A Mini Project Synopsis on

Efficient task management system for students

S.E. – Computer Science and Engineering-Data Science

Submitted By

Balkrishna Yadav   22107050

Adarsh Singh   22107009

Ayush Sharma   22107028

Under The Guidance Of

Prof. Aavani Nair

DEPARTMENT OF CSE-DATA SCIENCE

A.P.SHAH INSTITUTE OF TECHNOLOGY

G.B. Road, Kasarvadavali, Thane (W), Mumbai-400615

UNIVERSITY OF MUMBAI

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CERTIFICATE

This to certify that the Mini Project report on Efficient Task Management system for student using Recommendations has been submitted by Balkrishna Yadav(21107050), Ayush Sharma(21107028) and Adarsh Singh(22207009) who are a Bonafide students of A. P. Shah Institute of Technology, Thane, Mumbai, as a partial fullfilment of the requirement for the degree in Computer Science and Engineering(Data Science), during the academic year 2023-2024 in the satisfactory manner as per the curriculum laid down by University of Mumbai.

Prof. Aavani Nair

Guide

Prof. Anagha Aher   Dr. Uttam D.Kolekar

Head of Department CSE-Data Science   Principal

External Examiner(s)

1.

2.

Place: A. P. Shah Institute of Technology,

Thane Date:

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Chapter 1

Introduction

Welcome to the Efficient Task Management System for Students Project, an innovative endeavor poised to transform the way students manage their academic responsibilities. At its core, this project is committed to streamlining and enriching the task management experience for students in today's fast-paced educational landscape. In a world where academic demands continue to grow, this platform endeavors to empower students with a solution that simplifies their academic journey. It aims to provide a comprehensive system that allows students to efficiently organize their tasks, meet deadlines, and excel in their studies, ultimately promoting a balanced and stress-free academic life.

Our mission is clear: to revolutionize the way students manage their academic tasks, providing a dynamic and effective system that simplifies their educational journey. Recognizing the growing demands of modern education, we aim to maximize the potential of students by offering an efficient task management system tailored to their unique needs. This project is dedicated to creating an ecosystem where students can effortlessly organize their assignments, meet deadlines, and excel in their studies while maintaining a balanced and stress-free academic life.

Our primary goal is to streamline the process of task management for students. We aspire to provide a user-friendly platform that makes it easy for students to plan, track, and accomplish their academic assignments with ease. Simultaneously, students will gain a space to showcase their skills and talents, ensuring they receive the support and tools they need to succeed in their educational endeavors.

1.1 Purpose

The essence of the Efficient Task Management System for Students Project lies in its ambitious goal to establish a digital sanctuary for students seeking streamlined academic task management. It's a visionary platform meticulously designed to serve as a dynamic bridge connecting students with their academic responsibilities. For students, this means gaining access to a comprehensive solution that simplifies their educational journey and empowers them to excel in their studies. They can efficiently organize assignments, track progress, and maintain a harmonious balance between their academic and personal lives.

This project provides a user-friendly environment for students to effortlessly manage their tasks, meet deadlines, and thrive in today's fast-paced educational landscape. In a rapidly evolving digital age of learning, this initiative embodies accessibility, efficiency, and the ability to enhance students' academic experiences. It transcends the challenges of modern education, empowering students to navigate their academic responsibilities with ease. It's about unlocking the potential of an efficient task management system for students, creating a platform that empowers them to succeed in a dynamically changing educational world.

1.2 Objectives

The objectives of our Efficient Task Management System for Students Project underscore our unwavering commitment to delivering a top-tier academic task management platform that caters to the unique needs and aspirations of students. These objectives represent the cornerstones of our project, each designed to enhance the academic journey of students and empower them to excel in their studies. By focusing on these key objectives, we aim to provide students with a comprehensive and user-friendly system that simplifies the management of their academic tasks, facilitates efficient time management, and promotes a harmonious balance between their educational commitments and personal life. Our dedication lies in revolutionizing the way students handle their academic responsibilities, ensuring they have the tools and support needed for academic success in today's dynamic educational landscape.

Through these objectives, we aim to create a digital environment that not only streamlines the task management process but also fosters a sense of empowerment and control in students. We understand that the academic journey can be demanding, and our project seeks to alleviate that pressure by providing personalized task recommendations and efficient management tools. In doing so, we aspire to contribute to the academic success of students, allowing them to focus on their learning, personal growth, and well-being. Our commitment is to offer a comprehensive solution that adapts to the ever-evolving needs of students, ultimately transforming their educational experience into one that is more manageable, enjoyable, and rewarding.

1.3 Scope

The scope of the Efficient Task Management System for Students Project encompasses a wide range of features and functionalities aimed at simplifying and enhancing the academic task management process for students. This project includes:

- Task Organization and Prioritization: The system will allow students to input, categorize, and prioritize their academic tasks, ensuring they can effectively manage assignments, exams, and deadlines.

