



**Shri Khanderai Pratishthan's
DNYANSAGAR INSTITUTE OF MANAGEMENT & RESEARCH, PUNE**

A Project Report

on

EDUTRACK

by

Roll No	Name Of Student
33	Landge Prathmesh Gokul

MCA – I (SEM- II)

2024-2025

To

Savitribai Phule Pune University
Pune- 411041

In Partial Fulfilment of the Degree of
Master in Computer Application (M. C. A.)

Under The Guidance Of

Prof. Shweta Selokar



Date:

CERTIFICATE

This is to certify that **Mr. Landge Prathmesh Gokul** has successfully completed his project work entitled "**EduTrack**" in partial fulfilment of MCA – I (Semester-II) program for the year A.Y. 2024-25 to Savitribai Phule Pune University. He has worked under our guidance and direction.

Prof. Shweta Selokar

Project Guide

Internal Examiner

External Examiner

Dr. Sajid Alvi
Director

DECLARATION

To,
The principal,
DIMR, Pune

Respected Sir,

I hereby declare that the project entitled “**EduTrack**” developed under the guidance of **Prof. Shweta Selokar** is our original work. The reports generated in the project work are based on the information collected by us. We have not copied from any other project report submitted to SPPU earlier. The work has been submitted in partial fulfilment of the requirement of degree Master of Computer Application (MCA) to Savitribai Phule Pune University.

Student Name: Landge Prathmesh Gokul

Place: Pune

Date:

ACKNOWLEDGMENT

This work has been during project period, present project work method of education is really good opportunity to put theoretical knowledge into a planned exercise with an aim to solve a real-life business problem and also develop confidence to face various situations.

I thank to **Dr. Sajid Alvi (Director DIMR)** for providing congenial atmosphere and encouragement. I express my sincere thanks for giving us moral support and has kind attention and valuable guidance to me throughout this course.

I would like to express my deep and foremost gratitude to my **Internal Project Guide Prof. Shweta Selokar** has always been a source of inspiration and motivation for me. We would like to thank all our friends who have been always there to help me, and also who helped us directly or indirectly in completion for this project.

Thank You,

Student Name

Landge Prathmesh Gokul

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CHAPTER 1: INTRODUCTION

1.1 Introduction

In today's fast-paced educational environment, managing and tracking academic activities efficiently has become more critical than ever. Students juggle multiple responsibilities, including coursework, exams, extracurricular activities, and personal commitments, often leading to stress and disorganization. Similarly, teachers and administrators face the challenge of keeping track of student progress, attendance, and assignments while maintaining effective communication. Traditional methods, such as paper-based planners or disjointed digital tools, often fall short in providing a cohesive solution. EduTrack emerges as a modern, web-based platform designed to address these pain points by offering a centralized, intuitive, and scalable system for managing academic tasks.

EduTrack's core functionality revolves around simplifying academic workflows for all stakeholders. For students, the platform provides a personalized dashboard where they can track assignments, deadlines, exam schedules, and attendance records in real time. Automated reminders ensure that important tasks are never missed, while progress-tracking tools help students stay motivated and organized. Teachers, on the other hand, benefit from streamlined classroom management features, including gradebook integration, attendance logging, and assignment distribution. The system also facilitates seamless communication between educators and students, reducing misunderstandings and enhancing collaboration. Administrators can leverage EduTrack's reporting and analytics tools to monitor institutional performance, identify trends, and make data-driven decisions to improve academic outcomes.

Built with cutting-edge technologies such as HTML, CSS, Bootstrap, Node.js, and MySQL, EduTrack is designed for reliability, scalability, and ease of use. The responsive design ensures accessibility across devices, allowing users to stay updated whether they are on a desktop, tablet, or smartphone. The backend, powered by Node.js, ensures fast and efficient data processing, while MySQL provides a secure and robust database for storing academic records. Additionally, the system incorporates role-based access control, ensuring that students, teachers, and administrators only interact with the features relevant to their roles, thereby maintaining data privacy and security.

1.2 EXISTING SYSTEM

Disadvantages of Existing Systems

- 1. Lack of Centralization:** Existing systems often operate in silos, with separate tools for attendance, assignments, exams, and progress tracking. This lack of integration leads to inefficiencies and makes it difficult for users to access all relevant information in one place.
- 2. Manual Processes:** Many institutions still rely on manual methods (e.g., paper-based records, spreadsheets) for tracking educational activities. These methods are time-consuming, prone to errors, and difficult to maintain.
- 3. Limited Accessibility:** Traditional systems are often not accessible remotely, requiring physical presence to update or access records. This limits flexibility for students and teachers, especially in today's hybrid learning environments.
- 4. Poor User Experience:** Many existing systems have outdated interfaces that are not user-friendly. This creates a steep learning curve for users and reduces overall adoption and satisfaction.
- 5. Lack of Real-Time Updates:** Existing systems often lack real-time tracking capabilities, leading to delays in updating information. This can result in miscommunication and missed deadlines.
- 6. Inefficient Communication:** Communication between students, teachers, and administrators is often fragmented, relying on emails, notices, or word-of-mouth. This can lead to missed information and misunderstandings.
- 7. Limited Customization:** Many systems are rigid and do not allow customization to meet the specific needs of different institutions or users. This one-size-fits-all approach often fails to address unique requirements.
- 8. Data Security Concerns:** Existing systems may not have robust security measures in place, putting sensitive student and institutional data at risk of breaches or unauthorized access.
- 9. High Costs:** Some advanced educational tracking systems are expensive to implement and maintain, making them inaccessible for smaller institutions or those with limited budgets.
- 10. Lack of Analytics and Reporting:** Many systems do not provide comprehensive analytics or reporting features, making it difficult for administrators to gain insights into student performance, attendance trends, or other key metrics.
- 11. Scalability Issues:** Existing systems may not be scalable, meaning they cannot handle growing numbers of users or increasing amounts of data as an institution expands.

12. Dependency on Third-Party Tools: Institutions often rely on multiple third-party tools for different tasks, leading to compatibility issues and additional costs.

How EduTrack Addresses These Disadvantages -

You can follow up this section by explaining how EduTrack overcomes these limitations.

For example:

- **Centralized Platform:** EduTrack integrates all educational activities into a single platform.
- **Automation:** Reduces manual effort and errors through automation.
- **Real-Time Updates:** Provides real-time tracking and notifications.
- **User-Friendly Interface:** Built with modern design principles for ease of use.
- **Customization:** Tailored to meet the specific needs of institutions.
- **Data Security:** Implements robust security measures to protect sensitive data.

1.3 NEED FOR SYSTEM

In the modern educational landscape, the increasing complexity of academic activities, coupled with the growing demand for efficient management tools, has created a pressing need for a centralized and automated system like **EduTrack**. Traditional methods of tracking educational activities, such as manual record-keeping, spreadsheets, or disjointed software solutions, are no longer sufficient to meet the demands of today's dynamic learning environments.

Students, teachers, and administrators face numerous challenges, including disorganized schedules, missed deadlines, inefficient communication, and a lack of real-time updates. These issues not only hinder productivity but also negatively impact the overall learning experience. Furthermore, the absence of a unified platform often leads to data fragmentation, making it difficult to access and analyze critical information.

EduTrack addresses these challenges by providing a comprehensive, user-friendly, and scalable solution for tracking and managing educational activities. By centralizing tasks such as attendance monitoring, assignment tracking, exam scheduling, and progress reporting, EduTrack ensures that all stakeholders stay informed and aligned with their academic goals. The system also promotes transparency, enhances communication, and reduces the administrative burden on educators and institutions.

Beyond basic academic tracking, EduTrack fosters a more collaborative and transparent educational ecosystem. Features such as shared calendars, instant notifications, and discussion forums enhance communication between students and educators, ensuring that everyone stays aligned on expectations and deadlines. The system also supports parental involvement by providing guardians with controlled access to their child's progress reports and attendance records. By digitizing and centralizing these processes, EduTrack minimizes errors, reduces redundancy, and eliminates the risk of misplaced or lost records. Furthermore, its cloud-based architecture ensures accessibility from any device, making it ideal for both in-person and remote learning environments.

Looking ahead, EduTrack is designed with scalability and adaptability in mind. Future enhancements could include AI-powered predictive analytics to identify at-risk students, integration with learning management systems (LMS) like Moodle or Canvas, and mobile app functionality for on-the-go access.

1.4 OPERATING ENVIRONMENT

HARDWARE AND SOFTWARE

1)For PC/Laptop: Processor:

Pentium 2.0 and above

Browser: Any browser (Google Chrome, MS Edge, Apple Safari, Mozilla Firefox, Opera, Internet Explorer, Brave Browser, Tor Browser, etc)

RAM: At least 256MB

2)For Smartphones/Tablets:

Android Version: Android Version 9.0 and above

Browser: Any Browser

Necessary signal strength:

Download speed: at least 2MB/s

Upload speed: at least 2MB/s

TECHNOLOGY USED for PROJECT DEVELOPMENT

Front-End: HTML, CSS, Bootstrap, JavaScript

Backend: NodeJS (for managing server-side operations)

Database: MYSQL database (for storing the application data)

Server: Apache Server & Node Server

CHAPTER 2: PROPOSED SYSTEM

2.1 PROPOSED SYSTEM

EduTrack is a web-based educational activity tracking system designed to streamline the management of academic tasks for students, teachers, and administrators. The proposed system aims to provide a centralized, user-friendly, and efficient platform for tracking and organizing educational activities, ensuring seamless communication and improved productivity.

Key Features of EduTrack

1. **Centralized Dashboard:** A unified dashboard for students, teachers, and administrators to access all relevant information in one place. Displays upcoming assignments, exams, attendance records, and progress reports.
2. **Attendance Management:** Allows teachers to mark and track student attendance digitally.
 - o Provides students with real-time updates on their attendance records.
3. **Assignment and Exam Tracking:** Enables teachers to create, assign, and manage assignments and exams. Sends automated reminders to students about upcoming deadlines and exam schedules.
4. **Progress Monitoring:** Tracks student performance through grades, marks, and feedback. Generates progress reports for students and teachers to analyze academic growth.
5. **Communication Tools:** Facilitates seamless communication between students, teachers, and administrators through in-app messaging or notifications.
 - o Reduces reliance on external communication tools like email.
6. **Customizable Profiles:** Allows users to create and manage their profiles with personal and academic details. Teachers can upload course materials, while students can view their schedules and tasks
7. **Real-Time Notifications:** Sends instant alerts and reminders for important events, deadlines, and updates. Ensures that users stay informed and never miss critical information.
8. **Data Security:** Implements robust security measures to protect sensitive user data. Ensures compliance with data privacy regulations.
9. **Analytics and Reporting:** Provides administrators with detailed analytics and reports on student performance, attendance trends, and overall academic progress. Helps institutions make data-driven decisions.

10. Scalability and Flexibility: Designed to accommodate the growing needs of educational institutions. Can be customized to fit the unique requirements of different schools, colleges, or universities.

2.2 MODULE SPECIFICATION

- **EduTrack Module Specification**

1. Registration and Login Module:

- **Functionality:** Facilitate user registration and secure login access.
- **Features:**
 - User registration with validation (e.g., email, password, and profile details).
 - Secure login with authentication (e.g., password, OTP, or multi-factor authentication). Password recovery/reset functionality
 - Role-based access control (e.g., admin, student, teacher).
- **Benefits:**
 - Ensures secure access to the system for authorized users.
 - Streamlines user onboarding and account management.
 - Enhances data security and privacy by controlling access to sensitive information.

3. Attendance Management System:

- Functionality: Track and manage student attendance.
- Features: Mark attendance, generate reports, monitor attendance patterns.
- Benefits: Ensures accurate attendance records, helps in identifying absenteeism trends.

3. Class Routine:

- Functionality: Create and manage class schedules.
- Features: Assign teachers, subjects, create timetables.
- Benefits: Streamlines class organization, ensures a structured learning environment.

4. Examination Management:

- Functionality: Manage exam schedules and results.
- Features: Create exam routines, schedule exams, process results.
- Benefits: Simplifies exam administration, timely result processing.

5. Notice Publishing:

- Functionality: Publish notices and announcements.
- Features: Post important information, deadlines, events.
- Benefits: Keeps students and staff informed, enhances communication.

6. Leave Application:

- Functionality: Manage leave applications.
- Features: Submit leave requests, track approval status.
- Benefits: Simplifies leave management, ensures proper documentation.

7. Grievance Management:

- Functionality: Address student and staff grievances.
- Features: Submit complaints, track resolution status.
- Benefits: Enhances transparency, improves satisfaction.

2.3 SCOPE OF THE SYSTEM

Scope of EduTrack:

The **EduTrack** system is designed to cater to the needs of students, teachers, and administrators in educational institutions by providing a comprehensive platform for tracking and managing academic activities.

The scope of the system encompasses the following key area-

Scope of EduTrack: The EduTrack system is designed to cater to the needs of students, teachers, and administrators in educational institutions by providing a comprehensive platform for tracking and managing academic activities. The scope of the system encompasses the following key areas:

1. Functional Scope

For Students:

- Track attendance, assignments, exams, and deadlines.
- View progress reports and grades.
- Receive real-time notifications and reminders.
- Access course materials and schedules.

For Teachers:

- Manage attendance records.
- Create, assign, and evaluate assignments and exams.
- Monitor student performance and progress.
- Communicate with students and administrators.

For Administrators:

- Oversee institutional academic activities.
- Generate reports and analytics on student performance and attendance trends
- Manage user accounts and permissions.
- Ensure data security and compliance.

2. Technical Scope

Frontend:

- o Responsive and user-friendly interface built using HTML, CSS, and Bootstrap.
- o Compatible with desktops, tablets, and mobile devices.

Backend:

- o Server-side logic and API development using Node.js and Express.js.
- o Authentication and authorization using JWT (JSON Web Tokens).

Database:

- o Efficient data storage and management using MySQL.
- o Tables for users, attendance, assignments, exams, and progress tracking

Integration:

- o Seamless integration with third-party tools (e.g., email services for notifications).
- o APIs for future scalability and integration with other systems.

3. Operational Scope

Educational Institutions:

- o Suitable for schools, colleges, and universities.
- o Can be customized to meet the specific needs of different institutions.

Users:

- o Students, teachers, and administrators.
- o Role-based access control to ensure data privacy and security.

4. Geographical Scope

- o Initial Phase:
 - o Designed for use in a single institution or organization.
 - o Future Expansion:
 - o Scalable to support multiple institutions or even regional/national-level educational systems.

5. Limitations

- Dependency on Internet Connectivity:
- Requires an active internet connection for real-time updates and access.

• Initial Setup:

- Requires initial configuration and training for users to adapt to the system.

• Device Compatibility:

- While the system is responsive, optimal performance is guaranteed on modern browsers and devices.

