

Tuition Management System

Project Report



Sri Lanka Institute of Information Technology
Information Technology Project (IT2080)

Batch ID – Y2S2- Group 6.2

Group ID - ITP_WD_B06_G12

Name	Registration No
Thilakasiri P. K. V. C.	IT21244698
Pathirana K. P. V.	IT21244766
Soysa W. M. Y.	IT21238512
Hasanka G. S.	IT21233876
Jasingha S. D.	IT21327476
Silva R. L. G.	IT21232954
Gamlath W. A. V. K.	IT21211928
Bandara A. M. B. S.	IT21229398

May 2023

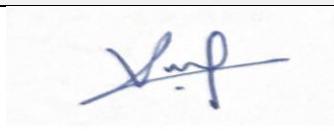
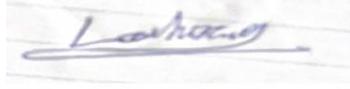
Declaration

This project report is our original work and the content is not plagiarized from any other resource. References for all the content taken from external resources are correctly cited. To the best of our knowledge, this report does not contain any material published or written by third parties, except as acknowledged in the text.

Project Details:

Project Title	Tuition Management System
Project ID	

Authors:

Author SID	Author name	Signature
IT21244698	Thilakasiri P. K. V. C.	
IT21244766	Pathirana K. P. V.	
IT21238512	Soysa W. M. Y.	
IT21233876	Hasanka G. S.	
IT21327476	Jasingha S. D.	
IT21232954	Silva R. L. G.	
IT21211928	Gamlath W. A. V. K.	
IT21229398	Bandara A. M. B. S.	

GitHub link: https://github.com/SLIITITP/y2_s2_wd_it_01-itp_wd_b06_g12.git

Abstract

This project document outlines the development and implementation of the Sysro Tuition Management System, a comprehensive web-based application designed to address the challenges faced by tuition centers in managing various aspects of their operations. Traditional manual methods of record-keeping, communication, and administrative tasks often lead to inefficiencies, inaccuracies, and limited accessibility, impacting the overall learning experience for students and causing additional stress for administrators, teachers, and parents.

The Sysro Tuition Management System leverages the power of technology to automate and simplify daily operations, providing a streamlined solution for tuition center administrators, teachers, students, and parents. By utilizing the MERN stack, which includes MongoDB, Express.js, React, and Node.js, the system ensures scalability, flexibility, and a seamless user experience.

The system encompasses a range of essential functions, including student management, teacher management, parent management, admin management, class management, subject management, exam management, fee management, expense management, and attendance management. Each function is designed to improve efficiency, accuracy, and accessibility, enabling effective communication and transparent information exchange among stakeholders.

With the Sysro Tuition Management System, tuition centers can bid farewell to manual paperwork, time-consuming processes, and potential data inaccuracies. The system offers tailored dashboards for administrators, teachers, students, and parents, providing easy access to relevant information and empowering users to track student performance, manage classes, schedules, exams, fees, and expenses more effectively.

By implementing the Sysro Tuition Management System, tuition centers can enhance their overall management capabilities, streamline administrative tasks, improve communication, and ultimately provide a better learning experience for students. The system's user-friendly interface and comprehensive features ensure that tuition centers can efficiently organize and manage their operations, fostering a conducive environment for academic growth and development.

Acknowledgement

The completion of this document represents the culmination of our second-year second-semester project for the Information Technology Project (ITP) module. As members of the ITP_WD_B06_G12 group, we would like to express our sincerest appreciation to all those who provided guidance and support throughout the successful completion of our project.

We extend our heartfelt gratitude to the lecturers and instructors associated with the Information Technology Project module, especially Ms. Vindhya Kalapuge. Their invaluable advice and encouragement have been instrumental in empowering us from the outset to accomplish this project. Their unwavering support has greatly facilitated our ability to meet the project's requirements successfully.

Additionally, we would like to express our deepest gratitude to all the group members who dedicated their utmost effort and commitment to ensure the project's successful completion. This website stands as a testament to their unwavering dedication and hard work throughout the semester.

Once again, we extend our heartfelt thanks to everyone who contributed to the realization of this project, ensuring its successful execution and timely completion.

Table of Contents

Declaration	2
Abstract	3
Acknowledgement	4
Table of Contents	5
List of Tables	7
List of Abbreviations	Error! Bookmark not defined.
Chapter 1 – Introduction	9
1.1 Background	9
1.2 Problem and motivation	10
1.3 Literature review	12
1.4 Aim and Objectives.....	15
1.4.1 Aim.....	15
1.4.2 Objectives.....	15
1.5 System Overview	16
1.6 Methodology	22
1.8 Link to the Git repo https://github.com/SLIITITP/y2_s2_wd_it_01-itp_wd_b06_g12	24
Chapter 2 - Requirements	25
2.1 Stakeholder analysis.....	25
2.2 Requirements analysis.....	26
2.2.1 Student Management.....	26
2.2.2 Teacher Management.....	30
2.2.3 Parent Management.....	34
2.2.4 Admin Management.....	38
2.2.5 Class Management	41
2.2.6 Subject Management.....	50
2.2.7 Exam Management	53
2.2.8 Fee Management	57
2.2.9 Expense Management	60
2.2.10 Attendance Management.....	63

2.3 Requirements modeling	66
Chapter 3 - Design and Development	67
3.1 Class Diagram	67
3.2 Entity Relationship Diagram.....	68
3.3 User Interfaces	69
3.3.1 Student Management.....	69
3.3.2 Teacher Management	71
3.3.3 Parent Management.....	77
3.3.4 Admin Management.....	81
3.3.5 Class Management	85
3.3.6 Subject Management.....	92
3.3.8 Fee Management	102
3.3.9 Expense Management	103
3.3.10 Attendance Management.....	108
Chapter 4 – Testing	110
4.1 Test cases and results	110
4.1.1 Student Management.....	Error! Bookmark not defined.
4.1.2 Teacher Management	Error! Bookmark not defined.
4.1.3 Parent Management.....	Error! Bookmark not defined.
4.1.4 Admin Management.....	Error! Bookmark not defined.
4.1.5 Class Management	Error! Bookmark not defined.
4.1.6 Subject Management.....	Error! Bookmark not defined.
4.1.7 Exam Management	110
4.1.8 Fee Management	Error! Bookmark not defined.
4.1.9 Expense Management	Error! Bookmark not defined.
4.1.10 Attendance Management.....	Error! Bookmark not defined.
Chapter 5 - Evaluation and Conclusion	114
References	116
Appendix A	117
Work done by each Member	117

List of Tables

Figure 1manage class activity diagram	43
Figure 2add class call activity	44
Figure 3edit class call activity.....	45
Figure 4delete class call activity	46
Figure 5enroll student call activity.....	47
Figure 6 unenrollment student call activity.....	48
Figure 7login as administrator call activity.....	49
Figure 8: Activity Diagram for Subject Management:	52
Figure 9: Use Case Diagram for Exam Management	54
Figure 10: Activity Diagram - Release Official Marks by Admin	55
Figure 11: Figure 2: Activity Diagram - Update Exams by Teacher.....	56
Figure 12: Use Case Diagram for Fee Management	58
Figure 13ER diagram	68
Figure : Student Management - Login Page	69
Figure : Student Management - Admin Dashboard	69
Figure : Student Management - Report Generation	69
Figure : Student Management - Student Dashboard Statistical Data View Tab	70
Figure : Student Management -Student Dashboard My Class Tab.....	70
Figure teacher admin.....	71
Figure add teacher.....	71
Figure edit teacher.....	72
Figure delete teacher	72
Figure teacher pdf	73
Figure teacher login	74
Figure teacher login	74
Figure dashboard tewacher	75
Figure tewcher my student.....	75
Figure my class	76
Figure 29 parent admin	77
Figure add parent	77
Figure edit parent	78
Figure delete parent.....	78
Figure parent pdf	79
Figure parent dashboard.....	80
Figure my children	81
Figure user select login page.....	86
Figure Welcome page	86
Figure Contact us form	87
Figure class manage interface	87
Figure class details report PDF	88

Figure admin statistics dashboard	88
Figure enroll student	89
Figure edit clss	90
Figure delete	90
Figure add class.....	91
Figure : Exam Portal - Login Page.....	94
Figure : Exam Portal - Teacher Dashboard.....	95
Figure : Exam Portal - Manage Exams Page	96
Figure : Exam Portal - Add Exam Form	96
Figure : Exam Portal - Edit Exam Form	97
Figure : Exam Portal - Mark Attendance Form	97
Figure : Exam Portal - Manage Marks	98
Figure : Exam Portal - Student Dashboard	99
Figure : Exam Portal - Student My Exams Page	100
Figure : Admin Dashboard - View Exams Page	100
Figure : Admin Dashboard - View results and Release official results	101
Figure : Generate Exam Report	101
Figure 58login expense	103
Figure 59overview	103
Figure 60manage expense	104
Figure 61add expense.....	104
Figure 62edit expense	105
Figure 63delete expense	105
Figure 64fixed value	106
Figure 65pdf expense	107
Figure 66expense profile.....	108

Chapter 1 – Introduction

1.1 Background

Tuition centers play a pivotal role in today's educational landscape, as they provide crucial supplementary learning opportunities to students. While schools undoubtedly offer a solid foundation of knowledge, the comprehensive understanding and personalized attention that some students require may not always be fully achievable within the classroom setting alone. This is where tuition centers step in, offering focused instruction, targeted practice, and additional support to help students excel academically.

In the context of our client, Sysro Institute, it stands as a well-established tuition center located in Ruwanwella, Sri Lanka. With over a decade of experience, Sysro Institute has been dedicated to delivering quality education to students ranging from grade 1 to A-levels. Renowned for its team of highly qualified and experienced teachers, the institute has earned a reputation for ensuring exceptional academic results and holistic student development.

However, managing a tuition center manually can be a daunting task. The traditional methods of paperwork, spreadsheets, and manual record-keeping are not only time-consuming but also prone to inefficiencies and inaccuracies. To address these challenges and streamline tuition center operations, we have developed the Sysro Tuition Management System. This innovative web-based application leverages modern technology to automate and simplify daily tasks, providing a comprehensive solution for tuition center administrators, teachers, students, and parents.

The Sysro Tuition Management System utilizes the MERN stack, which incorporates MongoDB, Express.js, React, and Node.js. MongoDB serves as the robust and flexible NoSQL database, while Express.js provides a backend framework for web application development. React, a powerful JavaScript library, enables the creation of interactive user interfaces, and Node.js offers a server-side runtime environment for efficient application execution.

By leveraging the capabilities of these technologies, the Sysro Tuition Management System enhances efficiency, accuracy, and accessibility. It offers tailored dashboards for each stakeholder, facilitating easy access to relevant information and promoting effective communication. Additionally, features such as attendance management, exam management, and expense tracking are seamlessly integrated, ensuring a streamlined and reliable tuition center management experience.

The Sysro Tuition Management System aims to transform the way tuition centers operate, empowering administrators, teachers, students, and parents with an intuitive and efficient platform.

1.2 Problem and motivation

Current Process:

- Sysro Institute relies on a manual process to manage student, teacher, and parent information, attendance records, exam results, expenses, and fee data.
- The current process involves maintaining physical records such as attendance registers, fee registers, and exam results sheets. Teachers and staff must spend a considerable amount of time maintaining these records, which can lead to errors and inconsistencies.
- The current process involves tracking student performance manually which could be really challenging.

Problems/ Specific Challenges:

- The traditional method of managing data is time-consuming, prone to errors, and not scalable as the number of students and teachers increases.
- Manual attendance marking for each student in each class takes up a significant amount of time, especially during peak hours.
- The current system lacks an efficient method to track expenses and fee collection, leading to delays and errors in financial management.
- Scheduling classes and events using a manual process creates confusion and miscommunication among students, teachers, and parents.
- The lack of a centralized platform for student, teacher, and parent information results in disorganized data management.
- The lack of automation in the process results in mismanagement of data, making it difficult to track student performance manually.
- The current system lacks the ability to provide notifications to students and teachers, making it difficult to schedule reminders for classes and other events. This hinders communication between students, teachers, and parents, resulting in delays and confusion.

Desired Solution:

- Sysro Institute is interested in implementing a tuition management system to automate the entire process of data management.
- The new system should provide a centralized platform for storing all information related to student, teacher, and parent data management, attendance records, exam results, expenses and fee data, and tracking student performance.

- Additionally, the system should have a schedule management feature for efficient planning of classes and events and provide notifications via email to students and teachers for scheduling reminders.
- The tuition management system should have separate dashboards for admins, parents, students, and teachers, enabling them to access relevant information easily.
- The system should include a report generation feature to generate customized reports on attendance, performance, fee collections, and expenses.

1.3 Literature review

Tuition management systems have become increasingly popular in recent years due to several factors. One of the main reasons is the increasing use of technology in education and the need for more efficient and streamlined processes. With the growing number of students and tuition centers, manual management of tuition fees, student accounts, attendance, and exam results can be time-consuming and error-prone. Tuition management systems provide an automated solution to manage these processes, reducing administrative workload and allowing for more accurate and timely reporting. In this literature review, we will compare the tuition management system described in this project with previously done projects to identify its unique features and advantages.

Compared to previous systems, the tuition management system described in this project stands out due to several unique features. Firstly, our system provides administrators with the ability to efficiently manage not only student accounts but also teacher, parent and admin accounts. This allows for more effective communication and collaboration between all parties involved in the tuition process. Administrators can create new user accounts, view, search, edit, and delete existing user accounts as needed. Additionally, when a new user is added to the system, the system will automatically generate a new secure password and send it to the user via email. Furthermore, the user will receive a welcome email containing information about their account and instructions on how to log in and access the system.

Another unique feature of our system is the exam portal. Teachers can create, edit, and manage exams for their assigned classes, add and edit marks, and view exam statistics and reports. Administrators can generate reports containing exam data, approve and release official marks, which are automatically sent to teachers, students, and parents via email. This feature is a significant improvement compared to previous systems that may not have such comprehensive exam management features.

The schedule management feature of the Tuition Management System also stands out as a unique feature. Administrators can view and download class schedules for all existing classes in a user-friendly calendar format. This feature enables students, teachers, and parents to access and manage their schedules efficiently.

Performance tracking is another unique feature of the Tuition Management System. Administrators, teachers, students and parents can all monitor and track student performance, identifying areas that require improvement. This feature can help to enhance the learning experience and improve academic performance.

When compared to previously done projects, our tuition management system offers a significant advantage over other systems. For example, Wenzhong and Fengyun et al. (2015) developed a web-

based tuition management system aimed at reducing the workload of the finance department of colleges and universities. Although their system was efficient, it lacked a comprehensive fee management module that administrators could use to monitor the payment status of students. Our system provides two separate features for managing finances - fee management function and expense management portal. The fee management function in the admin dashboard gives administrators complete visibility into the payment status of each student, allowing them to easily see which students have paid and which are yet to pay. Furthermore, the system can automatically generate payment reminders, thus reducing the need for manual reminders. In addition, the expense management portal allows administrators to view, add, edit, search, and delete expenses, categorize them, and generate reports that provide valuable insights into the center's financial status and spending patterns.

Yang and Rosmayati et al. (2023) developed a tuition management system that provides a platform for students to find tuition centers that meet their specific needs. Their system also allows private tutors to market their tutoring careers. However, our tuition management system is not only for students and teachers. Parents can also log in as stakeholders and access their dashboards. The Parent Dashboard in our system provides parents with a comprehensive view of their child's academic performance and attendance within the tuition center. This user-friendly dashboard allows parents to track their child's progress in real-time and stay informed about their education.

The Tuition Centre Management System via Mobile Application implemented by Putera and Mohd et al. 2022 is expected to fulfill the basic needs for tuition centre to handle students and their parents. Problem that led to the development of this system is that there is no exact way to know the understanding of a student in a subject they are currently enrolling. Parents are also unable to know about their children's performance without meeting the teachers. In contrast to this system, our system also focuses on teachers as a main user. Teachers can also log in to our system and get a comprehensive overview of their students and classes. They can view the number of students and classes assigned to them, gender and grade distribution of their students, attendance data, and exam results statistics. The dashboard also includes a feature to track students' progress over time.

Aida and Azizul et al. (2022) developed a web-based student management system to facilitate student registration at the Damya Deena Tuition Center. Although their system allowed administrators to update student data faster and systematically, it lacked an attendance portal. Our system includes an attendance portal that allows for easy marking of attendance for students. With this system, students can simply scan a QR code to access the attendance form. Once the form is filled, their attendance will be marked and securely stored in the system. This saves time and reduces the risk of errors or omissions in the attendance record.

The Tuition Management System developed by Aqilah and Ruhaya et al. (2022) for Pro Eduelite Tuition Centre has manager, administrators, tutors, and parents as users. The system accepts registration of students, tutors, and staff, update of payment, update of class scheduling, report management, and

others. Although their system included a exam management feature, it lacked a notification feature. However, our system can send notifications to students, teachers, and parents via email. This feature helps to keep everyone informed about critical events, such as exams, fee payments, and class cancellations.

In conclusion, tuition management systems have become a valuable tool in educational institutions, and the system described in this project offers several unique features and advantages over previously done projects. Our system provides a user-friendly and comprehensive dashboard for administrators, students, teachers and parents, enabling them to manage their respective tasks easily and efficiently. Additionally, the system's fee and expense management modules offer detailed reporting and insights into the institution's financial status and spending patterns, which can be used to optimize financial planning and budgeting. The Attendance Portal allows easy marking of attendance and retrieval of attendance records. Additionally, the Exam Portal allows administrators to manage exams and track student performance over time. Furthermore, the notification feature ensures that all stakeholders are kept informed about important events, leading to better communication and collaboration.

Overall, our tuition management system offers a complete solution for educational institutions, providing them with a powerful tool to streamline their administrative processes and enhance their financial management. We believe that our system can make a significant contribution to the education industry, and we are confident that it will be well-received by institutions looking to improve their efficiency and effectiveness.

1.4 Aim and Objectives

1.4.1 Aim

The aim of this project is to develop a tuition management system that automates the process of managing student, teacher, and parent information, attendance records, exam results, expenses and fee data, and provides notifications to students and teachers.

This system will enable Sysro Institute to streamline its administrative processes and improve communication between students, teachers, and parents.

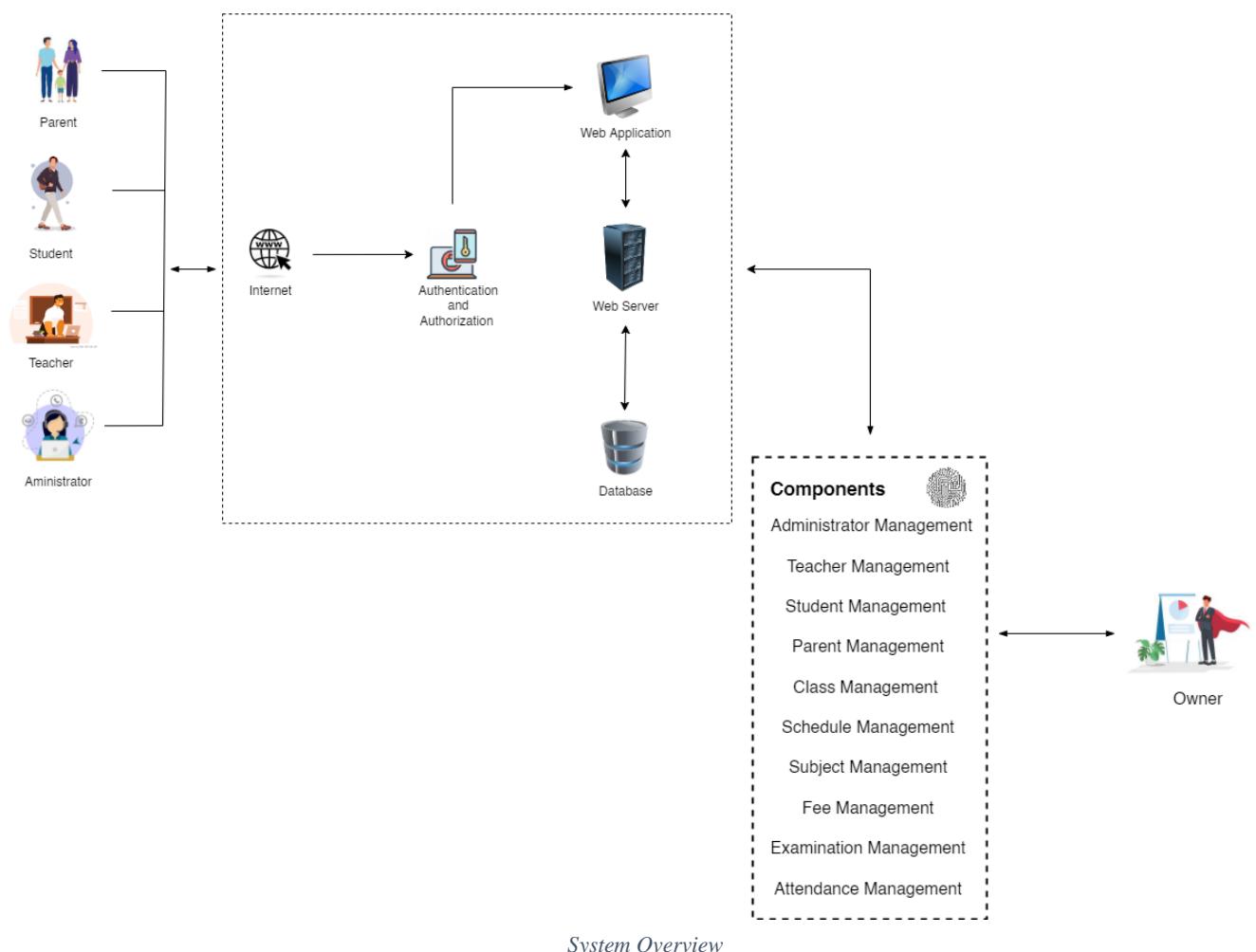
1.4.2 Objectives

- Develop a centralized database to store admin, student, teacher, and parent information.
- Implement a module for tracking student attendance records and exam results.
- Develop a module to manage expenses and fee data.
- Create features to track student performance and provide personalized support.
- Integrate a notification system to schedule reminders and improve communication between students, teachers, and parents.
- Design and develop a user-friendly interface for easy navigation and use by administrative staff, students, teachers, and parents.
- Test and refine the system to ensure it meets the needs of Sysro Institute and is free of bugs and errors.
- Implement the system in a timely manner and ensure a smooth transition from the current manual process to the new tuition management system.

1.5 System Overview

Our proposed Tuition Management System is designed to streamline and automate the Sysro Institute's operations by providing a web-based application that is highly sophisticated and user-friendly.

The system offers separate, tailored dashboards for each of the major stakeholders involved in the center, including the administrator, teacher, student and parent, as well as separate portals for managing attendance, exams, and expenses.



System Functions

Student Management

- The student management function in the admin dashboard is designed to provide the administrator with a comprehensive solution for managing student accounts.
- The admin has the ability to create new student accounts, view, search, edit, and delete existing accounts as needed.
- When a new student is added to the system, the system will automatically generate a new secure password and send it to the student via email.
- Additionally, the student will receive a welcome email containing information about their account and instructions on how to log in and access the system.
- The system also provides the admin the ability to monitor student performance.
- Additionally, the admin has the capability to generate reports based on student data.
- Moreover, the Student Dashboard provides students with a centralized platform to view their academic journey. They can easily view their class schedules, helping them stay on top of their daily activities and keep track of their classes.
- Additionally, the student dashboard allows students to track their progress. This enables them to identify areas where they need to improve and work on their weaknesses.

Teacher Management:

- The Admin Dashboard's Teacher Management function provides administrators with the tools to efficiently manage teacher accounts.
- Administrators can create new teacher accounts, view, search, edit, and delete existing teacher accounts as needed. This ensures that teacher information is up-to-date and accurate.
- When a new teacher is added to the system, the system will automatically generate a new secure password and send it to the teacher via email.
- Additionally, the teacher will receive a welcome email containing information about their account and instructions on how to log in and access the system.
- Also, the Teacher Management function provides administrators with the ability to generate reports based on the data.
- Moreover, the Teacher Dashboard gives teachers a comprehensive overview of their students and classes. They can view the number of students and classes assigned to them, gender and grade distribution of their students, attendance data, and exam results statistics.
- The teacher dashboard also includes a feature to track students' progress over time.

Parent Management:

- The Admin Dashboard's Parent Management function provides administrators with the tools to efficiently manage parent accounts.
- Administrators can create new parent accounts, view, search, edit, and delete existing parent accounts as needed. This ensures that parent information is up-to-date and accurate.
- When a new parent is added to the system, the system will automatically generate a new secure password and send it to the parent via email.
- Additionally, the parent will receive a welcome email containing information about their account and instructions on how to log in and access the system.
- In addition, the Parent Management function provides administrators with the ability to generate reports based on the data.
- Moreover, the Parent Dashboard provides parents with a comprehensive view of their child's academic performance and attendance within the tuition center. This user-friendly dashboard allows parents to track their child's progress in real-time and stay informed about their education.

Admin Management:

- The Admin Management function in the admin dashboard allows the administrator to create new admin accounts, view, search, edit, and delete existing accounts as needed, ensuring that only authorized individuals have access to the information contained within the admin dashboard.
- When a new admin is added to the system, the system will automatically generate a new secure password and send it to the admin via email.
- Additionally, the admin will receive a welcome email containing information about their account and instructions on how to log in and access the system.
- In addition, the system provides the capability to generate reports based on the admin data.
- Moreover, the Admin Dashboard provides the administrator with complete control over the management of the tuition center, enabling them to manage and access information about students, teachers, parents, subjects, classes, exams, schedules, attendance and financial aspects (fees and expenses).

Class Management:

- The Admin Dashboard's Class Management function streamlines class organization and management for the tuition center.
- It offers administrators the ability to create, view, search, edit, and delete classes as needed.

- The function also enables enrollment and unenrollment of students, as well as report generation.
- Also, when a teacher is assigned to a class by the administrator, they will be notified via email.
- Similarly, when a student is enrolled or unenrolled from a class, the student will receive notification via email.
- If there are changes made to the information about a class, such as the class teacher, date, time, or venue, the teacher and all enrolled students will also be notified via email. This ensures that all relevant parties are kept informed and up-to-date on the latest class information.

Subject Management:

- The Admin Dashboard's Subject Management function provides a centralized platform for administrators to manage the subjects offered by the tuition center. This includes creating new subjects, viewing, searching, editing, and deleting existing subjects as necessary, making it easy to keep the subject offerings up-to-date and relevant.
- Additionally, the subject management function includes the ability to generate reports that include subject details, allowing administrators to easily track the subjects offered and their related information.

Exam Management:

- The Exam Management Portal enables teachers to efficiently manage exams for the tuition center by providing them with the necessary tools.
- Teachers have the ability to create new exams, as well as view, search, edit, and delete existing exams that are associated with their assigned classes. Whenever new exams are created, or existing exams are updated or deleted, students will receive email notifications.
- Teachers can mark attendance for students who have taken the exam and assign marks to each student.
- They can also modify assigned marks if necessary and release unofficial student grades for approval by the admin.
- Teachers have access to exam statistics, including an overview of results, grade distribution, and average marks scored by students in the last six conducted exams, presented in the form of charts.
- Teachers can generate reports based on the exam data.
- Additionally, students can log into the Exam Management Portal to view their marks.
- Students have access to their exam statistics, including an overview of their results, grade distribution, and average marks scored by them in the last six conducted exams, presented in the form of charts.
- The Exam Management function on the Admin Dashboard empowers administrators to oversee exams at the tuition center.
- Administrators can view all exams added by teachers at the tuition center.

- Administrators can review the marks scored by students for a specific exam, approve them, and release them as official grades. These official grades are then automatically sent to students via email.
- Administrators can view the attendance records of students for each exam.
- Furthermore, administrators have the ability to generate reports based on exam data.

Fee Management:

- The Admin Dashboard's Fee Management function provides a centralized approach to fee collection and tracking.
- The administrator has complete visibility into the payment status of each student and can easily see which students have paid and which students are yet to pay.
- Admin can add, view, edit, search and delete payment records.
- Additionally, the system provides detailed reports on fees collected, enabling the administrator to make informed decisions about the financial health of the tuition center.
- Moreover, the system sends automated reminders to parents who have not yet paid their fees, reducing the burden on administrators to follow up with each individual parent.

Expense Management:

- The Expense Management Portal allows administrators to easily view, add, edit, search and delete expenses related to the tuition center. This includes expenses such as rent, utilities, staff salaries, and supplies, among others.
- By categorizing expenses into different categories, administrators can keep track of their expenses and stay within budget.
- In addition, administrators can also view expense reports, which provide them with valuable insights into the center's financial status and spending patterns.

Attendance Management:

- The Attendance Management Portal streamlines the process of marking student attendance by utilizing a QR code.
- With this system, students simply scan the QR code to access an attendance form. Once the form is completed, the attendance record is automatically recorded and securely stored in the system and can be easily retrieved for future reference.
- This efficient process saves time and reduces the risk of errors or omissions in the attendance record.

- With this system, administrators can also easily retrieve attendance records for future reference and analysis.
- Moreover, the Attendance Management Portal helps parents to track their child's attendance in real-time, ensuring that they stay informed and involved in their child's education. For example, if a student is absent three times, the system will automatically send an email notification to their parent, alerting them of their child's repeated absence.

1.6 Methodology

Our project will follow an agile development methodology to ensure that we complete the project on time.

We used the following methods, tools, and technologies for different stages of the project.

Requirements Engineering Methods:

- **User Interviews:** We conducted interviews with key stakeholders such as the tuition center's administrators, teachers, and students to gather their requirements and expectations for the tuition management system.
- **Surveys:** We used surveys to gather feedback and opinions from a larger sample of users.
- **Use Case Diagrams:** We drew use case diagrams to model the system's requirements, capturing the interactions between users and the system.
- **Unified Modeling Language (UML):** We used UML diagrams such as activity diagrams, sequence diagrams, and class diagrams to model the system's design.
- **Wireframes and Mockups:** We created wireframes and mockups to visualize the system's user interface and obtain feedback from stakeholders.

Development Tools and Technologies:

- **MERN Stack:** We used the MERN stack (MongoDB, Express.js, React, Node.js) to develop the web application.
- **Git:** We used Git as our version control system to enable collaboration and track changes.
- **Visual Studio Code:** We used Visual Studio Code as our integrated development environment (IDE) to develop the system.

Project Management Tools:

- **Jira** was used to manage project tasks, track progress, and keep team members informed of project updates.
- **GitHub** was used to store the project's source code and track changes made to the code over time. This allowed team members to collaborate on the codebase and maintain a history of changes made to the project.

Alternatives and Justifications:

- Alternative design tools like Sketch or Figma were considered but not selected because they were not as suitable for the specific requirements of the project as UML. While Sketch or Figma may have been more visually appealing, UML offered more detailed documentation and better support for software engineering concepts. Additionally, our development team had expertise with UML, making it the more efficient and effective choice.
- Agile was chosen as the methodology for requirements engineering and development due to its flexibility and ability to accommodate changing requirements throughout the project. Alternatives like the Waterfall methodology were considered but were not as suitable for the project due to their more rigid, sequential approach. Since the tuition management system is a complex project, with a high likelihood of changes in requirements over time as we receive feedback from users, the Agile methodology allows for more flexibility and adaptability to change, which is important for our project's success.

Project Plan

Grantt Chart

Task name	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12	WEEK 13	WEEK 14
Requirement Enginccring.														
Project Charter And Proposal.														
Project Presentation.														
Database Design.														
Interface Design.														
Coding And Development.														
Testing.														
Integration.														
Accepting And Testing.														
Final Report Writing.														
Final Presentation And Viva.														

1.8 Link to the Git repo https://github.com/SLIITITP/y2_s2_wd_it_01-itp_wd_b06_g12

Chapter 2 - Requirements

2.1 Stakeholder analysis

A stakeholder analysis is a critical step in understanding the individuals or groups who have an interest or influence in the project. It helps identify their needs, expectations, and potential impact on the project's success. The following stakeholders have been identified for the Sysro Tuition Management System:

- Students: The primary beneficiaries of the system, students rely on it for accessing their academic information, class schedules, and tracking their progress. They expect a user-friendly interface and reliable information to enhance their learning experience.
- Teachers: Teachers play a vital role in the system as they utilize it to manage classes, track student performance, and record attendance. They require an intuitive interface, efficient tools for managing exams and grading, and access to student data to support their teaching responsibilities.
- Parents/Guardians: Parents or guardians are essential stakeholders as they rely on the system to monitor their child's academic progress, track attendance, and stay informed about events and announcements. They value clear communication channels and access to relevant information about their child's education.
- Administrators: Administrators are responsible for managing the tuition center and overseeing various aspects of the system. They require robust administrative tools, such as student and teacher management, class scheduling, fee management, and generating reports. Their focus is on efficient operations, data accuracy, and effective decision-making.

