bit difficult for maintaining the time table and also keeping track of the daily schedule. But by developing this web-based application the administrator can enjoy the task, doing it ease and also by saving the valuable time. The amount of time consumption is reduced and also the manual calculations are omitted, the reports can be obtained regularly and also whenever on demand by the user. The effective utilization of the work, by proper sharing it and by providing the accurate results. The storage facility will ease the job of the operator. Thus the system developed will be helpful to the administrator by easing his/her task.

This System provide the automate admissions no manual processing is required. This is a paperless work. It can be monitored and controlled remotely. It reduces the man power required. It provides accurate information always.. All years together gathered information can be saved and can be accessed at any time. The data which is stored in the repository helps in taking intelligent decisions by the management providing the accurate results. The storage facility will ease the job of the operator. Thus the system developed will be helpful to the administrator by easing his/her task providing the accurate results. The storage facility will ease the job of the operator.

This project is successfully implemented with all the features and modules of the college management system as per requirements.

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- <https://creately.com/>
- <https://www.overleaf.com/project>