ATTENDANCE TRACKING MANAGAMENT SYSTEM PROJECT REPORT

PROJECT FOR DATABASE MANAGEMENT SYSTEM LAB

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INTRODUCTION AND PROBLEM STATEMENT

With the increasing number of students and the courses, the departments, faculties, and the students are facing issues like:

- The attendance is taken manually by the faculty.
- Data in the attendance list might be inaccurate due to deception.
- Faculty needs to manually analyze the number of absentees and the percentage.
- It is very time-consuming and the result of the calculation might be inaccurate.
- Data loss may happen and the whole attendance process is prone to human mistakes.

The proposed software would allow the following functionalities:

- It enhances the speed of performing attendance task easily.
- The entire student's attendance data will be stored and managed properly and effectively.
- The system enables the lecturer to add, view, delete or make changes accordingly.
- The system enhances the calculation process to be more accurate and fast.
- The system will help to analyze all the data inserted and then verified whether every student is following the university attendance policy or not.
- The attendance will be marked period wise and the reports of the students will be generated.

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1. Introduction-

The Attendance Tracking Management System (ATMS) for students is to be developed. The system would allow the following functionalities:

- It enhances the speed of performing attendance task easily.
- The entire student's attendance data will be stored and managed properly and effectively.
- The system enables the faculty to add, view, delete or make changes accordingly.
- The system enhances the calculation process to be more accurate and faster.
- The system will help to analyze all the data inserted and then verified whether every student is following the attendance policy or not.
- The attendance will be marked date wise and the reports of the students will be generated.

1.1. Purpose

The Attendance Tracking Management System (ATMS) maintains the information about the attendance of the students in the primary school. The system also maintains the record of all the students and faculty in the school. The records are maintained to maintain the attendance of students.

1.2. Scope

- The product is titled Attendance Tracking Management System (ATMS).
- The proposed ATMS must be able to perform the following functions:

Dos:

- Issue of login username and password to system operators.
- Maintain details of courses offered in the school.
- Maintain details of the students in the school.
- Maintain details of the faculty in the school.
- Maintain attendance.
- Generate Reports of the following:
 - List of courses
 - List of students
 - List of defaulters

Don'ts

- Students can't enroll for multiple courses and faculties can teach multiple courses.
- Complaint and queries section is not available
- Leave Application is not covered

Benefits

The ATMS provides the following benefits:

- Easy maintenance of attendance.
- Accurate and automated attendance percentage calculation.
- Printing of reports.

2. Overall Description

- The ATMS maintains records of attendance of students and details of students, faculty and courses in the school.
- It is assumed that the students have already admitted in the school.
- It is assumed that the students are already enrolled in the courses.
- The system administrator will receive the lists of the admitted students (course wise) from the academic section.
- The establishment section will provide the list of faculty appointed and courses offered in the school.
- The ATMS maintains and views the attendance of students enrolled in the course offered by the school.
- It allows the faculty to mark the attendance of the students in his class.
- It allows the student to view his attendance.
- The administrator/DEO will have to maintain the following information:
 - Attendance details (only admin)
 - Student details
 - Faculty details
 - Course details

2.1 Product Perspective

The Attendance Tracking Management System shall be developed using client/server architecture and will be compatible with any Operating System. The front end of the system will be developed using HTML and CSS, and the back-end will be developed using PHP and MySQL. It provides simple database rather than complex ones for high requirements and it provides good and easy graphical user interface to both new as well as experienced user of the computer.

2.1.1 System Interfaces

None

2.1.2 User Interfaces

The ATMS will have the user-friendly and menu-driven interfaces:

- a) **Login:** to allow the entry of only authorized users through valid username and password.
- b) Maintain Login: to maintain login details.

- c) Maintain Faculty: to maintain faculty details.
- d) Maintain Student: to maintain student details.
- e) Maintain Courses: to maintain course details.
- f) Maintain Attendance: to maintain attendance details.
- g) **View Attendance:** to view/display the attendance of students according to courses.
- h) **Report Generation:** to generate report of student's attendance.