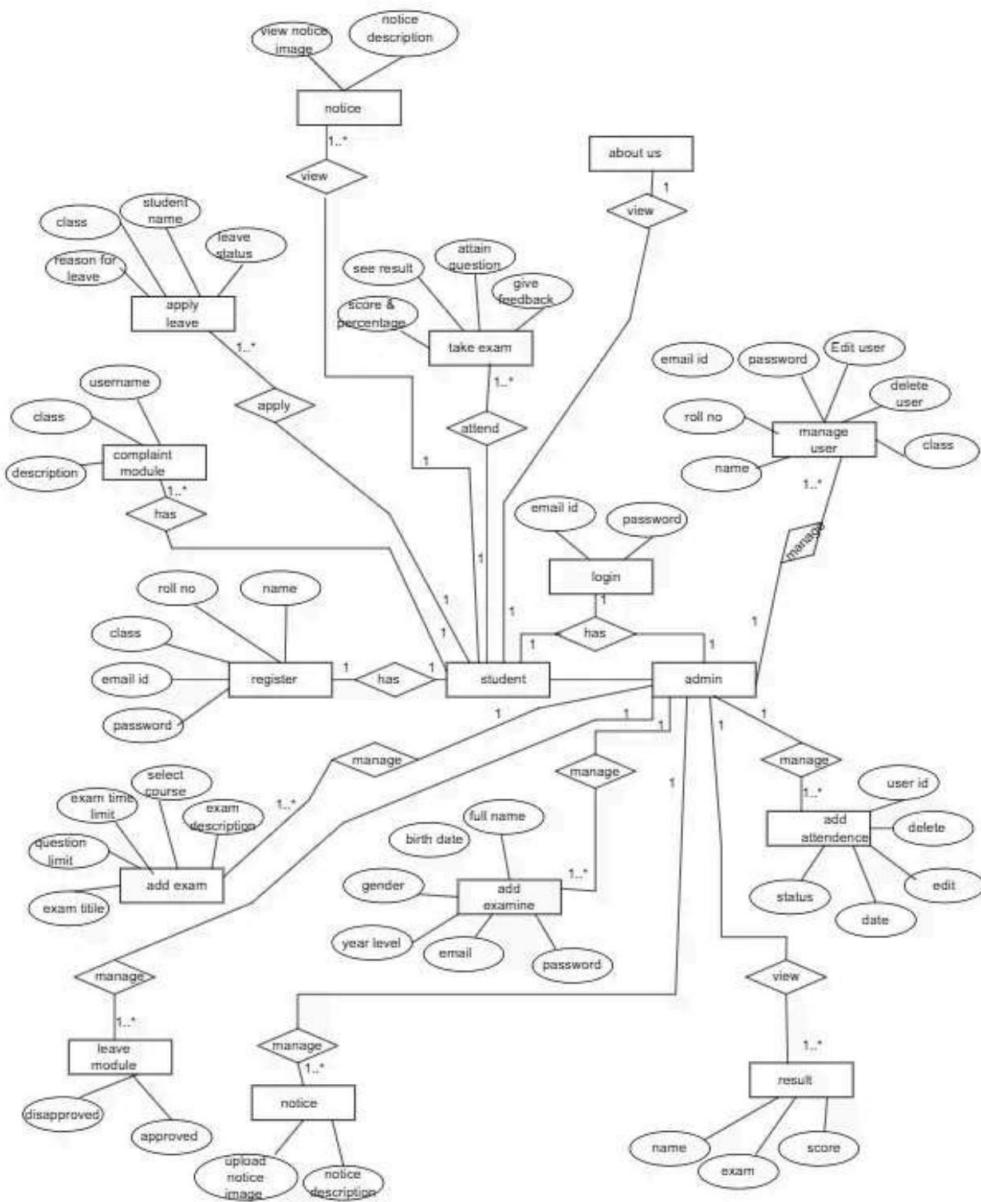
2.4 OBJECTIVE OF THE SYSTEM

The primary objective of EduTrack is to create a comprehensive, user-friendly, and efficient platform for tracking and managing educational activities. The system aims to address the challenges faced by students, teachers, and administrators in organizing and monitoring academic tasks. Below are the key objectives of the project:

- 1. Centralized Management:** To provide a unified platform where students, teachers, and administrators can access and manage all educational activities, including attendance, assignments, exams, and progress reports. To eliminate the inefficiencies of manual record-keeping by automating tasks such as attendance tracking, assignment submission, and deadline reminders.
- 3. Enhanced Communication:** To facilitate seamless communication between students, teachers, and administrators through in-app notifications and messaging tools, reducing reliance on external communication methods.
- 4. Real-Time Updates and Notifications:** To ensure that users receive real-time updates and reminders about important academic events, deadlines, and changes, helping them stay organized and informed.
- 5. Improved Time Management:** To help students and teachers manage their time effectively by providing a clear overview of schedules, deadlines, and tasks.
- 6. Data-Driven Insights:** To provide administrators with detailed analytics and reports on student performance, attendance trends, and overall academic progress, enabling data-driven decision-making.
- 7. User-Friendly Interface:** To design an intuitive and responsive interface that is easy to navigate, ensuring a positive user experience for students, teachers, and administrators.
- 8. Data Security and Privacy:** To implement robust security measures to protect sensitive user data and ensure compliance with data privacy regulations.
- 9. Scalability and Customization:** To develop a scalable system that can be easily customized to meet the unique needs of different educational institutions, from schools to universities.
- 10. Cost-Effectiveness:** To provide an affordable solution that reduces the need for multiple tools and manual processes, saving time and resources for educational institutions.

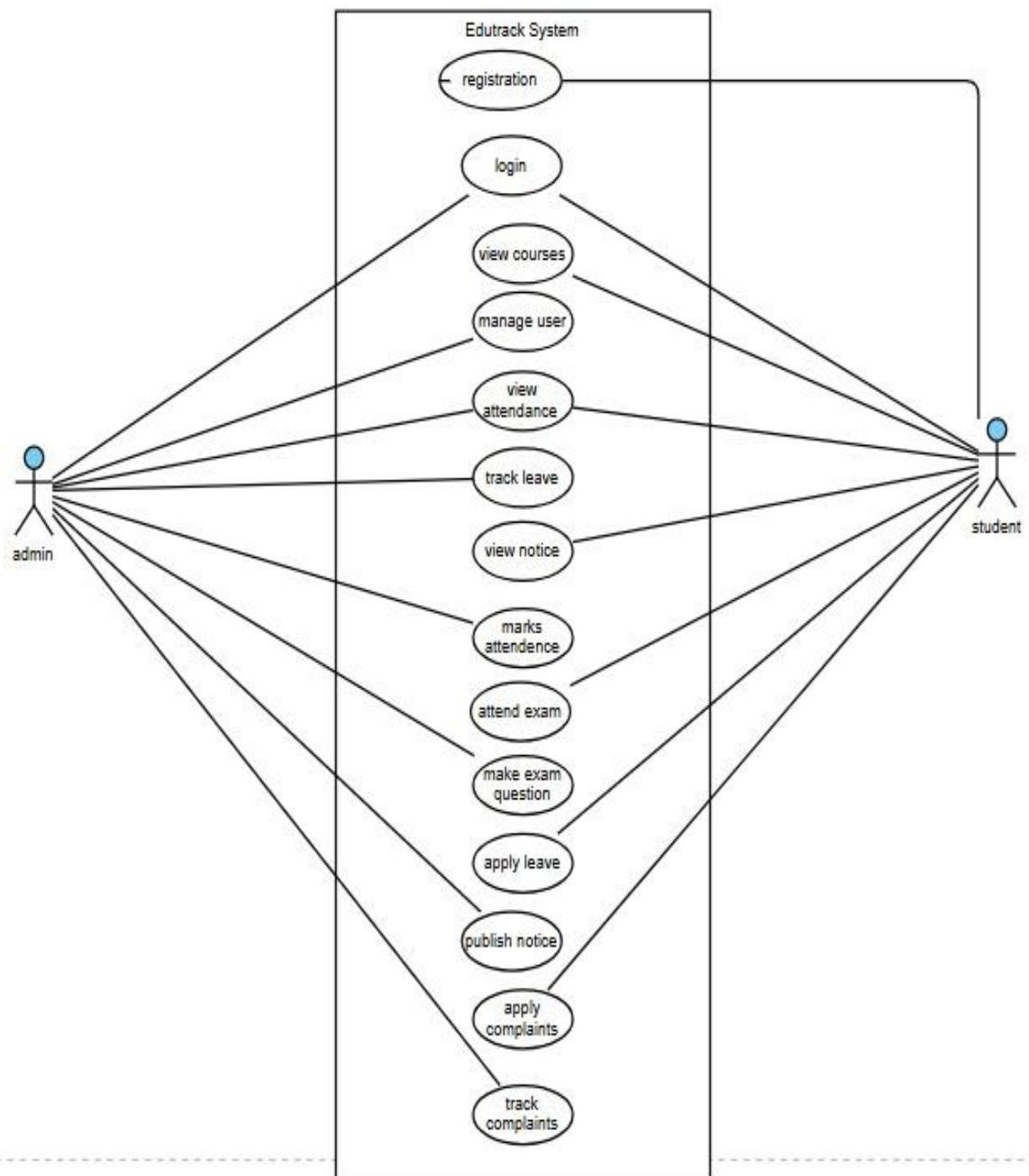
CHAPTER 3: ANALYSIS & DESIGN

3.1 Entity Relationship Diagram

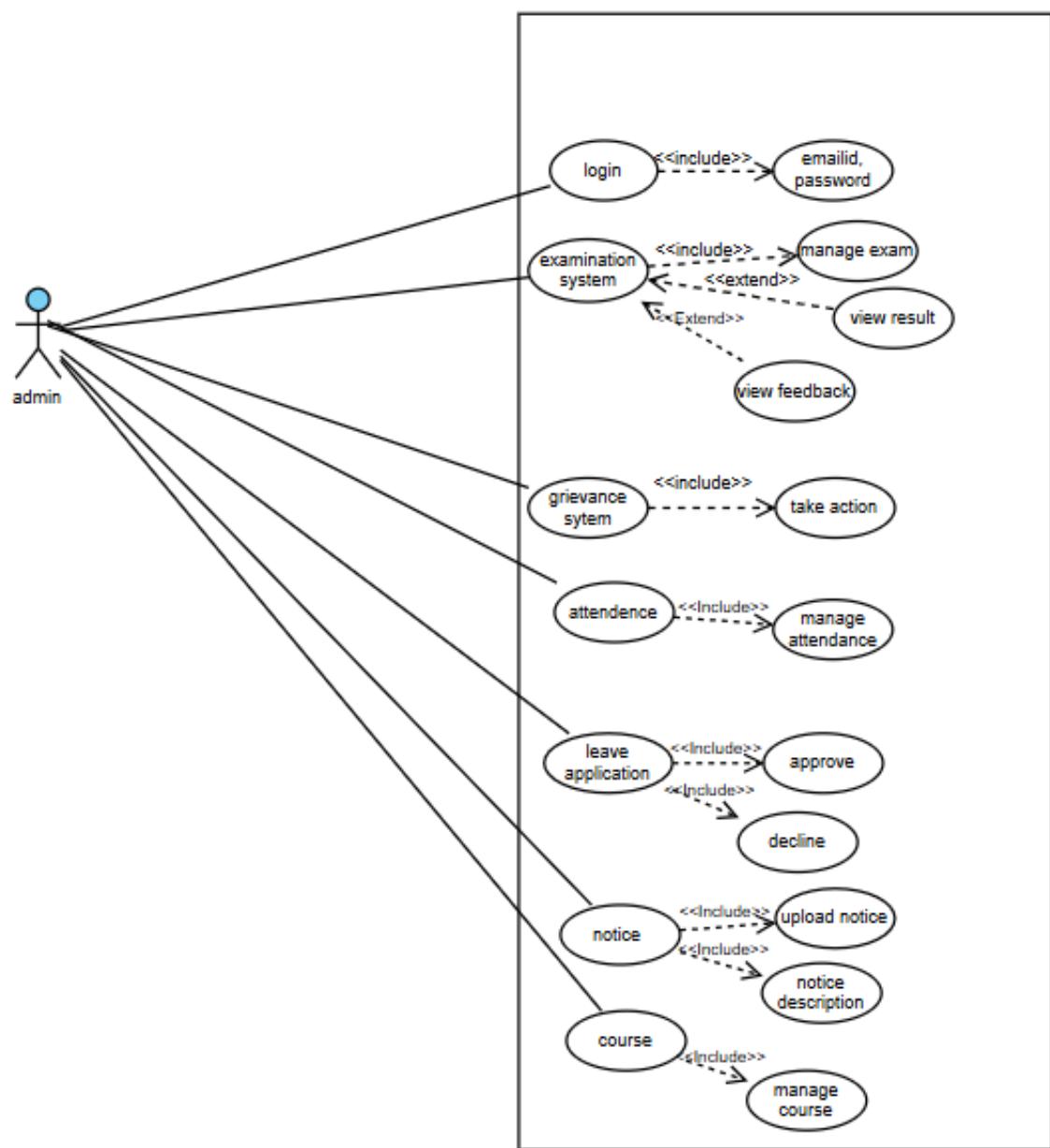


3.2 Use Case Diagrams

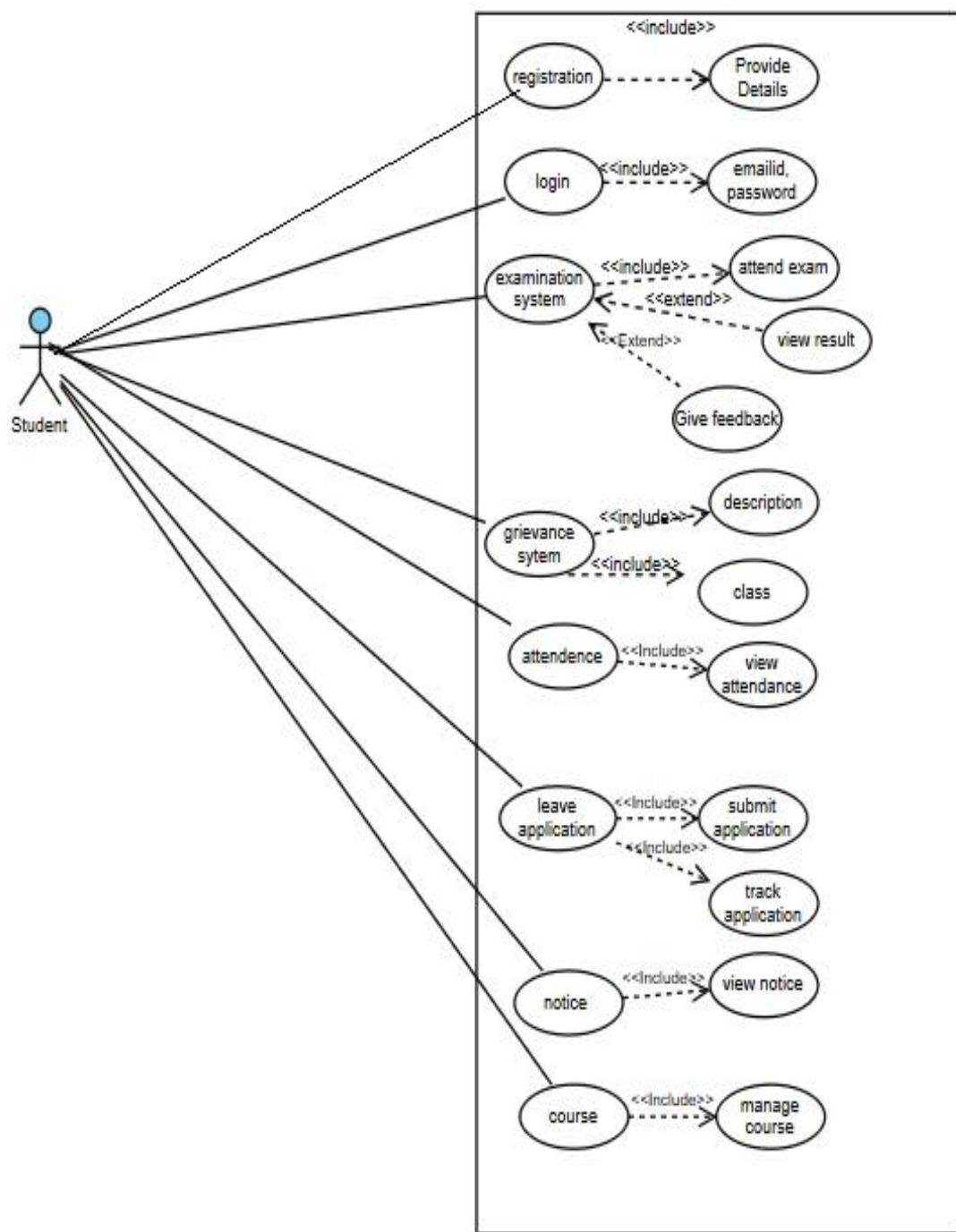
Global Use Case



Use Case for Admin:

