

# **Royal Academy Education Institute**

## **– Institute Management System**

### **Final Project Report**



**Sri Lanka Institute of Information Technology**

Information Technology Project (IT2080)

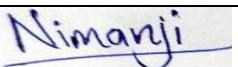
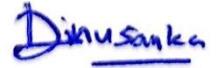
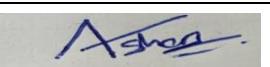
**Group ITP\_WD\_B6\_04**

**May 2024**

## DECLARATION

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## **ABSTRACT**

Royal Academy Education Institute is an institute management system designed to manage institute educational activities efficiently. This is a web-based application that was developed mainly based on eight functions, including user management, financial management, enrollment and attendance management, class management, lesson material management, timetable management, salary management, Q&A and feedback management. Through the use of the Royal Academy Education Institute, it helps students and teachers interact in a convenient manner, and it also helps managers and administrators manage institute tasks effectively and reliably.

Teachers and students can learn in an engaging and dynamic environment with this system. This approach helps to manage a great deal more work than the physical mode of education because it reduces problems that arise in the physical mode of institute management, which leads to improvements in the management of duties related to institute management.

The functionalities of the Royal Academy Education Institute web application have been selected by our team members by thoroughly going through the client requirements. After analyzing those functionalities, we chose the MERN stack as the technology to design our system, which includes MongoDB, Express JS, ReactJS, and NodeJS. We used "Trello" to manage the planning of our system. We used "GitHub" for easy integration, version control, and code management.

Ultimately, Royal Academy Education Institute provides a user-friendly and advanced institute management system to the client to help monitor institute management tasks. Through our system, we facilitate a convenient solution to overcome the issues faced in the physical management of the institute.

## **ACKNOWLEDGMENT**

Working in ITP group project is a miraculous opportunity for IT students to gain hands-on experience and put their learning into practice. As members of the ITP\_2024\_Y2\_S2\_WD\_B6\_4 group, we express our sincere appreciation to all who supported and guided us to achieve success in our project.

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## **LIST OF ABBREVIATIONS**

*Table 1-Abbreviations*

<b>Abbreviation</b>	<b>Description</b>
MERN	MongoDB, Express, React Js, Node Js
ER	Entity Relationship Diagram
DBMS	Database management System
UI	User Interface
SD	Sequence Diagram
SDLC	Software Development Life Cycle

# **CHAPTER1 - INTRODUCTION**

## **BACKGROUND**

### **Company Background**

We are thrilled to announce the development of a be spoke institute management system tailored for the Royal Academy Education Institute. This system is poised to revolutionize institute management by offering a seamless experience for admins, students, managers, and teachers alike.

Our comprehensive research indicates a gap in the market for institute management systems that cater specifically to single-branch institutions. With this insight, we're confident that our solution will effectively bridge this void and exceed expectations.

The system boasts an array of features meticulously crafted to streamline administrative tasks, enhance student engagement, empower managers, and facilitate efficient teaching practices. From attendance tracking and academic performance monitoring to resource allocation and communication tools, our platform covers every aspect of institute management with precision and ease of use.

In addition to core functionalities, we're integrating a convenient monthly subscription model that aligns with the dynamic needs of our client's institution. This flexible approach ensures accessibility while offering value-added benefits to subscribers, ultimately fostering long-term partnerships and sustained growth.

To uphold our commitment to continuous improvement, we'll actively solicit feedback from stakeholders to refine and enhance the system's performance. By leveraging user insights, we'll adapt to evolving needs and deliver a solution that remains ahead of the curve.

In summary, our single-branch institute management system is poised to elevate operational efficiency, foster student success, and empower educators to thrive in today's educational landscape. We're dedicated to providing a user-friendly, innovative solution that catalyzes positive outcomes for Royal Academy

## Introduction to the Web Application

Royal Academy Web Application is an all-encompassing online platform designed to streamline and enhance the operations of educational institutions. With eight robust subsystems, it caters to every facet of institute management, ensuring seamless administration, efficient teaching practices, and enhanced student engagement.