2.1.3 Hardware Interfaces

- a) Screen Resolution of at least 640 * 480 or above.
- b) Support for printer.
- c) Computer systems will be in the networked environment as it is a multi-user system.

2.1.4 Software Interfaces

- a) Any Operating System web browser
- b) HTML and CSS for designing front end.
- c) PHP and MySQL for designing the back end.

2.2 Product functions

The ATMS will allow access only to authorised users with specific roles (system administrator, data entry operator, faculty and student). Depending upon the user's role, he/she will be able to access only specific modules of the system.

A summary of major functions that the ATMS will perform is given as follows:

- A login facility for enabling only authorized users to login using the generated username and password.
- The system shall allow the Administrator/DEO to maintain the details (add, update, delete and view) of students and courses.
- The system shall allow the students to view the details of their attendance.
- The system shall generate reports for attendance of student.

2.3 User Characteristics

- Qualifications: At least matriculation and comfortable with English.
- **Experience:** The Administrator and the department staff should be well versed with the details of courses as well as the users.

• **Technical Experience:** Elementary knowledge of computers.

2.4 Constraints

- Password can't be updated once added.
- The delete, add and update operation is available to the administrator and data entry operator. To reduce the complexity of the system there is no check on delete operation. Hence the administrator or the DEO should be very careful before deletion of any record and he/she will be responsible for data consistency.
- The user will not be allowed to update the primary key.
- Students cannot enrol in multiple course

2.5 Assumptions and Dependencies

- The username and password must be created by system administrator and communicated to concerned user confidentially.
- Each department of the school should provide the list of all the courses to the administrator.
- The administrator should provide the list of registered students to the concerned department.

3. Specific Requirements

This section contains the software requirements in detail along with the various forms to be developed.

3.1 External Interface Requirements

3.1.1 User Interfaces

The following interfaces will be provided by the system.

1. Login

This will be the first interface which will be provided by the system.

Attendance Tracking Management System







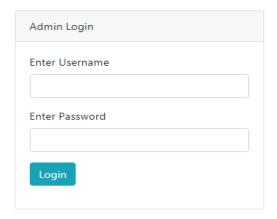


This has 4 options:

- Admin Login
- Date Entry Operator Login
- Faculty Login
- Student Login

Admin login

Attendance Tracking Management System



Various fields available on this form will be:

- Username: Alphanumeric and can be of any number of characters. Blank spaces are not allowed.
- Password: Alphanumeric and can be of any number of characters. Blank spaces are not allowed.

Faculty login

Attendance Tracking Management System

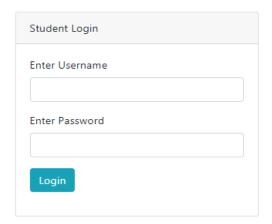
Faculty Login	
Enter Username	
Enter Password	
Login	

Various fields available on this form will be:

- Username: Email-Id is their username. Blank spaces are not allowed.
- Password: Alphanumeric and can be of any number of characters. Blank spaces are not allowed.

Student Login

Attendance Tracking Management System

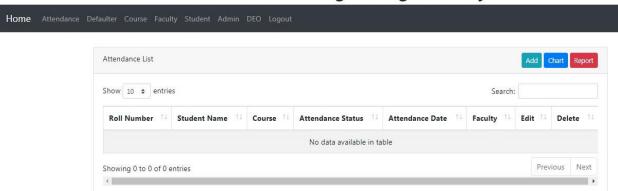


Various fields available on this form will be:

- Username: Email-ID is their username. Blank spaces are not allowed.
- Password: Alphanumeric and can be of any number of characters. Blank spaces are not allowed.