2.2 Requirements analysis

2.2.1 Student Management

Functional Requirements:

Admin

- Administrators can create new student accounts
- Administrators can view, search, edit, and delete existing student accounts as needed
- Administrators can generate reports based on student data

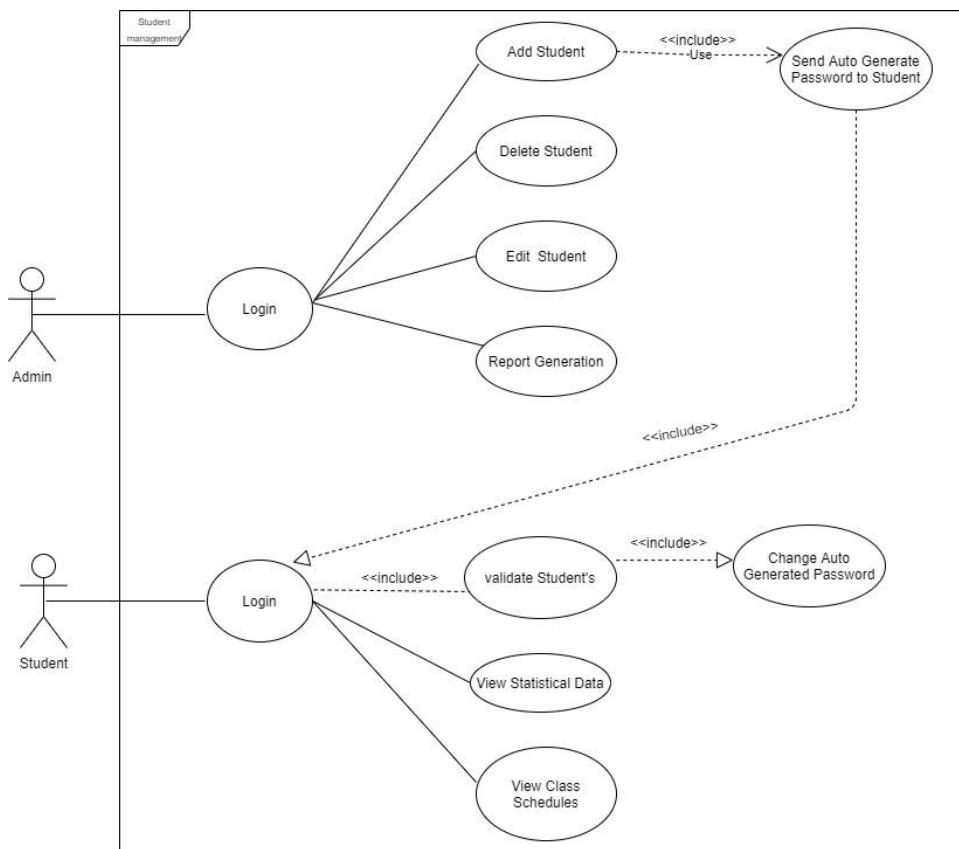
Student

- Students can view their assigned classes and class schedules
- Students can track their progress

Non-functional Requirements:

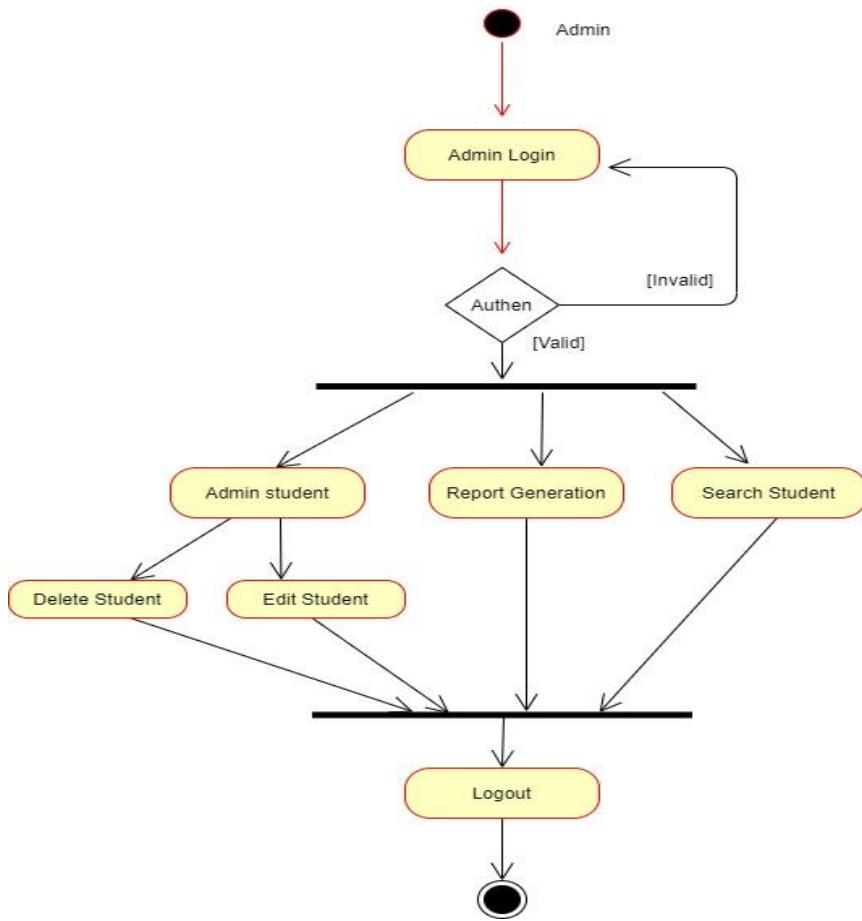
- **Performance:** The system should be able to handle a large number of student accounts and data without any significant impact on the system's speed or performance.
- **Security:** The system must be secure and ensure the confidentiality, integrity, and availability of student data at all times.
- **Usability:** The Student Dashboard should be user-friendly, intuitive, and easy to navigate, making it accessible for students of all technical backgrounds.
- **Reliability:** The system must be reliable and available 24/7, ensuring that students can access their information and perform necessary tasks at any time.
- **Scalability:** The system should be scalable and able to accommodate an increasing number of student accounts and data as the tuition center grows and expands.

Use Case Diagram for Student Management:

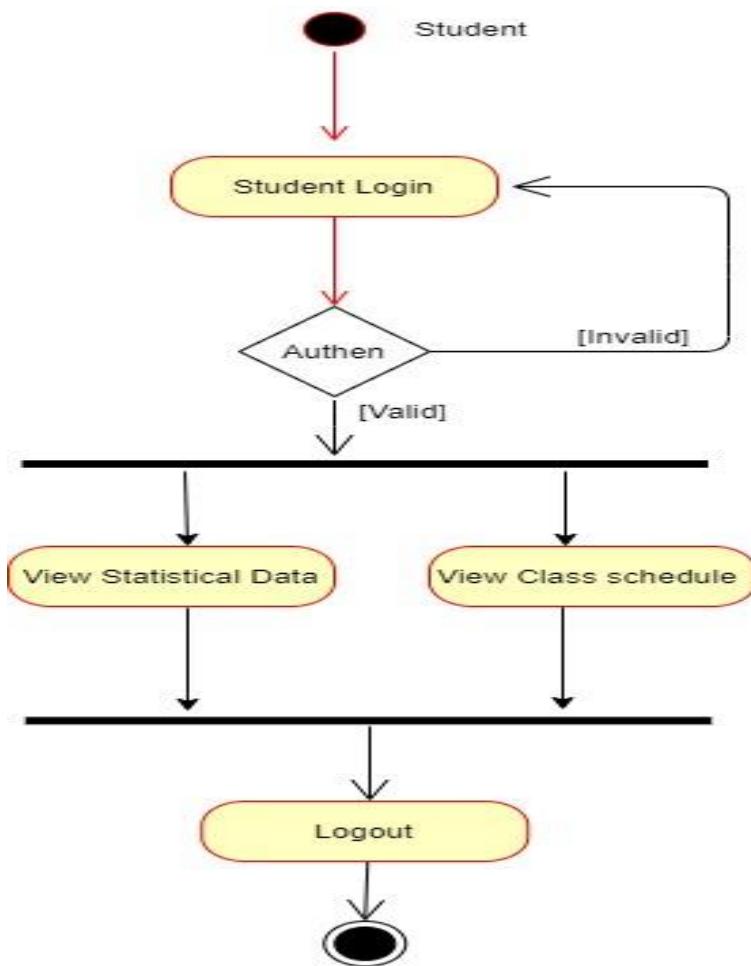


Activity Diagram for Student Management:

Admin part



Student part



2.2.2 Teacher Management

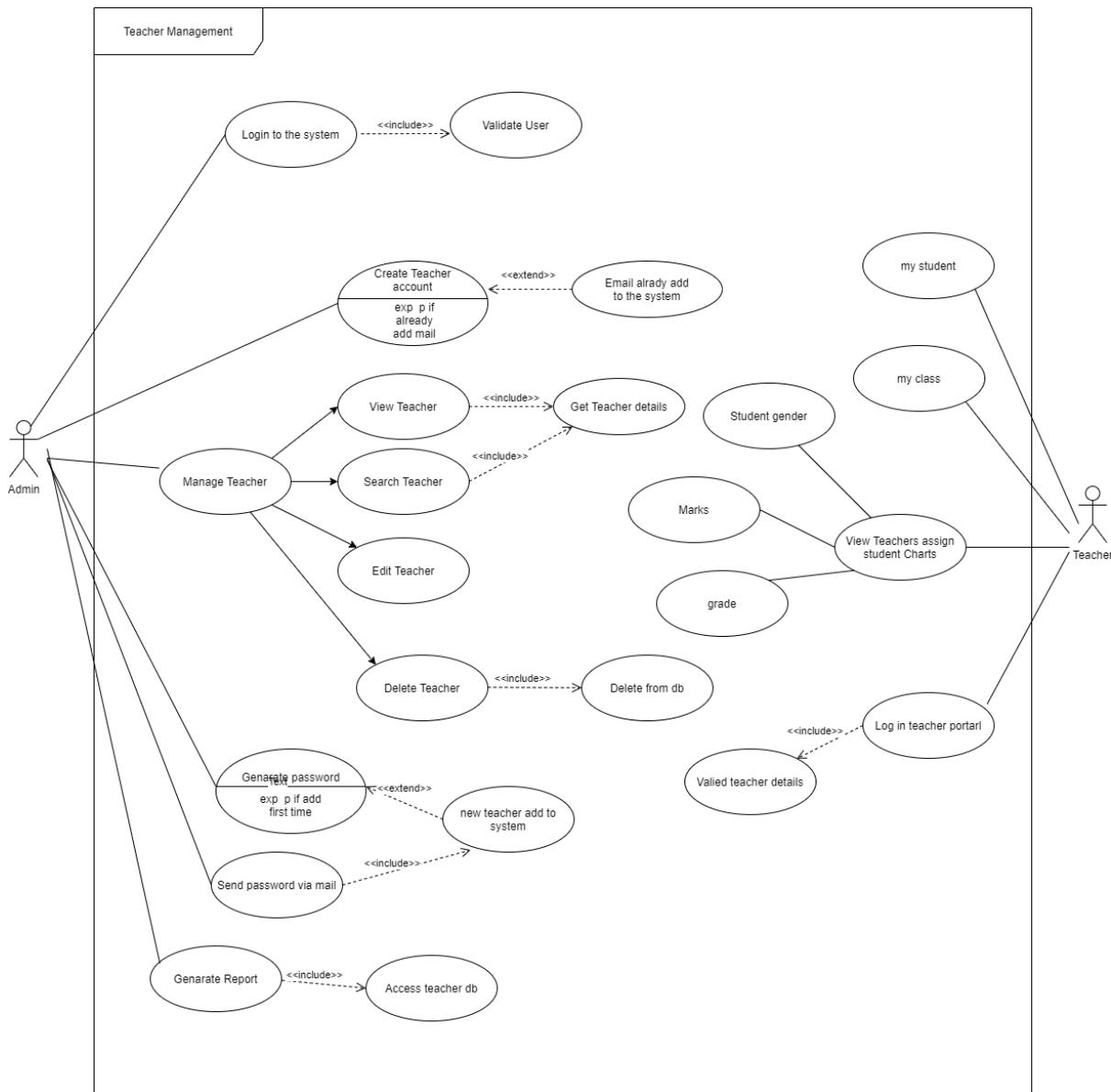
Functional Requirements:

Admin	Teacher
<ul style="list-style-type: none">• Administrators can create new teacher accounts• Administrators can view, search, edit, and delete existing teacher accounts as needed• Administrators can generate reports based on student data	<ul style="list-style-type: none">• Teachers can view the number of students and classes assigned to them• Teachers can view gender and grade distribution of their students• Teachers can view attendance data• Teachers can view exam results statistics• Teachers can track students' progress over time

Non-functional Requirements:

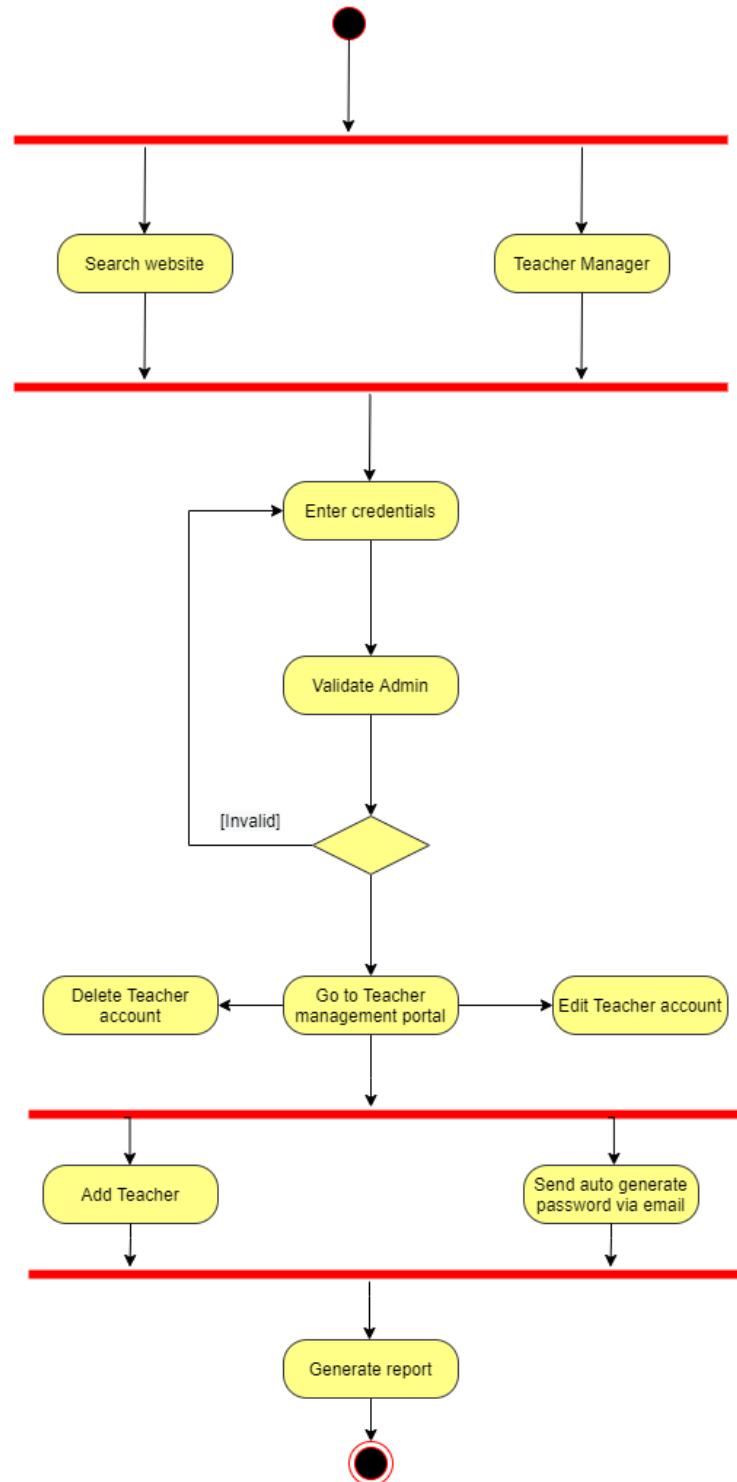
- **Security:** The system must ensure that the passwords generated for teacher accounts are secure and not easily hackable. It should also have measures in place to prevent unauthorized access to teacher information.
- **Reliability:** The system should be available and functional at all times, with minimum downtime and disruptions to the teacher management process.
- **Scalability:** The system should be able to handle a large number of teacher accounts and data, with the ability to scale up or down as needed.
- **Performance:** The system should be fast and responsive, with quick loading times and minimal lag. Teachers should be able to access and manage their accounts quickly and efficiently.

Use Case Diagram for Teacher Management:

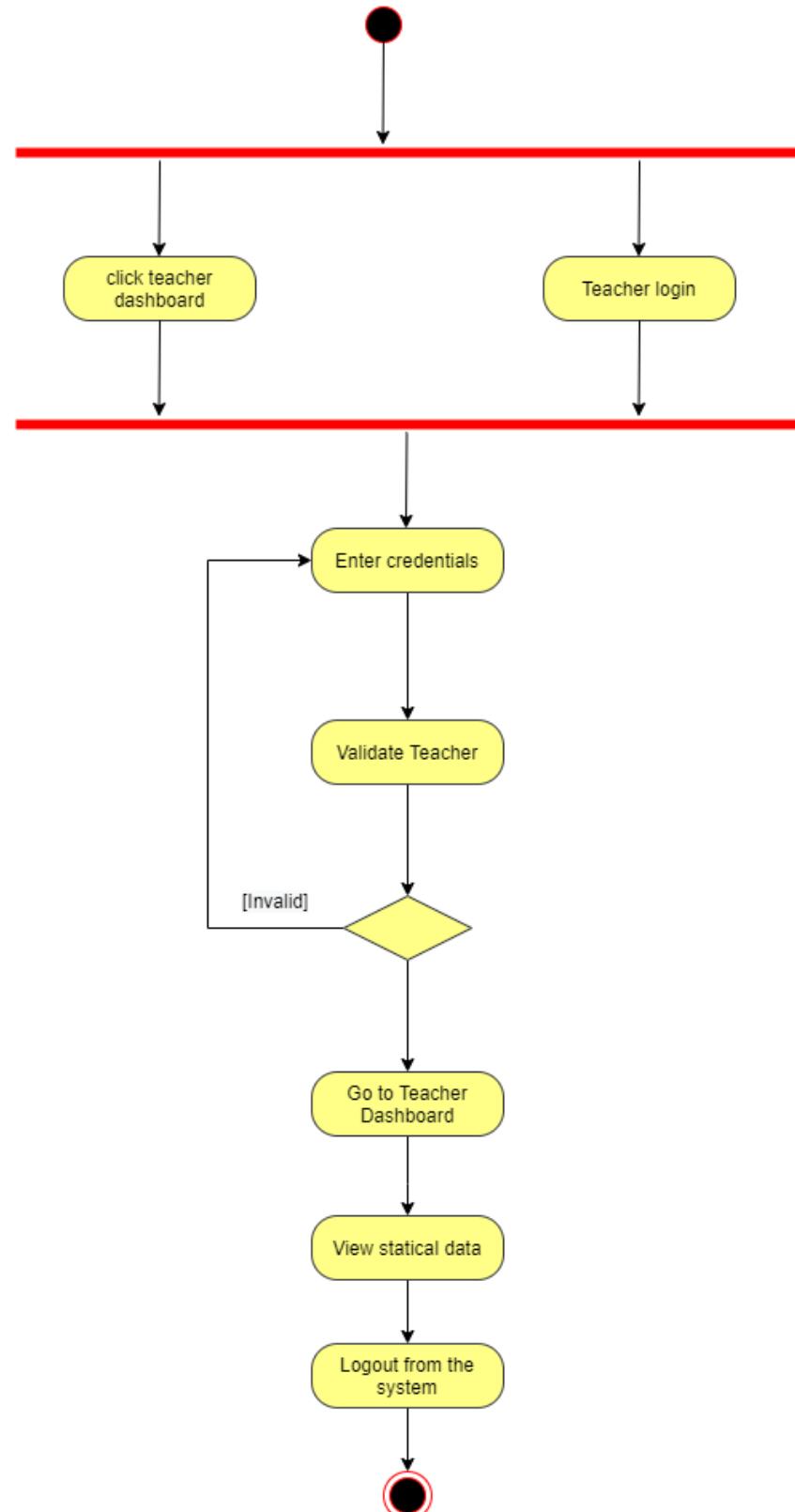


Activity Diagram for Teacher Management:

Admin



Teacher Dashboard



2.2.3 Parent Management

Functional Requirements:

Admin	Parent
<ul style="list-style-type: none">• Administrators can create new parent accounts.• Administrators can view, search, edit, and delete existing parent accounts as needed.• When a new parent is added to the system, the system will automatically generate a new secure password and send it to the parent via email.• Administrators can generate reports based on parent data.	<ul style="list-style-type: none">• Parents can track their child's academic performance.• Parents can view their students' payment records.

Non-functional Requirements:

- **Security:** The system must ensure that all parent data is securely stored and transmitted. The system should also provide a secure login process for parents to access their child's information.
- **Usability:** The Parent Dashboard should be user-friendly and easy to navigate, even for parents who may not be tech-savvy.
- **Reliability:** The system should be reliable and available at all times, with minimal downtime or system errors.
- **Performance:** The system should be able to handle a large number of parent accounts and data, and provide quick access to information.
- **Scalability:** The system should be able to scale up as the number of parent accounts and data increases over time.

Use Case Diagram for Parent Management:

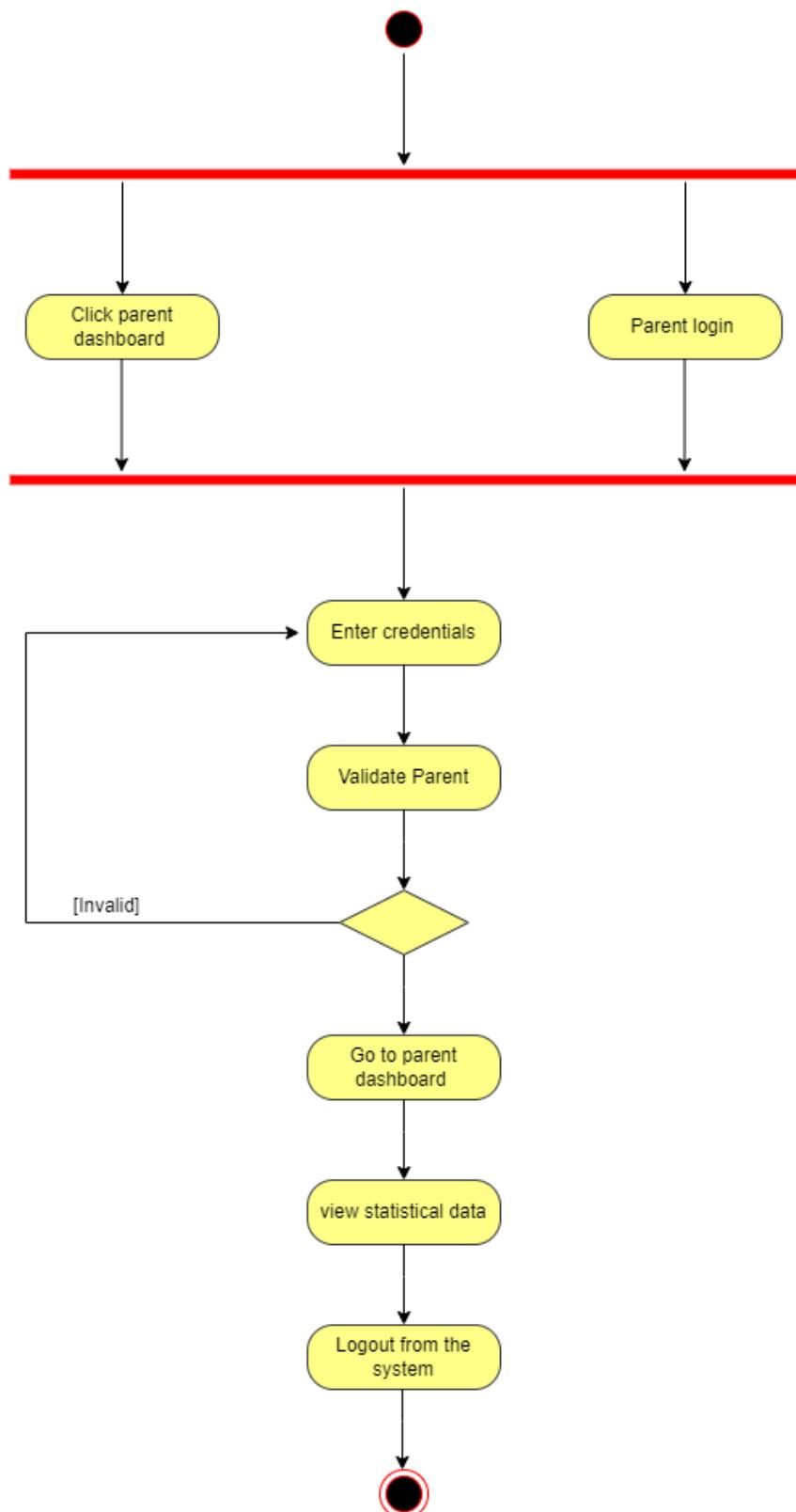


Activity Diagram for Parent Management:

Admin dashboard



Parent dashboard



2.2.4 Admin Management

Functional Requirements:

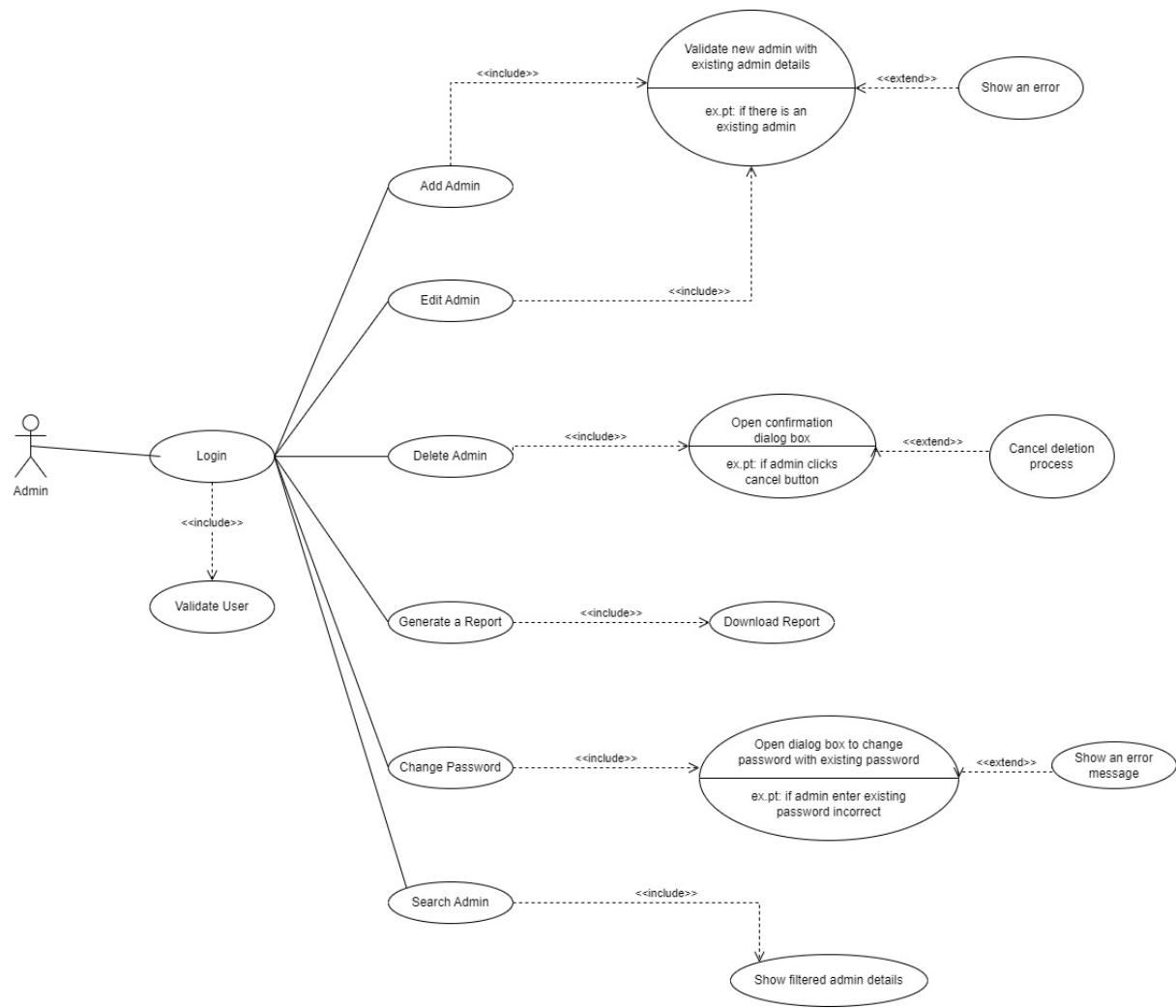
Admin

- Administrators can create new admin accounts
- Administrators can view, search, edit, and delete existing admin accounts as needed
- Administrators can generate reports based on the admin data
- Administrators can manage and access information about students, teachers, parents, subjects, classes, exams, schedules, attendance and financial aspects such as fees and expenses
- Administrators can generate and view reports in real-time, allowing for quick and informed decision-making

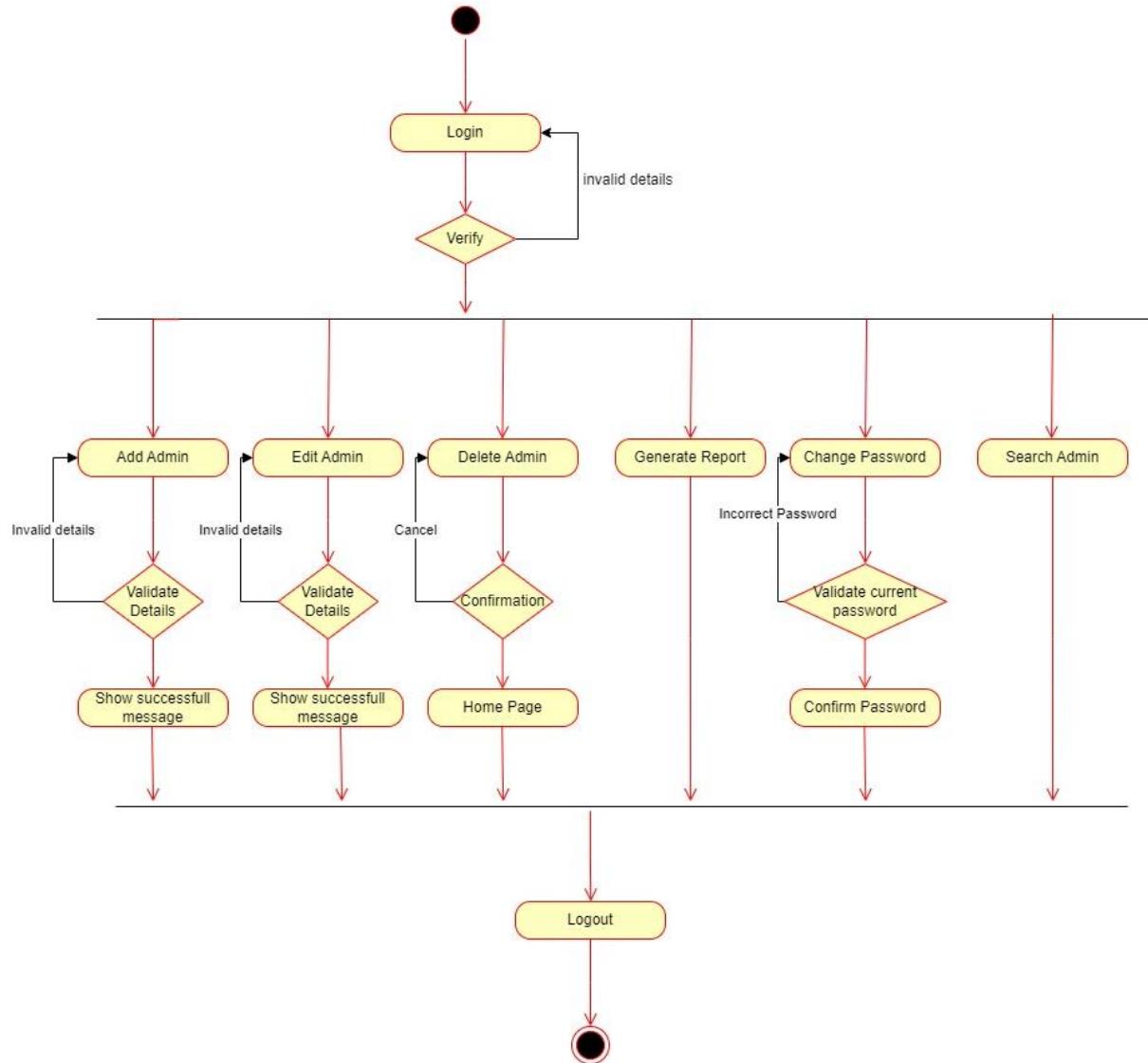
Non-functional Requirements:

- **Security:** The system must ensure that all admin accounts and information are secure and only accessible by authorized individuals through secure login and password management protocols.
- **Performance:** The system must be able to handle large amounts of data and user traffic without compromising performance or functionality.
- **Reliability:** The system must be available and reliable at all times to ensure that administrators can access information and perform necessary tasks without interruptions or delays.
- **Usability:** The system must have a user-friendly interface that is easy to navigate and understand for administrators with varying levels of technical expertise.
- **Scalability:** The system must be scalable to accommodate future growth and changes in the tuition center's management needs.