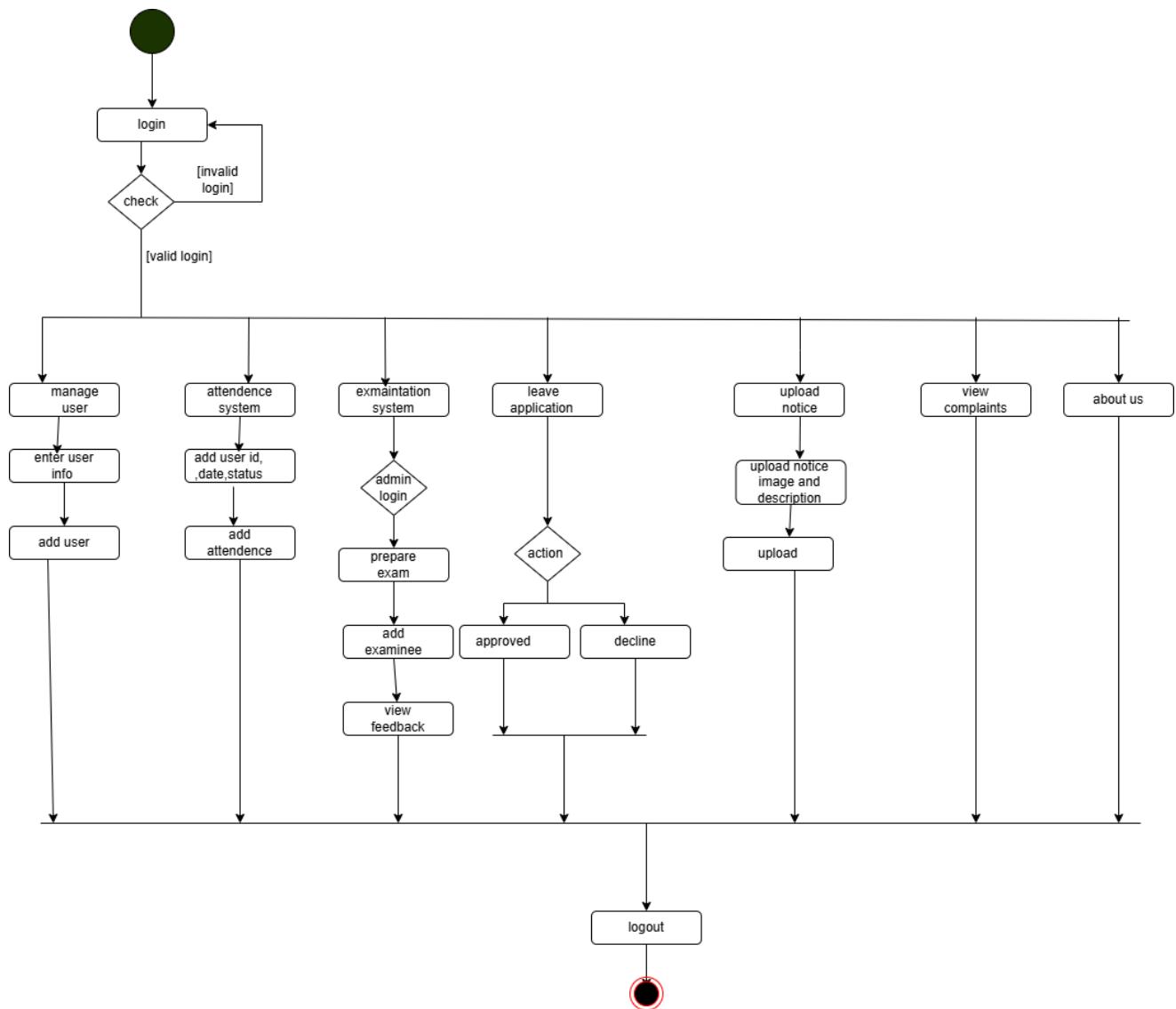


Use Case for Student:

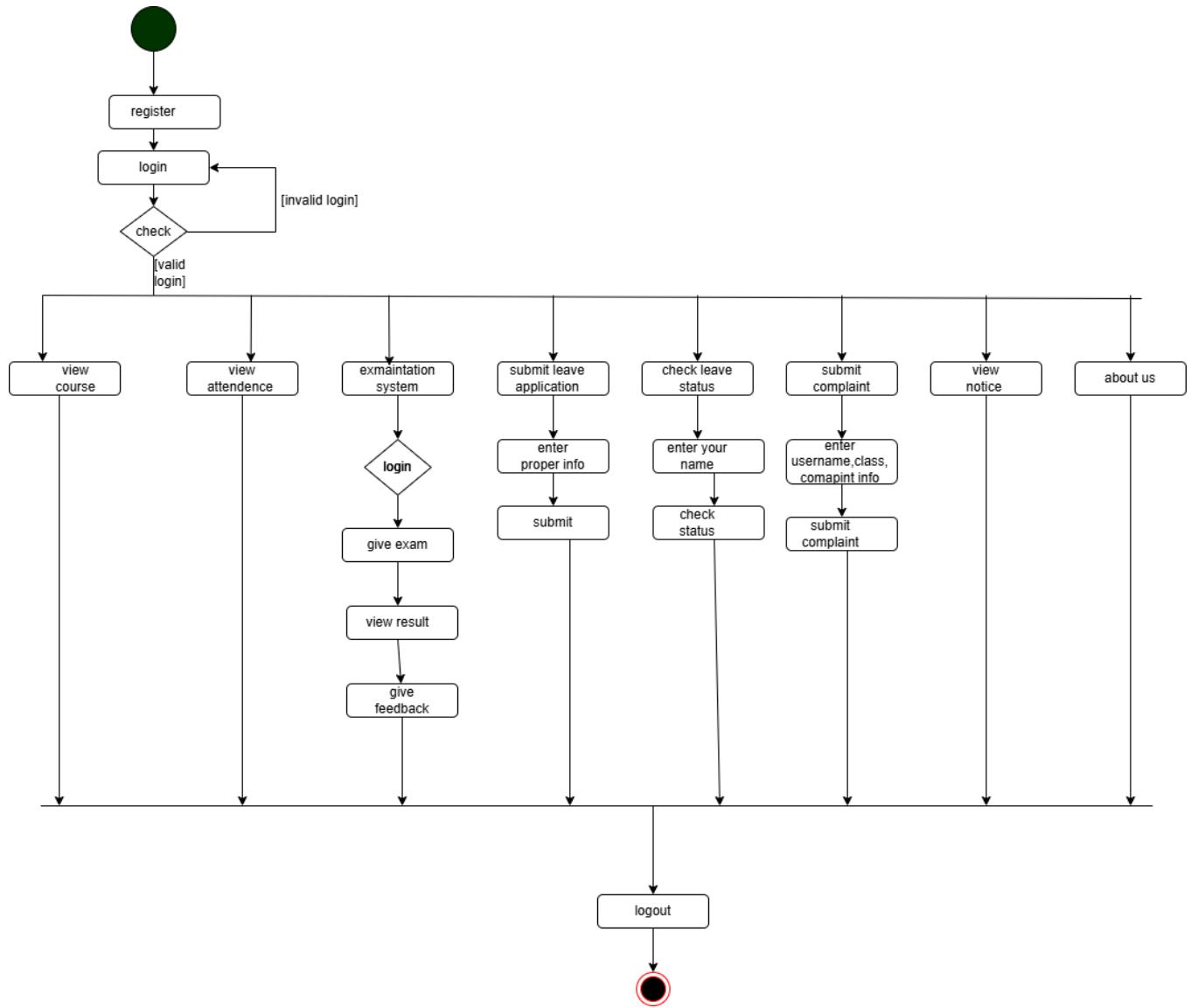


3.3 Activity Diagram

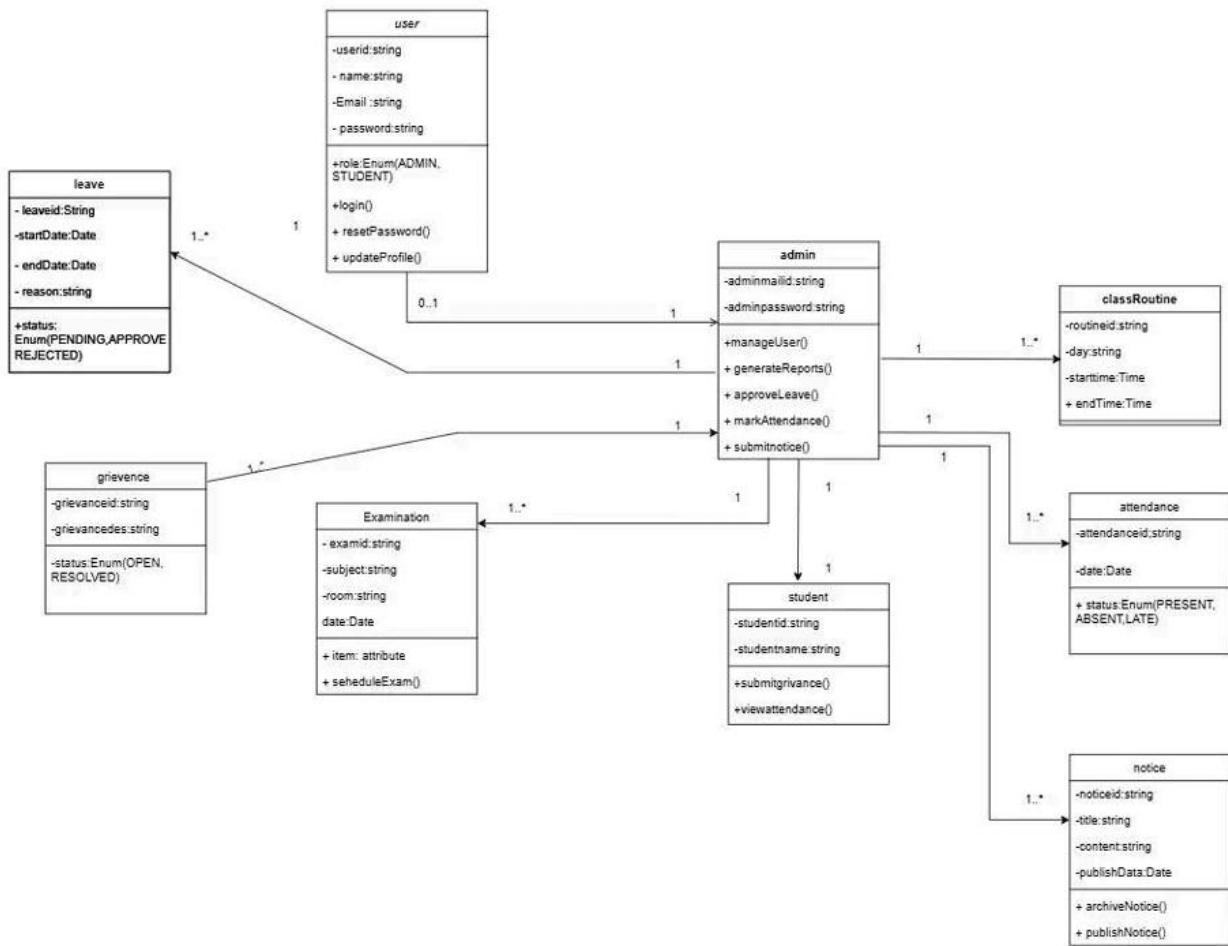
For admin-



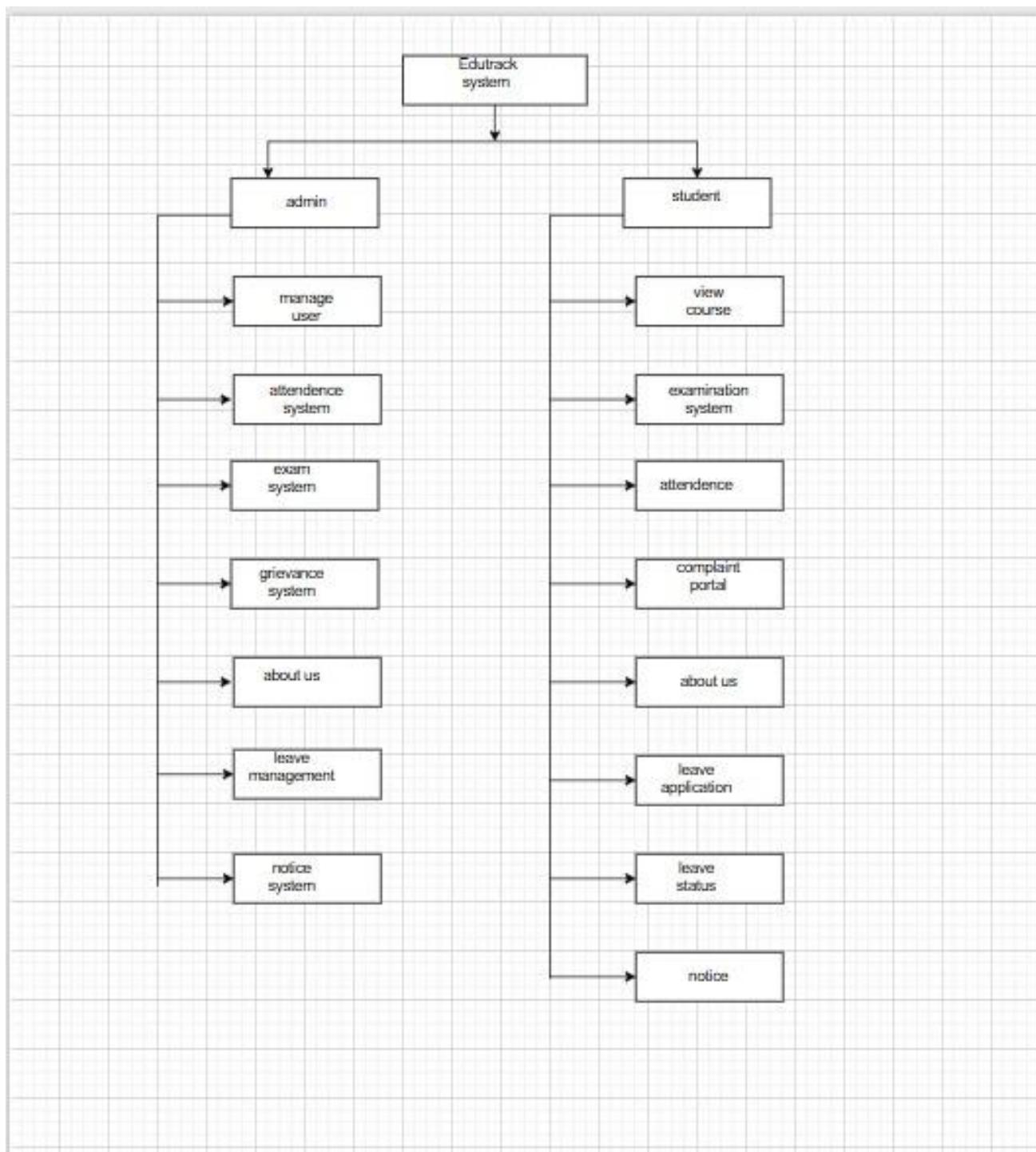
For Student



3.4 Class Diagram



3.5 Hierarchical Diagram



3.6 Table Specification (Database Design)

1) Admin Table

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
id	int(11)	Primary Key	No	None	AUTO_INCREMENT	Unique identifier for each user
username	varchar(255)	None	No	None	None	Unique username for login
password	varchar(255)	None	No	None	None	Password for authentication

2) Users Table

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
id	int(11)	Primary Key	No	None	AUTO_INCREMENT	Unique identifier for each user
name	varchar(255)	None	No	None	None	Full name of the student
rollno	varchar(255)	None	No	None	None	Roll number of the student
class	varchar(255)	None	No	None	None	Class or section of the student
email	varchar(255)	None	No	None	None	Email address of the student
password	varchar(255)	None	No	None	None	Password for authentication

3) Attendance Table

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
id	int(11)	Primary Key	No	None	AUTO_INCREMENT	Unique identifier for each record
user_id	int(11)	Foreign Key	No	None	None	References the id in users table
date	date	None	No	None	None	Date of attendance record
status	enum('Present', 'Absent', 'Late')	None	No	None	None	Attendance status for the user

4) Greivance Table

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
id	int(11)	Primary Key	No	None	AUTO_INCREMENT	Unique identifier for each record
username	varchar(255)	None	No	None	None	Username associated with the user
user_class	varchar(255)	None	No	None	None	Class or section of the user
description	text	None	No	None	None	Additional information about the user

5) Leave Application Table

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
id	int(11)	Primary Key	No	None	AUTO_INCREMENT	Unique identifier for each leave request
student_name	varchar(255)	None	No	None	None	Name of the student submitting the request
student_class	varchar(255)	None	No	None	None	Class of the student
reason	text	None	No	None	None	Reason for requesting leave
status	enum('Pending', 'Approved', 'Declined')	None	Yes	Pending	None	Status of the leave request

6) Notice Table

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
id	int(11)	Primary Key	No	None	AUTO_INCREMENT	Unique identifier for each image record
image_path	varchar(255)	None	No	None	None	File path where the image is stored
description	text	None	No	None	None	Description or details about the image

7) Courses Table

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
cou_id	int(11)	Primary Key	No	None	AUTO_INCREMENT	Unique identifier for each course
cou_name	varchar(1000)	None	No	None	None	Name of the course
cou_created	timestamp	None	No	current_timestamp()	ON UPDATE CURRENT_TIMESTAMP()	Timestamp of course creation and updates

8) Examinee Table

Field Name	Data Type	Length	Attributes	Null	Default	Key	Extra	Description
exmne_id	INT	11		No	None	Primary Key	AUTO_INCREMENT	Unique identifier for each examinee
exmne_fullname	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Full name of the examinee
exmne_course	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Course enrolled by the examinee
exmne_gender	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Gender of the examinee
exmne_birthdate	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Birthdate of the examinee
exmne_year_level	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Year level of the examinee
exmne_email	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Email address of the examinee
exmne_password	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Encrypted password for login
exmne_status	VARCHAR	1000	utf8mb4_unicode_ci	No	active			Status of the examinee (e.g., active)

9) Exam Answers Table

Field Name	Data Type	Length	Attributes	Null	Default	Key	Extra	Description
exans_id	INT	11		No	None	Primary Key	AUTO_INCREMENT	Unique identifier for each answer record
axmne_id	INT	11		No	None	Foreign Key		Reference to examinee who submitted the answer
exam_id	INT	11		No	None	Foreign Key		Reference to the exam the answer belongs to
quest_id	INT	11		No	None	Foreign Key		Reference to the question being answered
exans_answer	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Actual answer submitted by the examinee
exans_status	VARCHAR	1000	utf8mb4_unicode_ci	No	new			Status of the answer (e.g., new, reviewed)
exans_created	TIMESTAMP			No	current_timestamp()		ON UPDATE CURRENT_TIMESTAMP()	Timestamp of when the answer was created/updated

10) Exam Attempt Table

Field Name	Data Type	Length	Attributes	Null	Default	Key	Extra	Description
examat_id	INT	11		No	None	Primary Key	AUTO_INCREMENT	Unique identifier for each exam assignment
exmne_id	INT	11		No	None	Foreign Key		Reference to the examinee assigned to an exam
exam_id	INT	11		No	None	Foreign Key		Reference to the assigned exam
examat_status	VARCHAR	1000	utf8mb4_unicode_ci	No	used			Status of the exam assignment (e.g., used, unused)

11) Exam Question Table

Field Name	Data Type	Length	Null	Default	Key	Extra	Description
eqt_id	INT	11	No	None	Primary Key	AUTO_INCREMENT	Unique identifier for each exam question
exam_question	VARCHAR	1000	No	None			Text of the exam question
exam_ch1	VARCHAR	1000	No	None			First multiple choice option
exam_ch2	VARCHAR	1000	No	None			Second multiple choice option
exam_ch3	VARCHAR	1000	No	None			Third multiple choice option
exam_ch4	VARCHAR	1000	No	None			Fourth multiple choice option
exam_answer	VARCHAR	1000	No	None			Correct answer to the question
exam_status	VARCHAR	1000	No	active			Status of the question (e.g., active, inactive)

12) Exam Table

Field Name	Data Type	Length	Attributes	Null	Default	Key	Extra	Description
ex_id	INT	11		No	None	Primary Key	AUTO_INCREMENT	Unique identifier for each exam
cou_id	INT	11		No	None	Foreign Key		Reference to the course this exam is associated with
ex_title	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Title or name of the exam
ex_time_limit	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Time limit for the exam (e.g., 60 minutes)
ex_questlimit_display	INT	11		No	None			Number of questions to be displayed during the exam
ex_description	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Brief description of the exam

13) Feedbacks Table

Field Name	Data Type	Length	Attributes	Null	Default	Key	Extra	Description
fb_id	INT	11		No	None	Primary Key	AUTO_INCREMENT	Unique ID for each feedback record
exmne_id	INT	11		No	None	Foreign Key		ID of the examinee giving the feedback
fb_exmne_as	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Examinee's name or identification as text
fb_feedbacks	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Feedback content
fb_date	VARCHAR	1000	utf8mb4_unicode_ci	No	None			Date when feedback was submitted (as text)

3.6 Data Dictionary

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
id	int(11)	Primary Key	No	None	AUTO_INCREMENT	Unique identifier (from Admin, Users, Examinee, etc.)
username	varchar(255)	-	No	None	-	Username (Admin, Grievance)
password	varchar(255)	-	No	None	-	Password (Admin, Users, Examinee)
name / exmne_fullname	varchar(1000)	-	No	None	-	Full name (Users, Examinee, Leave App)
rollno	varchar(255)	-	No	None	-	Roll number (Users)
class / exmne_year_level	varchar(1000)	-	No	None	-	Class/Year level (Users, Examinee,

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
						Grievance, Leave)
email / exmne_email	varchar(1000)	-	No	None	-	Email (Users, Examinee)
exmne_course	varchar(1000)	-	No	None	-	Course (Examinee)
exmne_gender	varchar(1000)	-	No	None	-	Gender (Examinee)
exmne_birthdate	varchar(1000)	-	No	None	-	Birthdate (Examinee)
exmne_status	varchar(1000)	-	No	active	-	Status (Examinee)
user_id	int(11)	Foreign Key	No	None	-	User reference (Attendance)
date	date	-	No	None	-	Date (Attendance)
status	enum('Present', 'Absent', 'Late')	-	No	None	-	Attendance status

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
user_class	varchar(255)	-	No	None	-	Class (Grievance)
description	text	-	No	None	-	Description (Grievance, Notice)
student_name	varchar(255)	-	No	None	-	Student name (Leave App)
student_class	varchar(255)	-	No	None	-	Student class (Leave App)
reason	text	-	No	None	-	Reason (Leave App)
leave_status	enum('Pending', 'Approved', 'Declined')	-	Yes	Pending	-	Leave status (Leave App)
image_path	varchar(255)	-	No	None	-	Image path (Notice)
cou_id	int(11)	-	No	None	AUTO_INCREMENT	Course ID (Courses)

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
cou_name	varchar(1000)	-	No	None	-	Course name (Courses)
cou_created	timestamp	-	No	current_timestamp()	ON UPDATE CURRENT_TIMESTAMP()	Course timestamp
ex_id	int(11)	-	No	None	AUTO_INCREMENT	Exam ID (Exam)
ex_title	varchar(1000)	-	No	None	-	Exam title (Exam)
ex_time_limit	varchar(1000)	-	No	None	-	Time limit (Exam)
ex_questlimit_display	int(11)	-	No	None	-	Question limit (Exam)
ex_description	varchar(1000)	-	No	None	-	Exam description (Exam)
eqt_id	int(11)	-	No	None	AUTO_INCREMENT	Question ID (Exam Question)
exam_question	varchar(1000)	-	No	None	-	Question text (Exam Question)

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
exam_ch1	varchar(1000)	-	No	None	-	Choice 1 (Exam Question)
exam_ch2	varchar(1000)	-	No	None	-	Choice 2 (Exam Question)
exam_ch3	varchar(1000)	-	No	None	-	Choice 3 (Exam Question)
exam_ch4	varchar(1000)	-	No	None	-	Choice 4 (Exam Question)
exam_answer	varchar(1000)	-	No	None	-	Correct answer (Exam Question)
exam_status	varchar(1000)	-	No	active	-	Question status (Exam Question)
exans_id	int(11)	-	No	None	AUTO_INCREMENT	Answer ID (Exam Answers)

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
axmne_id	int(11)	-	No	None	-	Examinee ID (Exam Answers)
exam_id	int(11)	-	No	None	-	Exam ID (Exam Answers)
quest_id	int(11)	-	No	None	-	Question ID (Exam Answers)
exans_answer	varchar(1000)	-	No	None	-	Submitted answer (Exam Answers)
exans_status	varchar(1000)	-	No	new	-	Answer status (Exam Answers)
exans_created	timestam p	-	No	current_timestamp()	ON UPDATE CURRENT_TIMESTAMP()	Answer timestamp (Exam Answers)
examat_id	int(11)	-	No	None	AUTO_INCREMENT	Attempt ID (Exam

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
						Attempt)
exmne_id	int(11)	-	No	None	-	Examinee ID (Exam Attempt)
exam_id	int(11)	-	No	None	-	Exam ID (Exam Attempt)
examat_status	varchar(1000)	-	No	used	-	Attempt status (Exam Attempt)
fb_id	int(11)	-	No	None	AUTO_INCREMENT	Feedback ID (Feedbacks)
fb_exmne_as	varchar(1000)	-	No	None	-	Examinee name (Feedbacks)
fb_feedbacks	varchar(1000)	-	No	None	-	Feedback content (Feedbacks)
fb_date	varchar(1000)	-	No	None	-	Feedback date

Column Name	Data Type	Attributes	Null Allowed	Default Value	Extra	Description
						(Feedbacks)

3.7 Test Cases

1. Registration and Login Module

Test Cases for Registration Page

S. No	Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result (Pass/Fail)	Remarks
1	TC_REG_01	Valid Registration	1. Enter valid Name, Roll No, Class, Username, Password 2. Click "Register"	Success message: "Registration successful"	Pass	
2	TC_REG_02	Empty Name Field	1. Leave Name blank 2. Fill other fields 3. Click "Register"	Error: "Name is required"	Pass	
3	TC_REG_03	Invalid Name (Numbers/ Special Chars)	1. Enter name like "Rahul123" or "Rahul@" 2. Fill other fields 3. Click "Register"	Error: "Name must contain only letters"	Pass	
4	TC_REG_04	Empty Roll No Field	1. Leave Roll No blank 2. Fill other fields 3. Click "Register"	Error: "Roll No is required"	Pass	
5	TC_REG_05	Duplicate Roll No	1. Enter an already registered Roll No 2. Fill other fields 3. Click "Register"	Error: "Roll No already exists"	Pass	
6	TC_REG_06	Invalid Roll No (Non- Numeric)	1. Enter "12AB" in Roll No 2. Fill other fields 3. Click "Register"	Error: "Roll No must be numeric"	Pass	
7	TC_REG_07	Empty Class Field	1. Leave Class blank 2. Fill other fields 3. Click "Register"	Error: "Class is required"	Pass	