2. View attendance

Attendance Tracking Management System



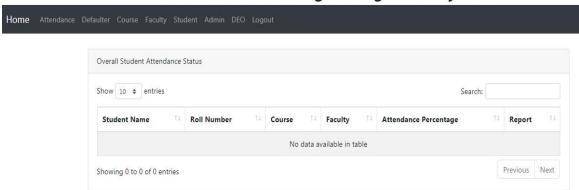
This interface displays the list of the attendance of students with the following attributes

- Roll Number
- Student Name
- Course

- Attendance Status
- Attendance Date
- Faculty Name

3. Overall student attendance status

Attendance Tracking Management System

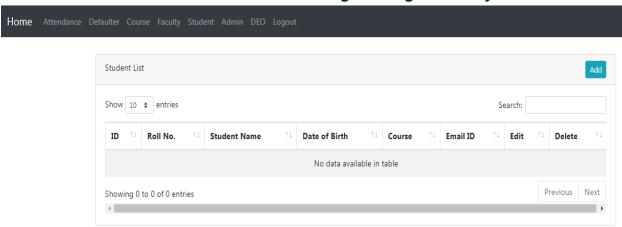


This interface displays the list of the attendance of students with the following attributes

- Roll Number
- Student Name
- Course
- Faculty Name
- Attendance Percentage

4. Student List

Attendance Tracking Management System



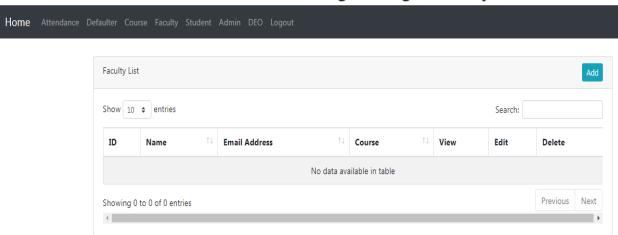
This interface displays the list of the attendance of students with the following attributes

- Student ID
- Roll Number
- Student Name
- Date of Birth
- Course

• Email ID

5. Faculty List

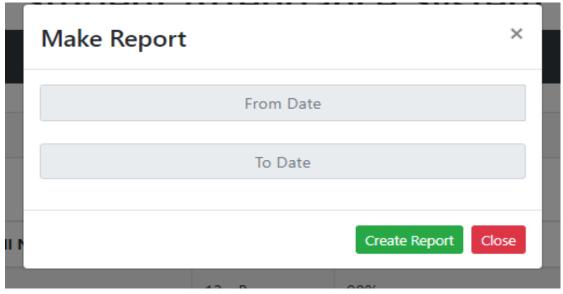
Attendance Tracking Management System



This interface displays the list of the attendance of students with the following attributes

- Faculty ID
- Name
- Email Address
- Course

6. Generate Report



Various fields available on this form will be:

- From Date: Starting date from which the report should begin.
- To Date: Ending date to which the report should end.

3.1.2. Hardware Interfaces

a) Screen Resolution of at least 640 * 480 or above.

- b) Support for printer.
- c) Computer systems will be in the networked environment as it is a multi-user system.

3.1.3. Software Interfaces

- a) MS-Windows Operating System (XP/Vista/8/10)
- b) HTML and CSS for designing front end.
- c) PHP and MySQL for designing the back end.

3.1.4. Communication Interfaces

Communication is via Internet as it is a web-enabled system.

3.2 Logical Database Requirements

The following information will be stored in the database:

- Admin and DEO information: Username and Password
- Courses information: Code, Name, Semester and Credit
- Faculty information: Name, Address, Email-id, Qualification, Date of Joining and Course Code
- Student information: Roll number, Name, Date of Birth, Course Code and Email-id
- Attendance information: Student id, Faculty id, Date and Status

3.3 Security Requirements

ATMS has four levels of users each with different privileges i.e.

- Administrator who is the super user and can perform most of the functions in the system such as creating users, view students and faculty list, view attendance list etc.
- Data entry Operator who enters the entry into the system. They can maintain students, faculties and courses in the system.
- Faculties who are the employees of the School. They can mark the attendance of the students and view their list.
- -Students who are enrolled in the school and their attendance are managed in the system. They can only view their attendance.

3.4 Software Quality Attributes

ATMS provides the users with very simple features. Due to its well designed and easy to use interface it can be used by any users. However, users must already have a basic knowledge of using a computer.

3.5 Software System Attributes

• Reliability:

The application will be available to the students throughout the registration period and have a high degree of fault tolerance.

• Usability:

The application will be user-friendly and easy to operate and the functions will be easy understandable.