Use Case Diagram for Admin Management:



Activity Diagram for Admin Management:



2.2.5 Class Management

Functional Requirements:

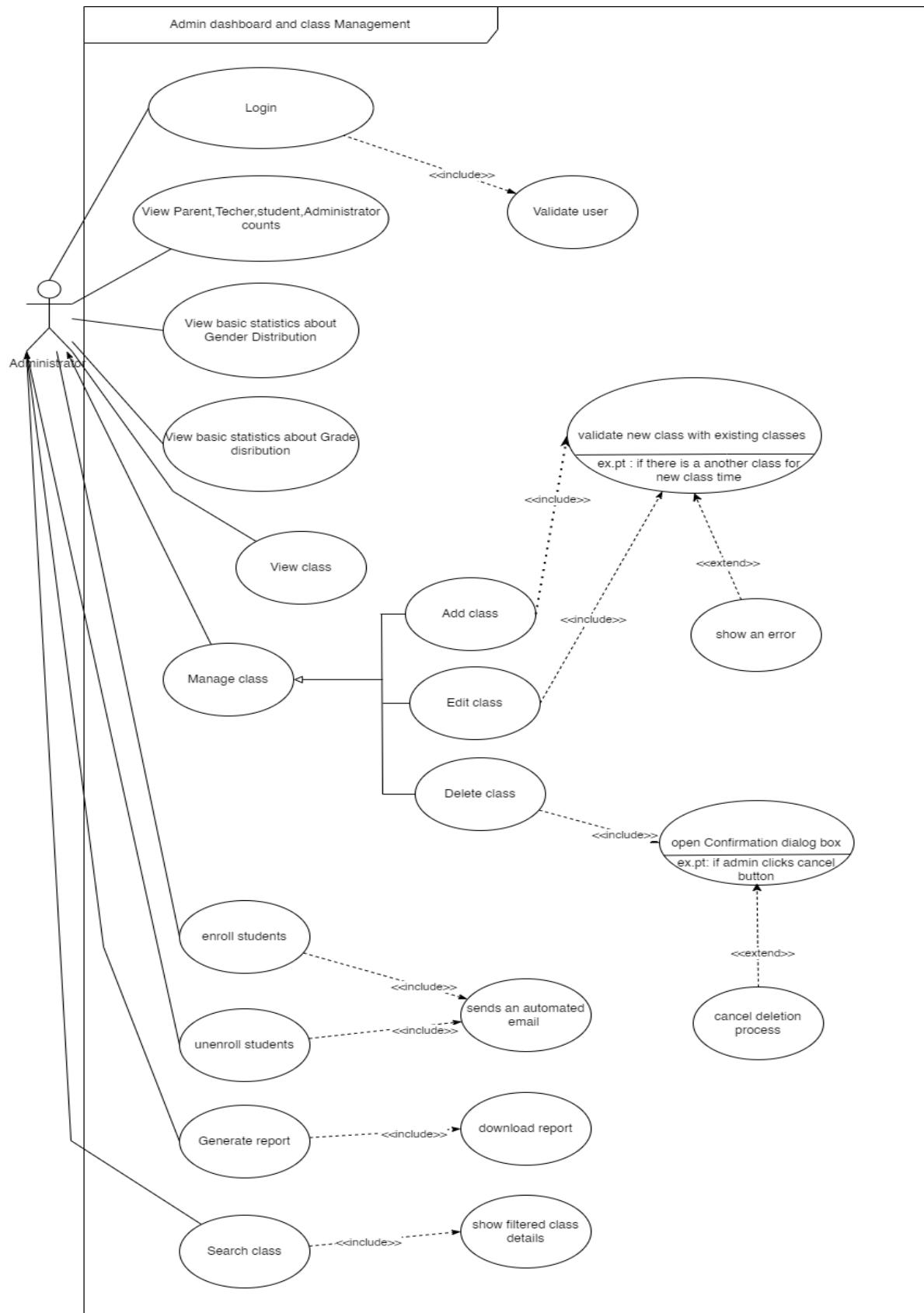
Admin

- Administrators can create, view, search, edit, and delete classes as needed
- Administrators can keep track of all classes offered by the center
- Administrators can enrollment and unenroll students as needed
- Administrators can generate reports based on class data

Non-functional Requirements:

- **Performance:** The system should be designed to handle a large number of classes without experiencing any lag or delay in response time.
- **Usability:** The system should have an intuitive and user-friendly interface, making it easy for administrators to navigate and manage classes.
- **Security:** The system should have robust security measures in place to protect the sensitive data of students and teachers at the tuition center.
- **Availability:** The system should be available 24/7, with minimal downtime for maintenance and upgrades.
- **Reliability:** The system should be reliable and accurate in managing class information and notifications, ensuring that all parties receive timely and accurate information.
- **Scalability:** The system should be scalable, able to handle an increasing number of classes and students as the tuition center grows.

Use Case Diagram for Class Management:



Activity Diagram for Class Management:

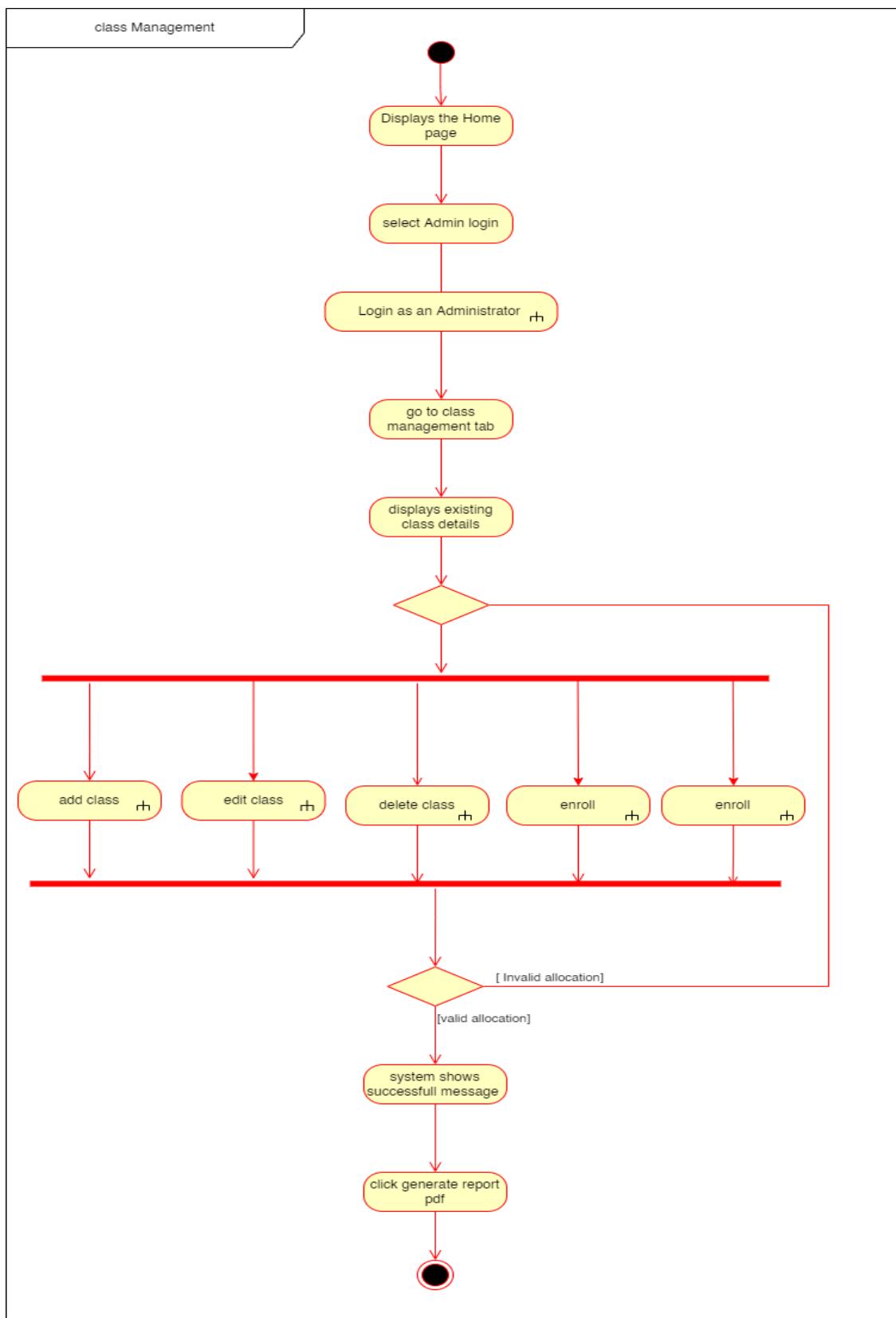


Figure 1manege class activity diagram

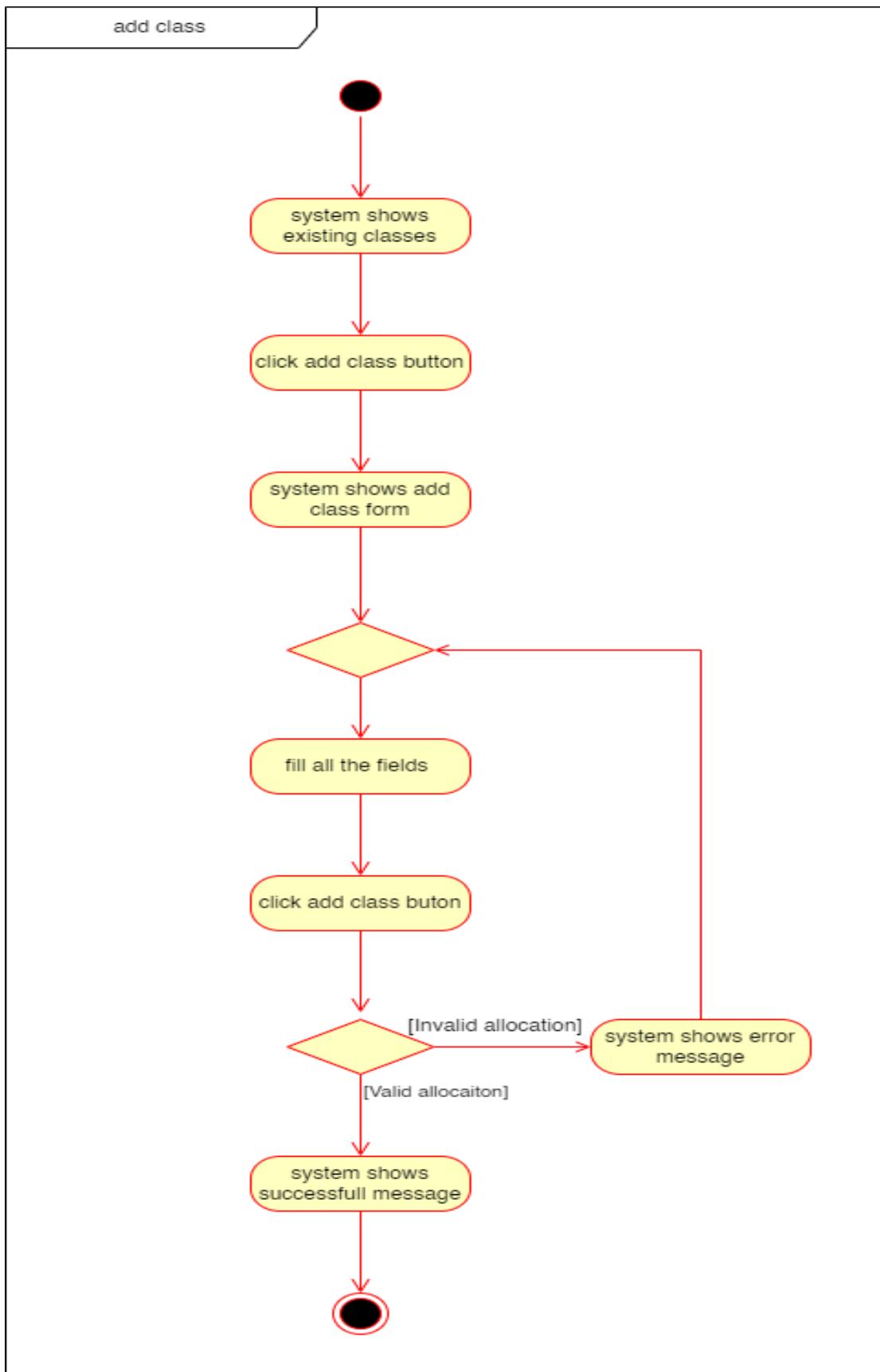


Figure 2add class call activity

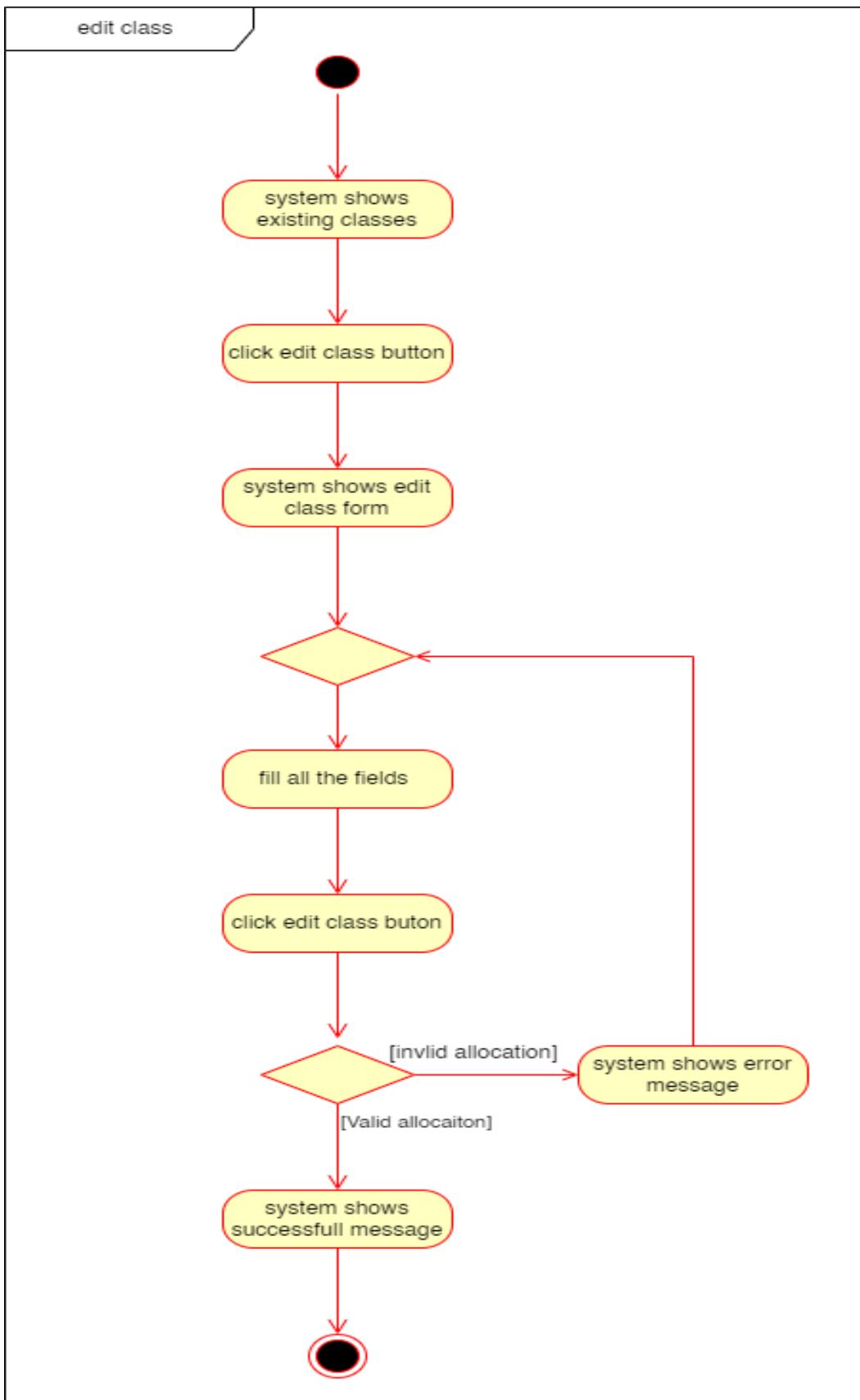


Figure 3edit class call activity

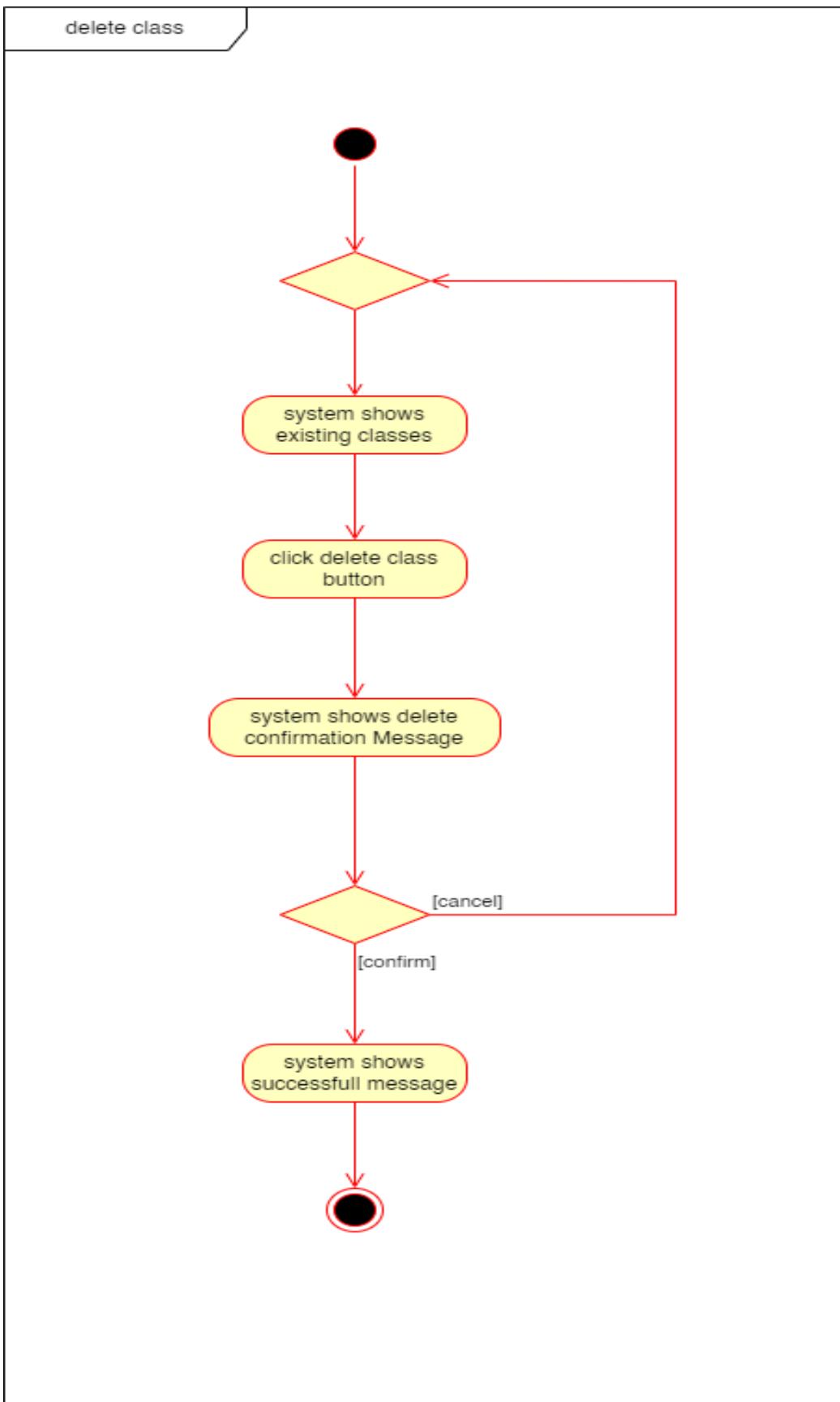


Figure 4 delete class call activity

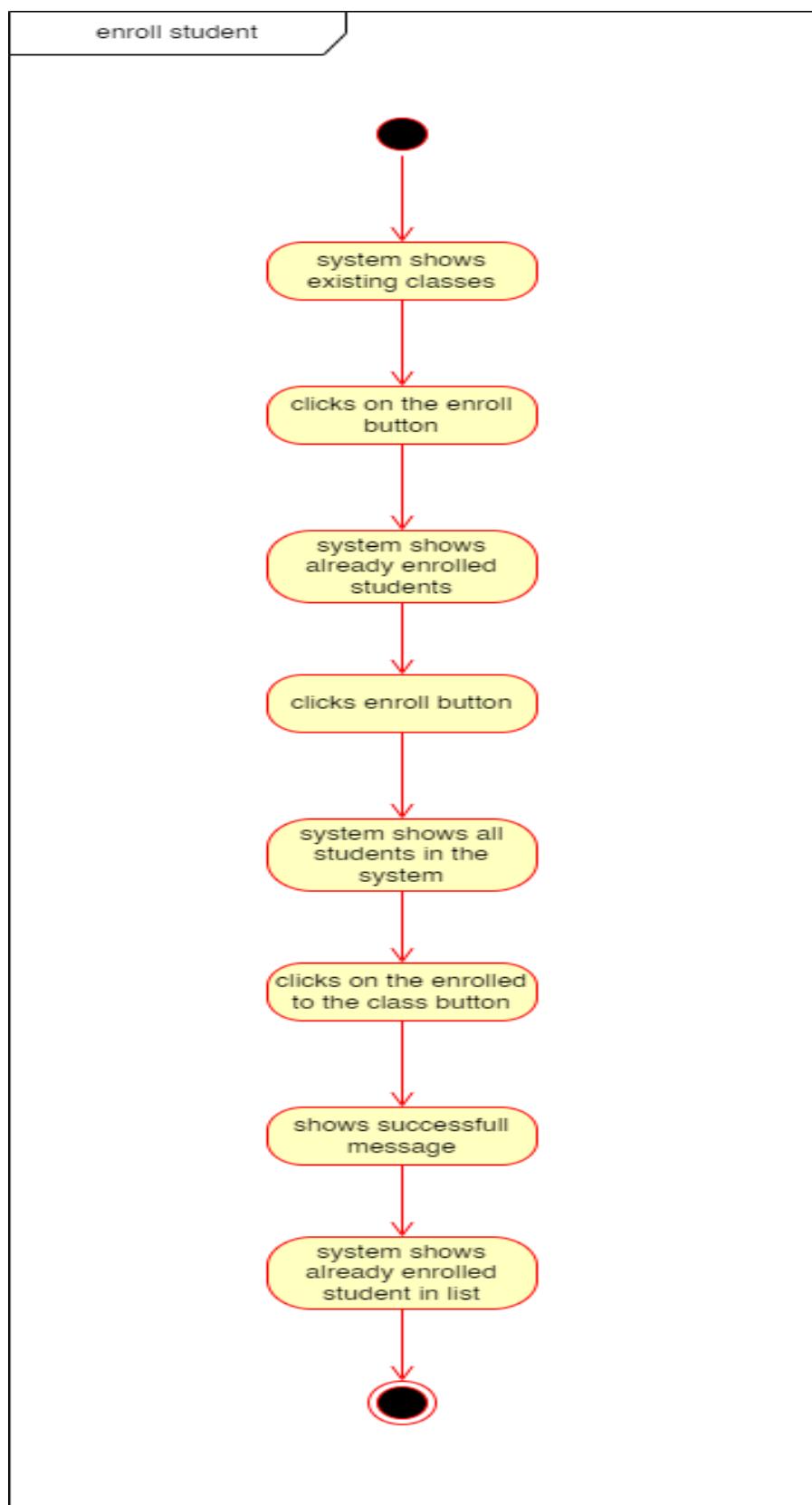


Figure 5enroll student call activity

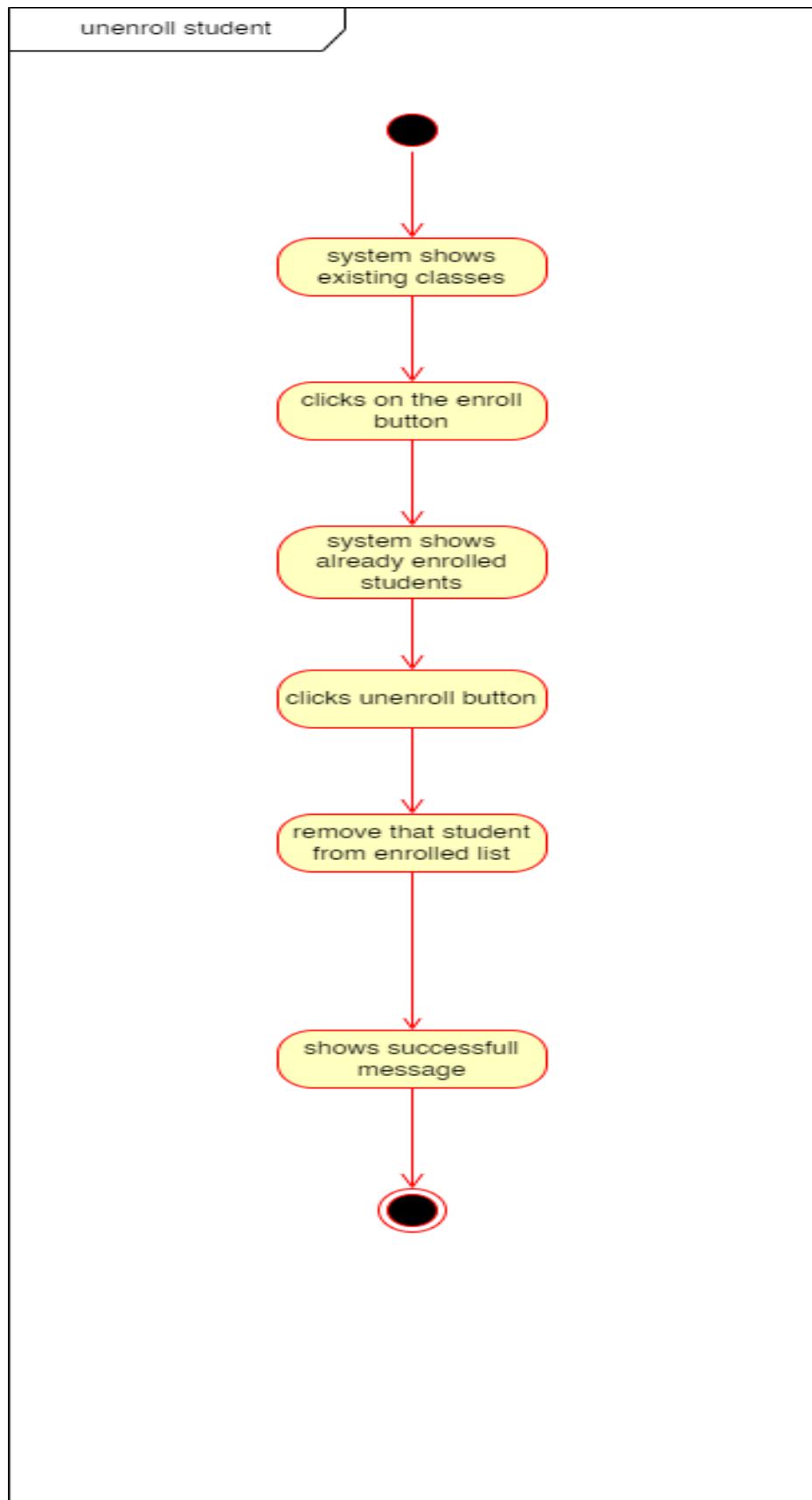


Figure 6 unenrollment student call activity

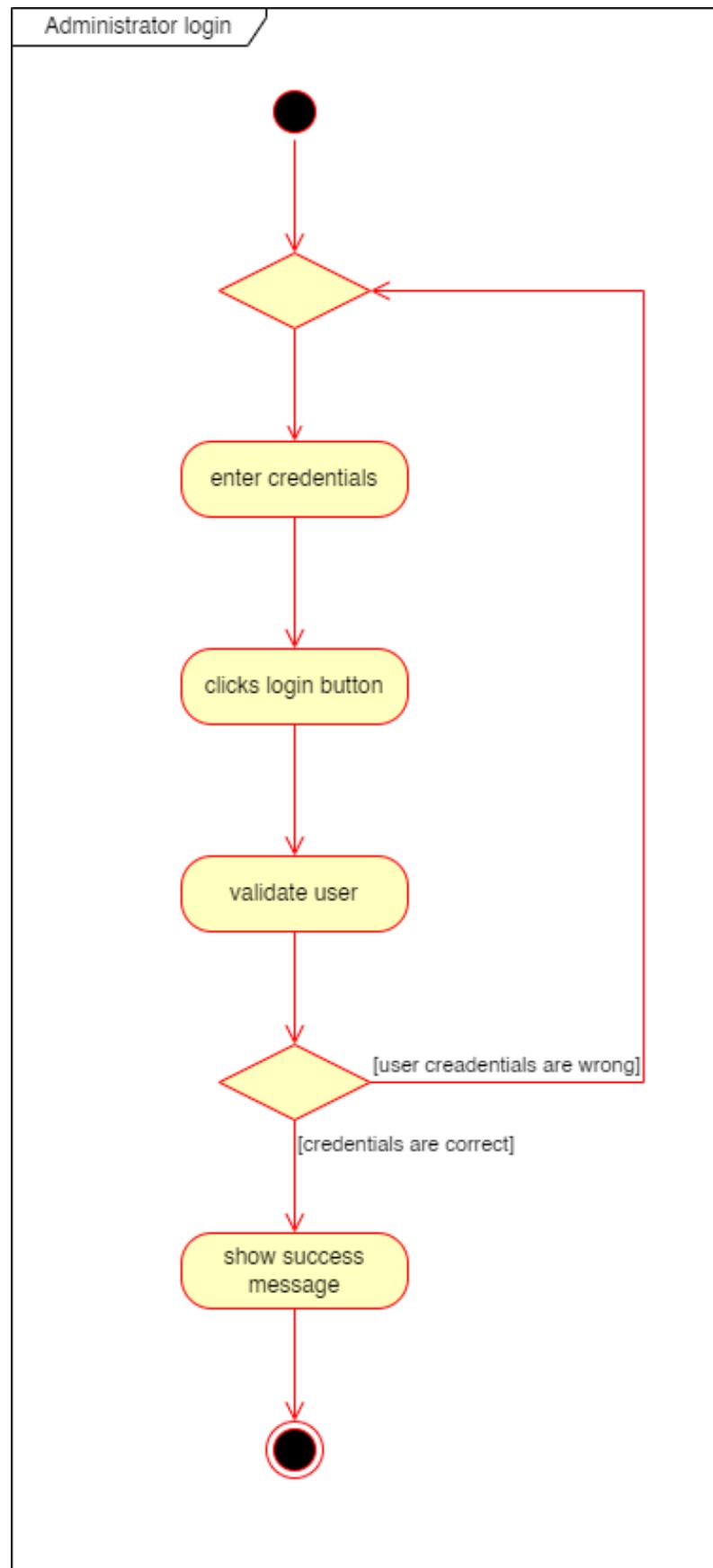


Figure 7 login as administrator call activity

2.2.6 Subject Management

Functional Requirements:

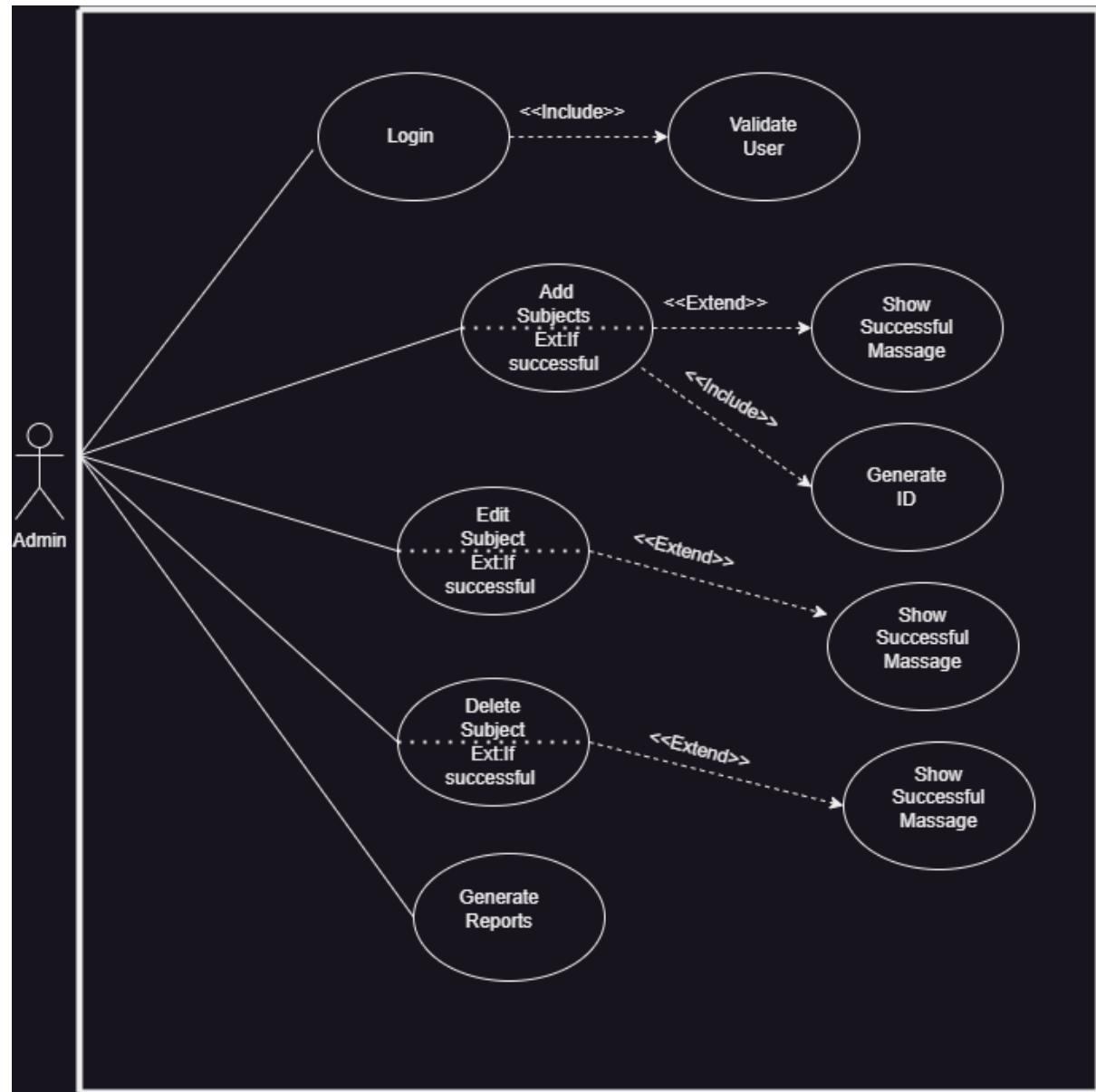
Admin

- Administrators can create, view, search, edit, and delete subjects as needed
- Administrators can generate reports based on subject data

Non-functional Requirements:

- **Performance:** The system must be able to handle a large number of subjects and their associated data without any significant decrease in performance..
- **Security:** The subject management system must be secure and protect confidential data from unauthorized access.
- **Usability:** The subject management system must be user-friendly and easy to navigate.
- **Reliability:** The system must be reliable and available at all times.
- **Scalability:** The system must be scalable and able to handle future growth. As the number of subjects offered by the tuition center increases, the system should be able to accommodate this growth without any major changes to the underlying infrastructure.