User Management lets admins control who can access the system. They can easily add, change, or remove user accounts to keep things secure. Enroll and Attendance Management simplifies student registration and tracking attendance, helping schools stay organized. Class Management gives managers the power to manually create, update, or delete class schedules, putting them in control of their timetables. Timetable Management helps schools create custom schedules that fit their needs perfectly, making sure classes run smoothly. Feedback Management lets everyone share their thoughts, helping schools improve and grow based on valuable input. Financial Management keeps track of student payments and wallets, making sure finances are managed responsibly and transparently. Lesson Material Management helps teachers share learning materials easily, making lessons more engaging and collaborative.

Royal Academy Web Application is designed to revolutionize institute management by offering a comprehensive suite of tools tailored to the specific needs of educational institutions. From user-friendly interfaces to robust functionality, it empowers administrators, teachers, and students to thrive in today's educational landscape. With the Royal Academy Web Application, managing educational institutions has never been easier or more efficient.

## SYSTEM DIAGRAM

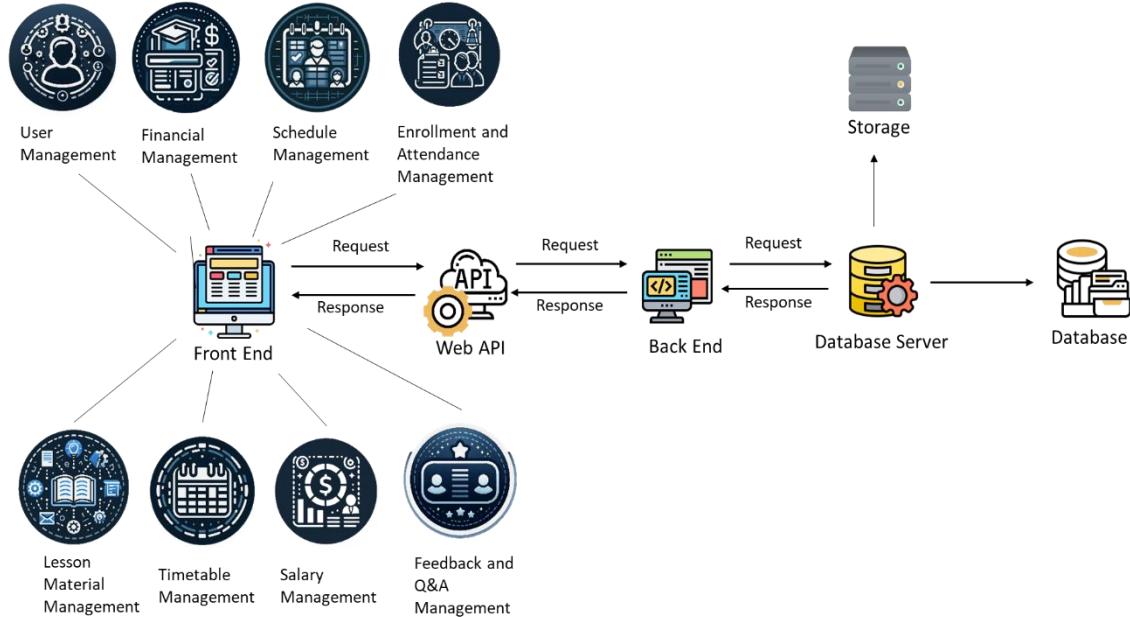


Figure 1-System Diagram

## Problem and Motivation

### **PROBLEM**

We gathered many problems that have to be faced by our client when handling the institute manually. Main tasks of the institute were carried out manually at the institute. Then we realized that these errors can lead to inaccuracies in data, impacting decision-making and potentially causing administrative issues. To overcome the problems of manual handling of institute management, we developed the Institute Management System. This system can address these challenges and streamline operations, improving overall efficiency and effectiveness.