• Security:

The application will be password protected. Users will have to enter correct login ID and password to access the application.

• Maintainability:

The application will be designed in a maintainable manner. It will be easy to incorporate new requirements in individual modules.

PROJECT SCREEN SHOTS AND EXECUTION DETAILS

Main page

Attendance Tracking Management System









This is the main page of the system. It has four options to login into the system for four types of users – Admin, Data entry Operator, Faculty and Student.

Admin Login Page

Attendance Tracking Management System

Admin Login	
Enter Username	
Enter Password	
Login	

Admin has to enter username and password to login into the system. The system will check for empty or incorrect username or password.

Admin Home Page Attendance Tracking Management System Home Course Faculty Student Admin DEO Attendance Defaulter Logout Overall Student Attendance Status Show 10 ¢ entries Search: Roll Number Faculty Attendance Percentage Report Student Name Course Aakash Garg SE 101 Bhupender Rana 80% Abhishek Sethi Rahul Kumar 5 SF 401 70% Aman Sharma SE 101 Bhupender Rana Ankit Yadav 1 SE 401 Rahul Kumar Chetan Garg SE 301 Vandana Gupta 60% 2 Deepak Kumar SE 201 Sneha Sharma 100%

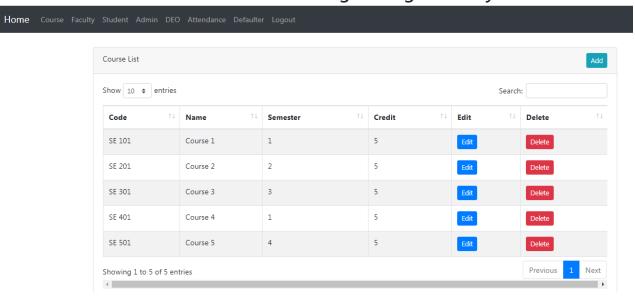
This page shows the overall attendance status of all the students. It contains student's name, roll number, course, faculty name, attendance percentage. Also there is an option for pdf and chart report. PDF report asks for a from date and to date and creates a report for a particular student and attendance details of that student. Chart Report is similar to pdf report but is shows that in the form of pie chart also.

Bhupender Rana

SE 101

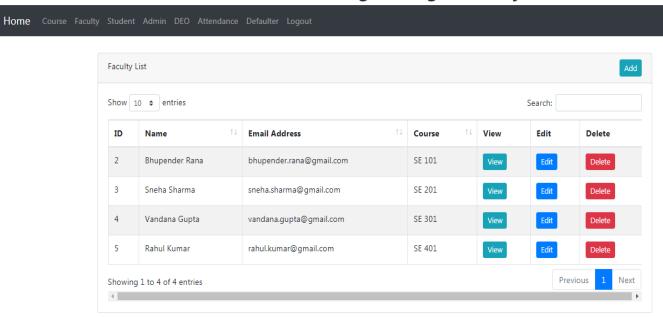
Devesh Singh

Admin Maintain Course Page Attendance Tracking Management System



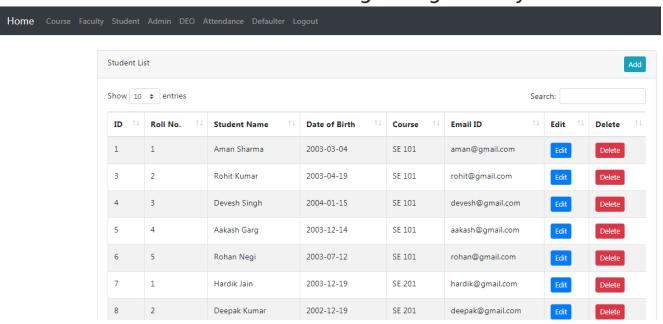
In this page, the admin can see the list of all the details of the courses and maintain the course – add, update and delete. Course has the following details – code, name, semester, and credit.

Maintain Faculty Page Attendance Tracking Management System



In this page, the admin can see the list of the faculty and maintain the faculty – add, view, update and delete. Faculty has the following details – faculty id, name, email id, course, qualification, address, and date of joining.