- Progress Tracking: Students will be able to monitor the status of their tasks, track their academic progress, and receive reminders for upcoming deadlines.

- Interactive Feedback Mechanism: User utilize feedback from students to continually improve the task management process, making it more attuned to individual needs.

- Customization Options: Students will have the flexibility to customize their task management preferences and criteria, allowing for a highly personalized experience.

- Secure Data Handling: Ensuring the privacy and security of student data will be a paramount concern.

- The scope of this project is to provide a comprehensive task management solution that adapts to the ever-changing demands of the academic world. Its primary focus is to empower students with the tools and resources they need to excel in their studies while promoting a balanced and stress-free educational experience.

- Maintaining Student List: The system will include features for maintaining a list of students, potentially including class or study group rosters, which can be beneficial for group project management and collaboration.

- Adding Tasks: The system will allow students to easily add new tasks to their academic workload, including details such as task name, description, due date, and priority level.

The expanded scope of the project encompasses a more comprehensive set of features, including task assignment and maintenance of student lists. These additions further enhance the system's capability to facilitate efficient task management for students and promote seamless collaboration when necessary.

Chapter 2
Problem Definition

Undoubtedly, the academic landscape presents a dynamic and increasingly crucial facet of students' lives. However, the existing inefficiencies and challenges often act as significant hurdles in achieving optimal academic performance. One of the primary issues is the fragmentation of the academic workload. This fragmentation arises from the plethora of subjects, assignments, and deadlines, each with its own unique set of requirements and expectations. For students, navigating this maze of academic responsibilities can be exceptionally time-consuming and overwhelming, leading to stress and missed opportunities for academic success.

Moreover, communication within the academic realm frequently relies on various external tools, such as emails, messaging apps, or offline planners. This reliance on multiple external platforms results in fragmented and inefficient academic organization, which can hinder students' ability to manage their academic workload effectively. It also impedes the establishment of a streamlined process for evaluating their academic progress and setting academic goals. Task management and deadline tracking can also be convoluted and lack transparency, often leading to missed assignments and academic stress. Organization issues, including disorganization, miscommunication, and time management challenges, are common due to the absence of a unified platform for efficient academic task management.

Furthermore, the dearth of comprehensive data and analytics further exacerbates these problems. Without access to meaningful insights, students are left in the dark when it comes to making informed decisions about task priorities, assignment completion, and effective study strategies. Addressing these issues through the development of an integrated platform designed for efficient academic task management is not just a desirable goal but a necessary one. Such a platform could streamline the process of managing academic tasks, simplify communication with teachers and peers, establish standardized evaluation mechanisms, and provide transparent progress tracking. Ultimately, this would lead to reduced academic stress, enhanced productivity, and a significantly improved academic experience for students, thus fostering growth and success in their educational journey.

Chapter 3
Proposed System

The proposed Efficient Task Management System for Students is a comprehensive solution meticulously designed to enhance the academic experience while promoting user efficiency. This system employs cutting-edge features to simplify task management for students and improve their academic journey.

Task Prioritization with Time and Date: The system enables students to categorize and prioritize their academic tasks by setting deadlines and due dates. This feature empowers students to manage their assignments efficiently, ensuring they allocate their time and efforts appropriately.

Due Date Management: To help students meet their deadlines, the system offers due date tracking and notifications, ensuring that they remain on top of their assignments and never miss important submission dates.

In-Progress Task Monitoring: Students can access a list of their in-progress tasks, providing a clear overview of ongoing academic responsibilities. This feature facilitates better organization and focus on the tasks at hand.

Completed Task Records: The system maintains a record of completed tasks, allowing students to review their achievements and keep a record of their academic progress over time. This feature offers valuable insights into their accomplishments.

This task management system employs state-of-the-art technologies and algorithms to create a user-centric, efficient, and secure academic environment for students. It simplifies the process of organizing and managing academic tasks, enhances time management, and provides transparency, ultimately leading to improved academic success and a more manageable educational experience for students.

3.1 Features and Functionality:

The development of the "Efficient Task Management System for Students" brings forth a sophisticated platform designed to revolutionize the academic journey of students. This system introduces a range of features tailored to enhance task management, prioritize

academic responsibilities, and streamline the educational experience. Each feature serves as a vital component of a comprehensive and user-friendly system that empowers students to excel in their studies while maintaining a balanced and stress-free academic life. In this discussion, we delve into the core features of this innovative platform, showcasing how it redefines the way students approach their academic responsibilities and paves the way for academic success.

Feature 1: User Authentication

A robust user authentication system is implemented to ensure that only authorized users can access their academic tasks. This feature uses a username and password combination for secure login, safeguarding the student's academic information and tasks.

Feature 2: Task Entry

Students can easily input and add tasks, assignments, exams, and other academic responsibilities into the system. This feature not only empowers students to manage their time effectively but also allows teachers to assign tasks directly to students for any academic-related work, aiding students in scheduling and organizing their academic commitments.