Use Case Diagram for Subject Management:



Activity Diagram for Subject Management:

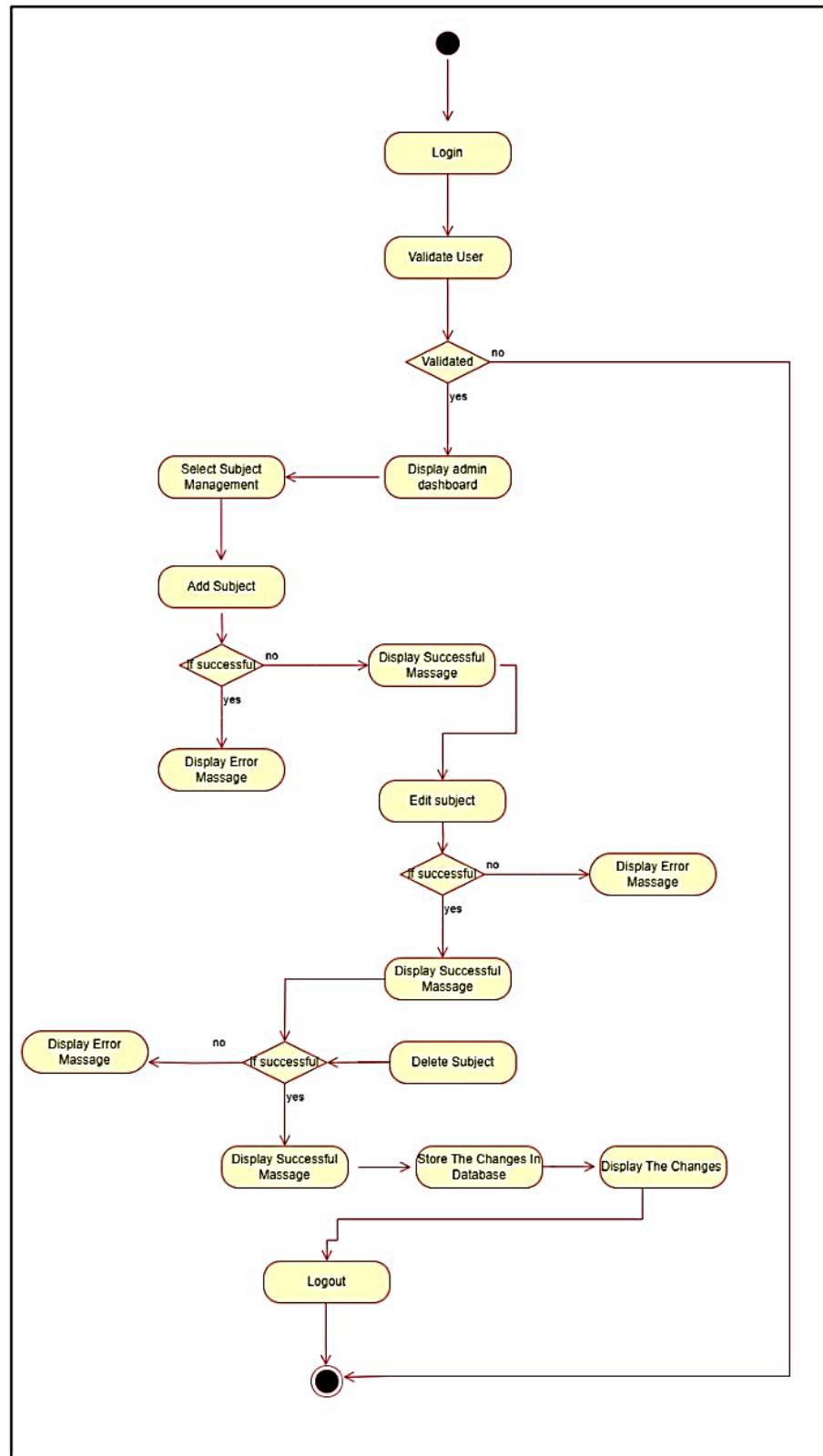


Figure 8: Activity Diagram for Subject Management:

2.2.7 Exam Management

Functional Requirements:

Admin

- Administrators can view all exams added by teachers at the tuition center.
- Administrators can access and review the marks scored by students for each exam.
- Administrators can approve and release official grades for exams.
- Administrators can view the attendance records of students for each exam.
- Administrators can generate reports based on exam data.

Teacher

- Teachers can create new exams.
- Teachers can view, search, edit, and delete existing exams related to their assigned classes.
- Teachers can mark attendance for students who sit for the exams.
- Teachers can add marks for each student.
- Teachers can edit assigned marks of students if necessary.
- Teachers can release unofficial student grades for approval by the admin
- Teachers can view exam statistics, including results overview, grade distribution, and average marks scored by students in the last six conducted exams.
- Teachers can generate reports based on exam data.

Student

- Students can log into the Exam Management Portal.
- Students can view their exam marks.
- Students can receive email notifications regarding exam-related updates.
- Students can access exam statistics, such as grade distribution and average marks scored by them in the last six conducted exams.

Non-functional Requirements:

- **Security:** The exam management portal must ensure the confidentiality and integrity of student data, such as exam scores and attendance records. The system must have strong authentication and access controls to prevent unauthorized access.
- **Performance:** The exam management portal must be able to handle a large number of concurrent users during peak exam periods, without slowing down or crashing. It should also have fast response times when generating reports or updating student records.
- **Usability:** The exam management portal must be user-friendly and intuitive for both teachers and students. It should have clear navigation and well-designed interfaces, with appropriate feedback provided to users during actions such as adding or editing grades.

- **Reliability:** The exam management portal should be highly available and reliable, with minimal downtime or disruption.
- **Scalability:** The exam management portal should be able to scale up or down as needed to accommodate changes in the number of students, classes, or exams. The system should be designed to handle future growth and expansion of the tuition center.

Use Case Diagram for Exam Management:

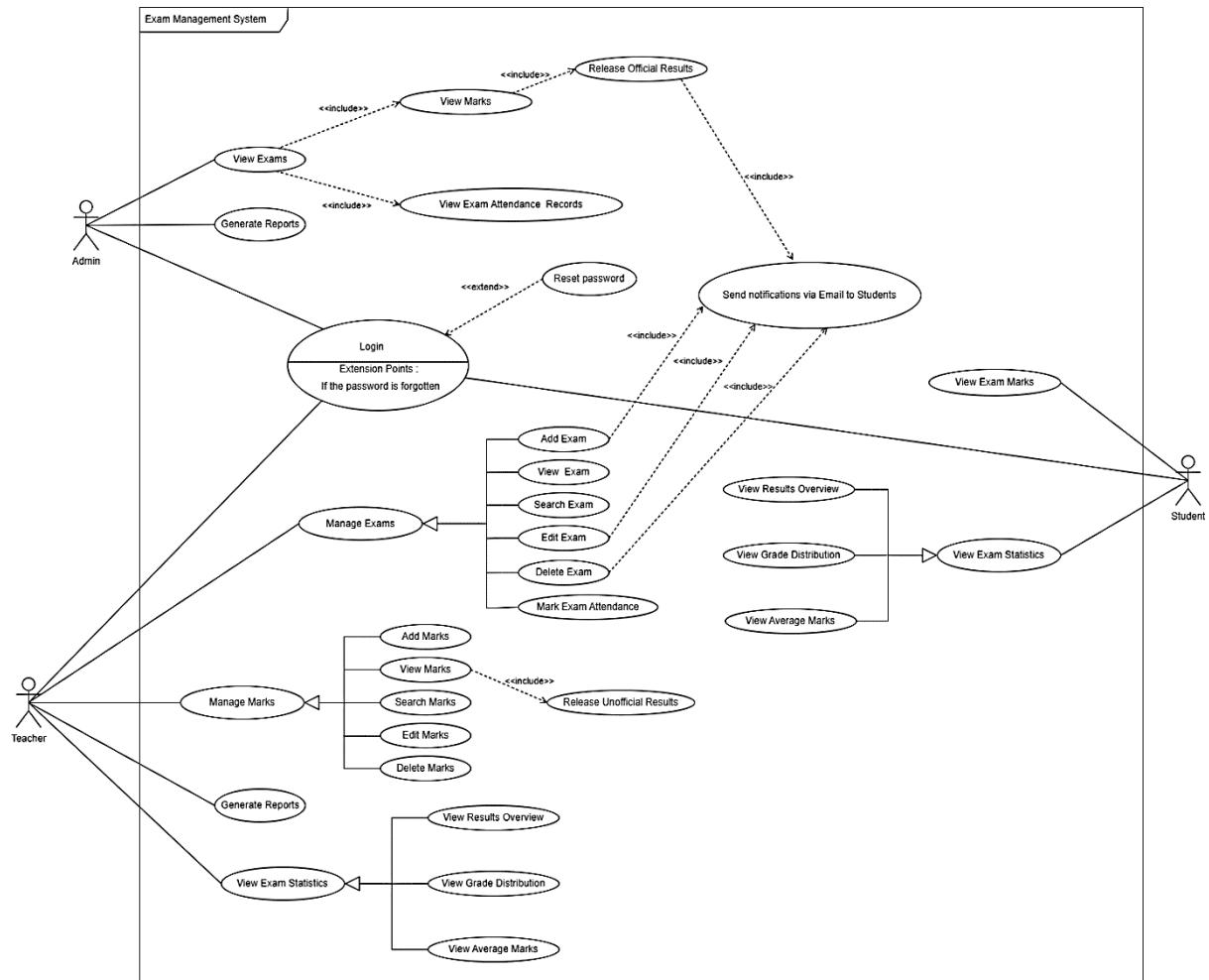


Figure 9: Use Case Diagram for Exam Management

Activity Diagrams for Exam Management:

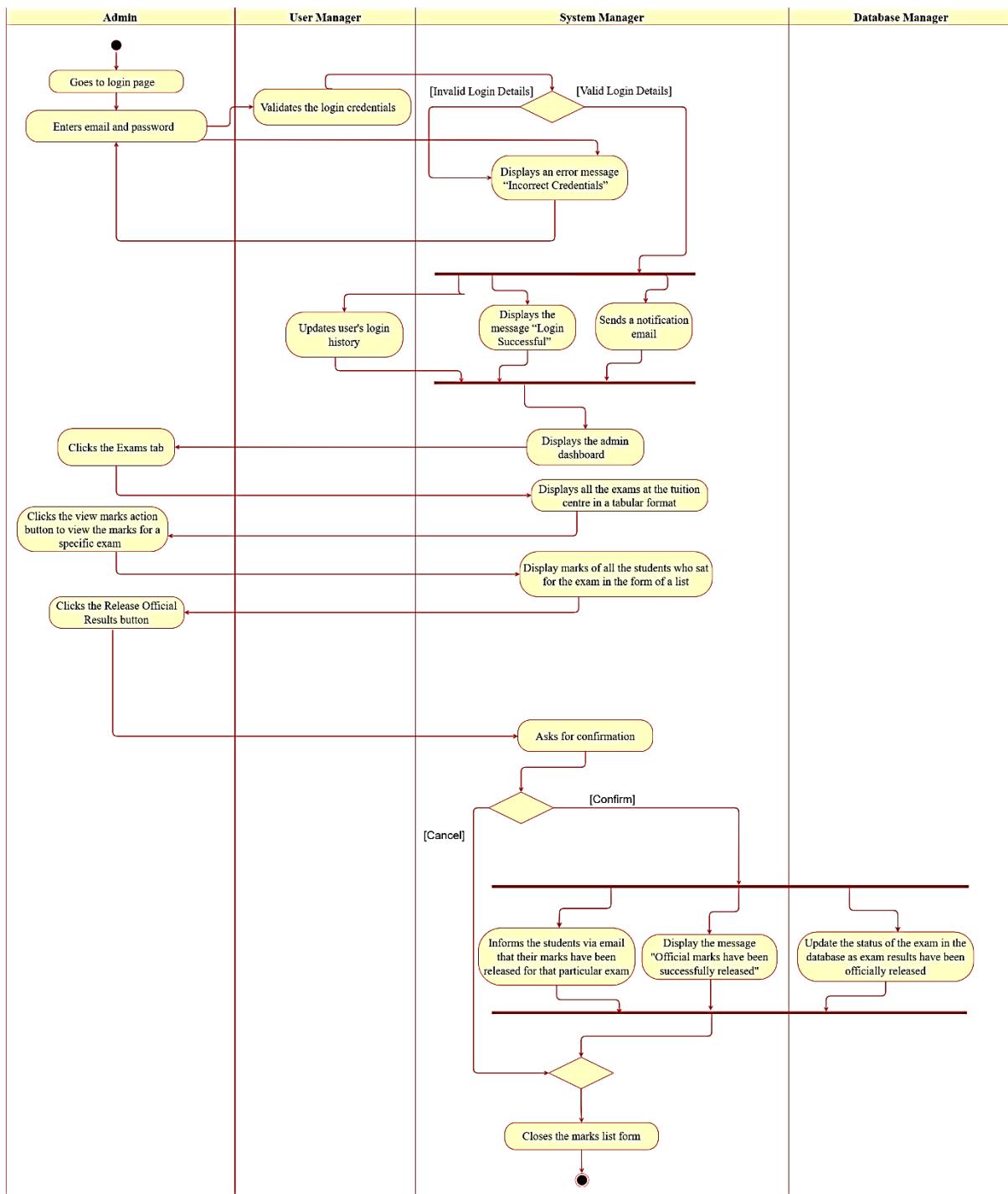


Figure 10: Activity Diagram - Release Official Marks by Admin

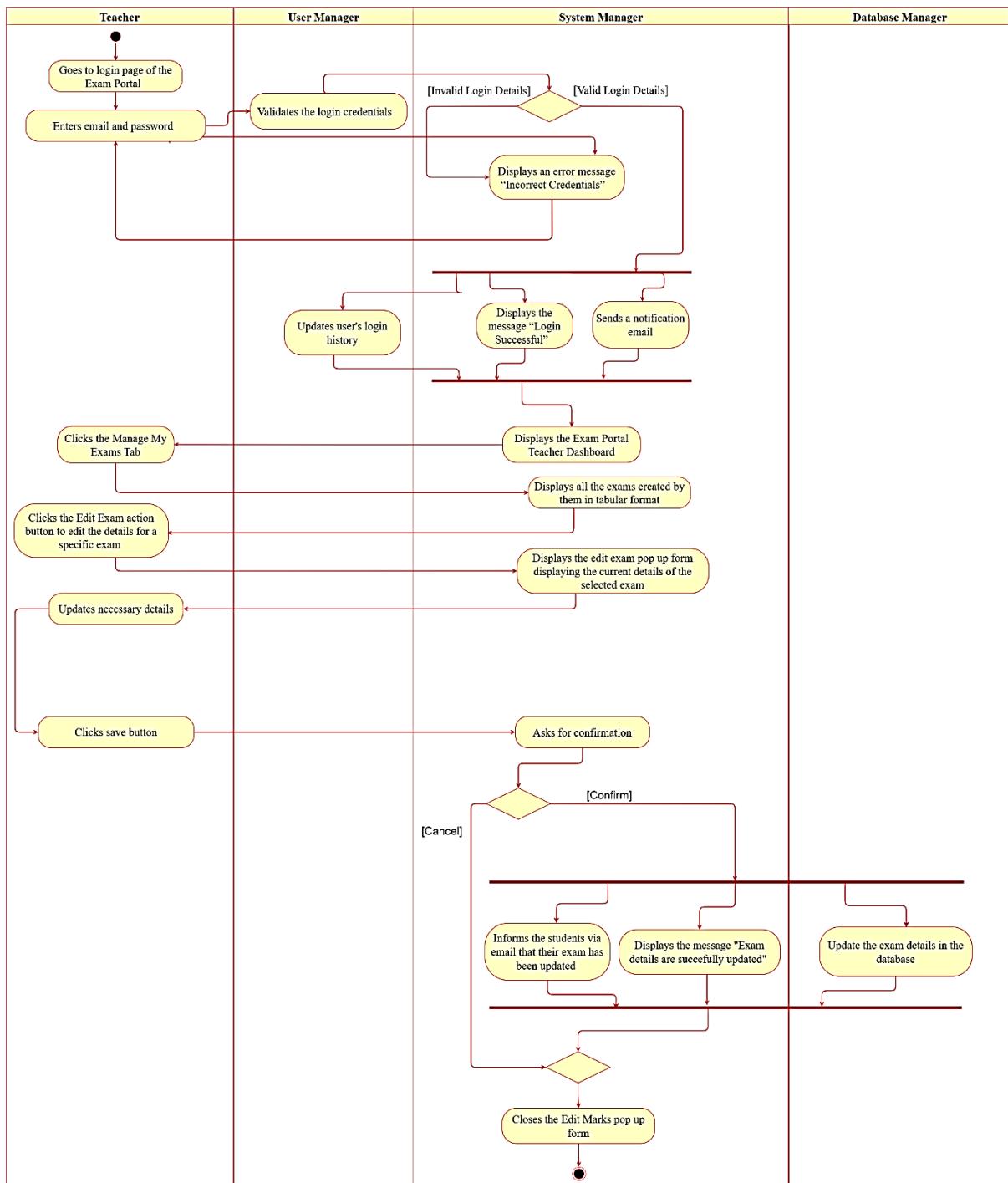


Figure 11: Figure 2: Activity Diagram - Update Exams by Teacher

2.2.8 Fee Management

Functional Requirements:

Admin

- Admin can view the payment status of each student
- Admin can add, view, edit, search and delete payment records
- Admin can generate reports on fees collected and outstanding balances

Non-functional Requirements:

- **Security:** The fee management system must ensure the confidentiality and integrity of all financial information.
- **Performance:** The system should be fast and responsive, with minimal latency in processing payment transactions. It should be able to handle a large number of payment transactions simultaneously without affecting system performance.
- **Scalability:** The system should be able to scale up or down based on the changing needs of the tuition center. It should be able to handle a growing number of students and payment transactions without compromising on performance or security.
- **Reliability:** The fee management system must be reliable and available at all times. It should have a high uptime and provide automatic failover and redundancy options in case of system failure or outage.
- **User-friendliness:** The system should be easy to use and navigate.

Use Case Diagram for Fee Management:

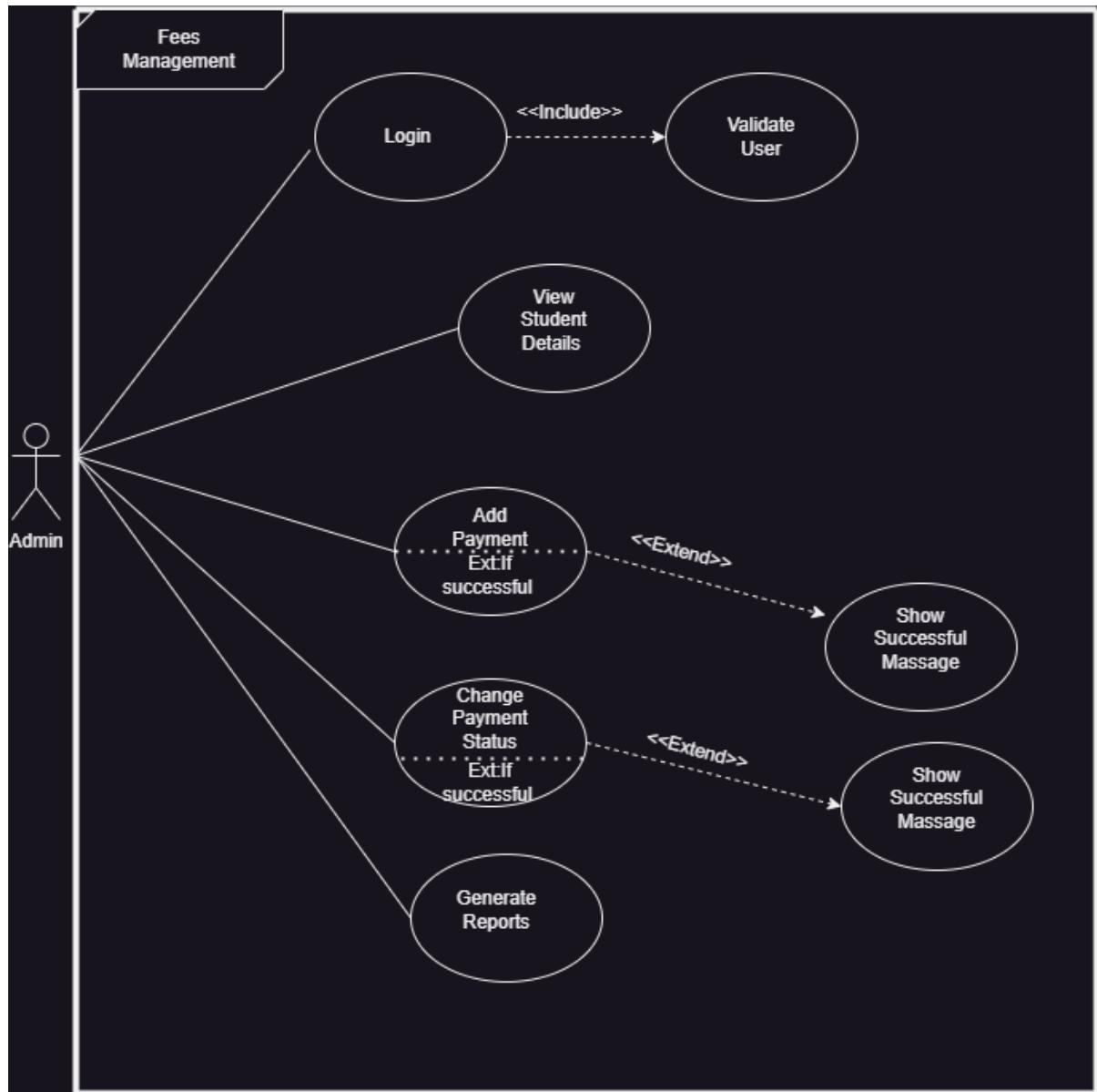
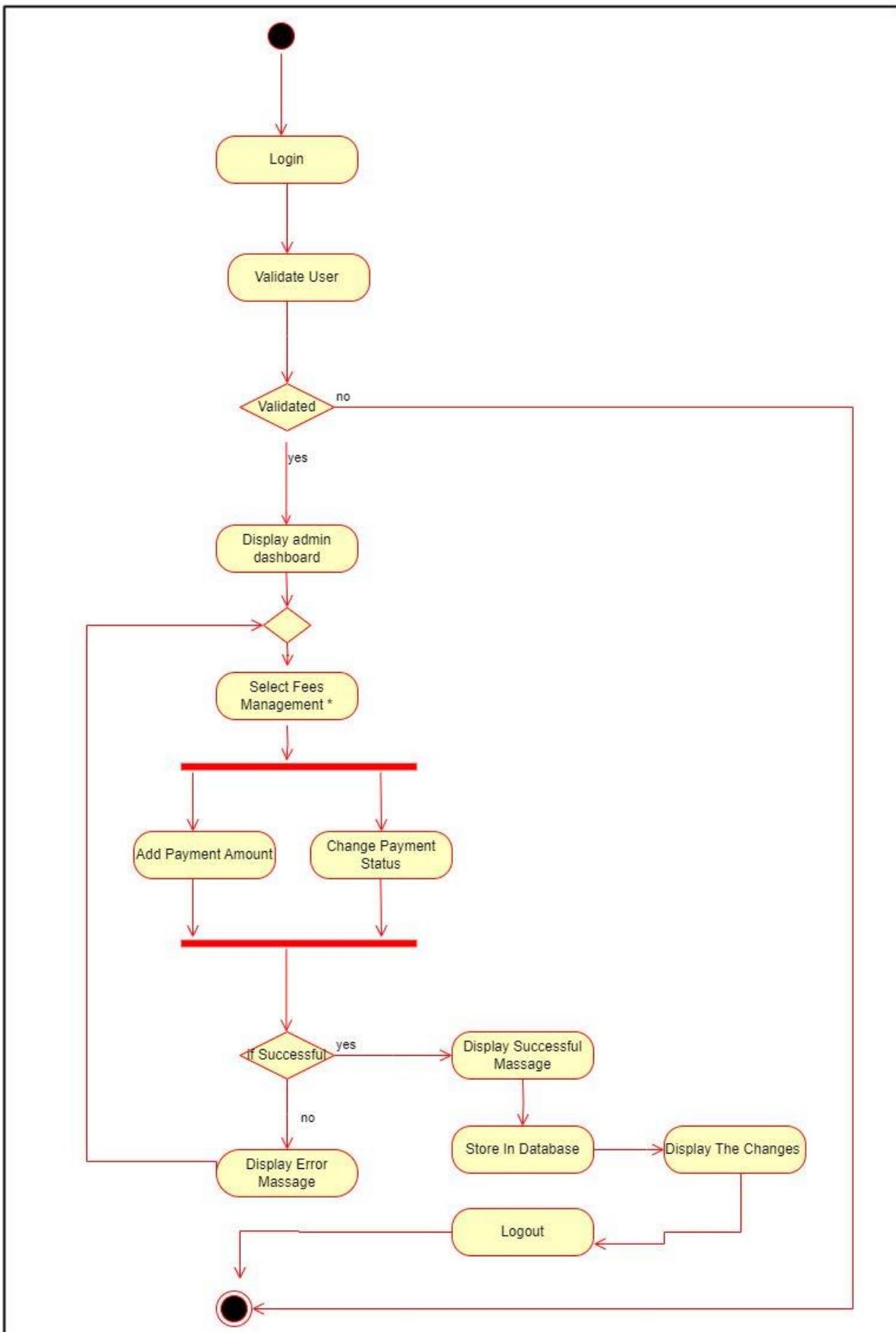


Figure 12: Use Case Diagram for Fee Management

Activity Diagram for Fee Management:



2.2.9 Expense Management

Functional Requirements:

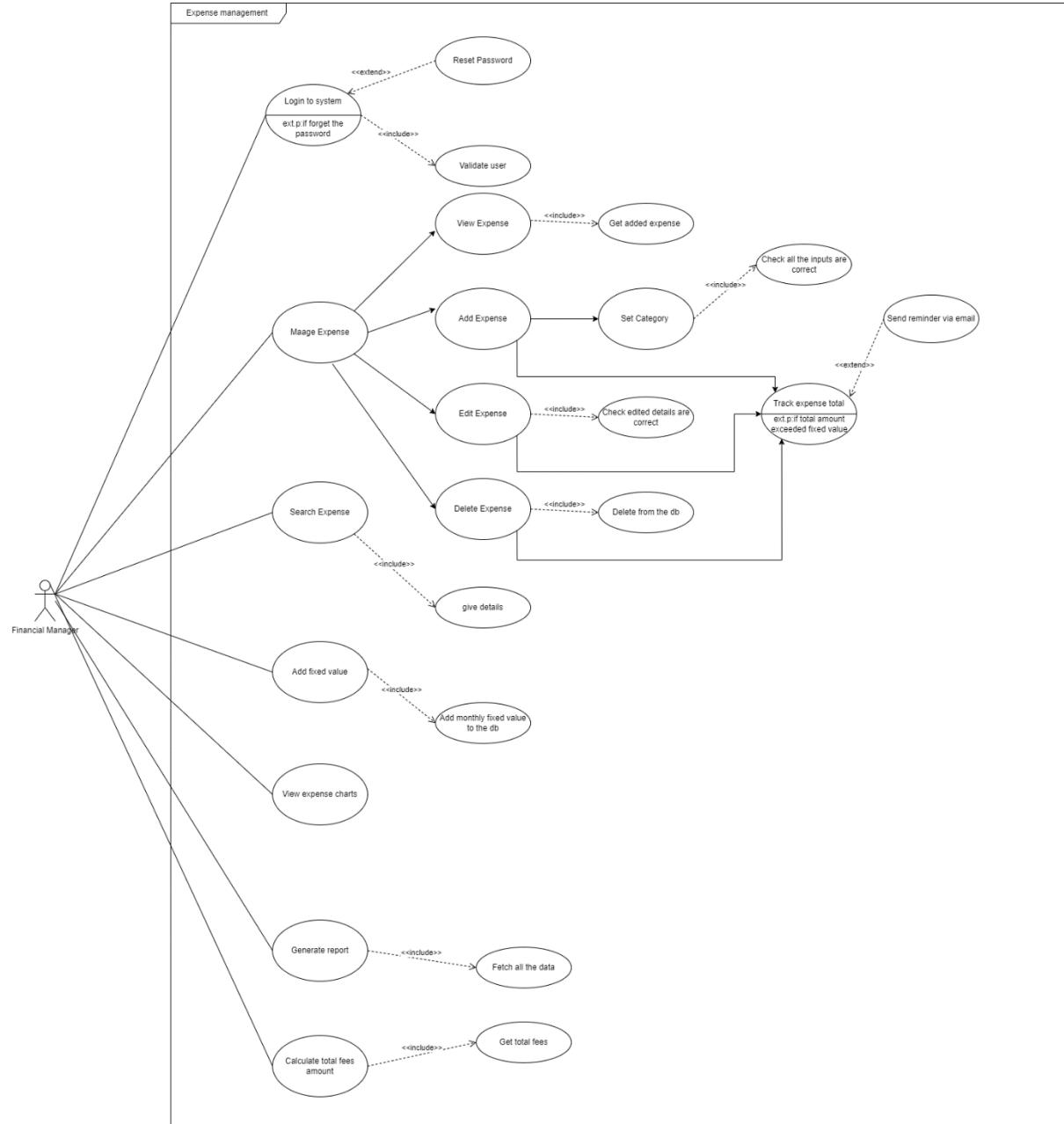
Admin

- Administrators can view, add, edit, search and delete expenses, including rent, utilities, staff salaries, and supplies, among others
- Administrators can categorize expenses into different categories
- Administrators can keep track of their expenses and stay within budget
- Administrators can generate detailed expense reports
- Administrators can ensure that they never miss a payment or deadline with features such as automated reminders and notifications