Maintain Student Page Attendance Tracking Management System



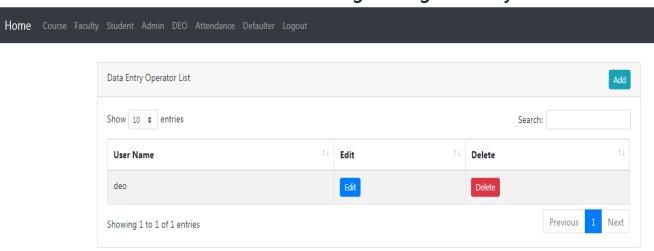
In this page, the admin can see the list of the student and maintain the student – add, update and delete. Student has the following details – student id, name, email id, course, and date of birth.

Maintain Admin Page Attendance Tracking Management System

-lome Course Faculty	y Student Admin DEO Attendance Def	aulter Logout		
	Admin List			Add
	Show 10 ¢ entries		Search:	
	User Name	↑↓ Edit	↑↓ Delete	ŢŢ
	admin	Edit	Delete	
	admin123	Edit	Delete	
	Showing 1 to 2 of 2 entries		Pr	evious 1 Next

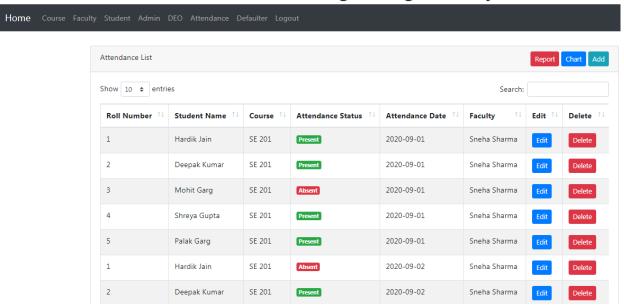
In this page, the admin can see the usernames of all the admin's present and maintain the admin – add, update, and delete. Admin has only username and password.

Maintain DEO Page Attendance Tracking Management System



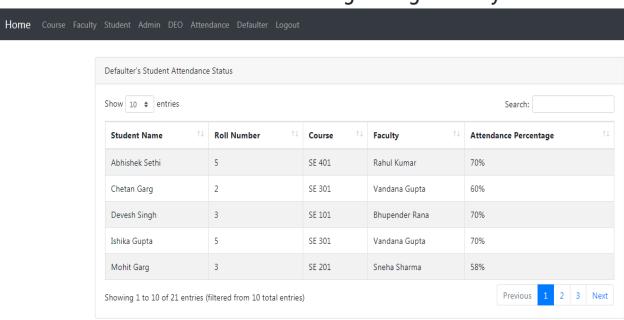
In this page, the admin can see the usernames of all the deo's present and maintain the deo - add, update, and delete. DEO has only username and password.

Maintain Attendance Page Attendance Tracking Management System



In this page, the admin can see the details of the attendance of all the students. Admin can also make the report and chart for a particular course which contains the details of the attendance of the students enrolled in that course. Attendance List contains student roll number, name, course code, attendance status, attendance date, and faculty name. Admin can add, edit or delete the attendance.

Defaulter's Page Attendance Tracking Management System



In this page, the list of students is shown whose attendance is less than 75%. It shows student name, roll number, course, and faculty name and attendance percentage.

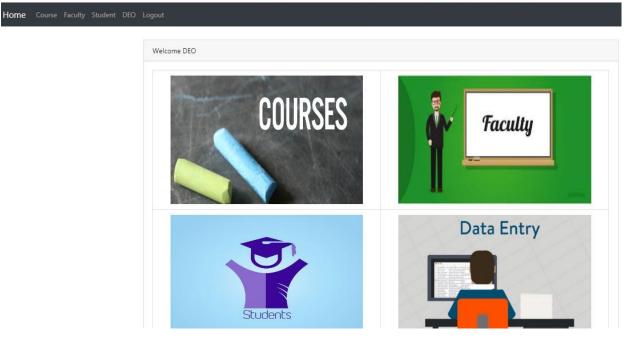
DEO login page

Attendance Tracking Management System

Enter Username		
Litter Osername		
Enter Password		

DEO has to enter username and password to login into the system. The system will check for empty or incorrect username or password.