S. No	Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result (Pass/Fail)	Remarks
8	TC_RE_G_08	Invalid Class (Non-Listed Value)	1. Enter "Class 15" (if only 1-12 are valid) 2. Fill other fields 3. Click "Register"	Error: "Invalid Class"	Pass	
9	TC_RE_G_09	Empty Username Field	1. Leave Username blank 2. Fill other fields 3. Click "Register"	Error: "Username is required"	Pass	
10	TC_RE_G_10	Duplicate Username	1. Enter an existing Username 2. Fill other fields 3. Click "Register"	Error: "Username already taken"	Pass	
11	TC_RE_G_11	Invalid Username (Special Chars)	1. Enter "user@name" 2. Fill other fields 3. Click "Register"	Error: "Username must be alphanumeric"	Pass	
12	TC_RE_G_12	Empty Password Field	1. Leave Password blank 2. Fill other fields 3. Click "Register"	Error: "Password is required"	Pass	
13	TC_RE_G_13	Weak Password (Less than 8 chars)	1. Enter "pass123" 2. Fill other fields 3. Click "Register"	Error: "Password must be 8+ characters"	Pass	
14	TC_RE_G_14	Password Without Special Char	1. Enter "password123" 2. Fill other fields 3. Click "Register"	Error: "Include a special char"	Pass	

S. No	Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result (Pass/Fail)	Remarks
				(e.g., @, #)"		
15	TC_REG_15	Confirm Password Mismatch	1. Enter Password : "Pass@123" 2. Enter Confirm Password : "Pass@124" 3. Click "Register"	Error: "Passwords do not match"	Pass	
16	TC_REG_16	SQL Injection Attempt	1. Enter SQL query (e.g., ' OR 1=1 --) in any field 2. Click "Register"	Error: "Invalid input" + blocked	Pass	
17	TC_REG_17	XSS (Cross-Site Scripting) Attempt	1. Enter <script>alert('XS S')</script> in any field 2. Click "Register"	Script not executed, error displayed	Pass	
18	TC_REG_18	Field Length Validation	1. Enter 150+ chars in Name or Username 2. Click "Register"	Error: "Exceeds maximum length (100 chars)"	Pass	
19	TC_REG_19	Auto-Trim Leading/Trailing Spaces	1. Enter " Rahul " in Name 2. Click "Register"	Trims spaces: "Rahul" saved	Pass	
20	TC_REG_20	Redirect to Login After Registration	1. Complete valid registration 2. Check redirection	Redirects to login page with success message	Pass	

1.2 User Login

Test Cases for Login Page

No.	Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result (Pass/Fail)
1	TC_LG_01	Valid Login	1. Enter valid username 2. Enter valid password 3. Click "Login"	User logs in successfully	Pass
2	TC_LG_02	Invalid Username	1. Enter invalid username 2. Enter valid password 3. Click "Login"	Error: "Invalid username/password"	Pass
3	TC_LG_03	Invalid Password	1. Enter valid username 2. Enter invalid password 3. Click "Login"	Error: "Invalid username/password"	Pass
4	TC_LG_04	Empty Username Field	1. Leave username blank 2. Enter password 3. Click "Login"	Error: "Username is required"	Pass
5	TC_LG_05	Empty Password Field	1. Enter username 2. Leave password	Error: "Password is required"	Pass

No.	Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result (Pass/Fail)
			blank 3. Click "Login"		
6	TC_LG_06	Empty Username & Password Fields	1. Leave both fields blank 2. Click "Login"	Errors for both fields	Pass
7	TC_LG_07	Case-Sensitive Password	1. Enter valid username 2. Enter password with wrong case 3. Click "Login"	Error: "Invalid credentials"	Pass

2. Attendance Management System

Test Cases for Attendance System Module

S. No	Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result (Pass/Fail)	Remarks
1	TC_ATT_01	Verify Attendance Table Rendering	1. Open the "Attendance Records" section	Table displays columns: Date, Day, Status, Time with correct data	Pass	
2	TC_ATT_02	Validate Date Format	1. Check the format of dates in the table (e.g., "Jan 9, 2025")	Dates follow consistent format (MMM D, YYYY)	Pass	
3	TC_ATT_03	Check Status Labels	1. Verify entries under Status column (Present/Late/Absent)	Only valid statuses are displayed	Pass	
4	TC_ATT_04	Verify Time Field for Late Entries	1. Check if "Late" status entries show time (if applicable)	Time is displayed for "Late" status or marked as "-"	Pass	
5	TC_ATT_05	Validate Summary Statistics	1. Compare the summary (e.g., "2 PRESENT") with table data	Summary matches actual counts in the table	Pass	
6	TC_ATT_06	Test Filtering by Status	1. Filter records by "Present" status (if applicable)	Only "Present"	Pass	

S. No	Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result (Pass/Fail)	Remarks
			functionality exists)	records are displayed		
7	TC_ATT_07	Test Sorting by Date	1. Click on the "Date" column header (if sortable)	Records are sorted chronologically	Pass	
8	TC_ATT_08	Verify Responsive Design	1. View the page on mobile/tablet	Table and summary adapt to screen size	Pass	
9	TC_ATT_09	Check Empty State	1. Simulate no attendance records	Displays "No records found" message	Pass	
10	TC_ATT_10	Validate Total Count Accuracy	1. Manually count records and compare with "4 TOTAL"	Total matches the number of rows in the table	Pass	
11	TC_ATT_11	Test Export Functionality (if any)	1. Click "Export as CSV/PDF" (if available)	File downloads with correct data	Pass	
12	TC_ATT_12	Verify Day Column Accuracy	1. Cross-check "Day" values (e.g., "Jan 9, 2025" = "Thursday")	Days correspond correctly to dates	Pass	
13	TC_ATT_13	Test Pagination	1. Navigate to next/previous page (if records	Pagination works	Pass	

S. No	Test Case ID	Test Scenario	Test Steps	Expected Result	Actual Result (Pass/Fail)	Remarks
		n (if large dataset)	exceed single page)	without data loss		

3. Class Routine

Test Case ID	Description	Steps	Expected Result	Actual Result	Status
TC_ROUT_01	Verify creating a new timetable	1. Go to "Class Routine". 2. Assign subjects, teachers, and timings. 3. Save.	Timetable is created successfully.	Timetable is created successfully.	Pass
TC_ROUT_02	Verify editing an existing timetable	1. Select a routine. 2. Modify timings. 3. Save.	Changes are applied.	Changes are applied.	Pass

4. Examination Management

Test Case ID	Description	Steps	Expected Result	Actual Result	Status
TC_EXAM_01	Verify exam schedule creation	1. Go to "Exam Management". 2. Set exam dates and subjects. 3. Save.	Exam schedule is published.	Exam schedule is published.	Passss
TC_EXAM_02	Verify result processing	1. Enter student marks. 2. Calculate grades. 3. Publish results.	Results are displayed to students.	Results are displayed to students.	Pass

5. Notice Publishing

Test Case ID	Description	Steps	Expected Result	Actual Result	Status
TC_NOT_01	Verify posting a new notice	1. Go to "Notices". 2. Enter title and content. 3. Click "Publish".	Notice is visible to users.	Notice is visible to users.	Pass

6. Leave Application

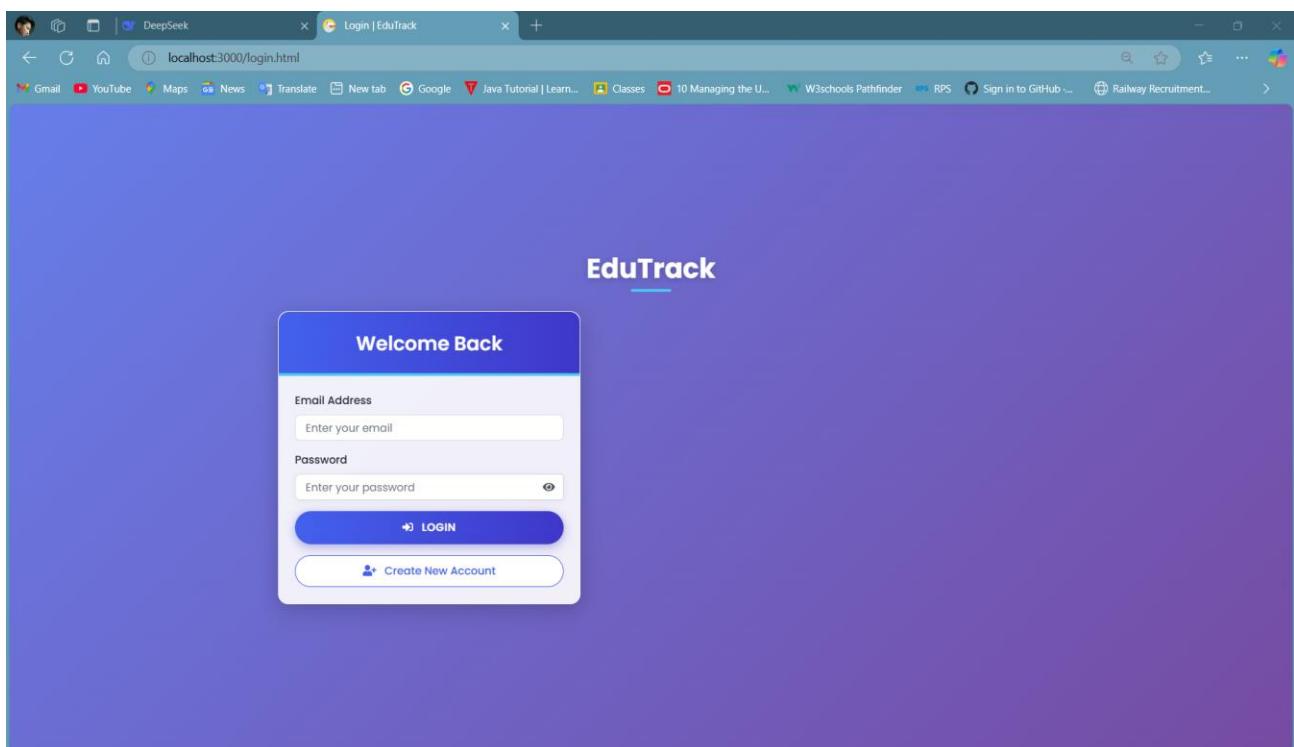
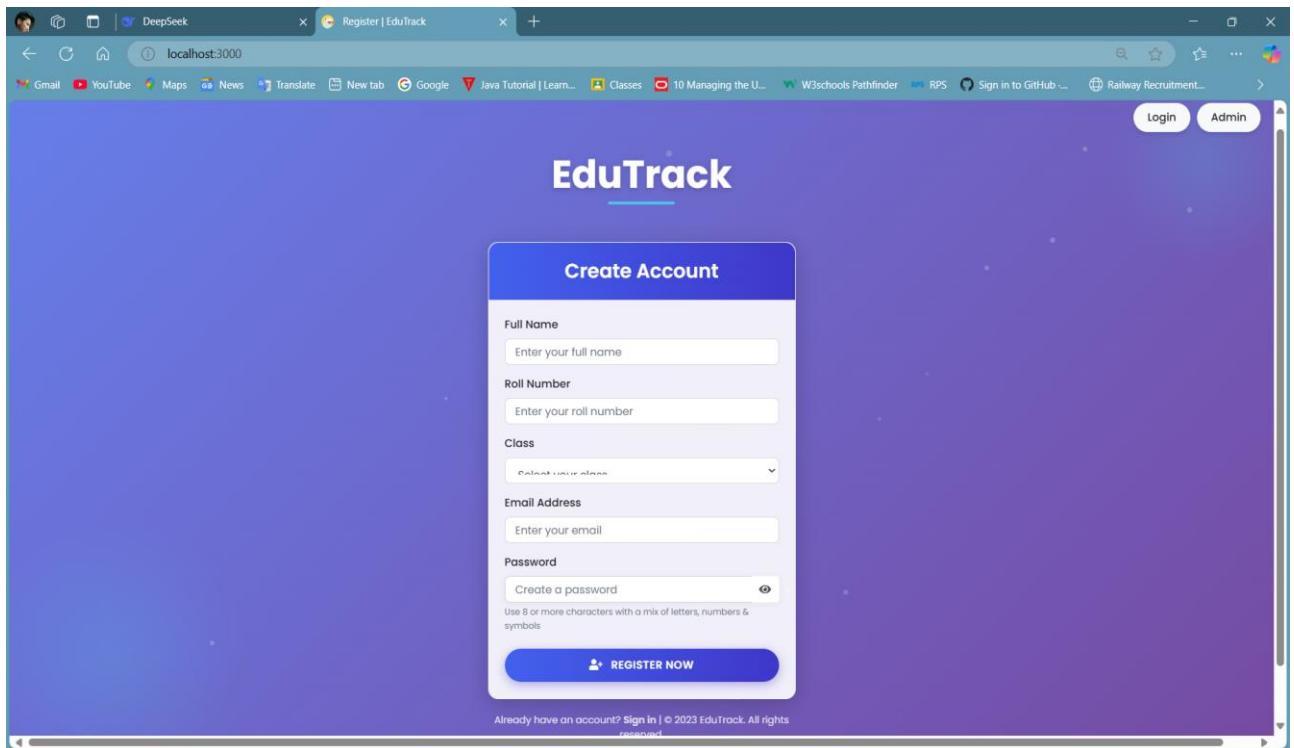
Test Case ID	Description	Steps	Expected Result	Actual Result	Status
TC_LEAVE_01	Verify submitting a leave request	1. Go to "Leave Application". 2. Fill in dates and reason. 3. Submit.	Request is sent for approval.	Request is sent for approval.	Pass