Feature 3: Task Overview

The task overview feature provides students with a comprehensive view of all the tasks assigned to them. This enables students to better manage their time by allowing them to prioritize tasks according to their preferences and deadlines. It offers a clear and organized display of academic responsibilities, helping students stay on top of their work and meet their goals effectively.

Feature 4: Task Progress Tracking

Students can efficiently track their tasks in progress, providing a real-time overview of their ongoing academic responsibilities. This feature helps students stay organized and informed about the status of their assignments, ensuring they can allocate their time effectively.

Feature 5: Completed Task Records

The system maintains a record of completed tasks, allowing students to review their past achievements and academic progress over time. This feature offers valuable insights into their accomplishments, helping students reflect on their academic journey and identify areas for improvement.

These additional features enhance the efficiency of the task management system, ensuring that students have a comprehensive toolset to stay on top of their academic responsibilities and make the most of their educational experience. accuracy. Additionally, we will uncover the intricate process of recommendation generation, which leverages both collaborative filtering and content-based filtering for optimal results.

3.2 Advantages:

The "Efficient Task Management System for Students" offers several advantages that can significantly enhance the academic experience and success of students:

◆ Enhanced Organization: The system enables students to stay organized by providing a structured platform for managing academic tasks, assignments, and deadlines. This reduces the risk of missing assignments or important dates.

◆ Improved Time Management: Students can prioritize tasks and set due dates, helping them effectively manage their time and allocate it according to the urgency and importance of their academic responsibilities.

◆ Streamlined Communication: The system can facilitate communication between students and teachers, allowing for efficient task assignment and clarification of academic requirements, thus fostering effective collaboration.

◆ Task Progress Tracking: Students can monitor the status of tasks in progress, ensuring they are aware of their ongoing academic commitments and allowing for better

◆ Transparency and Accountability: The system promotes transparency in academic tasks and assignments. Teachers can monitor the progress of students' tasks, and students can track their own performance, creating a sense of accountability.

◆ Reduced Academic Stress: With better organization and time management, students can reduce academic stress and anxiety, leading to improved overall well-being.

Chapter 4
Project Outcomes

The anticipated outcomes of implementing the "Efficient Task Management System for Students" are poised to significantly enhance the academic experience and success of students, as well as contribute positively to the educational ecosystem. Here's a breakdown of the expected project outcomes:

◆ Streamlined Academic Management: The system will streamline academic task management, allowing students to efficiently organize, prioritize, and track their assignments and responsibilities. This will reduce the stress and anxiety associated with academic workloads.

◆ Enhanced Time Management: Students will develop improved time management skills as they learn to allocate their time effectively and meet deadlines consistently. This newfound skill will serve them well not only in their academic pursuits but in life beyond the classroom.

◆ Improved Academic Performance: With better organization and time management, students can focus on their studies more effectively, leading to improved academic performance, higher grades, and overall academic success.

◆ Effective Communication: The system may facilitate communication between students and teachers, allowing for clearer task assignment and better understanding of academic requirements. This fosters more effective collaboration and support.

◆ Transparency and Accountability: Students will become more accountable for their academic tasks and progress, with teachers having the ability to monitor and provide guidance. This transparency encourages responsible academic behavior.

◆ Reduction in Academic Stress: By offering students a tool for efficient task management, the system will contribute to a reduction in academic stress and anxiety, promoting better overall well-being.

◆ Optimized Educational Experience: Students will enjoy a more streamlined and productive educational experience, enabling them to make the most of their learning opportunities and extracurricular activities.

In essence, the "Efficient Task Management System for Students" is expected to provide students with a comprehensive and user-friendly tool for academic task management, leading to improved academic success and a more balanced and manageable educational experience.

Chapter 5

Software Requirements

To develop the Efficient task management system for students project using MySQL with Java, you will need various software tools and technologies. Here is a list of essential software requirements:

5.1 Development Environment:

- a. Java Development Kit (JDK): A JDK is required for Java development. Choose the latest version compatible with your project's dependencies.

- b. Integrated Development Environment (IDE): Choose an IDE suitable for Java development. Popular options include:
  I. NetBeans

5.2. Backend Development:

- MySQL Database: Install and configure the MySQL Database Management System for storing and managing data. You can use MySQL Community Edition for open-source development.
- Database Connectivity: JDBC (Java Database Connectivity) drivers for MySQL to enable communication between the Java application and the database.

5.3. Frontend Development:

- Java:
  Use Java for structuring web pages, for styling, and for interactivity on the client-side.
- Front-end Frameworks: You may choose to use front-end frameworks like Angular, React, or Vue.js to build dynamic and responsive user interfaces.