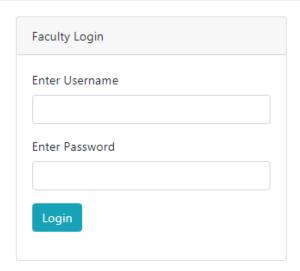
DEO home pageAttendance Tracking Management System



This page shows the options to maintain courses, facuty, students and deo. Nav bar also shows the same options. DEO can add, edit or delete theses details.

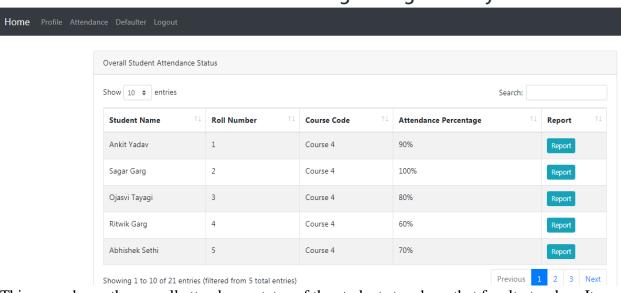
Faculty Login

Attendance Tracking Management System



Faculty has to enter username and password to login into the system. The system will check for empty or incorrect username or password.

Faculty Home Page
Attendance Tracking Management System



This page shows the overall attendance status of the students to whom that faculty teaches. It contains student's name, roll number, course, and attendance percentage. Also there is an option

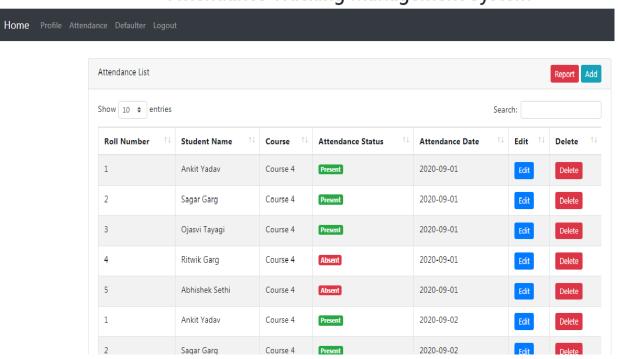
for pdf report. PDF report asks for a from date and to date and creates a report for a particular student and attendance details of that student.

Faculty Profile Page Attendance Tracking Management System

Home Profile Attend	ance Defaulter Logout	
	Profile	
	Name *	Rahul Kumar
	Address *	Rohini, Delhi
	Email Address *	rahul.kumar@gmail.com
	Qualification *	M.Sc
	Course *	SE 401 ~
	Date of Joining *	2020-09-01

This page shows the profile of the faculty. The details of the faculty are displayed in read only form is - Name, Address, Email-id, qualification, course code, and date of joining.

Attendance List Attendance Tracking Management System



This page shows the list of the attendance of the students to whom the faculty teaches. It displays student roll number, name, course, attendance status, and date. Option to add, edit or delete is also present.

Defaulter's List Attendance Tracking Management System

Home Profile Attenda	ance Defaulter Logout			
	Defaulter's List			
	Show 10 ¢ entries			Search:
	Student Name	Roll Number	Course Code	Attendance Percentage
	Ritwik Garg	4	Course 4	60%
	Abhishek Sethi	5	Course 4	70%
	Showing 1 to 10 of 21 entries (filter	ed from 5 total entries)		Previous 1 2 3 Next

This page displays the list of the defaulter's – students whose attendance is less than 75%.