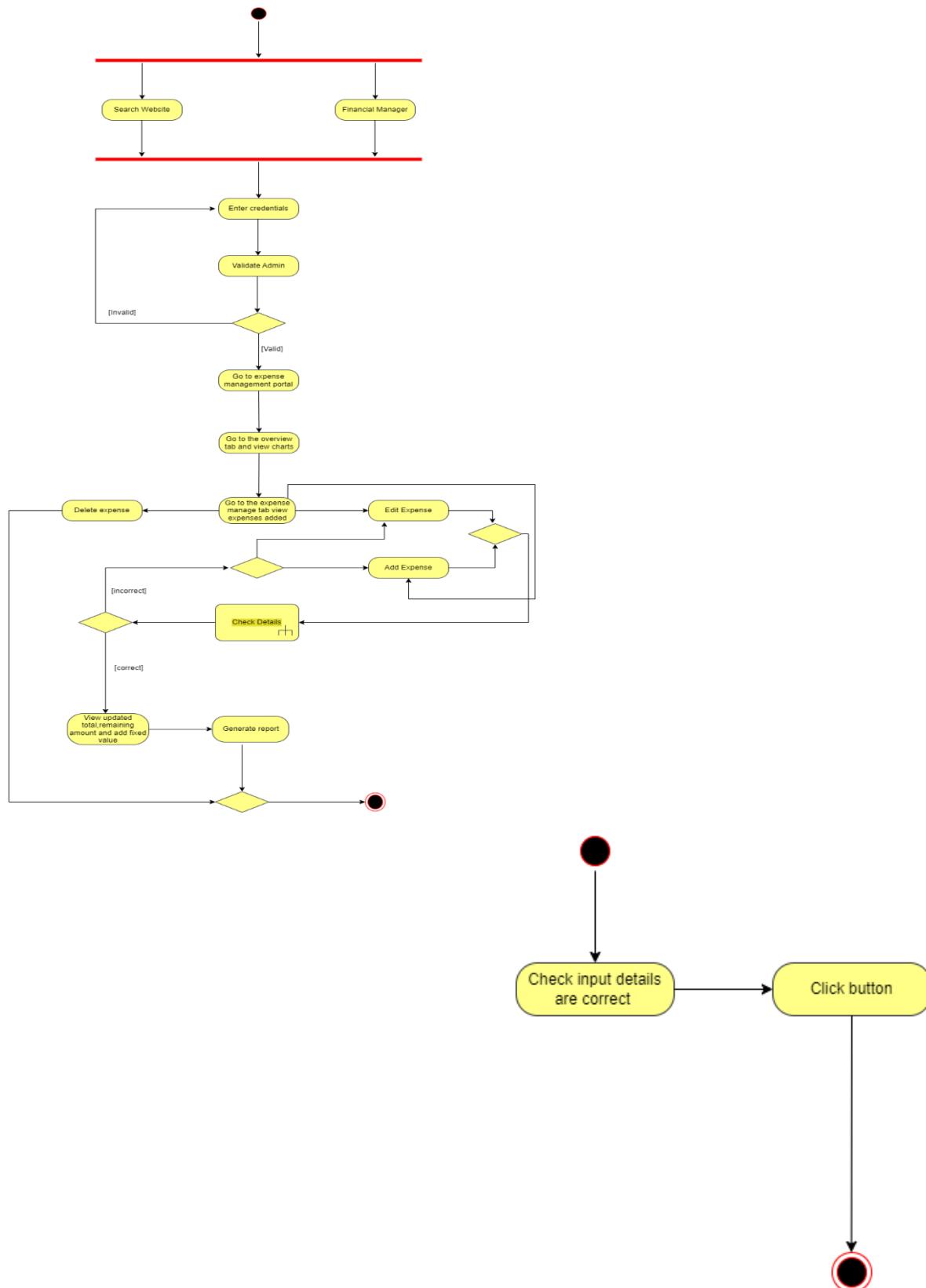
Non-functional Requirements:

- **Usability:** The Expense Management Portal should have a user-friendly interface that is easy for administrators to navigate and use.
- **Performance:** The system should be able to handle a large amount of data and users simultaneously without experiencing any significant lag or downtime.
- **Security:** The system should have robust security features to protect sensitive financial data, including user authentication, access control, and encryption of data in transit and at rest.
- **Scalability:** The system should be able to accommodate future growth of the tuition center and handle an increasing number of expenses, categories, and users without requiring significant modifications or upgrades.
- **Availability:** The system should be available 24/7.

Use Case Diagram for Expense Management:



Activity Diagram for Expense Management



2.2.10 Attendance Management

Functional Requirements:

Student

- Students can access the attendance form by scanning a QR code

Admin

- Administrators can easily retrieve attendance records for future reference and analysis.

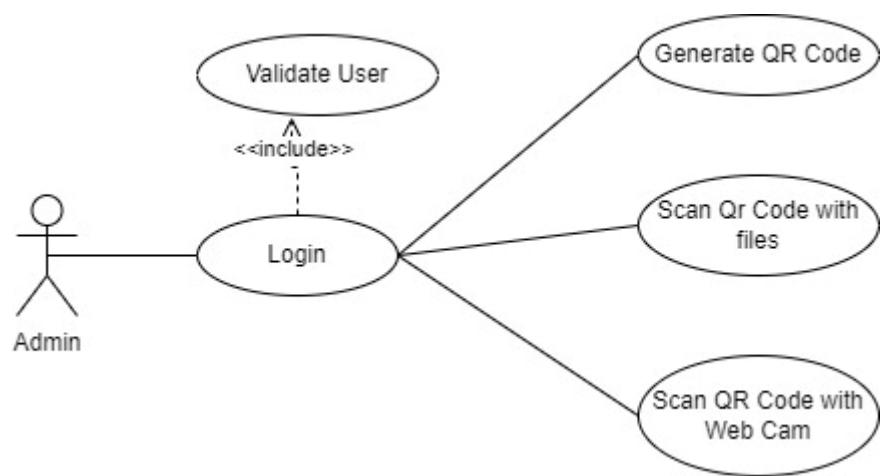
Parent

- Parents can track their child's attendance in real-time.

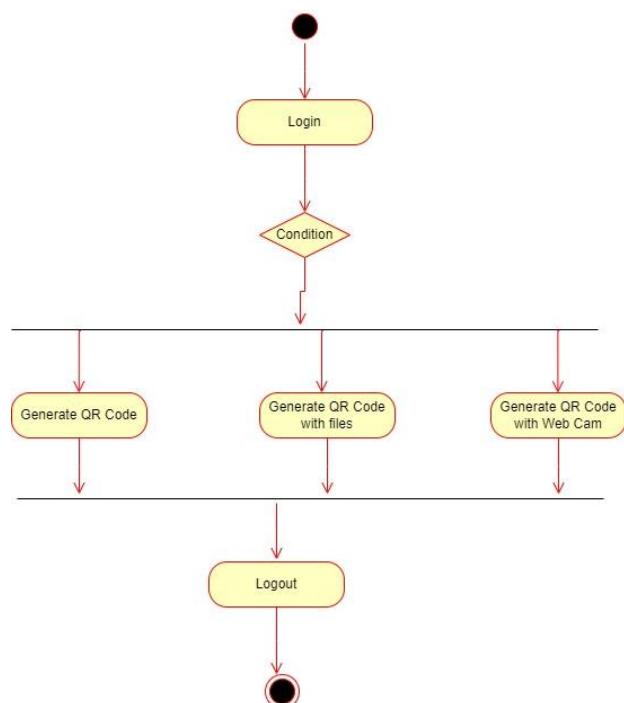
Non-functional Requirements:

- **Performance:** The system should be able to handle a large number of attendance records and user requests without any significant delays or interruptions.
- **Security:** The attendance data must be stored securely and protected from unauthorized access or manipulation. The system should use encryption and authentication mechanisms to ensure data privacy and integrity.
- **Reliability:** The system should be highly reliable and available, with minimal downtime or service disruptions. It should also have backup and recovery mechanisms to ensure the integrity and availability of the attendance data.
- **Usability:** The system should be easy to use and navigate, with clear instructions for students and teachers on how to access and use the attendance portal. The system should also have an intuitive interface that allows users to quickly and easily view attendance data and generate reports.
- **Accuracy:** The system should be able to accurately record attendance data and prevent errors or omissions in the attendance record. The QR code scanning and form submission process should be reliable and error-free.

Use Case Diagram for Attendance Management:



Activity Diagram for Attendance Management:



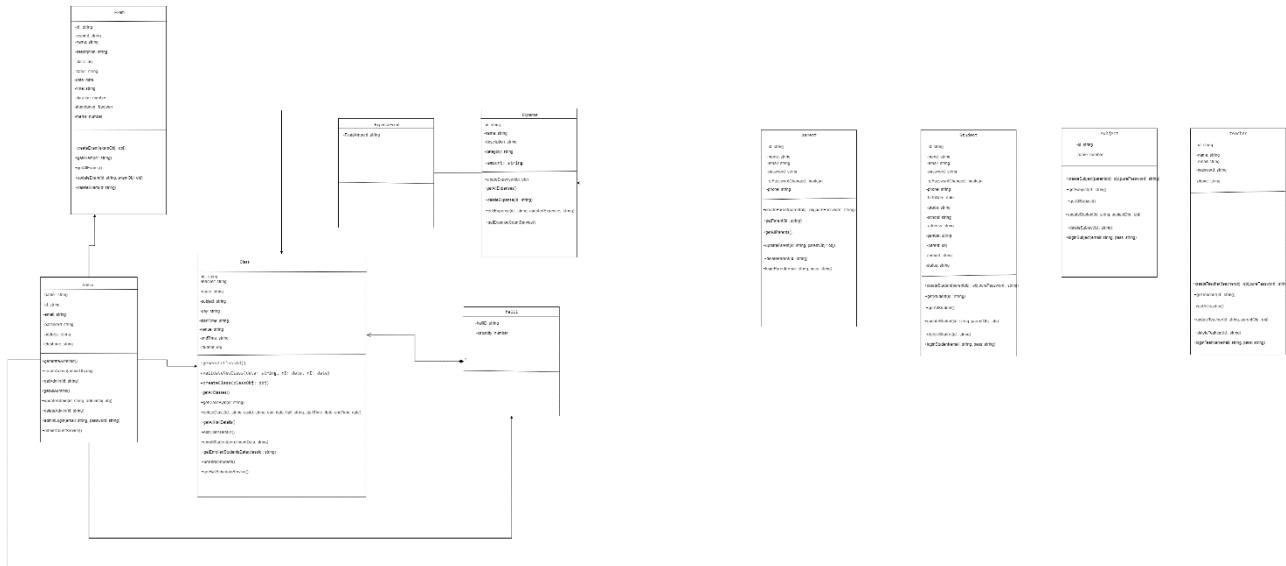
Technical requirements:

Hardware	Minimum	Recommended	Browsers	OS
• Processor	<ul style="list-style-type: none"> • Intel i3 2nd gen • AMD Ryzen 3 1st gen 	<ul style="list-style-type: none"> • Intel i3 7th gen or high • AMD Ryzen 3 3rd gen or high 	<ul style="list-style-type: none"> • Google Chrome • Mozilla Firefox • Microsoft Edge • Safari • Opera 	<ul style="list-style-type: none"> • Windows 7 or high • Mac OS X 10.6
• RAM	• 4GB	• 6GB or high		
• Storage	• 5GB	• 5GB or high (better use SSD)		

2.3 Requirements modeling

Chapter 3 - Design and Development

3.1 Class Diagram



3.2 Entity Relationship Diagram

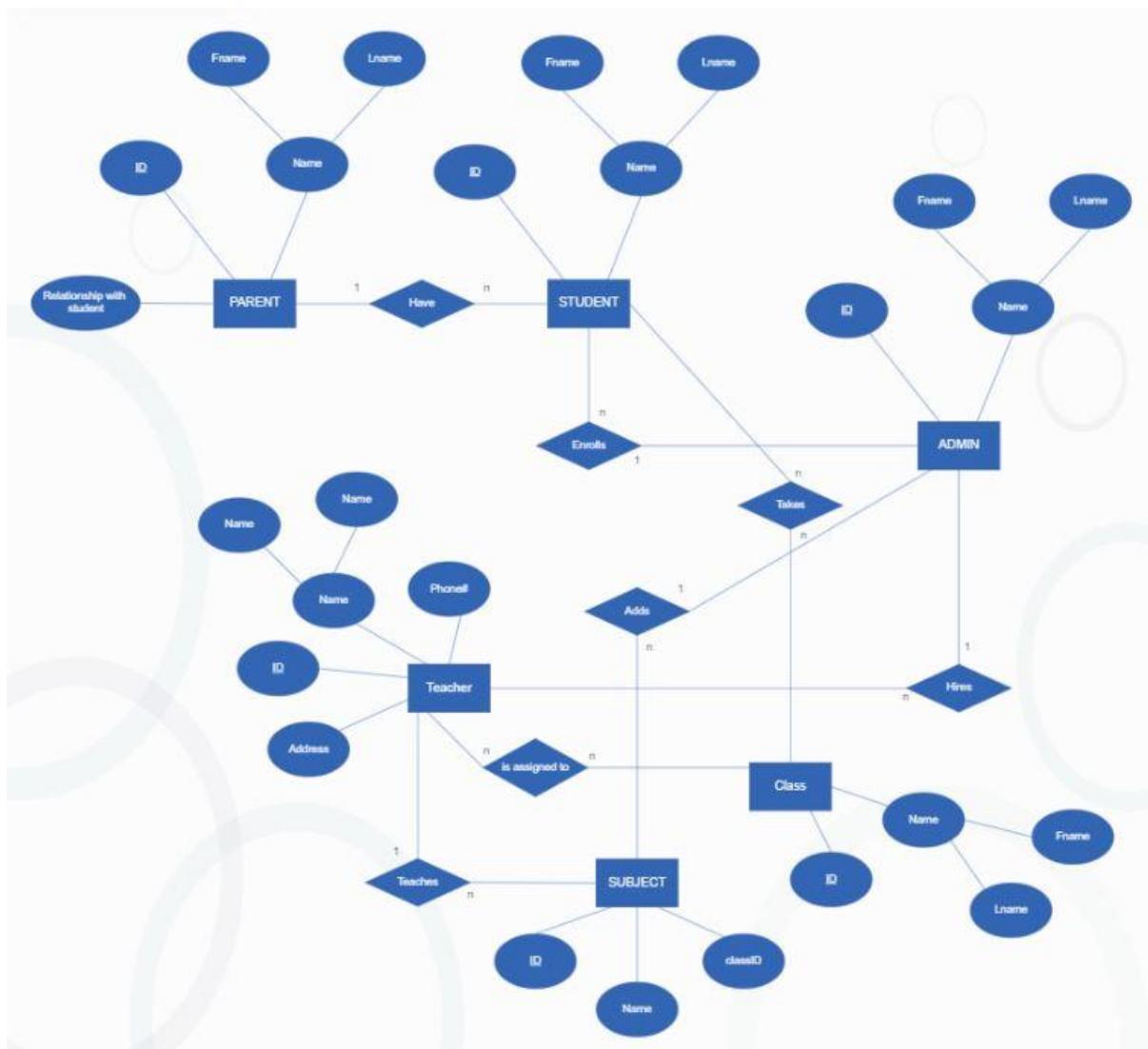


Figure 13 ER diagram

3.3 User Interfaces

3.3.1 Student Management

Figure 14: Student Management - Login Page

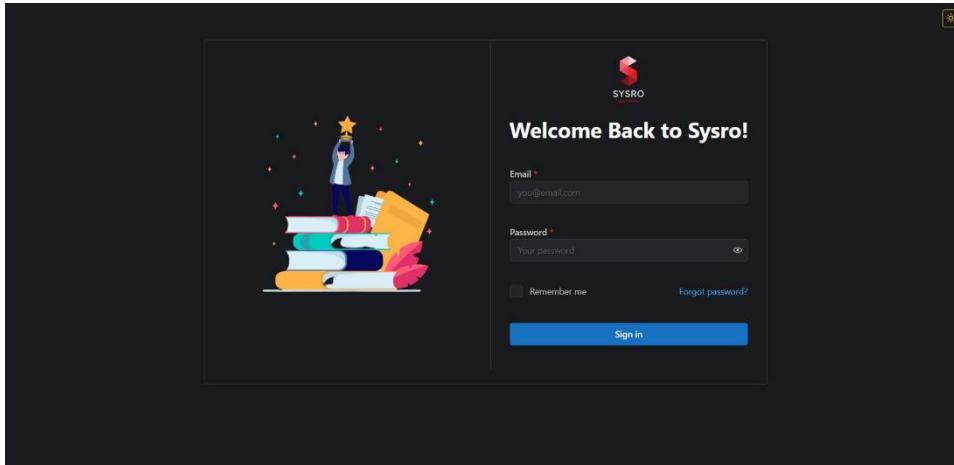


Figure 15: Student Management - Admin Dashboard

ID	Name	Email	Phone	School	Grade	Birth Date	Gender	Address	Parent	Action
STD-005	Yashodini Soya	yasodinisoysa@gmail.com	0761233345	Leeds	10	12/02/2002	female	Panadura		...
STD-007	Venura	venurav218@gmail.com	0717232312	ECC	13	31/03/2001	male	Walvita, Malabe	venura	...
STD-008	sahan bandara	beesarahan23623@gmail.com	0701117153	ECC	12	22/10/2001	male	21/b Rajasewa Gammanea, Diyurumputiya ,gatahatha	beesara	...
STD-009	vinnath	vinnath19@gmail.com	0711461016	ecc	12	19/09/2001	male	Ruwanwella	vinnath	...
STD-010	Vidura Chathuranga	vidurachathuranga2020@gmail.com	0712906815	RCC	12	30/03/2001	male	No12,Colombo10,Babla	venura	...

Figure 16: Student Management - Report Generation

Created Date: 2023-11-2
Created Time: 19:37:32
Generated Person: Vidura Chathuranga

ID	Name	Email	Phone	School	Grade	Birthday	Gender	Address	Parent
STD-005	Yashodini Soya	yasodinisoysa@gmail.com	0761233345	Leeds	10	2002-02-12	female	Panadura	
STD-007	Venura	venurav218@gmail.com	0717232312	ECC	13	2001-03-31	male	Walvita, Malabe	venura
STD-008	sahan bandara	beesarahan23623@gmail.com	0701117153	ECC	12	2001-10-21	male	21/b Rajasewa Gammanea, Diyurumputiya ,gatahatha	beesara
STD-009	vinnath	vinnath19@gmail.com	0711461016	ecc	12	2001-09-19	male	Ruwanwella	vinnath
STD-010	Vidura Chathuranga	vidurachathuranga2020@gmail.com	0712906815	RCC	12	2001-03-30	male	No12,Colombo10,Babla	venura

Figure 17: Student Management - Student Dashboard Statistical Data View Tab

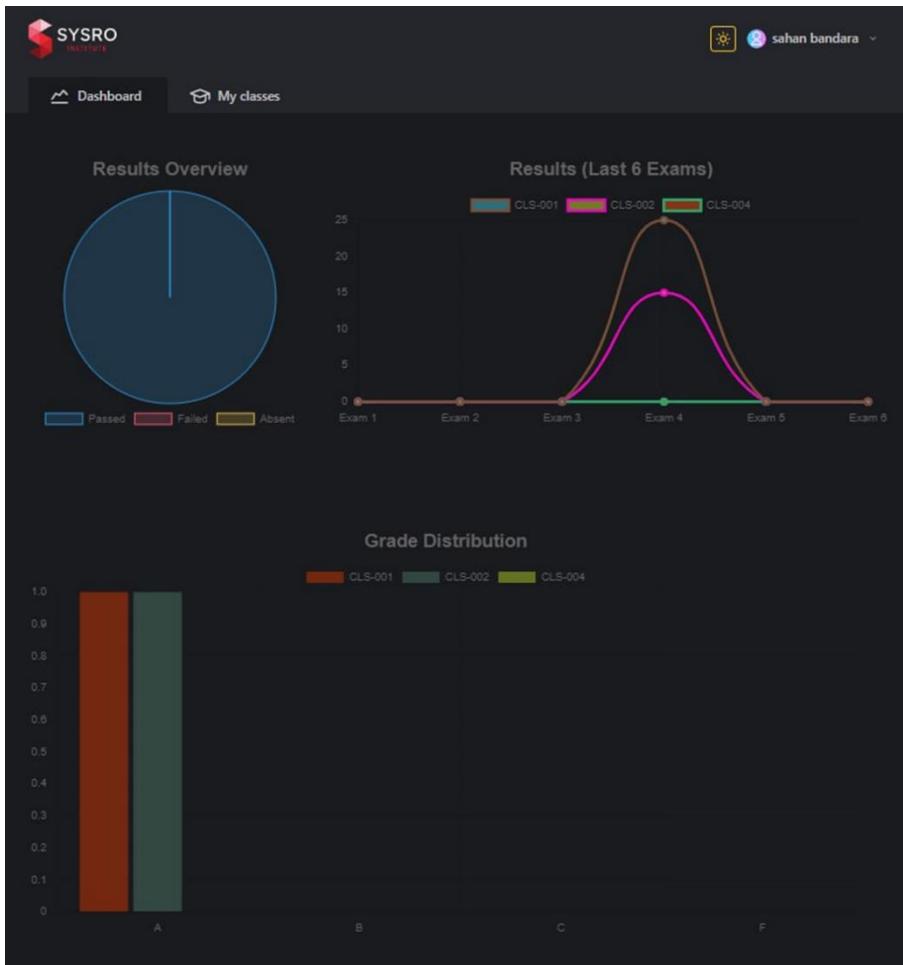


Figure 18: Student Management -Student Dashboard My Class Tab

ID	Name	Teacher	Subject	Day	Start Time	End Time	Venue
CLS-001	vidura's Class	Vidura Chaturanga	Mathematics	Monday	10:30 AM	12:30 PM	HLS-002
CLS-002	Amal's class	amal	English	Wednesday	4:00 PM	7:30 PM	HLS-002
CLS-004	testEdited	vinnath	Mathematics	Monday	9:00 AM	11:00 AM	HLS-004

© 2023 Tuition Management System. All rights reserved.

3.3.2 Teacher Management

The screenshot shows the SYSRO Admin interface with the 'Teachers' tab selected. The page includes a search bar, a 'Generate Report' button, and an 'Add Teacher' button. A table lists teacher records with columns for ID, Name, Email, Phone, and Action (Edit/Delete). The data in the table is as follows:

ID	Name	Email	Phone	Action
TCH-002	amal	amal@gmail.com	0712001234	<button>Edit</button> <button>Delete</button>
TCH-003	vinnath	vinnath@gmail.com	1234567898	<button>Edit</button> <button>Delete</button>
TCH-005	shehan	shehan@gmail.com	0714370503	<button>Edit</button> <button>Delete</button>
TCH-006	Yashodini Soysa	yashodini@gmail.com	0762212212	<button>Edit</button> <button>Delete</button>
TCH-007	venura kaushan	venura@gmail.com	0766883316	<button>Edit</button> <button>Delete</button>
TCH-008	Vidura Chathuranga	vidura@gmail.com	0987623131	<button>Edit</button> <button>Delete</button>
TCH-009	sahan bandara	beesarasahan23623@gmail.com	0701117153	<button>Edit</button> <button>Delete</button>

Figure 19 teacher admin

The screenshot shows the 'Add teacher Record' modal open over the teacher management table. The modal has fields for Name, Email, and Phone, each with a required asterisk. Below the fields is a large green 'Add' button. The background table shows the same teacher data as Figure 19.

Figure 20add teacher

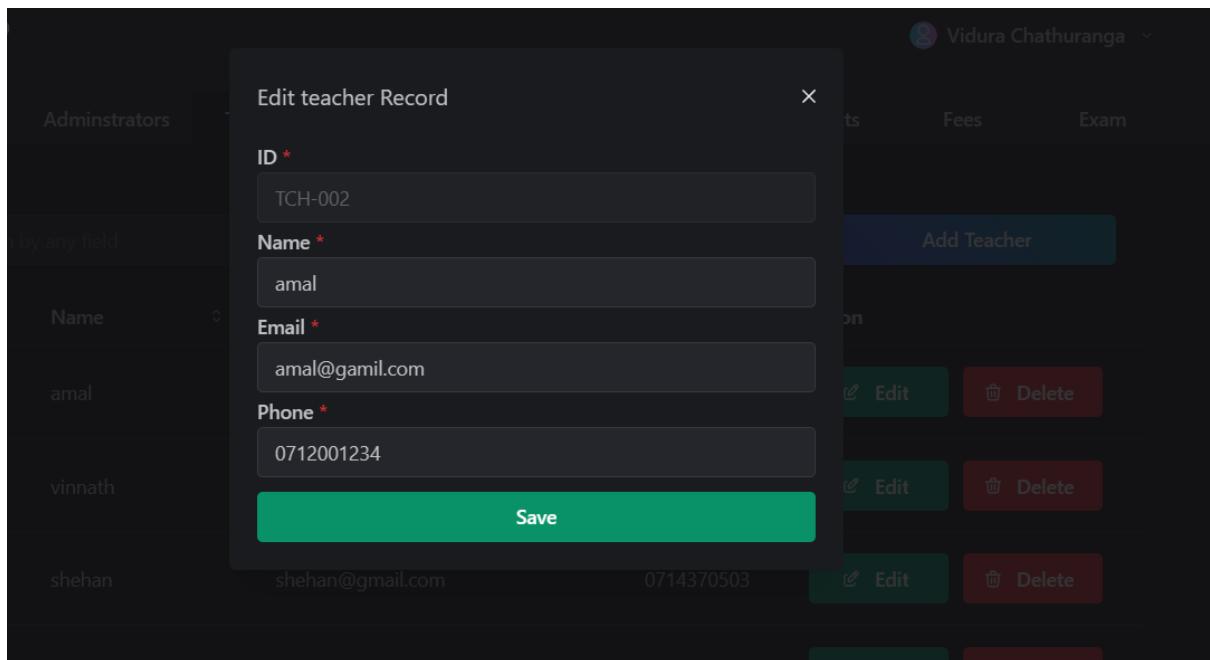


Figure 21edit teacher

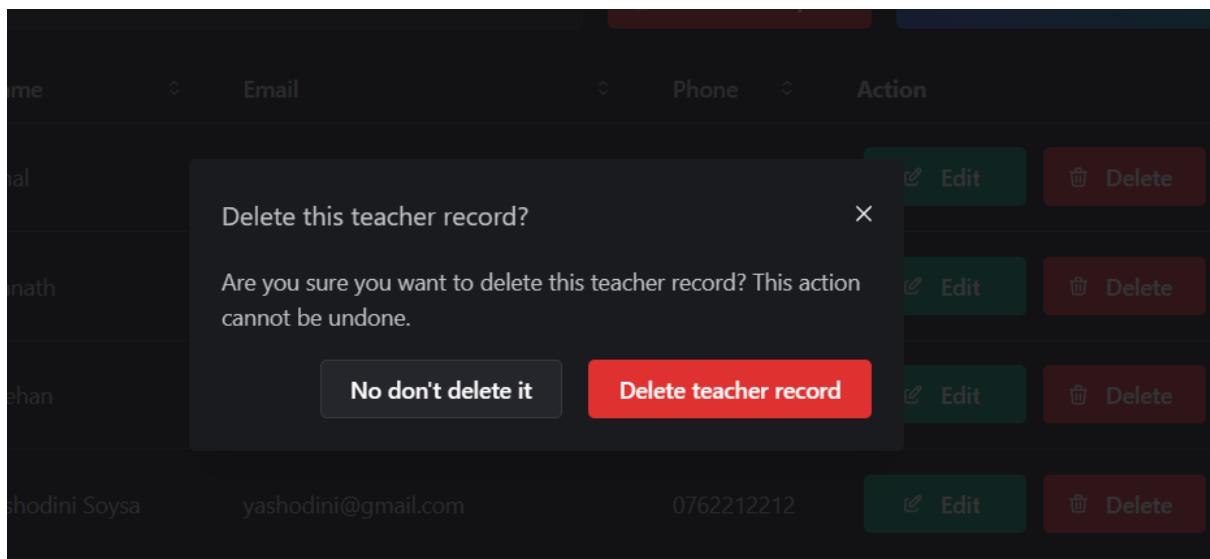


Figure 22delete teacher



Tuition Management System

Created Date : 2023 / 5 / 19

Created Time : 22.19.28

Generated Person : Vidura Chathuranga

ID	Name	Email	Phone
TCH-002	amal	amal@gamil.com	0712001234
TCH-003	vinnath	vinnath@gmail.com	1234567898
TCH-005	shehan	shehan@gmail.com	0714370503
TCH-006	Yashodini Soysa	yashodini@gmail.com	0762212212
TCH-007	venura kaushan	venura@gmail.com	0766883316
TCH-008	Vidura Chathuranga	vidura@gmail.com	0987623131
TCH-009	sahan bandara	beesarasa-han23623@gmail.com	0701117153
TCH-010	Vidura Thilakasiri	vidurachathuranga2020@gmail.com	0712906815
TCH-011	hasanka	sehanhasan-ka372@gmail.com	0714370876

This PDF document is generated from my personal Tuition Management System. It contains no real data. It is intended for educational purposes only and is not suitable for commercial use. The original source code is available at <https://github.com/ViduraChathuranga/TuitionManagementSystem>.

Figure 23teacher pdf

The screenshot shows the SYSRO INSTITUTE teacher dashboard. At the top, there is a navigation bar with links for Dashboard, Administrators, Teachers (which is the active tab), Students, Parents, Classes, and Subjects. Below the navigation bar is a search bar labeled "Search by any field" and a red "Generate Report" button. The main content area displays a table of teacher data with columns for ID, Name, Email, and Phone. The data includes:

ID	Name	Email	Phone
TCH-002	amal	amal@gmail.com	0712001234
TCH-003	vinnath	vinnath@gmail.com	1234567898
TCH-005	shehan	shehan@gmail.com	0714370503

At the bottom right of the table are "Edit" and "Delete" buttons. On the far right, a vertical sidebar menu for the user "Vidura Chathuranga" is open, showing options like Administrator, Change Theme, Settings, Account settings, Logout, Danger zone, and Delete account. The "Delete account" option is highlighted with a red background.