Chapter 6
Project Design

The software design for the Efficient Task Management System for Students involves a structured and systematic approach to define the software's architecture and functionality, ensuring that it aligns seamlessly with the specific needs of students. This high-level design process serves as a blueprint for transforming abstract requirements into concrete data structures and functional components. The interface design plays a crucial role in determining how the software communicates internally, with external systems, and how it caters to user behaviors, with a primary focus on creating a user-friendly and efficient experience.

6.1 Page Layout:
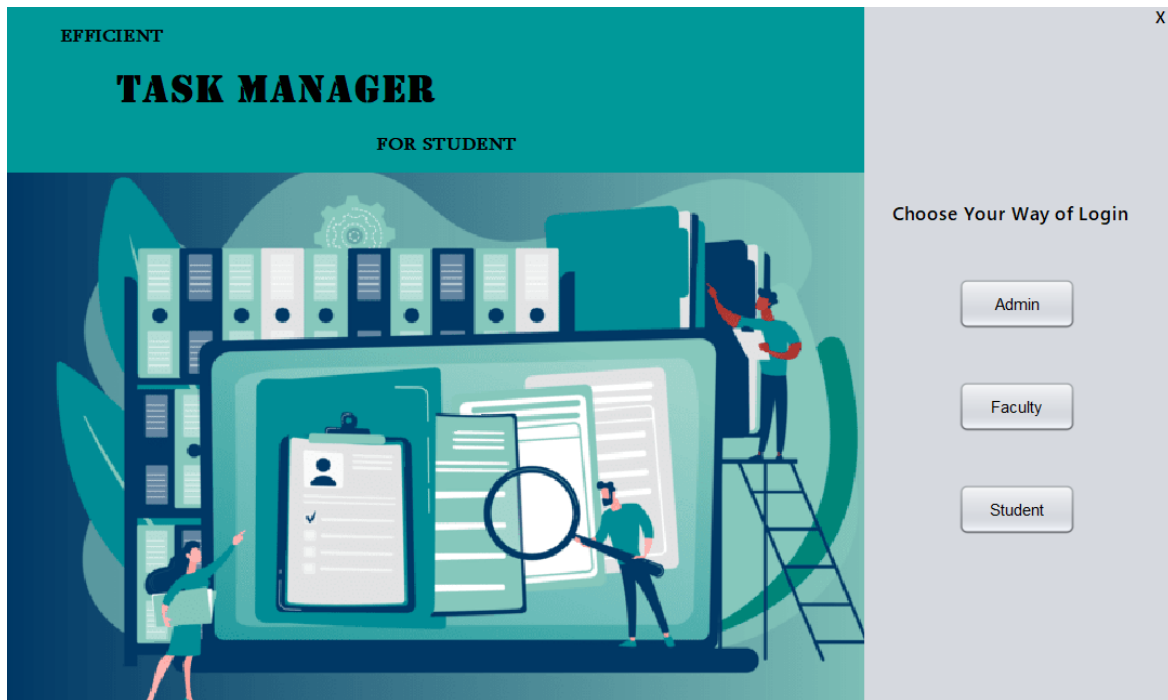
Figure 1: Welcome page for the efficient task manager for student where the user can select the user type
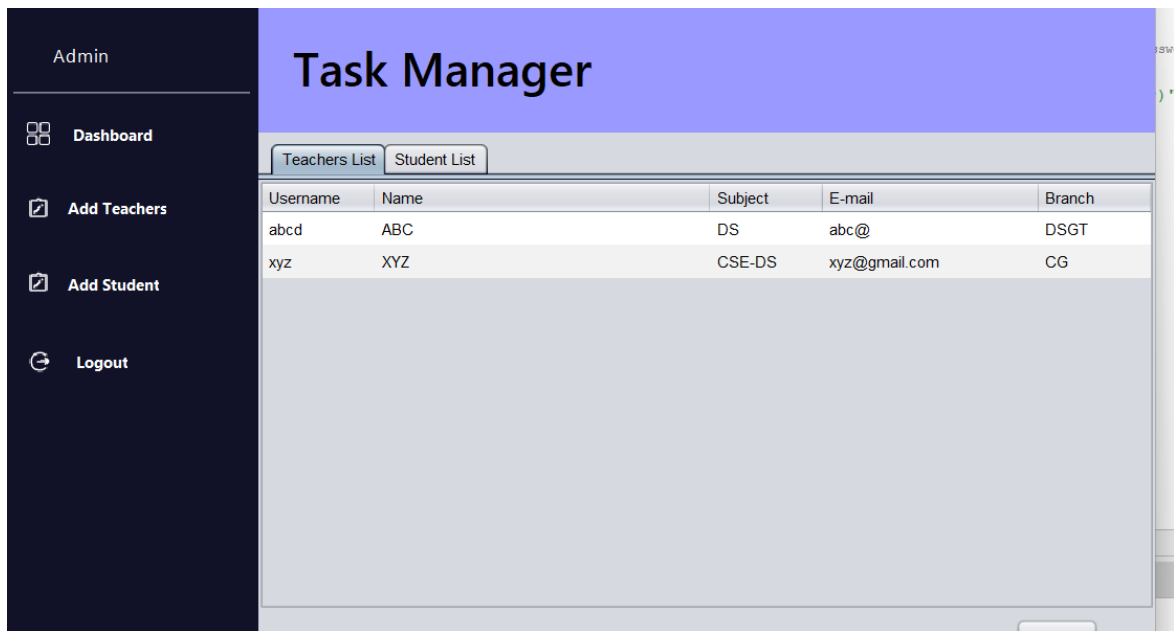
Figure 2: Admin Dashboard where the user can add the students as well the faculty in the list , Also admin will be able to provide the User ID and Initial Password for login.