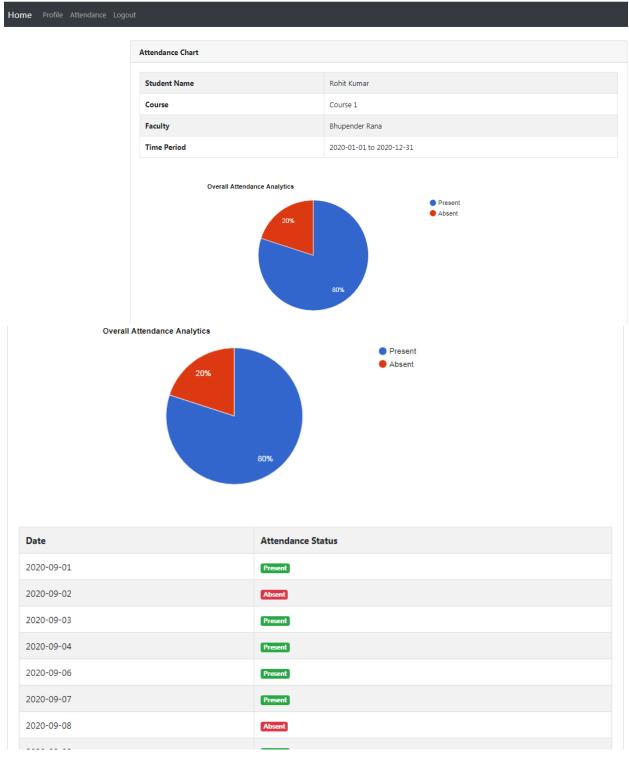
Student Login Page

Attendance Tracking Management System

Student Login	
Enter Username	
Enter Password	
Login	
Login	

Student has to enter username and password to login into the system. The system will check for empty or incorrect username or password.

Student Home PageAttendance Tracking Management System



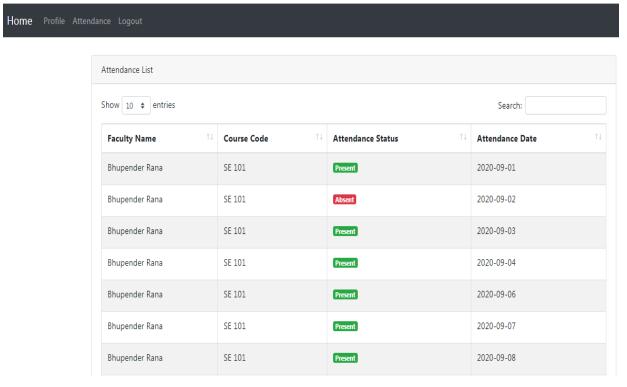
This page displays the overall attendance of the student in the form of table and pie chart. The list for details of attendance is also displayed.

Student Profile Page Attendance Tracking Management System

Home Profile Attend	ance Logout	
	Profile	
	Student Name *	Rohit Kumar
	Email Address *	rohit@gmail.com
	Course *	SE 101 →
	Date of Birth *	2003-04-19

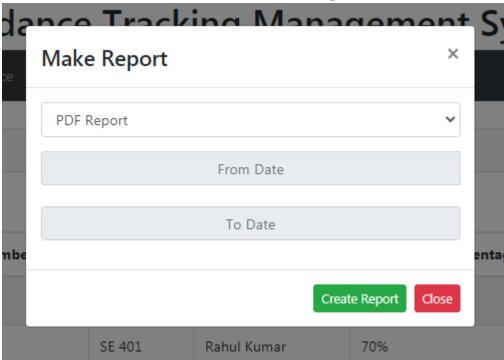
This page displays all the information of student in read only form. The information contains name, email address, course, and date of birth.

Attendance Page Attendance Tracking Management System



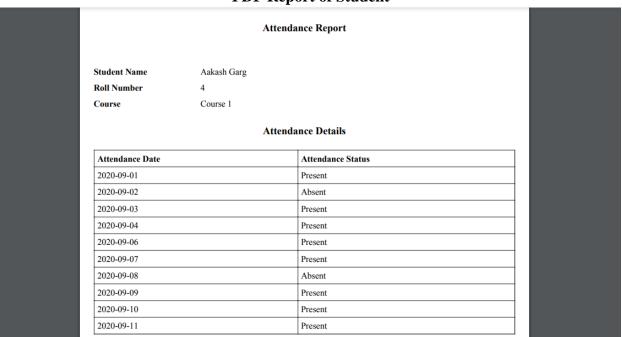
This page shows the list of the attendance details date wise. It shows faculty name, course, attendance status, and attendance date.