7. Grievance Management

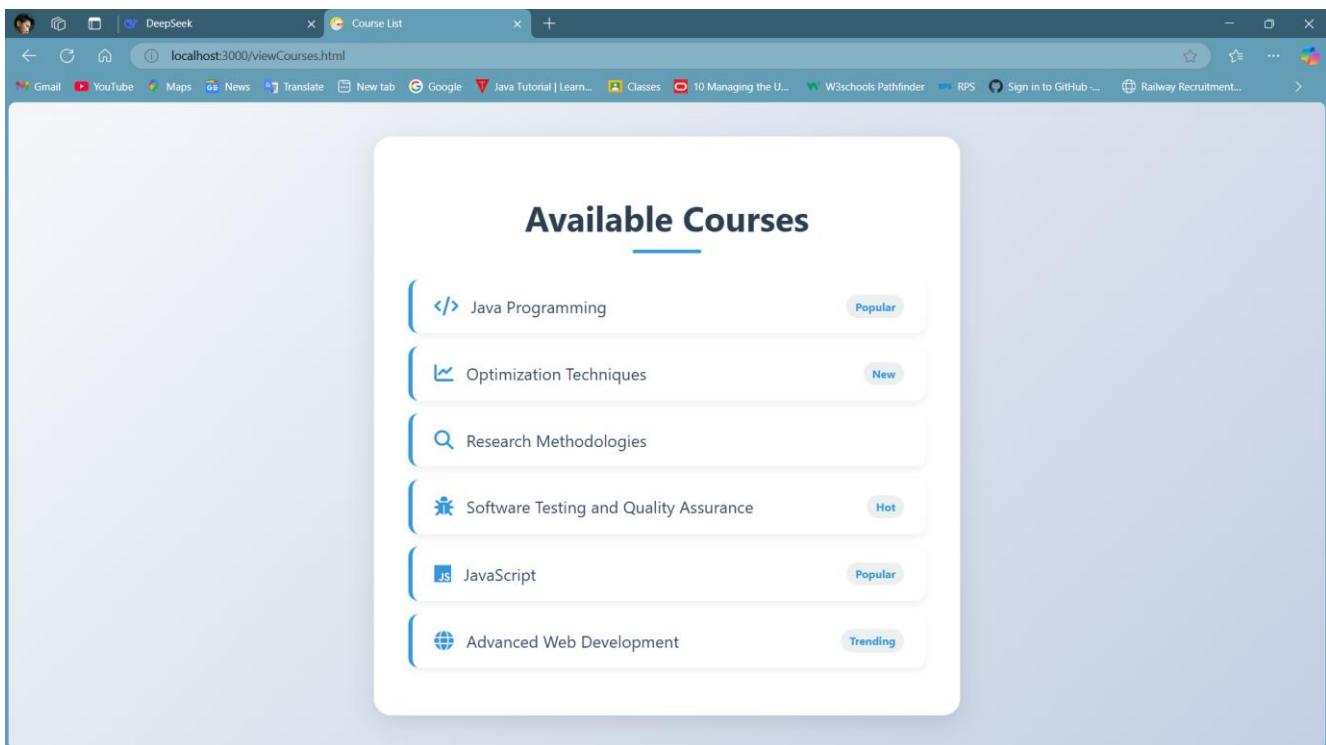
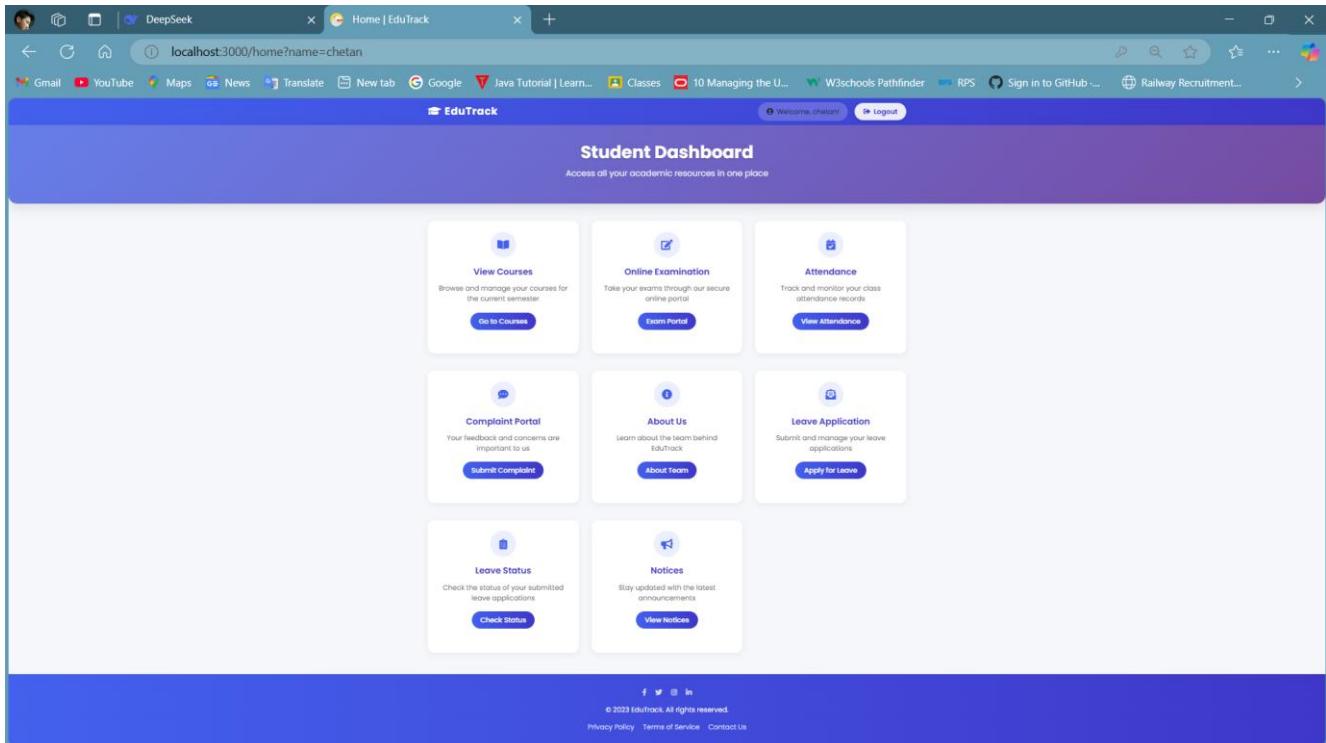
Test Case ID	Description	Steps	Expected Result	Actual Result	Status
TC_GRV_01	Verify submitting a complaint	1. Go to "Grievance". 2. Enter complaint details. 3. Submit.	Complaint is logged and status is "Pending".	Complaint is logged and status is "Pending".	Pass

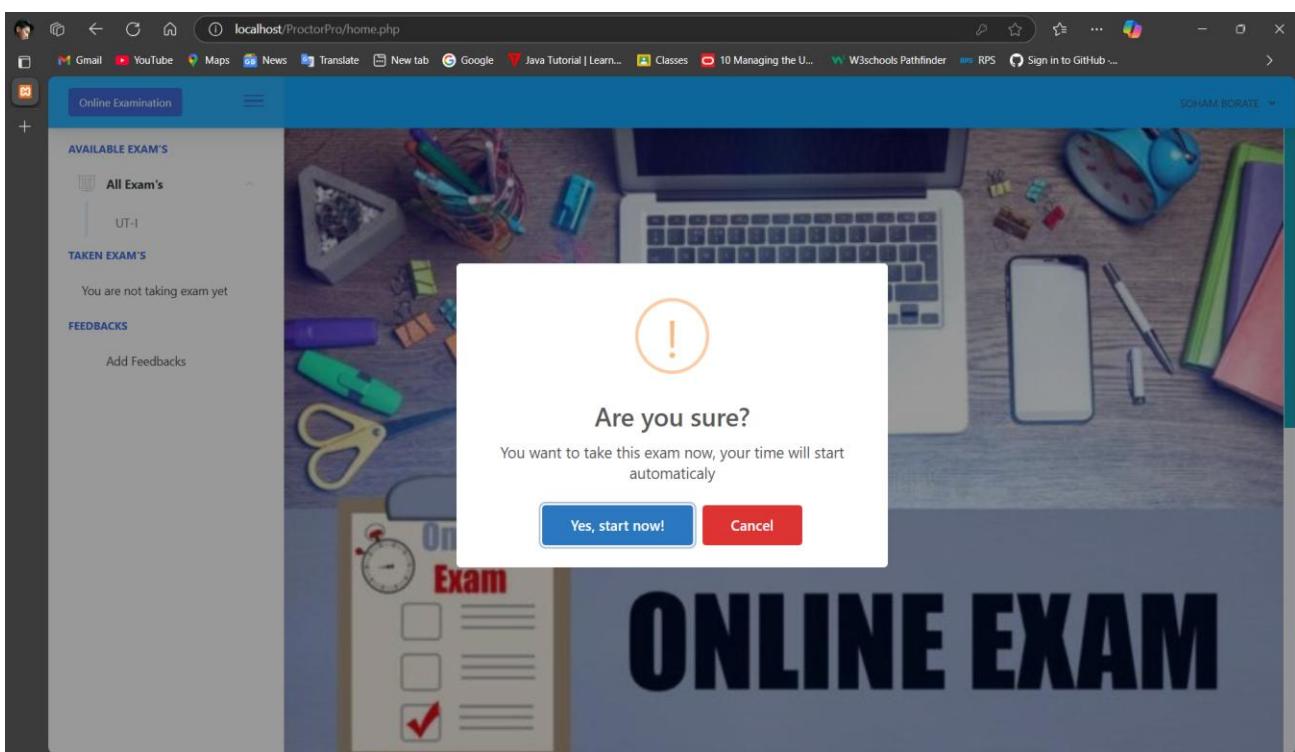
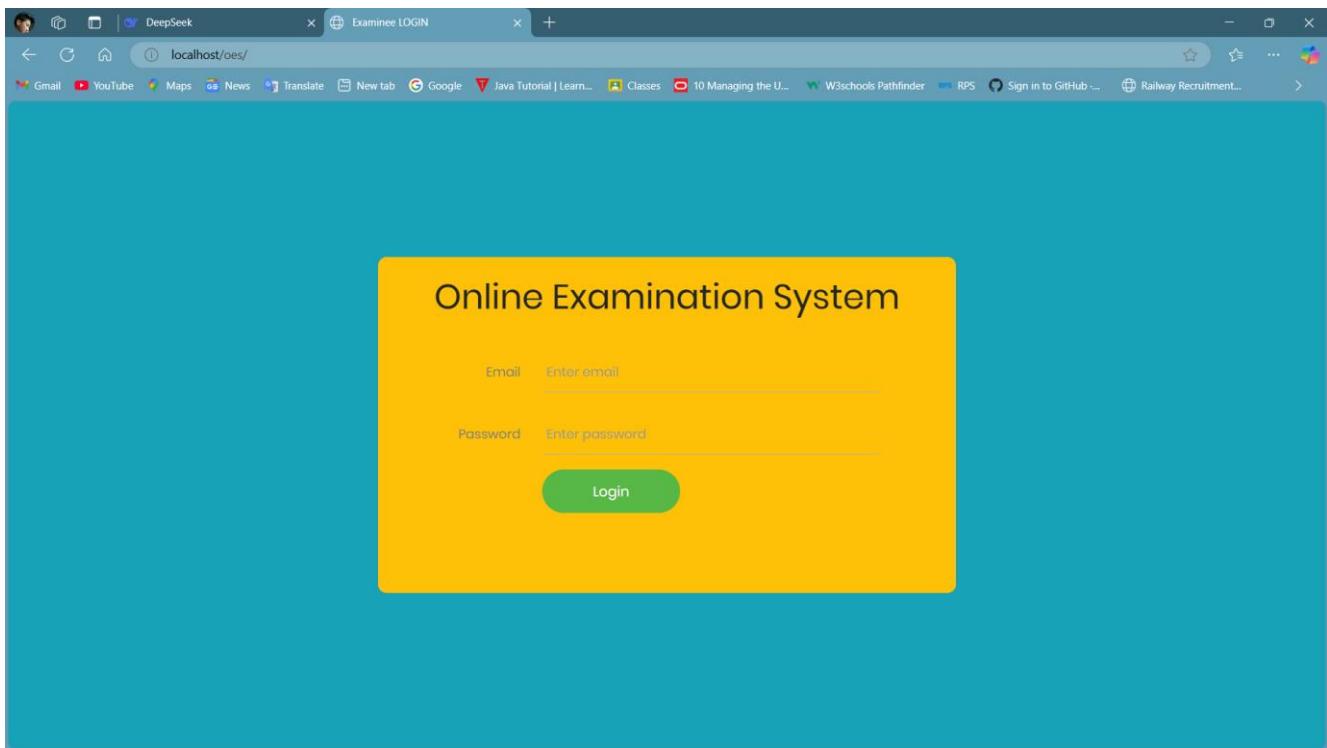
CHAPTER 4: USER MANUAL

4.1 User Interface Screens (Input)



4.2 Output Screens with Data





The screenshot shows a web-based online examination system. The title bar indicates the URL is `localhost/oes2/home.php?page=exam&id=34`. The top right corner shows the user's name, SHRIKRAM MAGAR. The left sidebar has sections for 'AVAILABLE EXAM'S' (All Exam's), 'TAKEN EXAM'S' (You are not taking exam yet), and 'FEEDBACKS' (Add Feedbacks). The main content area is titled 'UT-I' and describes it as the Unit Test-I exam for MCA(FY). A timer at the top right shows 'Remaining Time : 09:17'. The exam consists of five questions:

- 1.) Which of these is a valid method signature in Java?
Options: public void methodName[][], void public methodName(), public void methodName(), public methodName()
- 2.) Which of these is not a valid access modifier in Java?
Options: public, private, protected, friendly
- 3.) Which of the following is a reserved keyword in Java?
Options: object, strictfp, main, start()
- 4.) Which of the following statements is true about a constructor in Java?
Options: A constructor must have a return type., A constructor is automatically called when an object is created., A constructor cannot have parameters., A constructor must be called explicitly.
- 5.) What is the default value of a boolean variable in Java?
Options: true, 0

The screenshot shows the results page for the same examination. The title bar and user information are identical. The left sidebar now shows 'TAKEN EXAM'S' (UT-I) and 'FEEDBACKS' (Add Feedbacks). The main content area is titled 'RESULT'S' and displays the user's answers and the correct answers for each question. The right side shows the final score and percentage.

Score	Percentage
5 / 5	100%

YOUR ANSWER'S

- 1.) Which of these is a valid method signature in Java?
Answer : `public void methodName()`
- 2.) Which of these is not a valid access modifier in Java?
Answer : `friendly`
- 3.) Which of the following is a reserved keyword in Java?
Answer : `strictfp`
- 4.) Which of the following statements is true about a constructor in Java?
Answer : A constructor is automatically called when an object is created.
- 5.) What is the default value of a boolean variable in Java?
Answer : `false`

The screenshot shows a web-based online examination system. A modal window titled "Submit Feedbacks" is open in the foreground. It contains a radio button group for "Feedback AS" with options "Shriram Magar" (selected) and "Anonymous". Below this is a text input field containing the text "Less time was provided for exam.". At the bottom of the modal are two buttons: "Close" and "Add Now". In the background, the main page displays a "RESULTS" section for a test named "UT-I". It shows a summary with a score of "5 / 5" and a "Percentage" of "100%". Below the summary, there are five questions listed under "YOUR ANSWER'S":

- 1.) Which of these is not a valid access modifier in Java?
Answer: public
- 2.) Which of these is not a valid access modifier in Java?
Answer: friendly
- 3.) Which of the following is a reserved keyword in Java?
Answer: strictfp
- 4.) Which of the following statements is true about a constructor in Java?
Answer: A constructor is automatically called when an object is created.
- 5.) What is the default value of a boolean variable in Java?
Answer: false

The screenshot shows a web-based attendance management system. The title bar says "My Attendance". On the right, there is a red "Logout" button. Below the title, it says "Attendance Records". A table lists attendance records:

Date	Day	Status	Time
Jan 9, 2025	Thursday	Late	-
Mar 19, 2025	Wednesday	Present	-
Mar 20, 2025	Thursday	Present	-

Below the table, four summary boxes are displayed: "2 PRESENT", "0 ABSENT", "1 LATE", and "3 TOTAL".

localhost:3000/userComplaint

! Submit Complaint

Logout

Success! Your complaint has been submitted.

Username
Enter your username

Class
Enter your class

Complaint Description
Please describe your complaint in detail...
Please be as specific as possible about your issue.