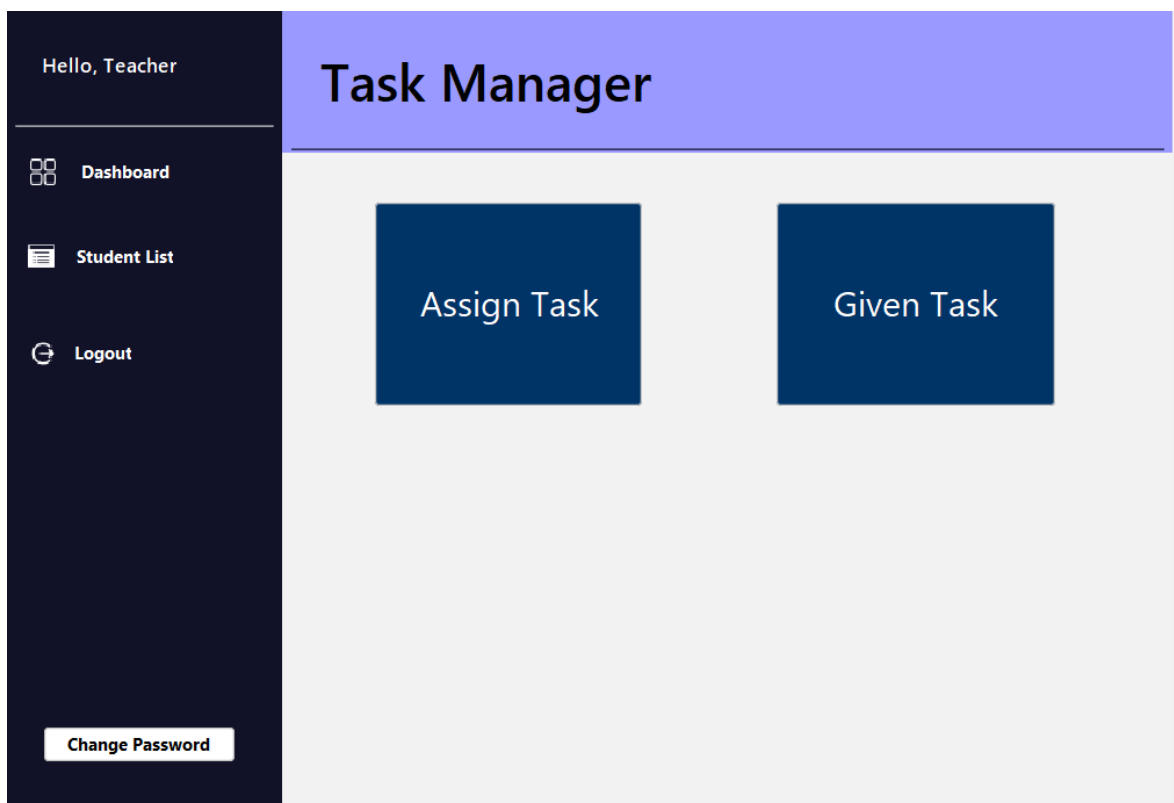
Figure 3: Teacher's Dashboard where the faculty can assign task to the students using the Assign Task , Also the faculty can use the given task option to take a overview of the tasks assigned to student , Faculty can also see the list of the students in His/Her batch under the student list .
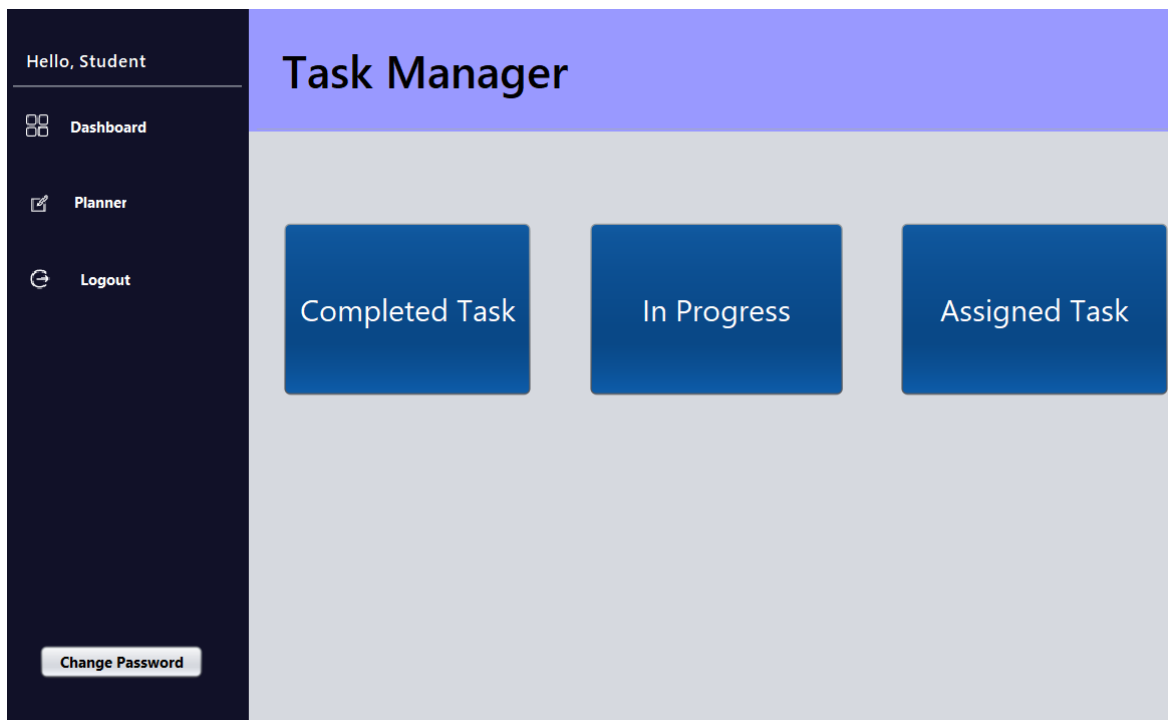