Some of the major concerns that have to be contemplated on are listed as follows:

- **Administrative Overload:** Manual handling of administrative tasks such as enrollment, attendance, and grading consumes a significant amount of time and effort.  
It increases the likelihood of errors due to manual data entry and processing.  
Administrative staff may feel overwhelmed by the volume of tasks, leading to reduced efficiency and productivity.
- **Data Disorganization:** Without a centralized system, student and staff data may be stored in disparate locations or formats, making it difficult to access and manage.  
Disorganized data can lead to duplication, inconsistency, and inaccuracies in records.  
Retrieving specific information or generating reports becomes challenging and time-consuming, hindering decision-making and analysis.
- **Communication Gaps:** Ineffective communication between teachers and students can result in misunderstandings, confusion, and missed opportunities for learning.  
Important announcements, assignments, or feedback may not reach students in a timely manner, impacting their academic performance and engagement.
- **Resource Mismanagement:** Inefficient allocation of resources, such as classrooms, equipment, and teaching materials, can lead to underutilization or overbooking.  
Poor resource planning may result in shortages or excesses, affecting the quality of education and student experiences.  
It can also lead to increased costs and budgetary constraints for the institution.
- **Compliance Challenges:** Meeting regulatory requirements without automated systems can be time-consuming and error prone.  
Manual tracking of compliance tasks, such as reporting, documentation, and audits, increases the risk of non-compliance and penalties.  
Keeping up to date with changing regulations and ensuring adherence to standards becomes a daunting task for administrative staff.

## MOTIVATION

We can take the motivations as follows:

- **Efficiency Enhancement:** Implementing an institute management system automates repetitive administrative tasks such as enrollment, attendance tracking, and grading, freeing up staff time for more meaningful work.  
It reduces paperwork, eliminates manual errors, and streamlines processes, resulting in increased productivity and efficiency across the institution.
- **Data Centralization:** A centralized management system stores all student and administrative data in one secure location, eliminating the need for multiple disparate databases.  
This ensures data consistency, accuracy, and integrity, making it easier to maintain and update records.  
Access controls and permissions can be implemented to ensure data privacy and security, safeguarding sensitive information from unauthorized access or tampering.
- **Improved Communication:** An integrated management system provides multiple channels for communication between students, teachers, and administrators, such as messaging platforms, and discussion forums.  
It facilitates instant communication, enabling quick dissemination of information, announcements, assignments, and feedback.
- **Optimized Resource Allocation:** A management system provides visibility into the availability and usage of resources  
It helps prevent overbooking or underutilization of resources, maximizing efficiency and cost-effectiveness.  
Insights from resource usage data can inform strategic planning and decision-making, ensuring that resources are allocated where they are most needed to support teaching and learning.
- **Streamlined Compliance:** An automated management system simplifies regulatory compliance by generating reports, maintaining documentation, and tracking compliance activities.

## **LITERATURE REVIEW**

Our institute management system presents a truly unique approach, unlike many others in the field. Although there are a few web applications that share some similarities, such as

<https://sailingopen.lk>

[www.Sipwin.lk](http://www.Sipwin.lk)

<https://www.indeepa.lk>

<https://syzygy.lk>

<https://rotaryhall.com>

When we look closely, we see some big differences in how they work and look. By checking out these examples for institute management, we can figure out what's good and what's not so great about them.

The first main point that can be mentioned here is about the problem faced by the student when paying class, our system introduces an additional feature for students, they can upload pictures of their payment receipts directly other than the paying through the online gateway. This helps everyone involved students feel more in control, and the system makes sure payments are legit. Through this system, administrators play a crucial role in verifying payments, offering an additional layer of support and guidance to students as they navigate through the course selection and payment confirmation processes.

Additionally, teachers have the capability to view students' payment information by searching using their unique student IDs. This enhancement aims to provide educators with valuable insights into the payment status of individual students, allowing for better awareness and understanding of their financial standing within the institution. By incorporating this feature, we strive to empower teachers to have a more comprehensive view of their students' academic journey, contributing to a more informed and supportive educational environment.