Make Report



This displays the form to make report. User has to enter the from date and to date and the report will be generated in the pdf format as shown below.

PDF Report of Student



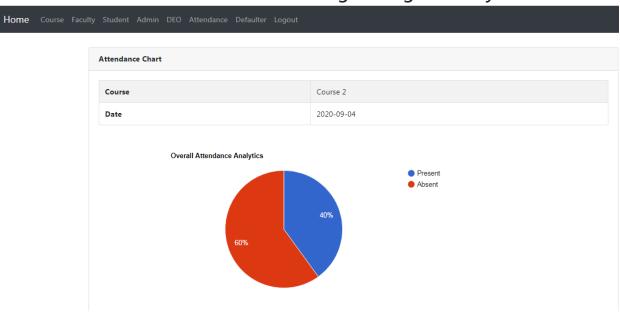
Report of a particular student is formed in the pdf format. It displays student name, roll number, course, attendance date, and attendance status.

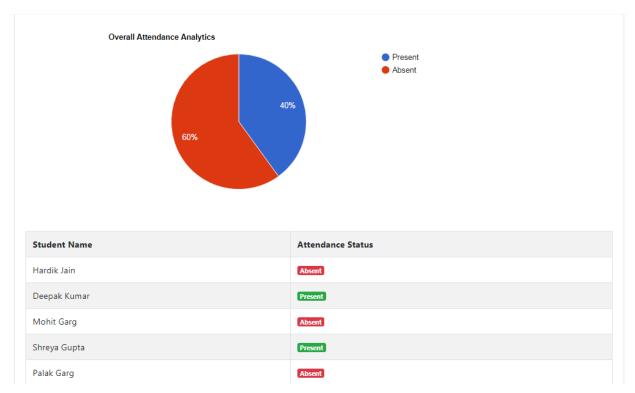
PDF report of a Course

Attendance Report					
Date - 2020-09-01					
Student Name	Roll Number	Course	Faculty	Attendance Status	
Aman Sharma	1	Course 1	Bhupender Rana	Present	
Rohit Kumar	2	Course 1	Bhupender Rana	Present	
Devesh Singh	3	Course 1	Bhupender Rana	Present	
Aakash Garg	4	Course 1	Bhupender Rana	Present	
Rohan Negi	5	Course 1	Bhupender Rana	Present	
Date - 2020-09-02			T		
Student Name	Roll Number	Course	Faculty	Attendance Status	
Aman Sharma	Roll Number	Course 1	Bhupender Rana	Present	
Aman Sharma			-		
Aman Sharma Rohit Kumar	1	Course 1	Bhupender Rana	Present	
	1 2	Course 1	Bhupender Rana Bhupender Rana	Present Absent	

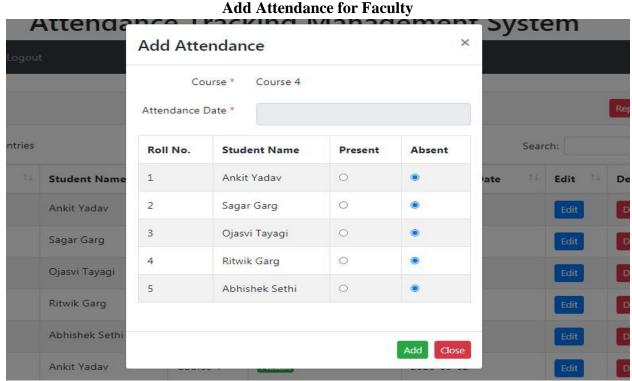
Report of a particular course is formed in the pdf format. It displays student name, roll number, course, faculty name, attendance date, and attendance status.

Chart Report of a Course Attendance Tracking Management System





Pie chart of a particular course is displayed. It displays student name, course, attendance date, and attendance status.



This is the form to add attendance for the faculty. It displays course, date and list of students with their roll number, name and attendance status.