Figure 24teacher login

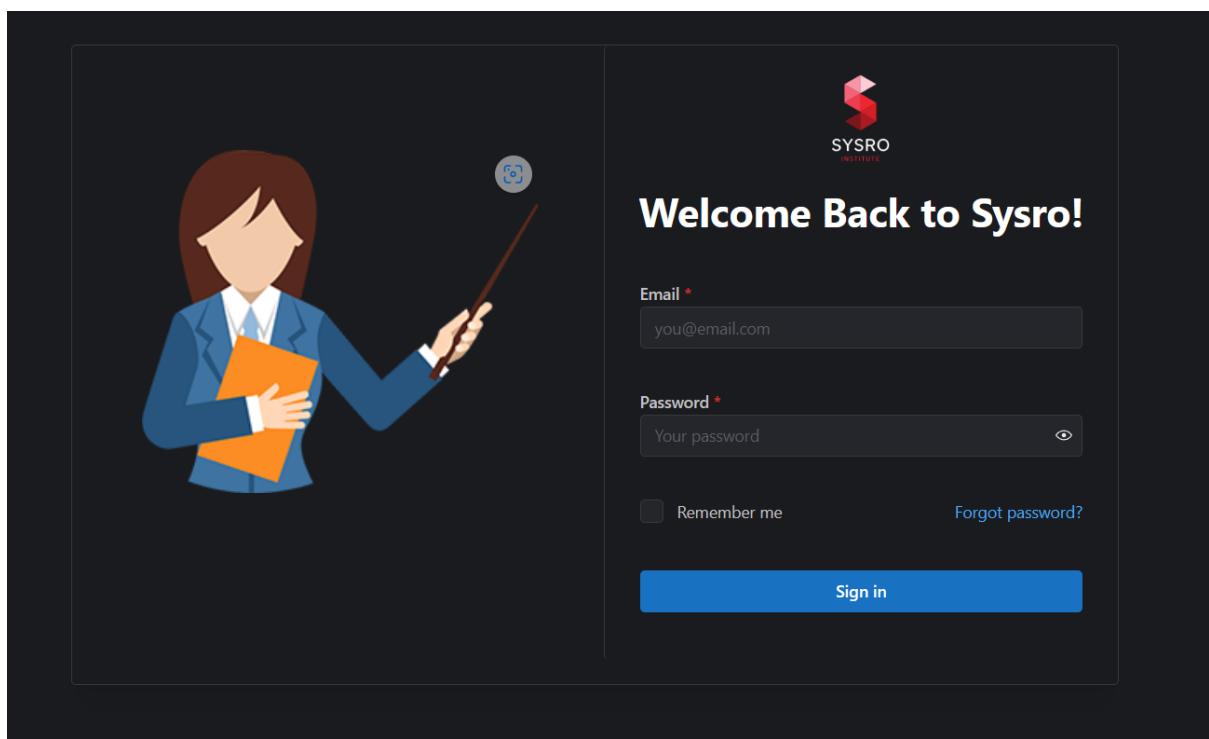


Figure 25teacher login

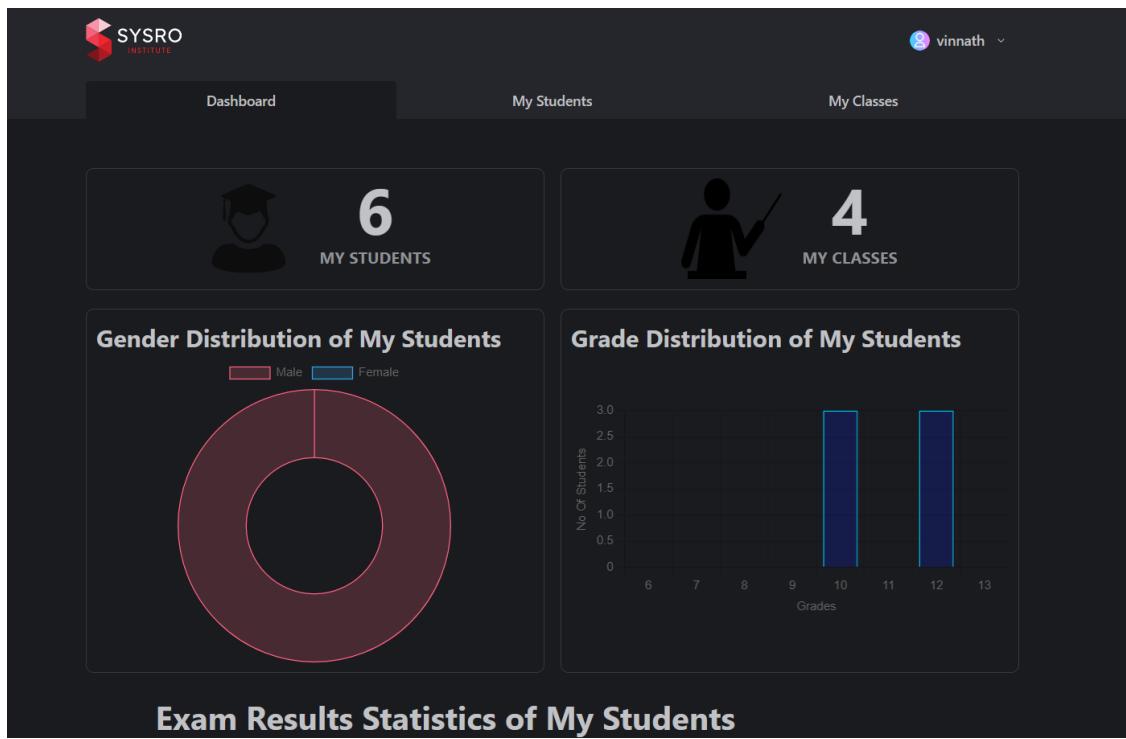


Figure 26 dashboard tewacher

ID	Name	Email	Phone	School	Grade	Birth Date	Gender	Address	Parent	Parent Phone
STD-006	Vidura Chathuranga	vidurathilakasiri@gmail.com	0712906815	RCC	10	2002-09-22	male	84,Wendala,Rawanwella,Srilanka		
STD-004	vidura	vidurachathuranga2020@gmail.com	0712906815	ecc	12	2002-02-03	male	84,Wendala,Rawanwella,Srilanka		
STD-007	venura	venura218@gmail.com	0712906815	ecc	12	2001-08-03	male	84,Wendala,Rawanwella,Srilanka	venura	0766883316
STD-008	sahan bandara	beesarasahan23623@gmail.com	0701117153	ECC	10	2001-01-09	male	21/b Rajasewa Gammanaa, Diyurumpitiya ,gatahatha	venura	0766883316
STD-009	vinnath	vinnath19@gmail.com	0000000000	ECC	12	2001-02-01	male	Rewanwella	vinnath	0711461016
STD-008	sahan bandara	beesarasahan23623@gmail.com	0701117153	ECC	10	2001-01-09	male	21/b Rajasewa Gammanaa, Diyurumpitiya ,gatahatha	venura	0766883316

Figure 27tewcher my student

The screenshot shows a dark-themed user interface for the SYSRO INSTITUTE. At the top, there is a logo for 'SYSRO INSTITUTE' and a user profile icon labeled 'vinnath'. Below the header, there are three navigation tabs: 'Dashboard', 'My Students', and 'My Classes', with 'My Classes' being the active tab. The main content area displays a table of scheduled classes. The columns are labeled: ID, Name, Subject, Date, Start Time, End Time, and Venue. The table contains the following data:

ID	Name	Subject	Date	Start Time	End Time	Venue
CLS-003	MATHS	Mathematics	Monday	5:33 AM	5:33 AM	HLS-002
CLS-004	testEdited	Mathematics	Monday	9:00 AM	11:00 AM	HLS-004
CLS-005	test2Edited	Mathematics	Monday	8:00 AM	9:00 AM	HLS-004
CLS-009	test class	English	Monday	4:35 PM	7:35 PM	HLS-002

Figure 28 my class

3.3.3 Parent Management

The screenshot shows a dark-themed web application interface for managing parents. At the top, there is a navigation bar with links for Dashboard, Administrators, Teachers, Students, Parents (which is the active tab), Classes, Subjects, Fees, and Exam. The user's profile picture and name, "Vidura Chathuranga", are also at the top right. Below the navigation is a search bar with placeholder text "Search by any field". To the right of the search bar are two buttons: "Generate Report" (red) and "Add Parent" (blue). The main content area displays a table of parent records. The columns are labeled ID, Name, Email, Phone, and Action. The data rows are as follows:

ID	Name	Email	Phone	Action
PTD-009	vidura chathuranga	vidurachathuranga2020@gmail.com	0711234568	<button>Edit</button> <button>Delete</button>
PTD-012	Beesara Bandara	beesarasahan23623@gmail.com	0701243456	<button>Edit</button> <button>Delete</button>
PTD-015	viduraa	vidurathilakasiri@gmail.com	0362266559	<button>Edit</button> <button>Delete</button>
PTD-019	vinnath	vinnath19@gmail.com	0711461016	<button>Edit</button> <button>Delete</button>
PTD-020	venura	venura218@gmail.com	0766883316	<button>Edit</button> <button>Delete</button>

Figure 29 parent admin

The screenshot shows a modal dialog titled "Add parent Record" overlaid on the parent management list. The modal contains three input fields: "Name *", "Email *", and "Phone *". Each field has a placeholder text below it: "Enter name", "Enter email", and "Enter phone". At the bottom of the modal is a large green "Add" button. The background of the modal is semi-transparent, showing the list of parents from Figure 29.

Figure 30 add parent

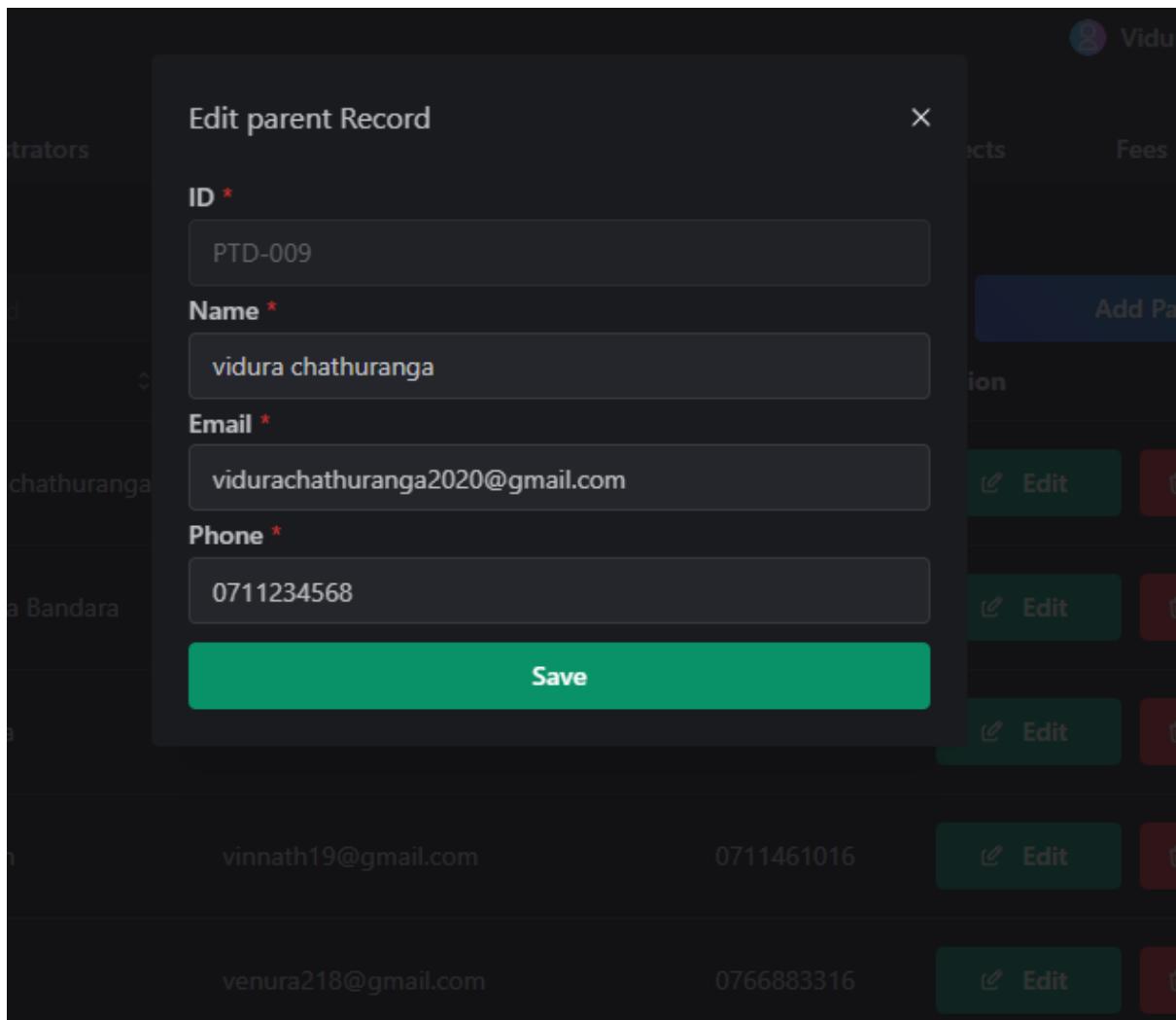


Figure 31 edit parent

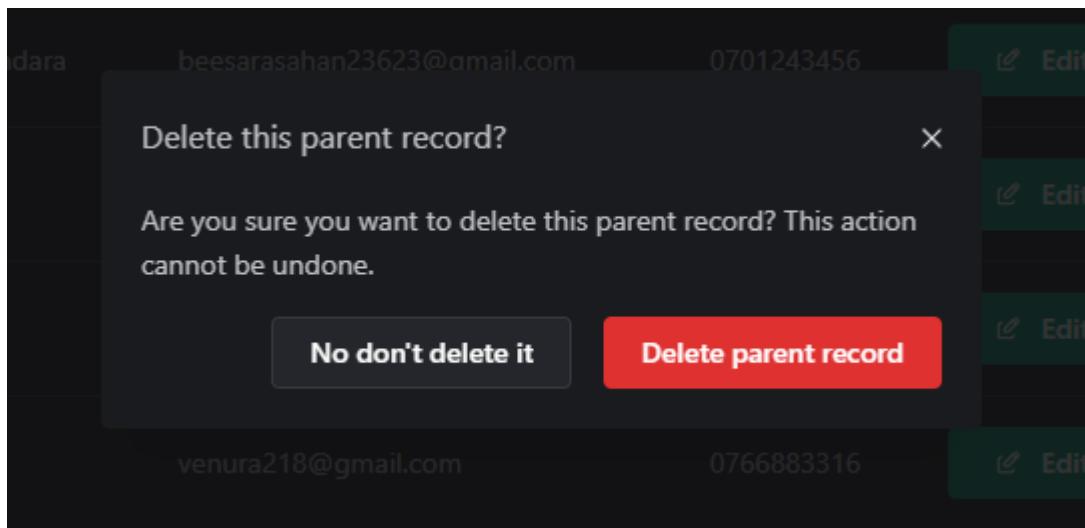


Figure 32delete parent



Tuition Management System

Created Date : 2023 / 5 / 19

Created Time : 22.14.55

Generated Person : Vidura Chathuranga

ID	Name	Email	Phone
PTD-009	vidura chathuranga	vidurachathuran-ga2020@gmail.com	0711234568
PTD-012	Beesara Bandara	beesarasa-han23623@gmail.com	0701243456
PTD-015	viduraa	vidurathi-lakasiri@gmail.com	0362266559
PTD-019	vinnath	vinnath19@gmail.com	0711461016
PTD-020	venura	venura218@gmail.com	0766883316

This PDF document and its content, including text, images, and formatting, are protected by copyright law. The document has been generated using an automated system developed by Sysro Tuition Management System. The use, reproduction, distribution, or modification of this document or its content without prior written permission from Sysro Tuition Management System is strictly prohibited and may result in legal action.

Figure 33 parent pdf

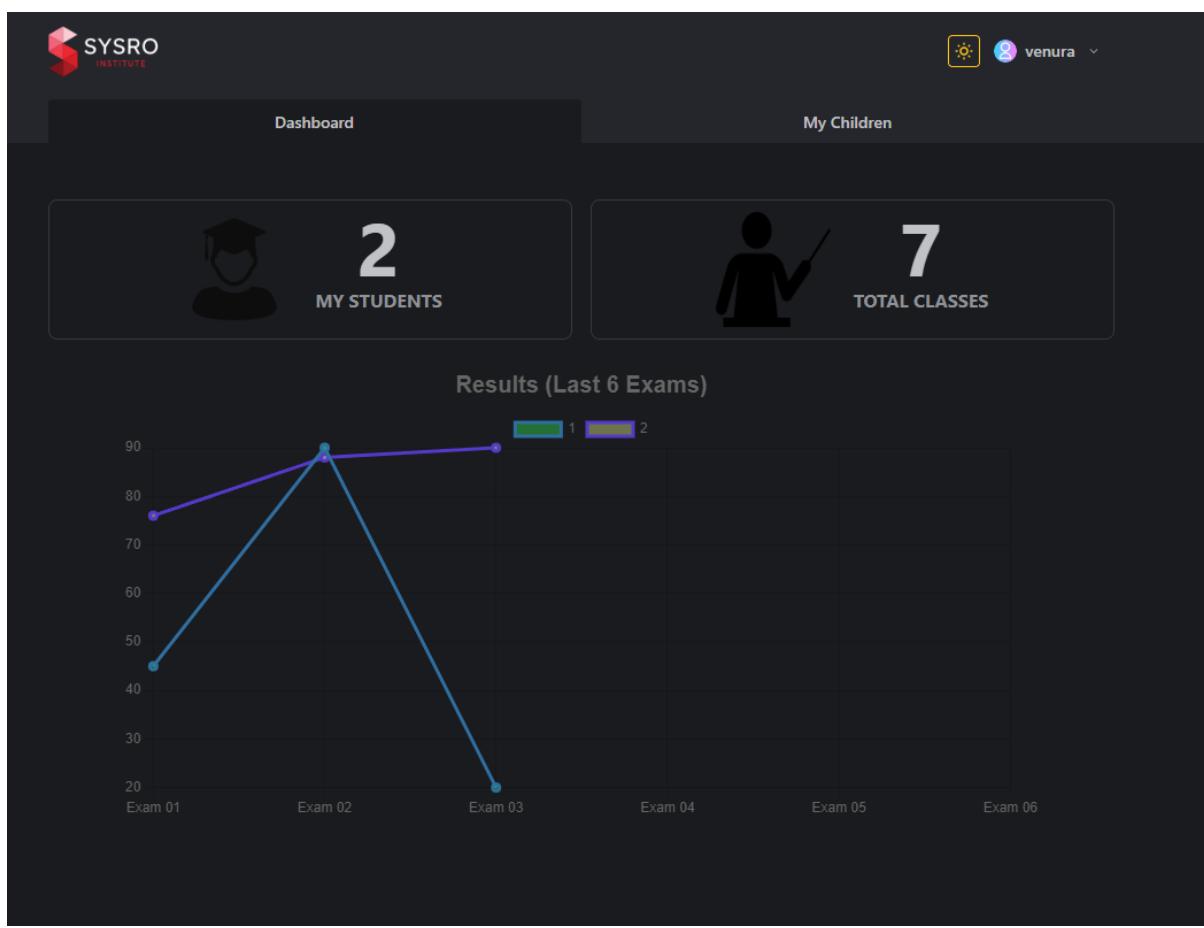


Figure 34 parent dashboard

The screenshot shows a dark-themed web application interface. At the top left is the SYSRO INSTITUTE logo. On the top right are user profile icons and a dropdown menu. Below the header, there are two tabs: "Dashboard" and "My Children". The "My Children" tab is active, displaying a table with two rows of student information. A search bar is located above the table. The table columns are labeled: ID, Name, Email, Phone, Fee, and Grade.

ID	Name	Email	Phone	Fee	Grade
STD-007	venura	venura218@gmail.com	0712906815	Paid	12
STD-008	sahan bandara	beesarasahan23623@gmail.com	0701117153	Not-Paid	10

Figure 35 my children

3.3.4 Admin Management

The screenshot shows the SYSRO Admin interface. At the top, there's a navigation bar with links for Dashboard, Administrators, Teachers, Students, Parents, Classes, Subjects, Fees, and Exam. A user profile for 'Vidura Chathuranga' is visible on the right. The main area has a dark background. On the left, there's a sidebar with a search bar and a table listing administrators by ID, Name, Email, Phone, and Address. Each row has 'Edit' and 'Delete' buttons. A modal window titled 'Add Administrator' is open in the center, containing fields for Name*, Email*, Password*, Telephone*, and Address*. A large green 'Add' button is at the bottom of the modal.

ID	Name	Email	Phone	Address
ADM-001	Vidura Chathuranga	vidura@gmail.com	0712906815	No 84, Wendala, Ruwanwella
ADM-004	Yashodini Soyza	yashodini@gmail.com	0761234567	Panadura
ADM-005	Venura Kaushan	venura218@gmail.com	0766883316	panawala.eheliyagoda
ADM-006	Lahiranga	lahiranga@gmail.com	0112231484	abcd.Malabe

This screenshot shows the 'Administrators' list page from the SYSRO Admin interface. The layout is similar to the previous one, with a dark theme and a sidebar on the left. The main content area displays a table of administrators with columns for ID, Name, Email, Phone, and Address. Each row includes 'Edit' and 'Delete' buttons. The table rows correspond to the data shown in the first screenshot.

ID	Name	Email	Phone	Address
ADM-001	Vidura Chathuranga	vidura@gmail.com	0712906815	No 84, Wendala, Ruwanwella
ADM-004	Yashodini Soyza	yashodini@gmail.com	0761234567	Panadura
ADM-005	Venura Kaushan	venura218@gmail.com	0766883316	panawala.eheliyagoda
ADM-006	Lahiranga	lahiranga@gmail.com	0112231484	abcd.Malabe

SYSRO

Vidura Chathuranga

Dashboard Administrators Teachers Students Parents Classes Subjects Fees Exam

Search by name or ID

Generate Report Add Administrator

ID	Name	Email	Phone	Address	Action
ADM-001	Vidura Chathuranga				<button>Edit</button> <button>Delete</button>
ADM-004	Yashodini Sozya	yashodini@gmail.com	0761234567	Panadura	<button>Edit</button> <button>Delete</button>
ADM-005	Venura Kaushan	venura218@gmail.com	0766883316	panawala.ehellyagoda.	<button>Edit</button> <button>Delete</button>
ADM-006	Lahiranga	lahiranga@gmail.com	0112231484	abcd.Malabé	<button>Edit</button> <button>Delete</button>

Delete this admin record?

Are you sure you want to delete this admin record? This action cannot be undone.

No don't delete it Delete admin record

SYSRO

Vidura Chathuranga

Dashboard Administrators Teachers Students Parents Classes Subjects Fees Exam

Search by name or ID

Add Administrator

ID	Name	Email	Phone	Address	Action
ADM-001	Vidura Chathuranga				<button>Edit</button> <button>Delete</button>
ADM-004	Yashodini Sozya	yashodini@gmail.com	0761234567	Panadura	<button>Edit</button> <button>Delete</button>
ADM-005	Venura Kaushan	venura218@gmail.com	0766883316	panawala.ehellyagoda.	<button>Edit</button> <button>Delete</button>
ADM-006	Lahiranga	lahiranga@gmail.com	0112231484	abcd.Malabé	<button>Edit</button> <button>Delete</button>

Edit Administrator

ID * ADM-004

Name * Yashodini Sozya

Email * yashodini@gmail.com

Telephone * 0761234567

Address * Panadura

Save

The screenshot shows the SYSRO INSTITUTE Admin Dashboard. At the top, there is a navigation bar with links for Dashboard, Administrators, Teachers, Students, Parents, Classes, and Subjects. A search bar and a 'Generate Report' button are also present. On the right, a user profile for 'Vidura Chathuranga' is shown with a dropdown menu for 'Administrator' settings, including options like Change Theme, Settings, Account settings, Logout, and Delete account.

ID	Name	Email	Phone	Address
ADM-001	Vidura Chathuranga	vidura@gmail.com	0712906815	No 84, Wendala, Ruwanwella
ADM-004	Yashodini Soyza	yashodini@gmail.com	0761234567	Panadura
ADM-005	Venura Kaushan	venura218@gmail.com	0766883316	panawala,eheliyagoda.
ADM-006	Lahiranga	lahiranga@gmail.com	0112231484	abcd,Malabe

The screenshot shows a PDF document titled 'Tuition Management System'. It includes a header with the SYSRO INSTITUTE logo and the title. Below the title, it displays creation details: Created Date : 2023 / 5 / 19, Created Time : 22:49.53, and Generated Person : Vidura Chathuranga. A table follows, listing the same administrator data as the dashboard:

ID	Name	Email	Phone	Address
ADM-001	Vidura Chathuranga	vidura@gmail.com	0712906815	No 84, Wendala, Ruwanwella
ADM-004	Yashodini Soyza	yashodini@gmail.com	0761234567	Panadura
ADM-005	Venura Kaushan	venura218@gmail.com	0766883316	panawala,eheliyagoda.
ADM-006	Lahiranga	lahiranga@gmail.com	0112231484	abcd,Malabe

At the bottom, a copyright notice states: This PDF document and its content, including text, images, and formatting, are protected by copyright law. The document has been generated using an automated system developed by Sysro Tuition Management System. The use, reproduction, distribution, or modification of this document or its content without prior written permission from Sysro Tuition Management System is strictly prohibited and may result in legal action.

This screenshot shows the profile management interface for a teacher named Vidura Chathuranga. The left sidebar displays basic profile information: Name (Vidura Chathuranga), Email (vidura@gmail.com), Address (No 84, Wendala, Ruwanwella), and Mobile No. (0712906815). Below these fields are three buttons: Change Password (blue), Update Profile (green), and Delete Profile (red). The main content area lists student records in a table. The columns are labeled: Email, Name, Address, and Action. Each student entry includes a green 'Edit' button and a red 'Delete' button. The student data shown is as follows:

Email	Name	Action
vidura@gmail.com	0712906815	Edit Delete

This screenshot shows the profile management interface for a teacher named Vidura Chathuranga. The left sidebar displays basic profile information: Name (Vidura Chathuranga), Email (vidura@gmail.com), Address (No 84, Wendala, Ruwanwella), and Mobile No. (0712906815). Below these fields are three buttons: Change Password (blue), Update Profile (green), and Delete Profile (red). A modal dialog titled 'Change password' is open in the center. It contains two input fields: 'Current Password' (placeholder: current password) and 'New Password' (placeholder: new password).

3.3.5 Class Management



Figure 36 user select login page

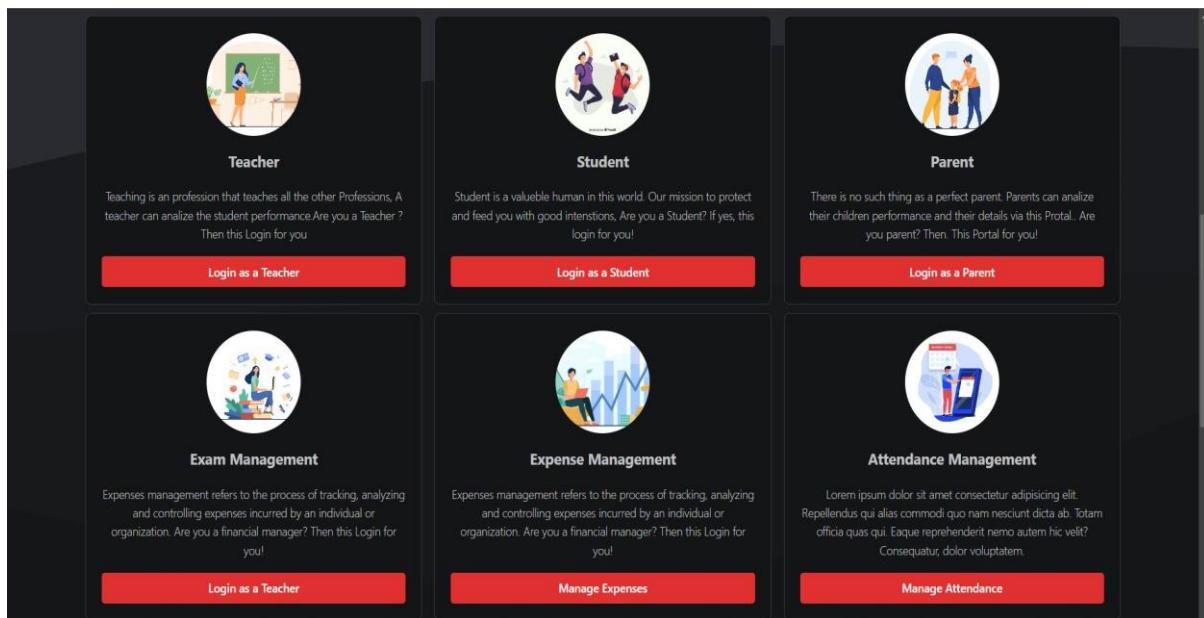
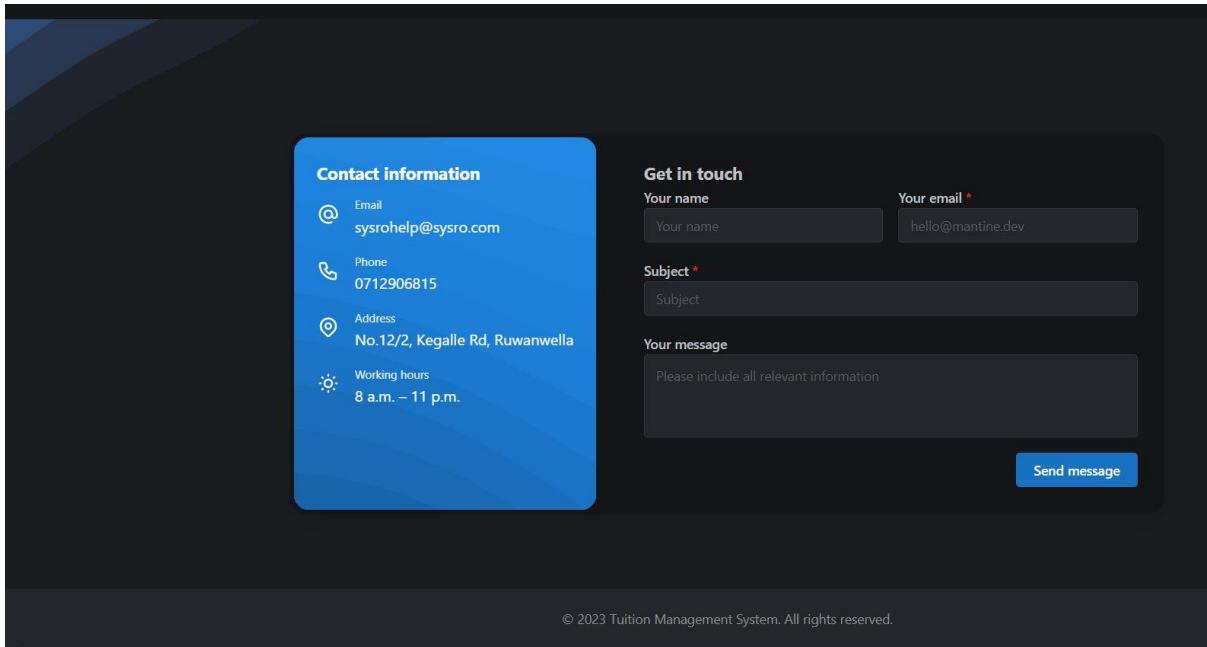


Figure 37 Welcome page



The contact us form is a dark-themed form with a blue header. It contains two main sections: 'Contact information' and 'Get in touch'.

Contact information:

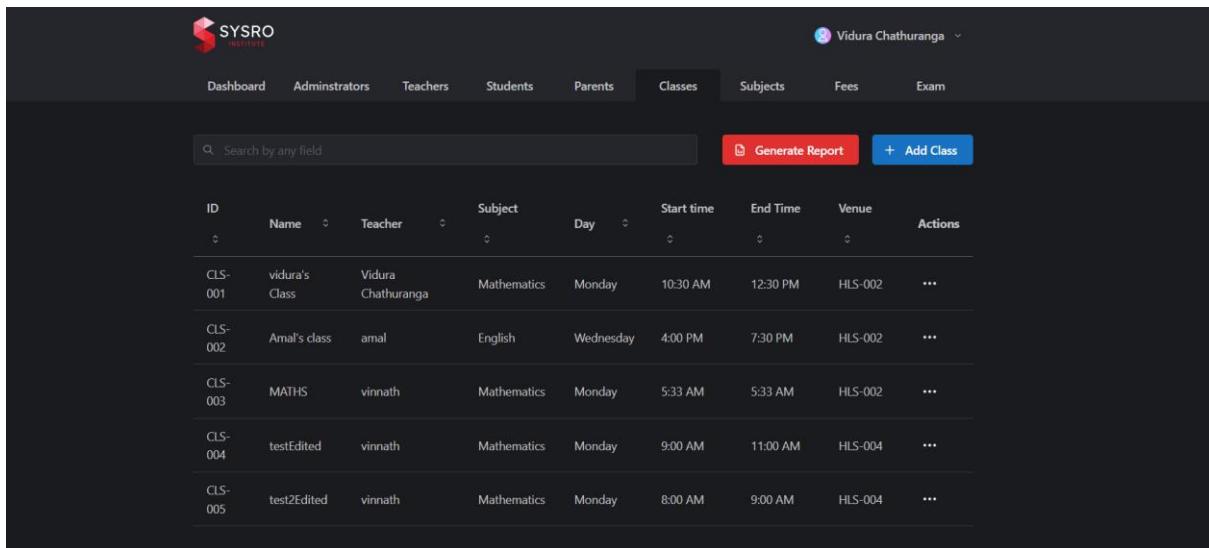
- Email: sysrohelp@sysro.com
- Phone: 0712906815
- Address: No.12/2, Kegalle Rd, Ruwanwella
- Working hours: 8 a.m. – 11 p.m.

Get in touch:

- Your name: [Input field]
- Your email *: hello@mantine.dev
- Subject *: [Input field]
- Your message: Please include all relevant information
- Send message: [Blue button]

© 2023 Tuition Management System. All rights reserved.

Figure 38 Contact us form



The class management interface is a dark-themed dashboard with a navigation bar and a central table.

Navigation Bar:

- Dashboard
- Administrators
- Teachers
- Students
- Parents
- Classes
- Subjects
- Fees
- Exam

User Profile:

- Vidura Chathuranga

Search and Action Buttons:

- Search by any field
- Generate Report
- Add Class

Table:

ID	Name	Teacher	Subject	Day	Start time	End Time	Venue	Actions
CLS-001	vidura's Class	Vidura Chathuranga	Mathematics	Monday	10:30 AM	12:30 PM	HLS-002	...
CLS-002	Amal's class	amal	English	Wednesday	4:00 PM	7:30 PM	HLS-002	...
CLS-003	MATHS	vinnath	Mathematics	Monday	5:33 AM	5:33 AM	HLS-002	...
CLS-004	testEdited	vinnath	Mathematics	Monday	9:00 AM	11:00 AM	HLS-004	...
CLS-005	test2Edited	vinnath	Mathematics	Monday	8:00 AM	9:00 AM	HLS-004	...