Another key feature that we can identify as a comparison is in any of the given systems there should not be included an option for students to view timetables and class schedules. To address this challenge, our system introduces an additional feature where students can conveniently view their class timetables. This feature aims to empower students with a clear and accessible overview of their scheduled classes. By having instant access to their timetables, students can make more informed decisions when selecting courses, ensuring that their choices align with their academic goals and overall schedule.

*Table 2-Literature Review*

Functions	Sailing Pen	Sipwin	Indeepa	Syzygy	Rotary Institute
User management	✓	✓	✓	✓	✓
Financial management	✓	✓	✗	✓	✗
Enrollment and Attendance management	✓	✓	✓	✗	✗
Class management	✓	✓	✓	✓	✓
Lesson Material management	✓	✗	✗	✓	✓
Timetable managements	✗	✓	✗	✗	✓
Salary management	✗	✓	✗	✗	✓
Q&A and Feedback Management	✓	✗	✓	✗	✗

## **AIMS & OBJECTIVES**

### **Aims**

- Streamlining Administrative Processes: The primary aim is to simplify administrative tasks within educational institutions, making processes more efficient and reducing manual workload.
- Enhancing Communication: Aims to facilitate improved communication among stakeholders, including students, teachers, and administrative staff, through features like messaging, notifications, and alerts.
- Optimizing Resource Utilization: This system seeks to maximize the utilization of resources such as faculty, staff, and facilities by effectively managing scheduling, workload allocation, and other related tasks.
- Improving Data Management: Aims to centralize and manage data related to students, faculty, courses, finances, and other aspects of institutional operations, ensuring data integrity and accessibility.
- Enhancing Decision Making: By providing comprehensive data analysis and reporting capabilities, IMS aims to support informed decision-making by administrators and other stakeholders.
- Ensuring Financial Transparency: Aims to provide transparency in financial management by automating processes such as fee collection, accounting, and reporting, thereby reducing the risk of errors and fraud.
- Fostering Continuous Improvement: Aims to promote a culture of continuous improvement within educational institutions by providing tools for monitoring performance, identifying areas for enhancement, and implementing changes as needed.

## **Objectives**

- Automating Administrative Tasks: Objectives include automating tasks such as admissions, enrollment, attendance tracking, grade management, and academic record-keeping to reduce manual effort and errors.
- Implementing Communication Tools: Objectives involve implementing communication features such as messaging systems, email notifications, and event alerts to keep stakeholders informed and engaged.
- Managing Student Information: Objectives include managing student data such as personal details, academic records, attendance, and performance evaluations in a centralized database for easy access and analysis.
- Optimizing Faculty Management: Objectives focus on managing faculty-related tasks such as scheduling, workload allocation, attendance tracking, and professional development to ensure efficient utilization of resources.
- Ensuring Financial Accuracy: Objectives involve implementing systems for accurate fee collection, accounting, budgeting, and financial reporting to maintain transparency and compliance with regulations.
- Enhancing Data Analysis and Reporting: Objectives involve providing tools for data analysis and reporting to generate insights on student performance, financial status, and other critical metrics for informed decision-making.

Providing a convenient educational environment for both teachers and students and improving the user experience are the main goals of an institute management system.

## **SOLUTION OVERVIEW**

- Online platform for all stakeholders of the institute

An online platform that links the institute's stakeholders Students, Teacher, administrators, and Manager. We offer an all-inclusive solution for handling operational, administrative, and academic responsibilities with our Institute Management System. Users can utilize this platform to access academic performance tracking, communication tools, enrollment, and course management capabilities. Academic staff are able to interact with students, monitor their progress, and provide instruction in an effective manner. Features for resource management, performance monitoring, and decision-making are available to administrators and managers. We guarantee that the needs of all stakeholders are appropriately acknowledged through our system, which also promotes efficient communication inside the institute.