✓ Submitted!

localhost:3000/AboutUsSection.html

Meet Our Team

We are a group of passionate MCA students dedicated to creating innovative solutions and pushing the boundaries of technology.

Our Developers



Landge Prathmesh
MCA Student (SEM-II)
Full Stack Developer with expertise in JavaScript frameworks and cloud technologies.



Badgujar Chetan
MCA Student (SEM-II)
Backend specialist with strong skills in database design and server architecture.

Leave Application

Student Name
Enter your full name

Class
Enter your class and section

Start Date
dd-mm-yyyy

End Date
dd-mm-yyyy

Reason for Leave
Please provide details about your leave request...
Be specific about your reason for better consideration.

Submit

Check Leave Status

Enter Your Name
chetan

Check Status

Leave Applications

Class	Start Date	End Date	Reason	Status
MCA	undefined	undefined	I want leave for my wedding	Approved

The screenshot shows a web browser window with the title "DeepSeek" and the URL "localhost:3000/viewNotices". The page has a header with the text "College Notices" and a subtitle "Stay updated with the latest announcements and important information". Below the header is a search bar with the placeholder "Search notices..." and a dropdown menu labeled "Filter by Category" set to "All Categories". There are two identical news items displayed, each featuring a thumbnail of a person in a sweater, the title "College Notice", a brief description, and a date "April 9, 2025".

The screenshot shows a web browser window with the title "DeepSeek" and the URL "localhost:3000/admin.html". The page has a purple header with the text "EduTrack". Below the header is a form titled "Secure Access" with fields for "Admin ID" and "Security Key", both containing placeholder text "Enter admin username" and "Enter security key". A large purple button at the bottom right contains the text "AUTHENTICATE" with a lock icon.

Welcome to Admin Panel

Manage all system operations from one place

Manage Users
Add, edit, or delete user accounts and permissions
[Go](#)

Attendance System
View and manage student and staff attendance records
[Go](#)

Exam System
Create and manage examinations, questions, and results
[Go](#)

Grievance System
Review and respond to student complaints and feedback
[Go](#)

About Us
Information about the website and development team
[Go](#)

Leave Management
Approve or reject student leave applications
[Go](#)

Notice System
Create and publish important notices and announcements
[Go](#)

User Management

Add New User

Name	Roll No	Class	Email	Actions
chetan	02	MCA	chetan@gmail.com	Edit Delete
chetan	20	MBA	chta@gmail.com	Edit Delete
shweta	30	MBA	shweta@gmail.com	Edit Delete
harshada	36	MBA	harsha@gmail.com	Edit Delete
Sahil	38	MCA	sahil774@gmail.com	Edit Delete

The screenshot shows a web browser window titled "Admin Manage Attendance" at the URL "localhost:3000/adminAttendance.html". The page has a header with the title "Attendance Management" and a "Logout" button. Below the header are search and filter fields: "Search User" (text input), "Filter by Date" (date input), and "Filter by Status" (dropdown menu). A section titled "+ Add Attendance Record" contains fields for "User ID" (text input), "Date" (date input), and "Status" (dropdown menu), with a "Add Record" button. The main content area is titled "Attendance Records" and displays a table with the following data:

User ID	Name	Date	Status	Actions
6	N/A	2025-01-08T18:30:00.000Z	Late	<button>Edit</button> <button>Delete</button>
13	N/A	2025-02-17T18:30:00.000Z	Absent	<button>Edit</button> <button>Delete</button>
15	N/A	2025-02-24T18:30:00.000Z	Present	<button>Edit</button> <button>Delete</button>
11	N/A	2025-02-27T18:30:00.000Z	Late	<button>Edit</button> <button>Delete</button>
6	N/A	2025-03-18T18:30:00.000Z	Present	<button>Edit</button> <button>Delete</button>

The screenshot shows a web browser window titled "localhost:8022/adminpanel/admin/" with a dark theme. The main content is a red box containing the "Online Examination System Admin Login" title. Below it are two input fields: "Username" with the value "admin@gmail.com" and "Password" with the placeholder "Enter password". A green "Login" button is centered below the password field.

Admin Panel

DASHBOARDS

MANAGE COURSE

Course

MANAGE EXAM

Exam

MANAGE EXAMINEE

Add Examinee

Manage Examinee

RANKING

Ranking By Exam

REPORTS

Examinee Result

FEEDBACKS

All Feedbacks

Analytics Dashboard

This is an admin dashboard for managing Online Examination System.

Total Course 1

Total Exam 1

Total Examinee 46%

The dashboard features three main performance metrics: 'Total Course' (1), 'Total Exam' (1), and 'Total Examinee' (46%). Below these stats is a photograph of a desk setup with a laptop, smartphone, and various office supplies like pens, paper clips, and sticky notes.

Admin Panel

DASHBOARDS

MANAGE COURSE

Course

Add Course

Manage Course

MANAGE EXAM

Exam

MANAGE EXAMINEE

Add Examinee

Manage Examinee

RANKING

Ranking By Exam

REPORTS

Examinee Result

FEEDBACKS

All Feedbacks

MANAGE COURSE

COURSE LIST

Course Name	Status
MCA(FY)	Update Delete

The 'MANAGE COURSE' section displays a table titled 'COURSE LIST' with one entry: 'MCA(FY)' under the 'Course Name' column and two buttons ('Update' and 'Delete') under the 'Status' column. The background of the page features a photograph of a desk setup with a laptop, smartphone, and various office supplies.

localhost/oes2/adminpanel/admin/home.php?page=manage-exam Admin

Admin Panel

- DASHBOARDS
- MANAGE COURSE
 - Course
- MANAGE EXAM
 - Exam
- MANAGE EXAMINEE
 - Add Examinee
 - Manage Examinee
- RANKING
 - Ranking By Exam
- REPORTS
 - Examinee Result
- FEEDBACKS
 - All Feedbacks

MANAGE EXAM

EXAM LIST

Exam Title	Course	Description	Time limit	Display limit	Action
UT-I	MCA(FY)	This is the Unit Test-I exam for MCA(FY)	10	5	Manage Delete

localhost/oes2/adminpanel/admin/manage-exam.php?id=34 Admin

Admin Panel

- DASHBOARDS
- MANAGE COURSE
 - Course
- MANAGE EXAM
 - Exam
- MANAGE EXAMINEE
 - Add Examinee
 - Manage Examinee
- RANKING
 - Ranking By Exam
- REPORTS
 - Examinee Result
- FEEDBACKS
 - All Feedbacks

MANAGE EXAM

Add Question for UT-I

EXAM INFORMATION

Course: MCA(FY)

Exam Title: UT-I

Exam Description: This is the Unit Test-I exam for MCA(FY)

Exam Time limit: 10 Minutes

Display limit: 5

[Update](#)

EXAM QUESTION'S [Add Question](#)

Course Name	Action
1.) Which of these is a valid method signature in Java? A - public void methodName[]() B - public void methodName() C - void public methodName() D - public methodName()	Update Delete
2.) Which of the following statements is true about a constructor in Java? A - A constructor must have a return type. B - A constructor cannot have parameters. C - A constructor is automatically called when an object is created. D - A constructor must be called explicitly.	Update Delete
3.) What is the default value of a boolean variable in Java? A - true	Update

Admin Panel

MANAGE EXAMINEE

Fullname	Gender	Birthdate	Course	Year level	Email	Password	status
Shriram Magar	male	2000-03-13	MCA(FY)	first year	shri011@gmail.com	shri123	active
Soham Borate	male	2002-07-16	MCA(FY)	first year	soham011@gmail.com	soham123	active
Pankaj	male	2000-06-16	MCA(FY)	first year	pankaj@gmail.com	pankaj123	active
Mrunal Borate	male	2003-08-08	MCA(FY)	first year	mrunal@gmail.com	mruna	active
Chetan Badgujar	male	2003-07-20	MCA(FY)	first year	chetanb@gmail.com	chetan	active
Shivraj Deshmukh	male	2002-06-16	MCA(FY)	first year	shivd@gmail.com	shiv	active
Prathmesh Landge	male	2002-06-16	MCA(FY)	first year	prathm011@gmail.com	prathm123	active



Admin Panel

RANKING BY EXAM

Exam Title	Course	Description	Action
UT-I	MCA(FY)	This is the Unit Test-I exam for MCA(FY)	<button>View</button>



localhost/oes2/adminpanel/admin/home.php?page=examinee-result Admin

Admin Panel

DASHBOARDS

MANAGE COURSE

- Course

MANAGE EXAM

- Exam

MANAGE EXAMINEE

- Add Examinee
- Manage Examinee

RANKING

- Ranking By Exam

REPORTS

- Examinee Result

FEEDBACKS

- All Feedbacks

EXAMINEE RESULT

EXAMINEE RESULT

Fullname	Exam Name	Scores	Ratings	Action
Shriram Magar	UT-I	5 / 5	100%	Print Result
Soham Borate	UT-I	3 / 5	60%	Print Result
Pankaj	UT-I	3 / 5	60%	Print Result
Mrunal Borate	UT-I	4 / 5	80%	Print Result
Shivraj Deshmukh	UT-I	4 / 5	80%	Print Result
Prathmesh Landge	UT-I	2 / 5	40%	Print Result



localhost/oes2/adminpanel/admin/home.php?page=feedbacks Admin

Admin Panel

DASHBOARDS

MANAGE COURSE

- Course

MANAGE EXAM

- Exam

MANAGE EXAMINEE

- Add Examinee
- Manage Examinee

RANKING

- Ranking By Exam

REPORTS

- Examinee Result

FEEDBACKS

- All Feedbacks

Feedback by Examinees

FEEDBACK'S LIST

Examinee	Feedbacks	Date
Shriram Magar	Less time was provided for exam.	December 19, 2024
Pankaj	Questions was very difficult to answer	December 17, 2024
Shivraj Deshmukh	Good exam	November 26, 2024
Prathmesh Landge	Good Exam	November 26, 2024



localhost/oes2/adminpanel/admin/home.php?page=ranking-exam&exam_id=34

Admin Panel

- DASHBOARDS
- MANAGE COURSE
 - Course
- MANAGE EXAM
 - Exam
- MANAGE EXAMINEE
 - Add Examinee
 - Manage Examinee
- RANKING
 - Ranking By Exam
- REPORTS
 - Examinee Result
- FEEDBACKS
 - All Feedbacks

RANKING BY EXAM

Exam Name : UT-I

Examinee Fullname	Score / Over	Percentage
Prathmesh Landge	2 / 5	40%
Shivraj Deshmukh	4 / 5	80%
Chetan Badgujar	Not answer yet	Not answer yet
Mnual Borate	4 / 5	80%
Pankaj	3 / 5	60%
Soham Borate	3 / 5	60%
Shriram Magar	5 / 5	100%

localhost:3000/adminComplaints

User Complaints

Logged in

Search Complaints	Filter by Status
Search by username or complaint	All Complaints

Complaints List

admin MCA	Pending	April 9, 2025 at 1:31 AM	<button>Mark Resolved</button>	<button>Delete</button>
sdcdf zdfv	Pending	April 9, 2025 at 1:31 AM	<button>Mark Resolved</button>	<button>Delete</button>
chetan@gmail.com MBA	Pending	April 9, 2025 at 1:31 AM	<button>Mark Resolved</button>	<button>Delete</button>
Chetan MCA	Pending	April 9, 2025 at 1:31 AM	<button>Mark Resolved</button>	<button>Delete</button>

The screenshot shows a web browser window titled "DeepSeek" with the URL "localhost:3000/adminLeaveApplications". The page has a dark blue header with the title "Leave Applications" and a subtitle "Review and manage student leave requests". Below the header is a table with the following data:

Student Name	Class	Reason	Status	Actions
adnj	adkjn	asdkn	Approved	✓ Approve ✗ Decline
Chetan	MCA	I want leave for my wedding	Approved	✓ Approve ✗ Decline
Chetan Anil Badgujar	MCA	I want leave for my wedding	Approved	✓ Approve ✗ Decline

The screenshot shows a web browser window titled "DeepSeek" with the URL "localhost:3000/adminNotice". The page has a dark blue header with the title "Upload Notice" and a subtitle "Share important information with students and staff". Below the header is a form with the following fields:

Notice Image
Choose file...
Recommended size: 1200x800px or similar ratio

Notice Description
Enter detailed notice description here...

The screenshot shows the phpMyAdmin interface for the 'edutrack' database. The left sidebar lists databases and tables, with 'edutrack' selected. The main area displays the 'admin' table, which contains one row:

	id	username	password
	1	admin@edutrack.in	admin@DIMR

Below the table, there are buttons for Print, Copy to clipboard, Export, Display chart, and Create view.

The screenshot shows the phpMyAdmin interface for the 'edutrack' database. The left sidebar lists databases and tables, with 'edutrack' selected. The main area displays the 'users' table, which contains 11 rows of student information:

	id	name	rollno	class	email	password
	6	chetan	02	MCA	chetan@gmail.com	chetan@123
	11	chetan	20	MBA	chta@gmail.com	chetan@123
	12	shweta	30	MBA	shweta@gmail.com	shweta@123
	13	harshada	36	MBA	harsha@gmail.com	harsha@123
	15	Sahil	38	MCA	sahit774@gmail.com	
	21	jay	23	MCA	jay34@gmail.com	ajay2637474
	22	Pawan	33	MCA	pawan@gmail.com	pawan@123
	23	Chetan	2	MCA	chetan@gmail.com	chetan@123
	26	Pranav Kadam	20	MCA	pranav@gmail.com	pranav@123
	27	pranay Kadam	12	MCA	pranay123@gmail.com	pranay@123
	28	Harshada Mali	36	MCA	harsha@gamil.com	Pass@1234

Below the table, there are buttons for Print, Copy to clipboard, Export, Display chart, and Create view.

The screenshot shows the phpMyAdmin interface for the 'edutrack' database. The left sidebar lists various databases and tables, including 'attendance'. The main area displays the contents of the 'attendance' table.

Table: attendance

	id	user_id	date	status
<input type="checkbox"/>	5	6	2025-01-09	Late
<input type="checkbox"/>	6	13	2025-02-18	Absent
<input type="checkbox"/>	7	15	2025-02-25	Present
<input type="checkbox"/>	8	11	2025-02-28	Late
<input type="checkbox"/>	9	6	2025-03-19	Present
<input type="checkbox"/>	10	6	2025-03-20	Present

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

The screenshot shows the phpMyAdmin interface for the 'edutrack' database. The left sidebar lists various databases and tables, including 'complaints'. The main area displays the contents of the 'complaints' table.