Figure 39 class manage interface



Tuition Management System

Created Date : 2023 / 5 / 19
Created Time : 11:50:50
Generated Person : Vidura Chathuranga

ID	Name	Teacher	Subject	Day	Start Time	End Time	Venue
CLS-001	vidura's Class	Vidura Chathuranga	Mathematics	Monday	10:30 AM	12:30 PM	HLS-002
CLS-002	Amal's class	amal	English	Wednesday	4:00 PM	7:30 PM	HLS-002
CLS-003	MATHS	vinnath	Mathematics	Monday	5:33 AM	5:33 AM	HLS-002
CLS-004	testEdited	vinnath	Mathematics	Monday	9:00 AM	11:00 AM	HLS-004
CLS-005	test2Edited	vinnath	Mathematics	Monday	8:00 AM	9:00 AM	HLS-004
CLS-006	test3	Yashodini Soysa	English	Tuesday	2:30 PM	5:30 PM	HLS-005
CLS-007	test4	venura kaushan	IT	Tuesday	10:00 AM	12:00 PM	HLS-005
CLS-008	test5	sahan bandara	History	Tuesday	2:30 PM	4:30 PM	HLS-004
CLS-009	test class	vinnath	English	Monday	4:35 PM	7:35 PM	HLS-002

This PDF document and its content, including text, images, and formatting, are protected by copyright law. The document has been generated using an automated system developed by Sysro Tuition Management System. The use, reproduction, distribution, or modification of this document or its content without prior written permission from Sysro Tuition Management System is strictly prohibited and may result in legal action.

Figure 40 class details report PDF

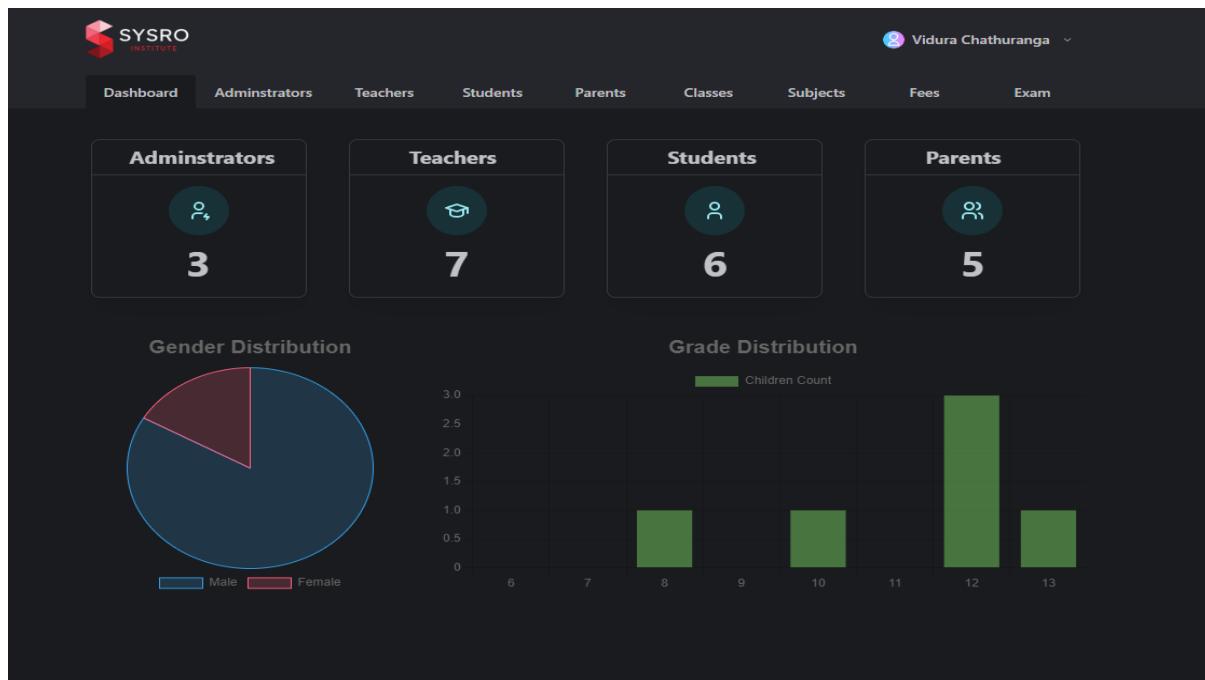


Figure 41 admin statistics dashboard

SYSRO

Vidura Chathuranga

Enroll Students into vidura's Class

Search by any field

Enroll Student

SID	Name	Email	Phone	Action
STD-002	Yashodini	yasodinisoysa@gmail.com	5509987977	X Unenroll Student
STD-004	vidura	vidurachathuranga2020@gmail.com	0712906815	X Unenroll Student
STD-007	venura	venura218@gmail.com	0712906815	X Unenroll Student
STD-008	sahan bandara	beesarasahan23623@gmail.com	0701117153	X Unenroll Student

Search by any field

+ Enroll Student

SID	Name	Email	Phone	Grade	Action
STD-002	Yashodini	yasodinisoysa@gmail.com	5509987977	8	✓ Already Enrolled
STD-004	vidura	vidurachathuranga2020@gmail.com	0712906815	12	✓ Already Enrolled
STD-006	Vidura Chathuranga	vidurathilakasiri@gmail.com	0712906815	10	+ Enroll Student
STD-007	venura	venura218@gmail.com	0712906815	12	✓ Already Enrolled
STD-008	sahan bandara	beesarasahan23623@gmail.com	0701117153	10	✓ Already Enrolled

Figure 42enroll student

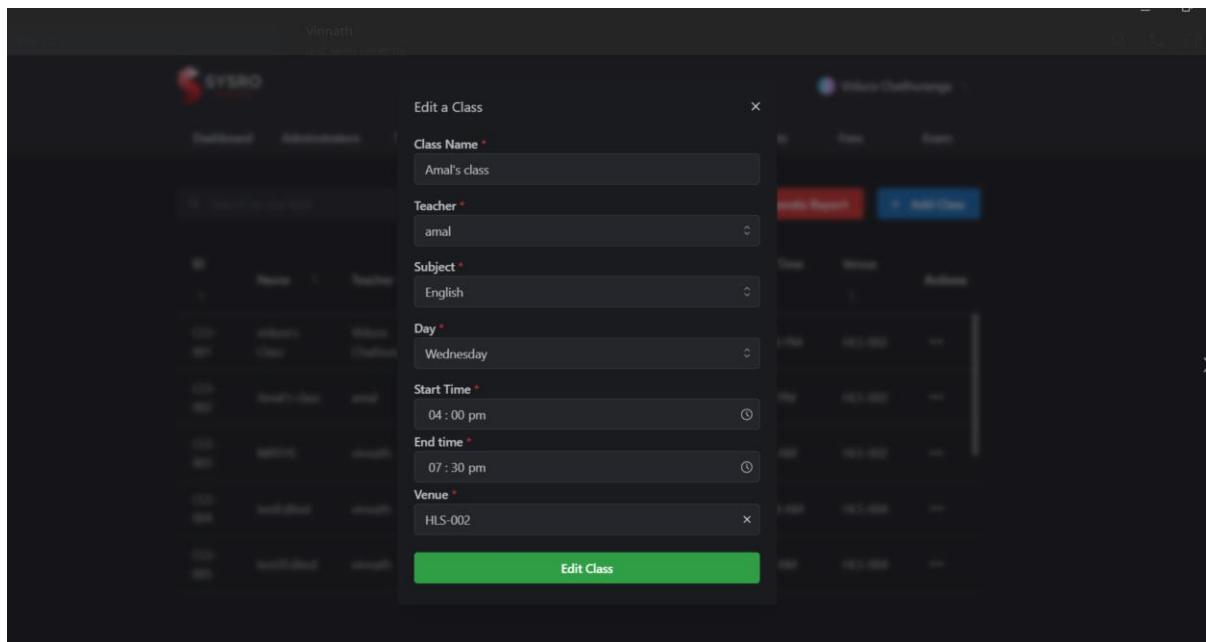


Figure 43edit clss

ID	Name	Teacher	Subject	Day	Start time	End Time	Venue	Actions
CLS-001	vidura's Class	Vidura Chathuranga	Mathematics	Monday	5:33 AM	5:33 AM	HLS-002	...
CLS-002	Amal's class	amal	Mathematics	Monday	6:00 PM	6:30 PM	HLS-002	...
CLS-003	MATHS	vinnath	Mathematics	Monday	9:00 AM	11:00 AM	HLS-002	...
CLS-004	testEdited	vinnath	Mathematics	Monday	9:00 AM	11:00 AM	HLS-004	...
CLS-005	test2Edited	vinnath	Mathematics	Monday	8:00 AM	9:00 AM	HLS-004	...

Figure 44delete

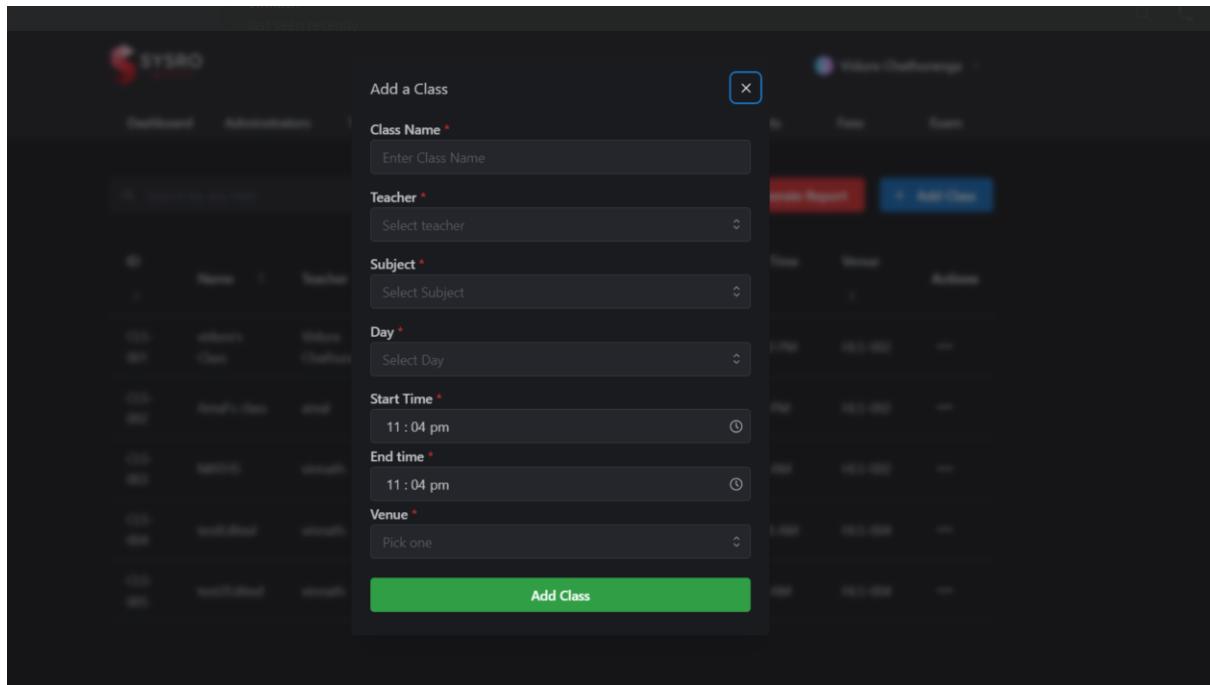


Figure 45add class

3.3.6 Subject Management

Figure 45 Subject Management Tab

ID	Name	Action
SUB-001	Mathematics	<button>Edit</button> <button>Delete</button>
SUB-002	English	<button>Edit</button> <button>Delete</button>
SUB-003	IT	<button>Edit</button> <button>Delete</button>
SUB-004	History	<button>Edit</button> <button>Delete</button>
SUB-005	bs	<button>Edit</button> <button>Delete</button>

Figure 46 Add Subject

Add subject Record

Name *

Add

ID	Name	Action
SUB-001	Mathematics	<button>Edit</button> <button>Delete</button>
SUB-002	English	<button>Edit</button> <button>Delete</button>
SUB-003	IT	<button>Edit</button> <button>Delete</button>
SUB-004	History	<button>Edit</button> <button>Delete</button>
SUB-005	bs	<button>Edit</button> <button>Delete</button>

Figure 47 Edit Subject

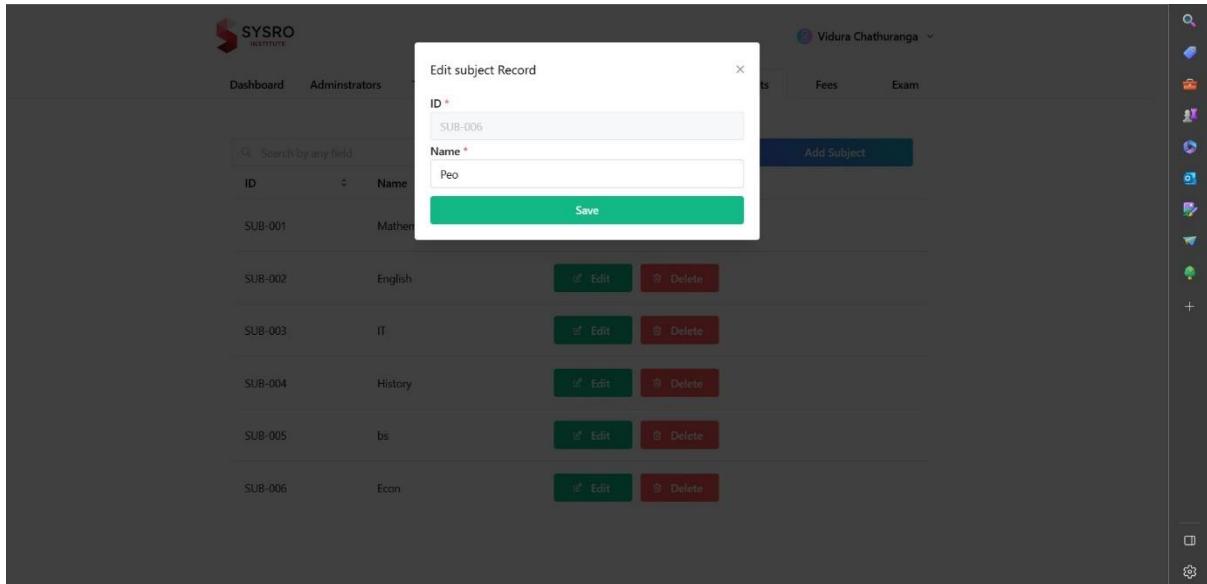
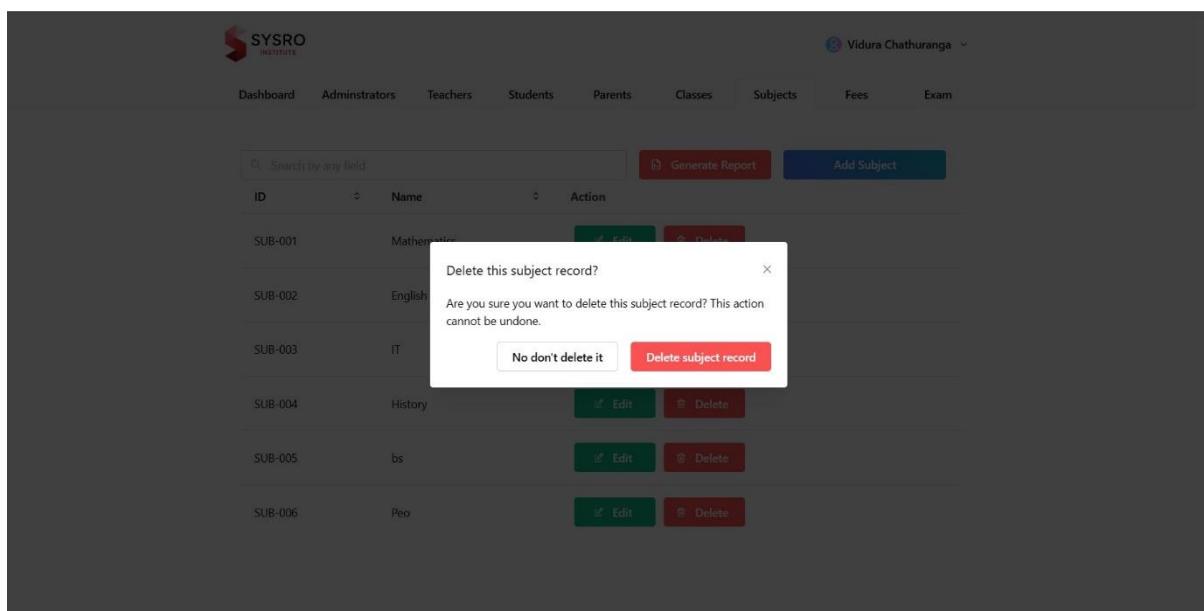


Figure 47 Delete Subject



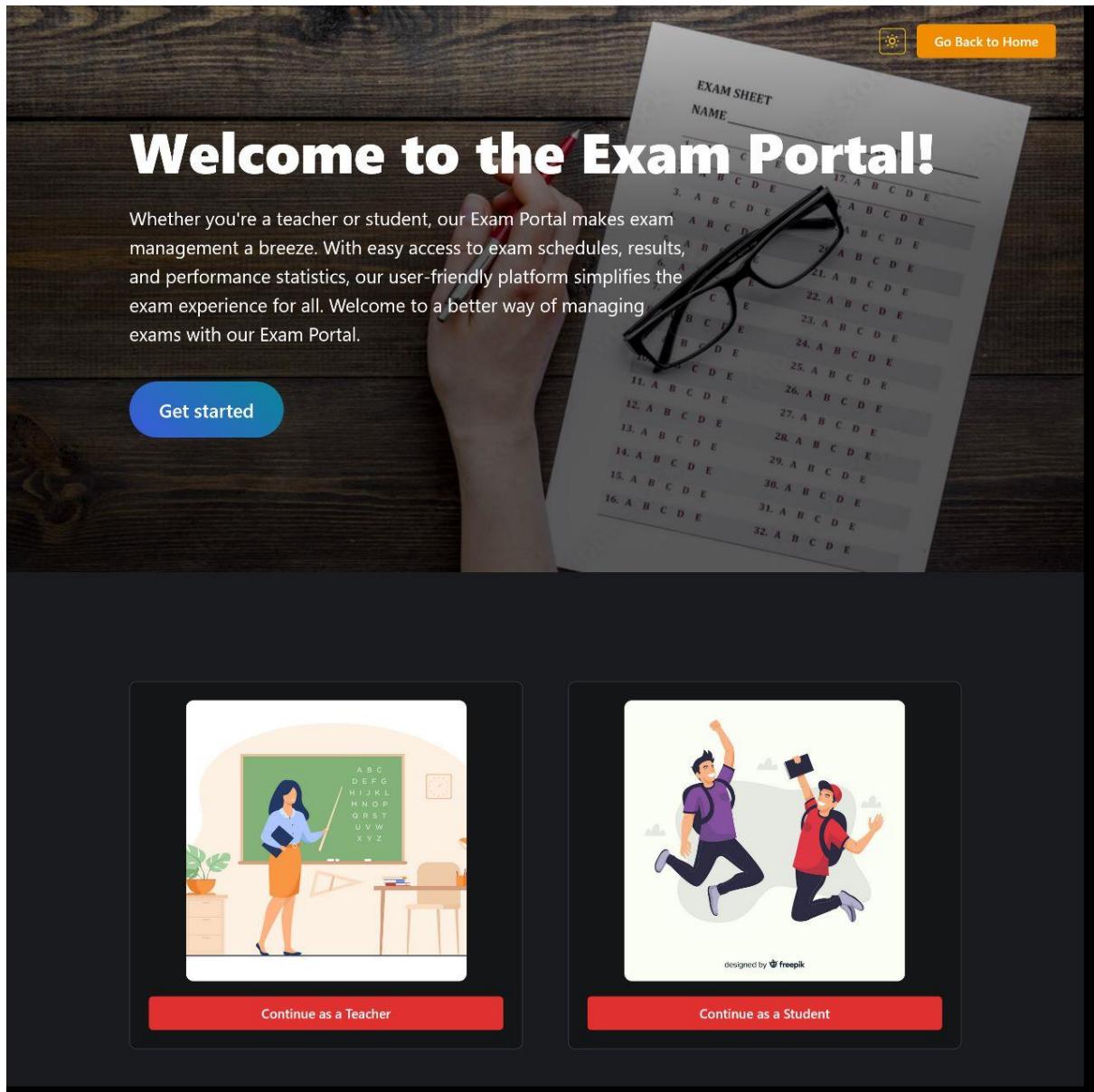
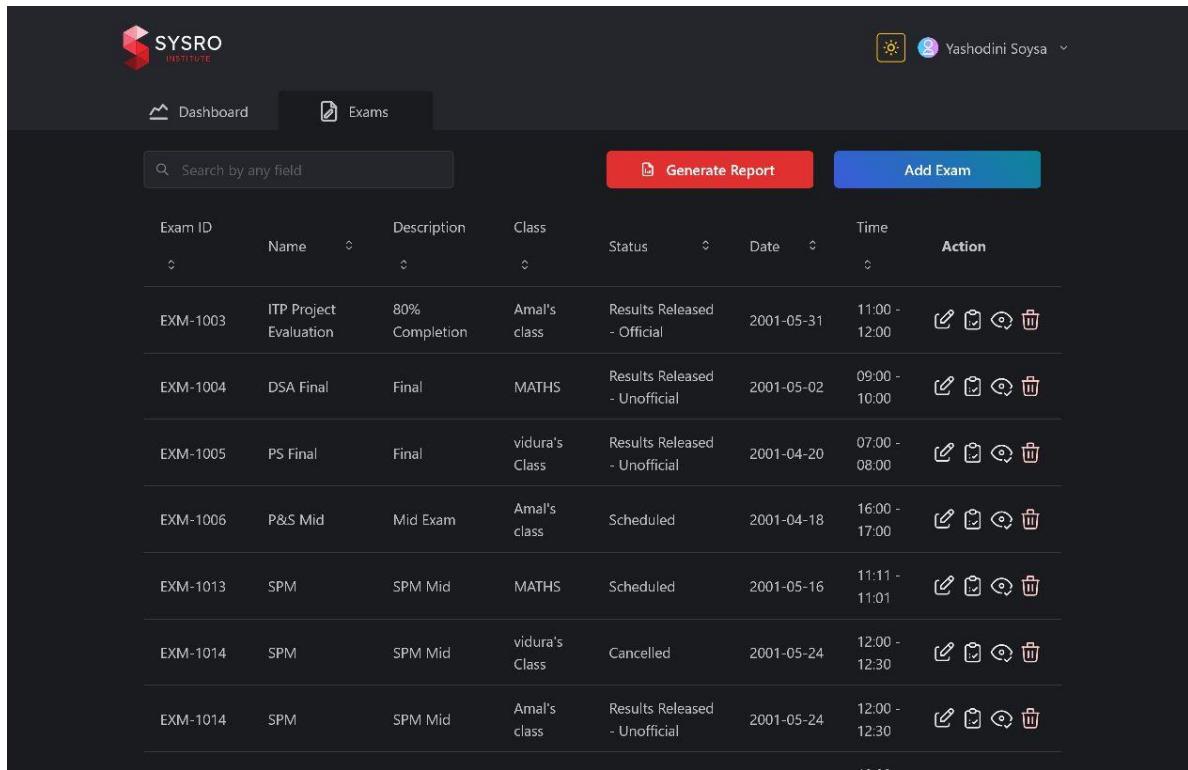


Figure 46: Exam Portal - Login Page



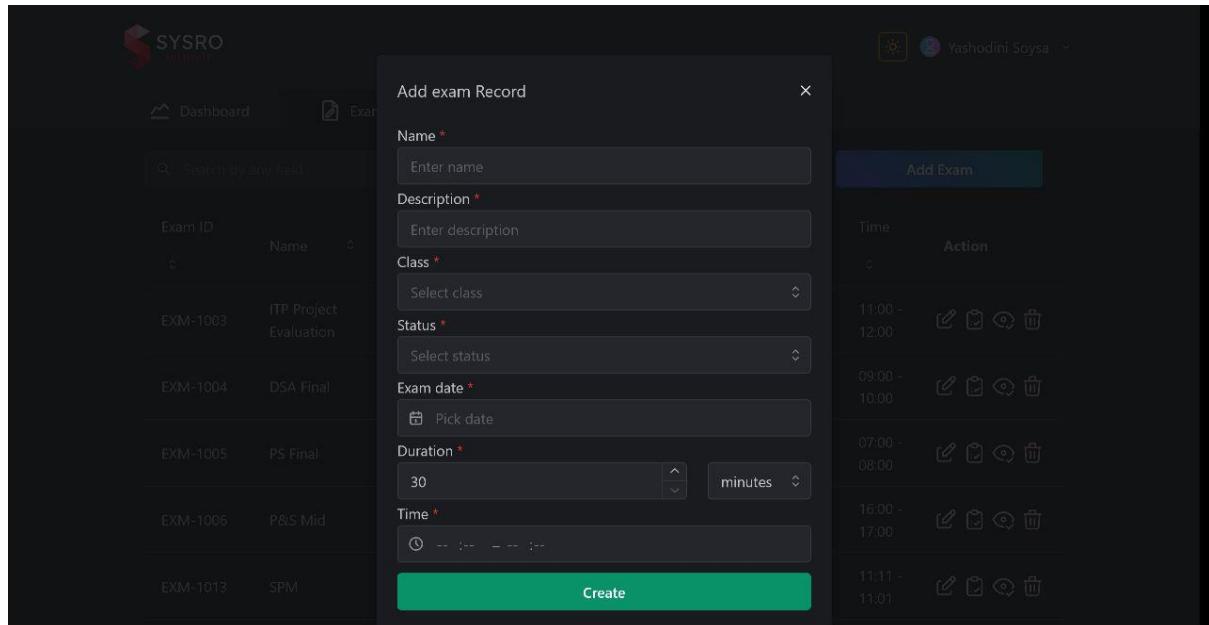
Figure 47: Exam Portal - Teacher Dashboard



The screenshot shows the 'Manage Exams' page of the SYSRO Institute Exam Portal. At the top, there is a search bar labeled 'Search by any field', a red 'Generate Report' button, and a blue 'Add Exam' button. Below these are two tabs: 'Dashboard' and 'Exams', with 'Exams' being the active tab. A dark grey header bar contains the SYSRO logo and the user's name, 'Yashodini Soysa'. The main content area is a table listing exam records:

Exam ID	Name	Description	Class	Status	Date	Time	Action
EXM-1003	ITP Project Evaluation	80% Completion	Amal's class	Results Released - Official	2001-05-31	11:00 - 12:00	
EXM-1004	DSA Final	Final	MATHS	Results Released - Unofficial	2001-05-02	09:00 - 10:00	
EXM-1005	PS Final	Final	vidura's Class	Results Released - Unofficial	2001-04-20	07:00 - 08:00	
EXM-1006	P&S Mid	Mid Exam	Amal's class	Scheduled	2001-04-18	16:00 - 17:00	
EXM-1013	SPM	SPM Mid	MATHS	Scheduled	2001-05-16	11:11 - 11:01	
EXM-1014	SPM	SPM Mid	vidura's Class	Cancelled	2001-05-24	12:00 - 12:30	
EXM-1014	SPM	SPM Mid	Amal's class	Results Released - Unofficial	2001-05-24	12:00 - 12:30	

Figure 48: Exam Portal - Manage Exams Page



The screenshot shows the 'Add Exam Record' form from the SYSRO Institute Exam Portal. The form is overlaid on the 'Manage Exams' page. It includes fields for Name, Description, Class, Status, Exam date, Duration, and Time. The 'Add Exam' button is located at the top right of the form. The background table lists existing exams:

Exam ID	Name	Description	Class	Status	Exam date	Duration	Time	Action
EXM-1003	ITP Project Evaluation	80% Completion	Select class	Select status	2001-05-31	30 minutes	11:00 - 12:00	
EXM-1004	DSA Final	Final	vidura's Class	Not Started	2001-05-02	60 minutes	09:00 - 10:00	
EXM-1005	PS Final	Final	Amal's class	Not Started	2001-04-20	60 minutes	07:00 - 08:00	
EXM-1006	P&S Mid	Mid Exam	vidura's Class	Not Started	2001-04-18	60 minutes	16:00 - 17:00	
EXM-1013	SPM	SPM Mid	Amal's class	Not Started	2001-05-16	60 minutes	11:11 - 11:01	

Figure 49: Exam Portal - Add Exam Form

Edit Exam EXM-1003

Name * ITP Project Evaluation

Description * 80% Completion

Class * Amal's class

Status * Results Released - Official

Exam date * 2001-05-31

Duration * 1 Select due

Time * 11:00 – 12:00

Save

Exam ID	Name	Action
EXM-1003	ITP Project Evaluation	
EXM-1004	DSA Final	
EXM-1005	PS Final	
EXM-1006	P&S Mid	
EXM-1013	SPM	

Figure 50: Exam Portal - Edit Exam Form

Attendance EXM-1003

Search by any field

ID	Name	Attendance
STD-002	Yashodini	<input checked="" type="checkbox"/>
STD-004	vidura	<input checked="" type="checkbox"/>
STD-006	Vidura Chathuranga	<input checked="" type="checkbox"/>
STD-007	venura	<input type="checkbox"/>
STD-008	sahan bandara	<input type="checkbox"/>

Save

Exam ID	Name	Class	Scheduled	Time		
EXM-1013	SPM	SPM Mid	MATHS	2001-05-16	11:11 - 11:01	

Figure 51: Exam Portal - Mark Attendance Form

The screenshot shows a dark-themed user interface for managing exam marks. At the top left is the SYSRO logo. On the right, there's a user profile for 'Yashodini Sayas' and a 'Release Unofficial Results' button. A search bar is at the top center. Below it is a table with columns: ID, Name, Marks, and Action. The table contains five rows of student data:

ID	Name	Marks	Action
STD-002	Yashodini	89	Edit Marks
STD-004	vidura	78	Edit Marks
STD-006	Vidura Chathuranga	65	Edit Marks
STD-007	venura	0	Edit Marks
STD-008	sahan bandara	-	Add Marks

At the bottom of the interface, there are several status indicators: EXM-1013, SPM, SPM Mid, MATHS, Scheduled, 2001-05-16, and time markers 11:11 - 11:01. To the right of these are icons for edit, copy, delete, and trash.

Figure 52: Exam Portal - Manage Marks



Figure 53: Exam Portal - Student Dashboard



Yashodini

Dashboard My Exams

Search by any field

Name	Description	Class	Status	Date	Time	Result
ITP Project Evaluation	80% Completion	Amal's class	Results Released - Official	2001-05-31	12:00 - 13:00	89
SPM	SPM Mid	vidura's Class	Cancelled	2001-05-24	12:00 - 12:30	89
SPM	SPM Mid	Amal's class	Results Released - Unofficial	2001-05-24	12:00 - 12:30	NOT RELEASED
exam	fhjkkk	vidura's Class	Scheduled	2001-05-07	09:00 - 09:08	NOT RELEASED
PS Final	Final	vidura's Class	Results Released - Unofficial	2001-04-20	07:00 - 08:00	67
P&S Mid	Mid Exam	Amal's class	Scheduled	2001-04-18	16:00 - 17:00	NOT RELEASED

Figure 54: Exam Portal - Student My Exams Page



Yashodini Soyza

Dashboard Administrators Teachers Students Parents Classes Subjects Fees Exam

Search by any field

Generate Report

Exam ID	Name	Description	Class	Status	Date	Time	Action
EXM-1003	ITP Project Evaluation	80% Completion	Amal's class	Results Released - Official	2001-05-31	12:00 - 13:00	 
EXM-1004	DSA Final	Final	MATHS	Results Released - Unofficial	2001-05-02	09:00 - 10:00	 
EXM-1005	PS Final	Final	vidura's Class	Results Released - Unofficial	2001-04-20	07:00 - 08:00	 
EXM-1006	P&S Mid	Mid Exam	Amal's class	Scheduled	2001-04-18	16:00 - 17:00	 
EXM-1013	SPM	SPM Mid	MATHS	Scheduled	2001-05-16	11:11 - 11:01	 
EXM-1014	SPM	SPM Mid	vidura's Class	Cancelled	2001-05-24	12:00 - 12:30	 
EXM-1014	SPM	SPM Mid	Amal's class	Results Released - Unofficial	2001-05-24	12:00 - 12:30	 

Figure 55: Admin Dashboard - View Exams Page

The screenshot shows the 'Add Marks - EXM-1005' interface. At the top right is a blue button labeled 'Release Official Results'. Below it is a table with columns: ID, Name, and Marks. The data is as follows:

ID	Name	Marks
STD-002	Yashodini	67
STD-004	vidura	76
STD-007	venura	-
STD-008	sahan bandara	-

Below this is a table for 'EXM-1005' showing class details and scheduled times. The rows are:

Class	Scheduled	Time
SPM	Scheduled	11:11 - 11:01
SPM Mid	Cancelled	12:00 - 12:30

At the bottom, there's a note 'Amal's Results Released' with a time of 12:00.