Figure 4: Student's dashboard board where the student can check His completed task under the completed task, Also the student's can see the tasks which are under progress in the in-progress section of the dashboard, Student can also see the tasks which are assigned by the faculty in assigned task.
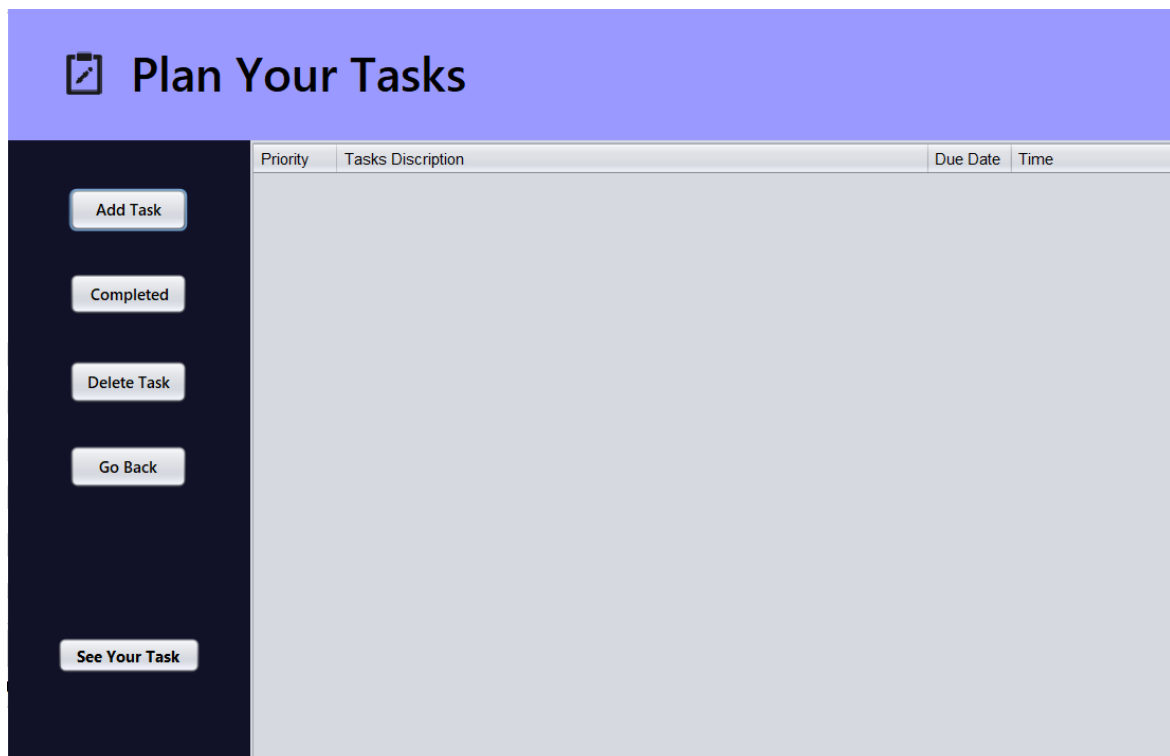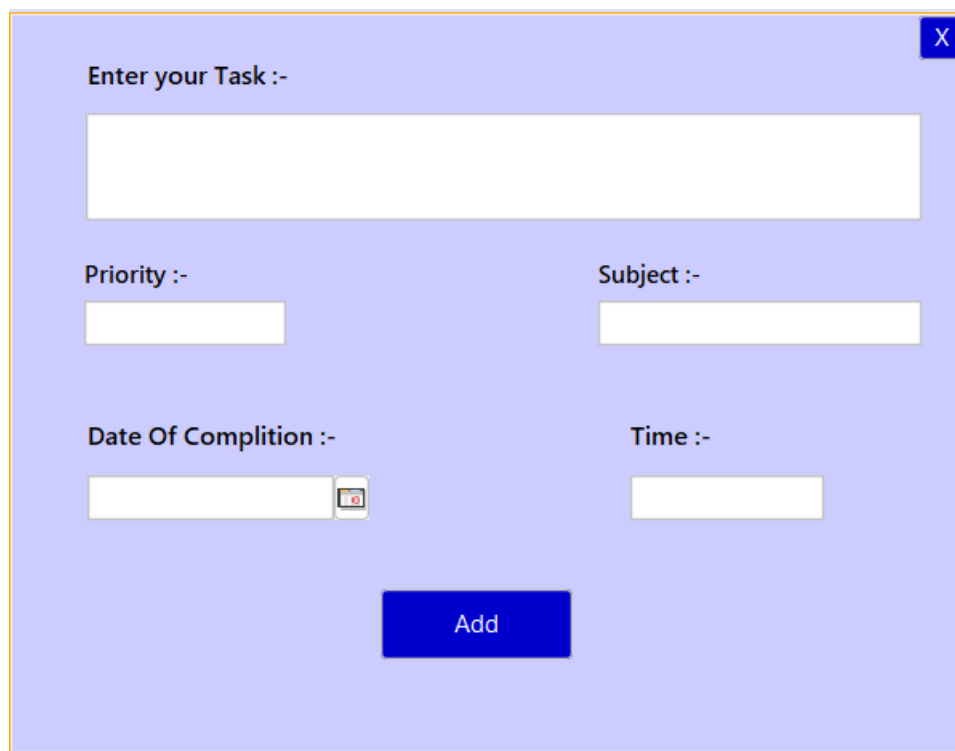
Figure 5: Planner feature available under student dashboard, so student can plan and assign task to himself also the user will be able to delete the tasks as well.