Table: complaints

	id	username	user_class	description
<input type="checkbox"/>	1	admin	MCA	adsin
<input type="checkbox"/>	2	sdcdf	zdfv	szvzdfbfvfbfb
<input type="checkbox"/>	3	chetan@gmail.com	MBA	Having an issue with timing of college
<input type="checkbox"/>	4	Chetan	MCA	Want preparation leaves for final exam

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

The screenshot shows the phpMyAdmin interface for the 'edutrack' database. The left sidebar lists various databases and tables, including 'New', 'edutrack', 'admin', 'attendance', 'complaints', 'leave_applications', 'notices', 'users', 'exam', 'information_schema', 'mysql', 'performance_schema', 'phpmyadmin', 'test', and 'user_registration'. The current table being viewed is 'leave_applications'. The table structure includes columns: id, student_name, student_class, reason, and status. There are three rows displayed:

	id	student_name	student_class	reason	status
<input type="checkbox"/>	1	adnj	adkjn	asdkn	Approved
<input type="checkbox"/>	2	Cheitan	MCA	I want leave for my wedding	Approved
<input type="checkbox"/>	3	Cheitan Anil Badgujar	MCA	I want leave for my wedding	Approved

Below the table, there are buttons for 'Edit', 'Copy', 'Delete', 'Check all', and 'With selected:'. The 'Query results operations' section contains links for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'.

The screenshot shows the phpMyAdmin interface for the 'edutrack' database. The left sidebar lists various databases and tables, including 'New', 'edutrack', 'admin', 'attendance', 'complaints', 'leave_applications', 'notices', 'users', 'exam', 'information_schema', 'mysql', 'performance_schema', 'phpmyadmin', 'test', and 'user_registration'. The current table being viewed is 'notices'. The table structure includes columns: id, image_path, and description. There are two rows displayed:

	id	image_path	description
<input type="checkbox"/>	1	uploads\3bc16391ce050ecf70e3dccef0d3e9e2	This person is going to visit the institute tomorrow...
<input type="checkbox"/>	2	uploads\bff113f9644504b447d0e9495cb296eec	Search for this person in Institute

Below the table, there are buttons for 'Edit', 'Copy', 'Delete', 'Check all', and 'With selected:'. The 'Query results operations' section contains links for 'Print', 'Copy to clipboard', 'Export', 'Display chart', and 'Create view'.

The screenshot shows the phpMyAdmin interface for the 'exam' database. The left sidebar lists various tables under the 'exam' schema, including 'admin_acc', 'course_tbl', 'examinee_tbl', 'exam_answers', 'exam_attempt', 'exam_question_tbl', 'exam_tbl', and 'feedbacks_tbl'. The current table being viewed is 'admin_acc'. The table structure has columns: admin_id, admin_user, and admin_pass. There is one record displayed: admin_id 1, admin_user admin@011, and admin_pass admin@DIMR.

admin_id	admin_user	admin_pass
1	admin@011	admin@DIMR

The screenshot shows the phpMyAdmin interface for the 'exam' database, specifically viewing the 'course_tbl' table. The table structure has columns: cou_id, cou_name, and cou_created. Two records are listed: cou_id 66 (MCA, 2025-03-18 19:57:25) and cou_id 67 (MBA, 2025-03-18 19:57:38).

cou_id	cou_name	cou_created
66	MCA	2025-03-18 19:57:25
67	MBA	2025-03-18 19:57:38

localhost/phpmyadmin/index.php?route=/sql&pos=0&db=exam&table=examinee_tbl

phpMyAdmin

Showing rows 0 - 2 (3 total, Query took 0.0004 seconds.)

SELECT * FROM `examinee_tbl`

Profile [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

	exmne_id	exmne_fullname	exmne_course	exmne_gender	exmne_birthdate	exmne_year_level	exmne_email	exmne_password	exmne_status
<input type="checkbox"/>	11	Pawan Raj	66	male	2025-03-02	first year	pawan@gmail.com	Pawan@123	active
<input type="checkbox"/>	12	Prathmesh Landge	66	male	2002-06-16	first year	prathm@gmail.com	prathm@123	active
<input type="checkbox"/>	14	Chetan Badgujar	66	male	2002-06-22	first year	chetan@gmail.com	chetan@123	active

Check all With selected: Edit Copy Delete Export

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Label: Let every user access this bookmark

Bookmark this SQL query

Console

localhost/phpmyadmin/index.php?route=/sql&pos=0&db=exam&table=exam_answers

phpMyAdmin

Showing rows 0 - 8 (9 total, Query took 0.0004 seconds.)

SELECT * FROM `exam_answers`

Profile [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

Extra options

	exans_id	axmne_id	exam_id	quest_id	exans_answer	exans_status	exans_created
<input type="checkbox"/>	328	10	27	38	abstract	new	2025-03-22 09:03:33
<input type="checkbox"/>	329	10	27	40	James Gosling	new	2025-03-22 09:03:33
<input type="checkbox"/>	330	10	27	39	Local variables are not initialized by default	new	2025-03-22 09:03:33
<input type="checkbox"/>	331	12	27	38	abstract	new	2025-03-22 09:07:59
<input type="checkbox"/>	332	12	27	40	Dennis Ritchie	new	2025-03-22 09:07:59
<input type="checkbox"/>	333	12	27	39	Local variables are not initialized by default	new	2025-03-22 09:07:59
<input type="checkbox"/>	334	14	27	41	Oracle	new	2025-03-22 10:00:47
<input type="checkbox"/>	335	14	27	39	Local variables are not initialized by default	new	2025-03-22 10:00:47
<input type="checkbox"/>	336	14	27	38	transient	new	2025-03-22 10:00:47

Check all With selected: Edit Copy Delete Export

Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view

Console

The screenshot shows the phpMyAdmin interface for the 'exam' database. The left sidebar lists various tables under the 'exam' schema, including 'exam_attempt'. The main panel displays the contents of the 'exam_attempt' table. The table has columns: examat_id, exmne_id, exam_id, and examat_status. Three rows are present:

examat_id	exmne_id	exam_id	examat_status
58	10	27	used
59	12	27	used
60	14	27	used

Below the table, there are buttons for Edit, Copy, Delete, and Export.

The screenshot shows the phpMyAdmin interface for the 'exam' database. The left sidebar lists various tables under the 'exam' schema, including 'exam_question_tbl'. The main panel displays the contents of the 'exam_question_tbl' table. The table has columns: eqt_id, exam_id, exam_question, exam_ch1, exam_ch2, exam_ch3, exam_ch4, exam_answer, and exam_status. Three rows are present:

eqt_id	exam_id	exam_question	exam_ch1	exam_ch2	exam_ch3	exam_ch4	exam_answer	exam_status
38	27	Which of the following is NOT a valid Java keyword.	abstract	volatile	sizeof	transient	sizeof	active
39	27	What is the default value of a local variable in ...	0	null	Depends on the data type	Local variables are not initialized by default	Local variables are not initialized by default	active
41	27	Which organization developed Java?	Apple	Sun Microsystem	Oracle	Microsoft	Sun Microsystem	active

Below the table, there are buttons for Edit, Copy, Delete, and Export.

The screenshot shows the phpMyAdmin interface for the 'exam' database. The left sidebar lists various databases and tables, including 'exam' and its associated tables like 'exam_answers', 'exam_attempt', and 'exam_question'. The main panel displays the 'exam_tbl' table with one row of data:

ex_id	cou_id	ex_title	ex_time_limit	ex_questlimit_display	ex_description	ex_created
27	66	MCA FY UTI	10	5	This is the unit test I of MCA(FY)	2025-03-18 19:59:00

The screenshot shows the phpMyAdmin interface for the 'exam' database. The left sidebar lists various databases and tables, including 'exam' and its associated tables like 'exam_answers', 'exam_attempt', and 'feedbacks'. The main panel displays the 'feedbacks_tbl' table with one row of data:

fb_id	exmne_id	fb_exmne_as	fb_feedbacks	fb_date
11	10	Chetan Badgugar	The questions were very difficult.	March 22, 2025

4.3 Sample Project Code

Server.js

```
const express = require("express");
const bodyParser = require("body-parser");
const mysql = require("mysql");
const path = require("path");
const session = require("express-session");
const multer = require("multer");
const upload = multer({ dest: "uploads/" }); // Configuring file upload destination

const app = express();
const port = 3000;

app.use(bodyParser.json());
app.use(session({
    secret: 'your_secret_key',
    resave: false,
    saveUninitialized: true,
    cookie: { maxAge: 60000 }
}));

// Serve static files from the "public" directory
app.use(express.static(path.join(__dirname, "public")));
app.use("/uploads", express.static("uploads"));

// Database connection
const db = mysql.createConnection({
    host: "localhost",
    user: "root",
    password: ""
});
```

```

        database: "EduTrack"
    });

db.connect((err) => {
    if (err) throw err;
    console.log("Connected to database");
});

// Register endpoint
app.post("/register", (req, res) => {
    const { name, rollno, class: className, email, password } = req.body;
    const sql = "INSERT INTO users (name, rollno, class, email, password) VALUES (?, ?, ?, ?, ?)";
    db.query(sql, [name, rollno, className, email, password], (err, result) => {
        if (err) {
            console.error(err);
            res.status(500).send("Registration failed");
        } else {
            res.status(200).send("Registration successful");
        }
    });
});

// Login endpoint
app.post("/login", (req, res) => {
    const { username, password } = req.body;
    const sql = "SELECT * FROM users WHERE email = ? AND password = ?";
    db.query(sql, [username, password], (err, results) => {
        if (err) {
            console.error(err);
            res.status(500).send("Login failed");
        } else if (results.length > 0) {

```

```

    req.session.user = results[0];
    res.status(200).json({ success: true, name: results[0].name });
} else {
    res.status(200).json({ success: false });
}
});

});

// Admin login endpoint
app.post("/adminLogin", (req, res) => {
    const { username, password } = req.body;
    const sql = "SELECT * FROM admin WHERE username = ? AND password = ?";
    db.query(sql, [username, password], (err, results) => {
        if (err) {
            console.error(err);
            res.status(500).send("Login failed");
        } else if (results.length > 0) {
            res.status(200).json({ success: true });
        } else {
            res.status(200).json({ success: false });
        }
    });
});

// Logout endpoint
app.post("/logout", (req, res) => {
    req.session.destroy((err) => {
        if (err) {
            console.error(err);
            res.status(500).send("Logout failed");
        } else {

```

```

        res.status(200).send("Logged out successfully");

    }

});

});

// Middleware to check if the user is authenticated

function isAuthenticated(req, res, next) {
    if (req.session.user) {
        next();
    } else {
        res.redirect("/login");
    }
}

// Endpoint to add an attendance record

app.post("/addAttendance", (req, res) => {
    const { user_id, date, status } = req.body;
    const sql = "INSERT INTO attendance (user_id, date, status) VALUES (?, ?, ?)";
    db.query(sql, [user_id, date, status], (err, result) => {
        if (err) {
            console.error(err);
            res.status(500).send("Failed to add attendance record");
        } else {
            res.status(200).send("Attendance record added successfully");
        }
    });
});

// Endpoint to update an attendance record

```

```
app.put("/updateAttendance/:id", (req, res) => {
  const attendanceId = req.params.id;
  const { user_id, date, status } = req.body;
  const sql = "UPDATE attendance SET user_id = ?, date = ?, status = ? WHERE id = ?";
  db.query(sql, [user_id, date, status, attendanceId], (err, result) => {
    if (err) {
      console.error(err);
      res.status(500).send("Failed to update attendance record");
    } else {
      res.status(200).send("Attendance record updated successfully");
    }
  });
});
```

// Endpoint to delete an attendance record

```
app.delete("/deleteAttendance/:id", (req, res) => {
  const attendanceId = req.params.id;
  const sql = "DELETE FROM attendance WHERE id = ?";
  db.query(sql, [attendanceId], (err, result) => {
    if (err) {
      console.error(err);
      res.status(500).send("Failed to delete attendance record");
    } else {
      res.status(200).send("Attendance record deleted successfully");
    }
  });
});
```

//

```

// Endpoint to fetch all attendance records
app.get("/attendance", (req, res) => {
  const sql = "SELECT * FROM attendance";
  db.query(sql, (err, results) => {
    if (err) {
      console.error(err);
      res.status(500).send("Failed to fetch attendance records");
    } else {
      res.status(200).json(results);
    }
  });
});

// Endpoint to fetch attendance records for a specific user
app.get("/attendance/:userId", (req, res) => {
  const userId = req.params.userId;
  const sql = "SELECT * FROM attendance WHERE user_id = ?";
  db.query(sql, [userId], (err, results) => {
    if (err) {
      console.error(err);
      res.status(500).send("Failed to fetch attendance records");
    } else {
      res.status(200).json(results);
    }
  });
});

app.get("/attendance/:userId", (req, res) => {
  const userId = req.params.userId;
  const sql = "SELECT * FROM attendance WHERE user_id = ?";
  db.query(sql, [userId], (err, results) => {

```

```
if (err) {  
    console.error(err);  
    res.status(500).send("Failed to fetch attendance records");  
} else {  
    res.status(200).json(results);  
}  
});  
});
```

4.4 Limitations of EduTrack

While EduTrack offers a comprehensive solution for academic activity management, it does have certain limitations that should be considered. One key constraint is its dependency on stable internet connectivity, as a web-based platform. In regions with poor or unreliable internet access, users may face difficulties accessing real-time updates and features, potentially disrupting their workflow. Additionally, while the system is designed to be user-friendly, there may still be a learning curve for less tech-savvy individuals, particularly older educators or administrators who are accustomed to traditional methods. Training and support would be necessary to ensure smooth adoption across all user groups.

Another limitation is the potential challenge of integrating EduTrack with existing school or university management systems. Many educational institutions already use legacy software for student information systems, learning management, or financial operations. Without proper API support or customization, data synchronization between EduTrack and these systems could be problematic, leading to manual data entry and possible inconsistencies. Furthermore, while the platform offers robust features for tracking academic activities, it may lack advanced functionalities like AI-driven personalized learning recommendations or predictive analytics, which could further enhance its value.

Security and privacy concerns also present notable limitations. Although EduTrack implements role-based access and database security measures, storing sensitive student and institutional data online always carries inherent risks. Cybersecurity threats such as data breaches or unauthorized access could compromise confidential information if proper safeguards are not continuously maintained. Lastly, the scalability of the system might be tested in larger institutions with thousands of users, as high traffic volumes could impact performance without adequate server infrastructure. Addressing these limitations in future updates—through offline functionality, enhanced integrations, advanced features, and stronger security protocols—would further solidify EduTrack's position as a leading educational management tool.

4.5 Bibliography

BIBLIOGRAPHY

A bibliography provides a list of the sources consulted during the development of EduTrack project. Below are key references that were instrumental in guiding the project:

Websites Visited:

- NodeJS Documentation:

<https://nodejs.org/api/all.html>

- Bootstrap (for managing PHP dependencies):

<https://getbootstrap.com/docs/4.1/getting-started/introduction>

- Apache Server Documentation:

<https://httpd.apache.org/docs>

- XAMPP Tutorial:

<https://www.javatpoint.com/xampp>

- CSS Documentation:

<https://developer.mozilla.org/en-us/docs/Web/CSS>

Book referred:

“Jeff Dickey” “Node.js: Novice to Ninja” “Packt” 2019