Figure 56: Admin Dashboard - View results and Release official results

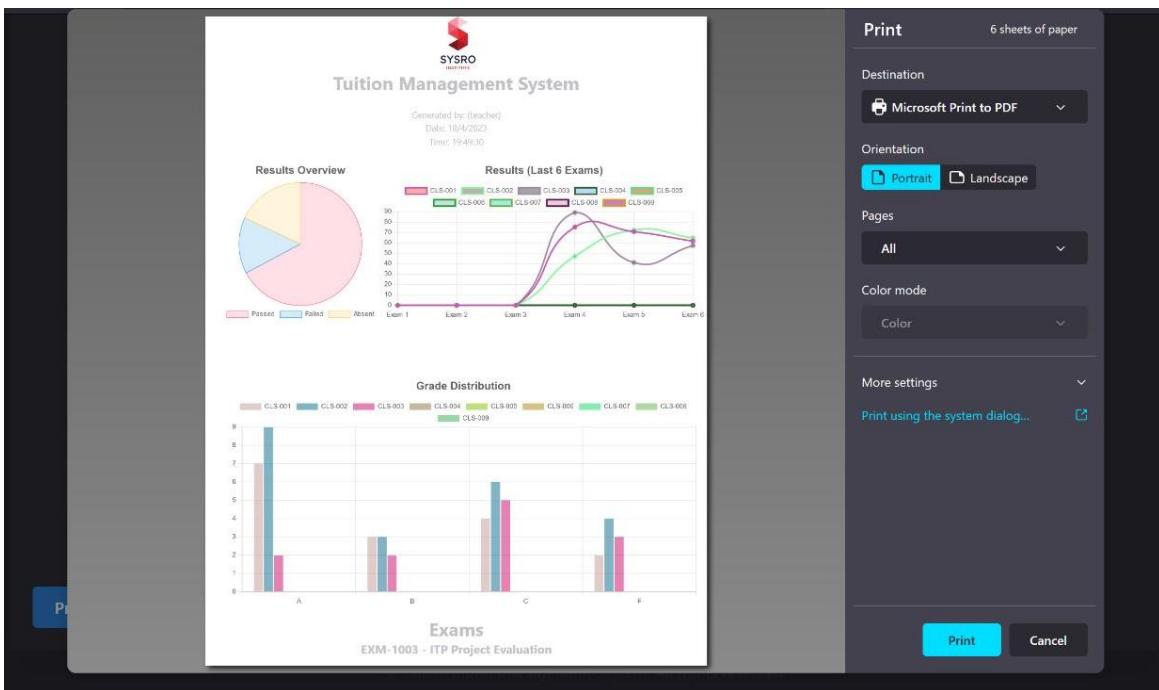


Figure 57: Generate Exam Report

3.3.8 Fee Management

The screenshot shows a modal window titled "Update Student's Fee" overlaid on a list of student fees. The modal fields are: ID (STD-002), Name (Yashodini), Amount (1200.00), and Status (Paid). A green "Submit" button is at the bottom. The background table lists student details and their fees.

ID	Name	Amount	Status	Action
STD-002	Yashodini	1200.00	Paid	<button>Update Fee</button>
STD-004	vidura	900	Paid	<button>Update Fee</button>
STD-006	Vidura Chathuranga	900	Paid	<button>Update Fee</button>
STD-007	venura	900	Paid	<button>Update Fee</button>
STD-008	sahan bandara	00.00	Not-Paid	<button>Update Fee</button>
STD-009	vinnath	1500	Paid	<button>Update Fee</button>
STD-010	sadupa dilshan	1000	Paid	<button>Update Fee</button>

The screenshot shows a table of student fees. Each row includes the student ID, name, amount, status, and an "Update Fee" button.

ID	Name	Amount (Rs)	Status	Action
STD-002	Yashodini	1200.00	Paid	<button>Update Fee</button>
STD-004	vidura	800	Paid	<button>Update Fee</button>
STD-006	Vidura Chathuranga	900	Paid	<button>Update Fee</button>
STD-007	venura	900	Paid	<button>Update Fee</button>
STD-008	sahan bandara	00.00	Not-Paid	<button>Update Fee</button>
STD-009	vinnath	1500	Paid	<button>Update Fee</button>
STD-010	sadupa dilshan	1000	Paid	<button>Update Fee</button>

3.3.9 Expense Management

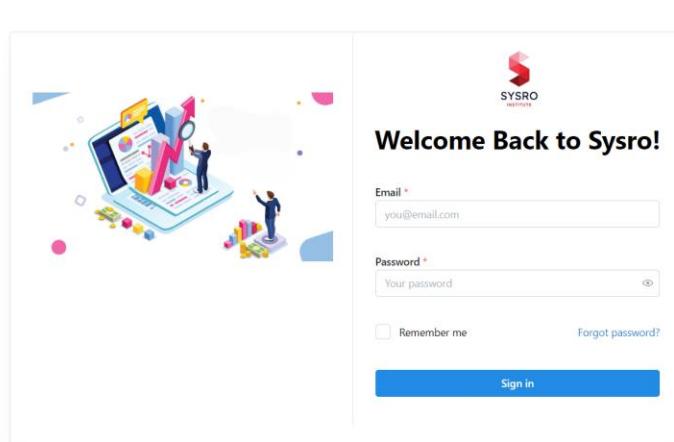


Figure 58login expense

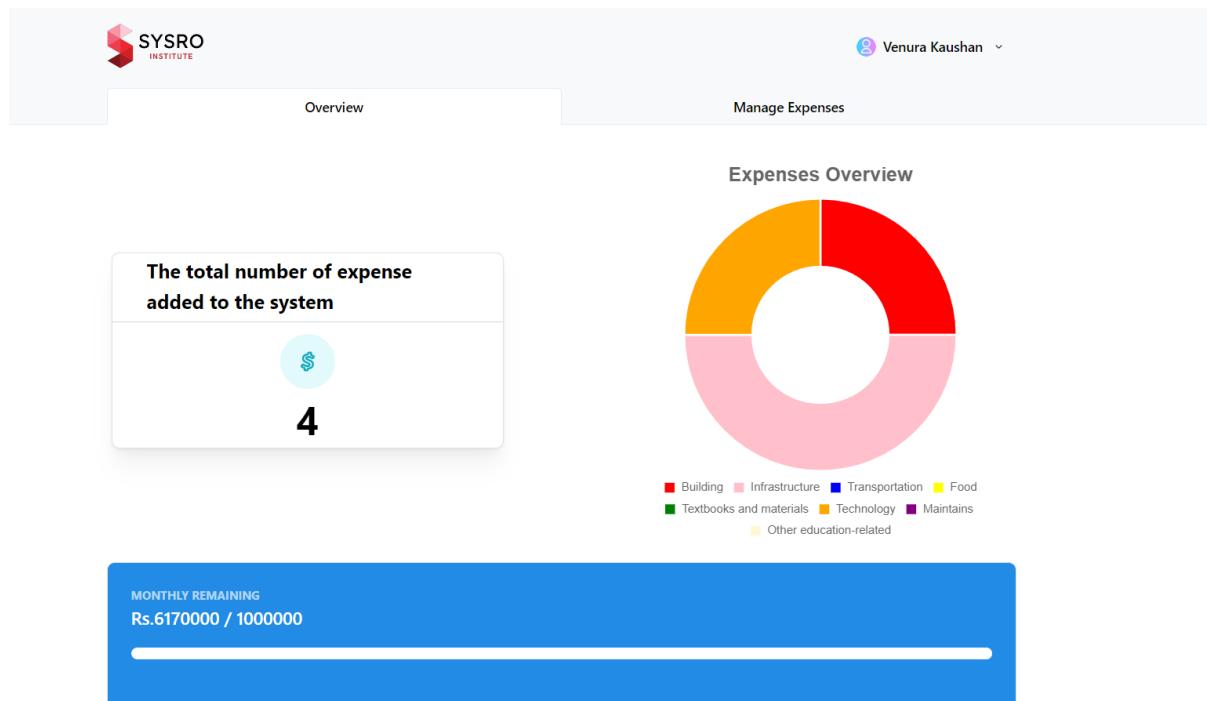


Figure 59overview

The screenshot shows the 'Manage Expenses' section of the application. At the top, there are tabs for 'Overview' and 'Manage Expenses'. A search bar and two buttons ('Generate Report' and 'Add expense') are located above the table. The table lists four expense records:

ID	Name	Description	Category	Amount	Action
EXP-001	electricity bill	this is include feb month power bill	Building expense	70000	<button>Edit</button> <button>Delete</button>
EXP-002	water bill	this is last month water bill	Infrastructure expense	60000	<button>Edit</button> <button>Delete</button>
EXP-003	Car park rental	This is feb month car park rental	Infrastructure expense	40000	<button>Edit</button> <button>Delete</button>
EXP-004	Buy new laptops	Buy new laptops to the classes	Technology expenses	600000	<button>Edit</button> <button>Delete</button>

Below the table, a summary box contains the following data:

The monthly fixed value	1000000	***
Total amount of expenses	6163700	
Total remaining Amount	-5170000	
Total collected fees Amount	6300	

At the bottom, a copyright notice reads: © 2023 Tuition Management System. All rights reserved.

Figure 60 manage expense

The screenshot shows the 'Add expense Record' modal. It has fields for 'Name *', 'description *', 'category *', and 'amount *'. Each field has an associated placeholder text and a required asterisk. Below the fields is a large green 'Add' button. In the background, the main expense management interface is visible, showing a list of existing expenses and a summary box at the bottom.

Figure 61 add expense

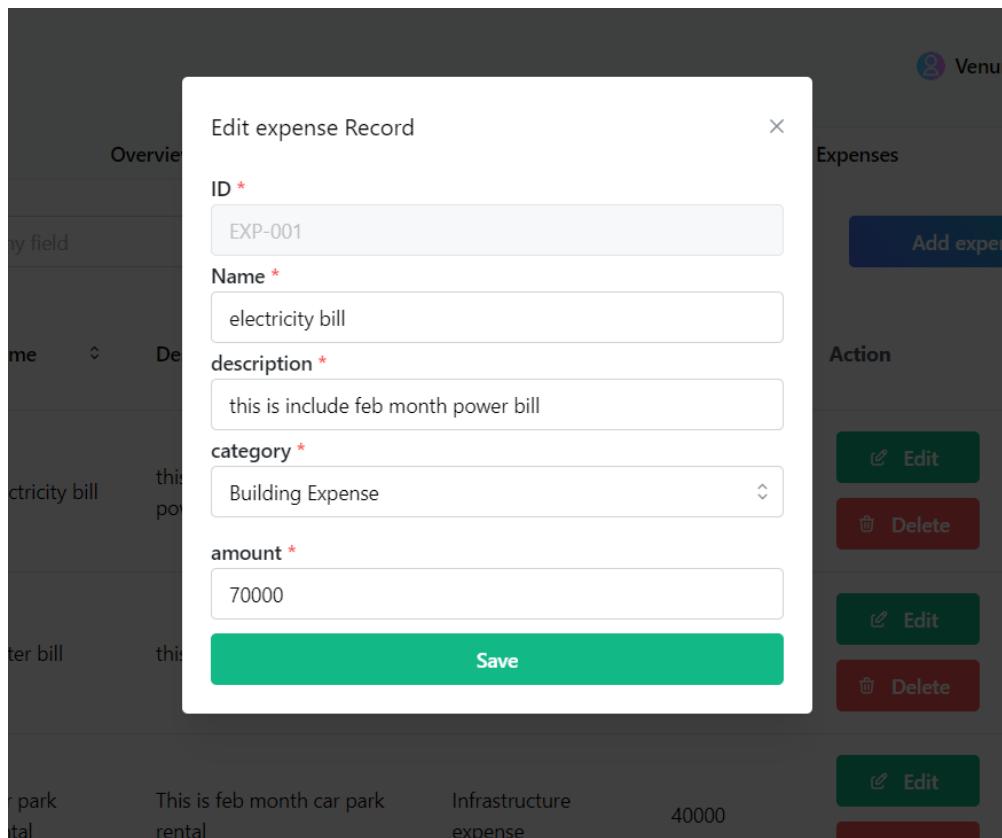


Figure 62edit expense

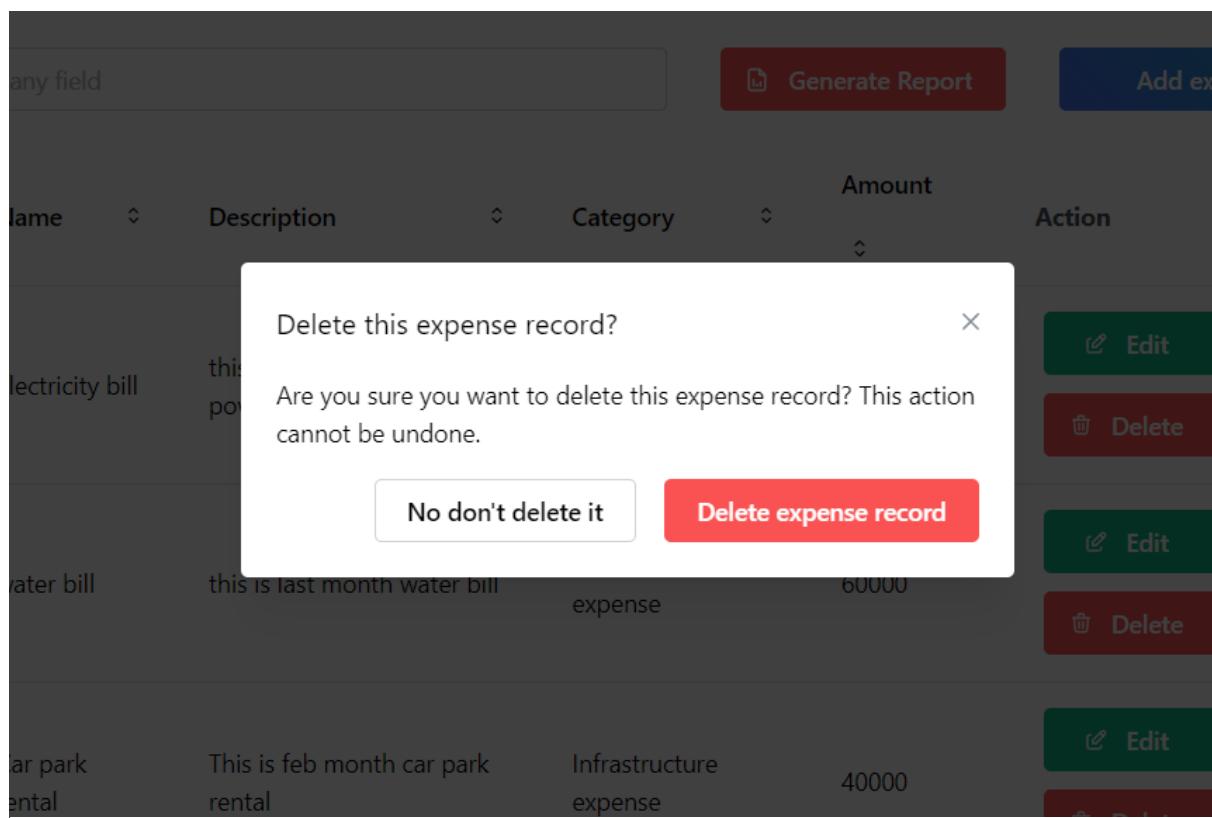
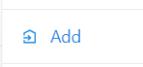


Figure 63delete expense

The monthly fixed value	1000000	...
Total amount of expenses	163700	
Total remaining Amount	830000	
Total collected fees Amount	6300	

© 2023 Tuition Management System. All rights reserved.

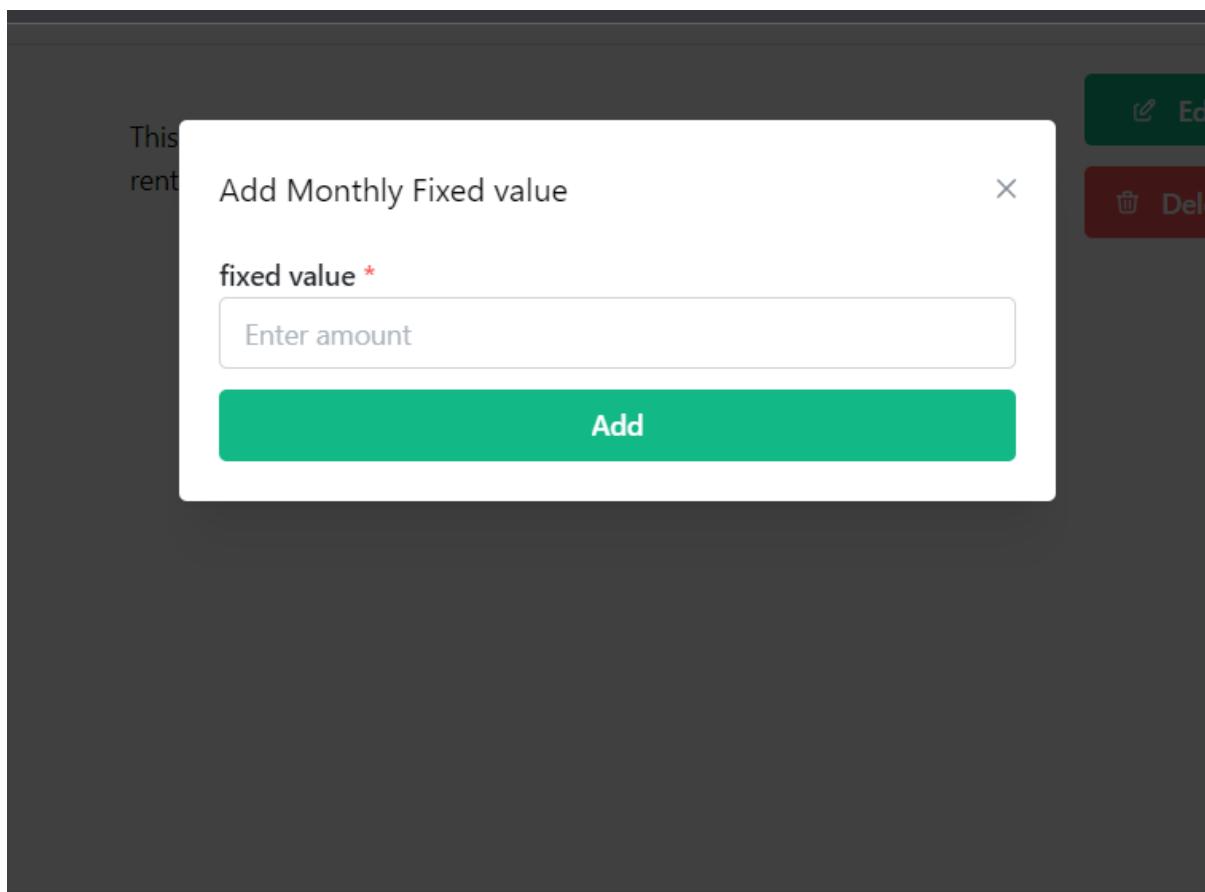


Figure 64fixed value



Tuition Management System

Created Date : 2023 / 5 / 19

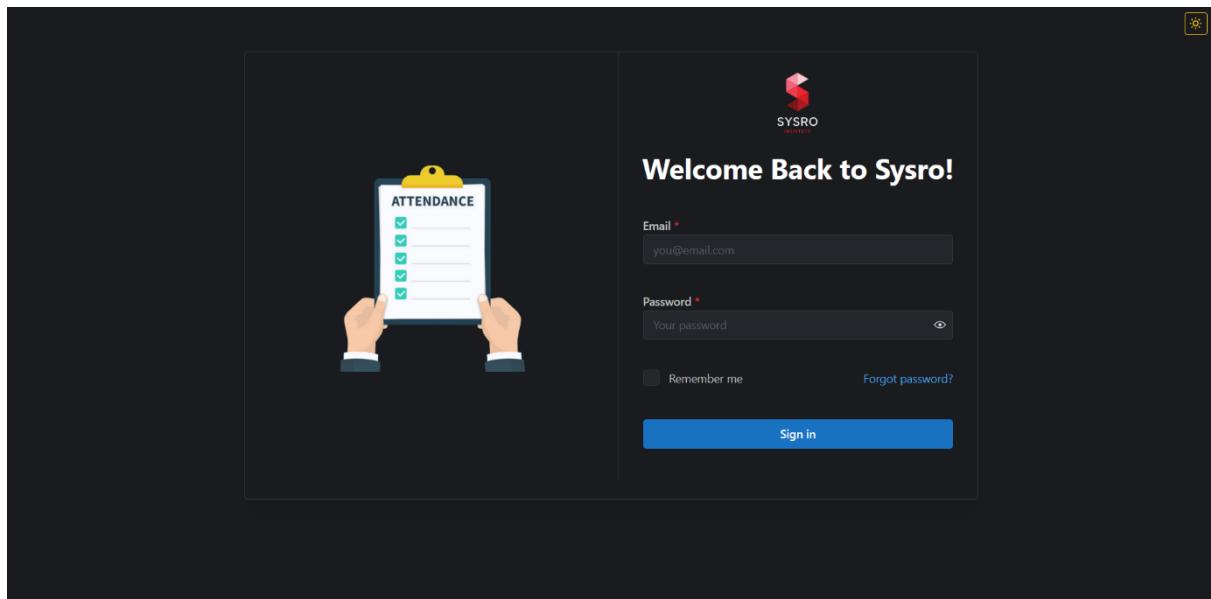
Created Time : 22.11.55

Generated Person : Venura Kaushan

ID	Name	Description	Category	Amount
EXP-001	electricity bill	this is include feb month power bill	Building expense	70000
EXP-002	water bill	this is last month water bill	Infrastructure expense	60000
EXP-003	Car park rental	This is feb month car park rental	Infrastructure expense	40000

This PDF document and its content, including text, images, and formatting, are protected by copyright law. The document has been generated using an automated system developed by Sysro Tuition Management System. The use, reproduction, distribution, or modification of this document or its content without prior written permission from Sysro Tuition Management System is strictly prohibited and may result in legal action.

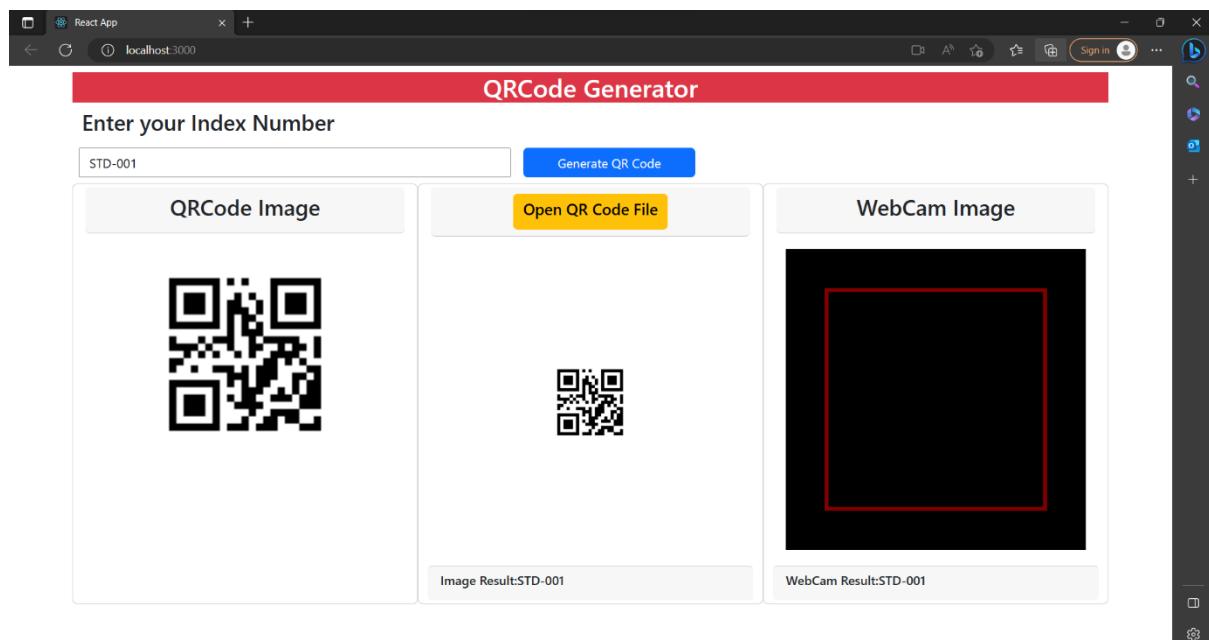
Figure 65pdf expense

The image shows a dashboard titled "Overview". At the top right is a user profile for "Venura Kaushan" with a dropdown menu. The menu includes options like "Administrator", "Change Theme" (with a blue circular icon), "Settings", "Account settings", "Logout", and "Delete account". The main area displays a table with columns: ID, Name, Description, Category, and Amount. A search bar and a red "Generate Report" button are also present. The table data is as follows:

ID	Name	Description	Category	Amount
EXP-001	electricity bill	this is include feb month power bill	Building expense	70000

Figure 66 expense profile

3.3.10 Attendance Management



Chapter 4 – Testing

4.1 Test cases and results

4.1.7 Exam Management

Test Cases for Admin:

1) Test Case: View Exams

Preconditions: Admin is logged into the system.

Steps:

- 1) Navigate to the "Exams" tab.
- 2) Verify that all exams added by teachers are displayed.

Test ID	Test Inputs	Expected Output	Actual Output	Result	Description
TC001	Admin clicks on the Exams tab	All exams added by teachers are displayed	Exams list	Pass	Admin can view all exams added by teachers at the tuition center

2) Test Case: Approve and Release Official Grades

Preconditions: Admin is logged into the system.

Steps:

- 1) Select a specific exam.
- 2) Release the grades for that exam by clicking on the Release Official Results Button.

Test ID	Test Inputs	Expected Output	Actual Output	Result	Description
TC002	Select a specific exam. Release the grades for that exam by clicking on the "Release Official	The grades for the selected exam are approved and released as official grades.	The grades for the selected exam are approved and released as official grades.	Pass	Admin can approve and release official grades for a specific exam successfully.

	Results" button.				
--	------------------	--	--	--	--

3) Test Case: View Attendance Records

Preconditions: Admin is logged into the system.

Steps:

- 1) Select a specific exam.
- 2) View the attendance of that exam by clicking on the View Attendance Action Button.

Test ID	Test Inputs	Expected Output	Actual Output	Result	Description
TC002	Select a specific exam. View the attendance of that exam by clicking on the View Attendance Action Button.	The grades for the selected exam are approved and released as official grades.	Attendance records of the selected exam are displayed.	Pass	Admin can view attendance records.

4) Test Case: Generate Reports

Preconditions: Admin is logged into the system.

Steps:

- 1) Click on the "Generate Report" button

Expected Result: Admin can generate reports based on exam data.

Test Cases for Student:

1. Test Case: Log into Exam Management Portal

Preconditions: Student credentials are valid.

Steps:

- 1) Enter the email and password.
- 2) Click on the "Login" button.

Expected Result: Student successfully logs into the Exam Management Portal.

2. Test Case: View Exam Marks

Preconditions: Student is logged into the Exam Management Portal.

Steps:

- 1) Navigate to the "My Exams" tab.

Expected Result: Student can view their exam marks.

3. Test Case: Receive Exam-Related Notifications

Preconditions: Student is registered in the system and has a valid email.

Steps:

- 1) Conduct an action that triggers an exam-related notification (e.g., grade release).
- 2) Check the registered email inbox.

Expected Result: Student receives email notifications regarding exam-related updates.

4. Test Case: Access Exam Statistics

Preconditions: Student is logged into the Exam Management Portal.

Steps:

- 1) Navigate to the "Student Dashboard" tab in the exam portal.
- 2) Verify that grade distribution and average marks for the last six conducted exams are displayed.

Expected Result: Student can access exam statistics, such as grade distribution and average marks.

Test Cases for Teacher:

1. Test Case: Create New Exam

Preconditions: Teacher is logged into the system.

Steps:

- 1) Click on the Add new exam button
- 2) Fill in the required details for the new exam.
- 3) Click on the "Create" button.

Expected Result: Teacher successfully creates a new exam.

2. Test Case: View and Search Existing Exams

Preconditions: Teacher is logged into the system.

Steps:

- 1) Navigate to the "View Exams" section.
- 2) Verify that all existing exams related to the assigned classes are displayed.
- 3) Perform a search for a specific exam.

Expected Result: Teacher can view, search, and access existing exams related to their assigned classes.

3. Test Case: Mark Attendance

Preconditions: Teacher is logged into the system and has a list of students for the exam.

Steps:

- 1) Navigate to the "Mark Attendance" section.
- 2) Select the specific exam.
- 3) Mark attendance for each student.

Expected Result: Teacher can mark attendance for students who sit for the exams.

4. Test Case: Add and Edit Marks

Preconditions: Teacher is logged into the system and has a list of students for the exam.

Steps:

- 1) Navigate to the "Add Marks" section.
- 2) Select the specific exam.
- 3) Add marks for each student.
- 4) Edit the assigned marks if necessary.

Expected Result: Teacher can add and edit marks for each student.

5. Test Case: Release Unofficial Grades

Preconditions: Teacher is logged into the system and has assigned marks for the exam.

Steps:

- 1) Click on the "Release Unofficial Grades" button.
- 2) Select the specific exam.
- 3) Release the unofficial grades for approval by the admin.

Expected Result: Teacher can release unofficial student grades for approval by the admin.

Chapter 5 - Evaluation and Conclusion

The system will be evaluated through several methods to ensure its effectiveness, reliability, and efficiency.

- **User Testing:** The system will undergo user testing with a sample group of teachers, administrators, students, and parents to gauge their satisfaction with the system's usability, functionality, and overall performance.
- **Performance Testing:** The system's performance will be evaluated under various conditions to determine its responsiveness, stability, and scalability. Performance testing will be conducted using simulated loads, peak loads, and stress loads.
- **Security Testing:** The system will undergo security testing to ensure that it is protected against potential security breaches and cyber attacks. This includes testing the system's authentication, authorization, and encryption capabilities.
- **Usability Testing:** The system's usability will be evaluated to ensure that it meets the needs of its users. This will include testing the system's navigation, layout, and ease of use.
- **Functionality Testing:** The system's functionality will be evaluated to ensure that it meets the requirements outlined in the system's specifications. This includes testing the system's features, such as fee management, expense management, class management and exam management.
- **Compatibility Testing:** The system will be evaluated to ensure that it is compatible with a variety of browsers, operating systems, and devices. This will include testing the system's functionality and usability across different platforms.
- **Acceptance Testing:** The system will undergo acceptance testing to ensure that it meets the requirements and expectations of the client. This includes testing the system's functionality, usability, and performance in real-world scenarios.

Overall, the system's evaluation will be a continuous process to ensure that it is meeting the needs of its users and stakeholders. The results of the evaluation will be used to make necessary improvements and enhancements to the system.

References

- Aziz, N. A. (2022). Development of Tuition Centre Management System. *IEEE International Conference on Computing (ICOCO)*.
- Ng Yang Cherng, R. M. (2023). Centralized Tuition Management System. *International Journal of Advanced Education and Development*.
- Putera Ezzalee Kamaroszaman, M. Z. (2022). Development of Tuition Centre Management. *Applied Information Technology And Computer Science*.
- Ramli, R. A. (2022). Student Management System Development of Damya Deena Tuition Center (SPP Damya Deena). *Applied Information Technology And Computer Science*.
- Wenzhong Xia, F. L. (2015). The Research on Colleges' Tuition Management System Development. *Atlantis Press*, 1308.

Appendix A

Work done by each Member

	Name with Initials	Work Done
1.	Thilakasiri P. K. V. C.	Admin Dashboard – Statistical Data Representation Admin Dashboard's Class Management Function
2.	K. P. V. Pathirana	Admin Dashboard's Parent Management function Parent Dashboard
3.	W. M. Y. Soysa	Exam Management Portal – Student Dashboard & Teacher Dashboard Admin Dashboard's Exam Management function
4.	G. S. Hasanka	Admin Dashboard's Teacher Management function Teacher Dashboard
5.	Jasingha S. D.	Admin Dashboard's Subject Management Admin Dashboard's Fee Management
6.	Silva R. L. G.	Admin Management Attendance Management
7.	Gamlath W. A. V. K.	Expense Management Portal
8.	A. M. B. S. Bandara	Admin Dashboard's Student Management function Student Dashboard