Figure 6: Add task option under the faculty dashboard so that the user can assign task along with the due date.

Figure 7: Completed Task window, so that the student can easily see the completed task

Chapter 7

Project Scheduling

In the context of the Efficient task management system for students , scheduling plays a vital role in organizing and managing the development process. The project schedule comprises a comprehensive list of milestones, tasks, and deliverables, serving as a roadmap for the project's execution. It outlines the timeline for task completion, allocation of resources and activities.

| Sr. No	Group Member	Time duration	Work to be done
1	Ayush Sharma Adarsh Singh Balkrishna Yadav	1st week of August	Group formation and Topic finalization. Identifying the scope and objectives of the Mini Project. Discussing the project topic with the help of a paper prototype.
		2nd week of August	Identifying the functionalities of the Mini Project. Designing the Graphical User Interface (GUI).
2	Ayush Sharma Adarsh Singh Balkrishna Yadav	3rd week of August	GUIs Connectivity.
3	Ayush Sharma Adarsh Singh Balkrishna Yadav	1 st week of September	Chat section and database connectivity with features
4	Ayush Sharma Adarsh Singh Balkrishna Yadav	4 th week of September	Integration of all modules and Report Writing.

GANTT CHART TEMPLATE
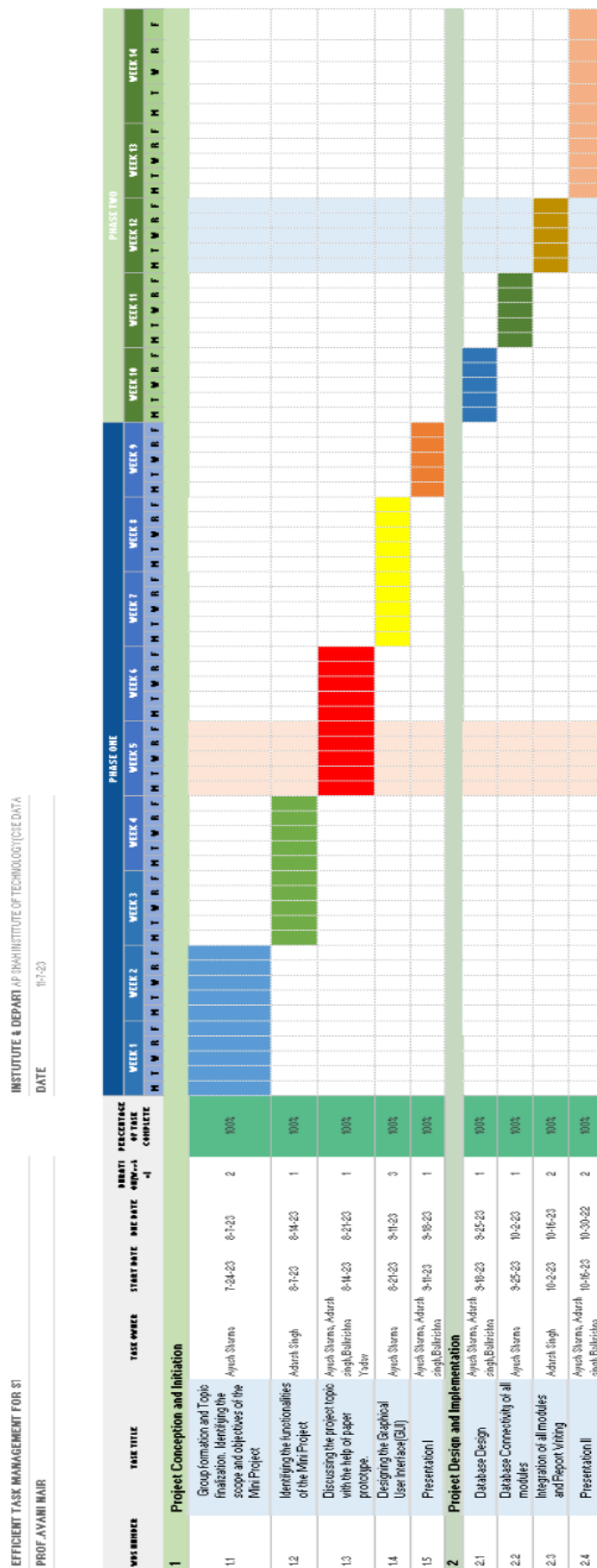
Figure 8 : Gantt Chart of Efficient task management system for students

To visualize this schedule, a Gantt chart is employed, providing a graphical representation of task durations, start and finish dates, and interactivity. Additionally, Gantt charts help illustrate the project's work breakdown structure and the relationships between activities, ensuring effective project management and progress tracking.

Here in the above figure, the rows of the chart contain the task titles such as the project conception and initialization as well as the project design and implementation which in subdivision contains the group formation, topic finalizing, prototype, GUI designing, backend implementation etc. The columns contain the duration of the task completed, percentage of work completed, number of weeks required to complete a particular task, the specific dates, the team members who contributed towards the completion of tasks

The detailed explanation of the Gantt chart is explained below: The project conception and initiation task were executed by the month end around 04/08/23. The task of initiation included many more sub-tasks such as group formation and topic finalization which was performed during the 1 week of project initialization. The group formed included 3 members Balkrishna yadav, Adarsh singh, Ayush Sharma and the finalized topic was Efficient task management system for students. Further, the upcoming week led to the task of identifying the scope and objectives of the mini projects.

The next sub-task was to identify the functionalities of the project which was done by the two members Meet Adarsh singh, Ayush Sharma in a span of one week from 07/08/23 to 14/08/23. The discussion of the project topic with the help of a paper prototype was completed with equal contribution from all the group members within one week from 15/08/23-19/08/23.

The next task, Database Connectivity and functionalities of modules in the app were done by Balkrishna yadav, Adarsh singh, Ayush Sharma from 8/09/23 to 19/09/23. The Integration of all modules, user interfaces and report writing was completed by Balkrishna yadav, Adarsh singh, with Ayush Sharma from 19/09/23 to 28/09/23. The preparation of final presentation II work was equally shared by all the group members in the time of 2 weeks from 2/10/23 to 14/10/23.

Chapter 8
Conclusion

In conclusion, The "Efficient Task Management System for Students" project has reached its peak , and its impact on the academic lives of students is poised to be profound. Throughout this project, we have endeavored to create a comprehensive and interactive resource that equips students with the skills and knowledge they need to thrive academically while maintaining a balanced and fulfilling life. As we conclude this project, it is essential to reflect on the journey and the significance of the outcomes achieved.

Empowerment Through Knowledge: The heart of this project lies in empowering students with knowledge. We have explored a multitude of strategies, techniques, and tools that enable students to take control of their academic responsibilities. From setting clear goals and effective time management to the utilization of digital task management apps, students now have the resources they need to excel in their studies.

Reducing Stress, Enhancing Well-being: Academic life can be demanding, and stress is often an unwelcome companion. Through this project, we have provided students with stress reduction techniques and self-care practices, helping them preserve their mental and emotional well-being as they navigate their educational journeys.

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