- The student feedback system for evaluating teachers.

Student feedback is integral to enhancing the quality of services offered by a Royal Institute Management System. Therefore, we have implemented a feedback mechanism within our system to evaluate faculty members. Students can provide feedbacks. This feedback helps students assessing faculty performance and making necessary improvements to the educational experience.

- Option for managing Teachers' salaries.

As there are a lot of issues in assigning and managing teachers' salaries, we provided an option for managing teachers' salaries. Therefore, there is no need to use third-party applications and services for the salary management of teachers.

- Online database for real-time updates and backups

In our product, gym staff will no longer want to keep all related records manually and handle the paperwork for user registrations. We have used an online cloud-based database with real-time updating and concurrent updates.

## **METHODOLOGY**

### **1. Requirements Gathering:**

- **Stakeholders:** The project team will communicate with its stakeholders as well as all the relevant stakeholders including the institute owner, manager, administrative staff, teachers, and the top-performing students.
- **The process:** The team will use interviews, surveys, and workshops to get the requirements from stakeholders. The main goal is to get to know the needs, challenges, and target within information systems. This process will give the requirements document then scope and purpose of the project.

### **2. Analysis and Design:**

- **System design** – based on system requirements collection, the project team will prepare the system architecture, database schema, interface, and system operations design.
- **Use cases and flowcharts** – use cases and flowcharts will be produced for evaluating the system behavior and identifying possible constraints.
- **Design validation** – project stakeholders will be engaged in the process of validation and ensure the compatibility of the system design with their needs.

### **3. Development:**

- **Agile Development:** Using an agile approach, the Royal Institute Management System will be developed by the project team in iterative increments. Specifically, each iteration will produce a subsystem or a part of the larger system, promoting a feedback-based system improvement. Specifically,
- **Unit Testing and Integration:** The system will then be subjected to unit testing; a method used to ensure subsystem quality and then combine all subsystems or the system components for reliability testing.
- **Stakeholder Collaboration:** The stakeholders, participants, or future users of the system version will be constantly involved in the project to ensure that they provide feedback and that all their emerging requirement are addressed.

### **4. Deployment:**

- **Production Deployment:** The fully developed Royal Institute Management System RIMS will be deployed to the institute's production environment for productive use. Moreover, extensive training will be offered to the institute staff, teachers, and users to enhance their effectiveness and efficiency in using the system.
- **User Acceptance Testing:** user acceptance testing will be conducted to confirm that the system has met the expected requirements.

### **5. Maintenance:**

- **Ongoing Support:** The project team will provide ongoing maintenance and support for the Royal Institute Management System, addressing any issues or concerns that arise post-deployment.
- **Feature Enhancements:** New features and enhancements will be implemented based on feedback from institute stakeholders, ensuring the system remains up-to-date and aligned with evolving needs.
- **Performance Monitoring:** Continuous monitoring of the system's performance will be conducted to ensure optimal functionality and user satisfaction.

## Tools and Technologies

In our project, we adopted the MERN stack, leveraging the power of MongoDB, Express.js, React, and Node.js. Each component played a crucial role in the development process:

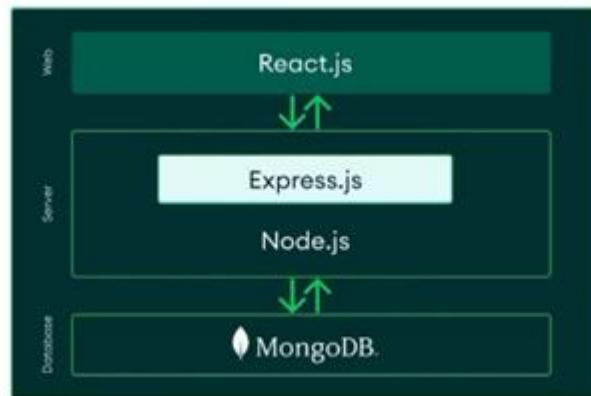


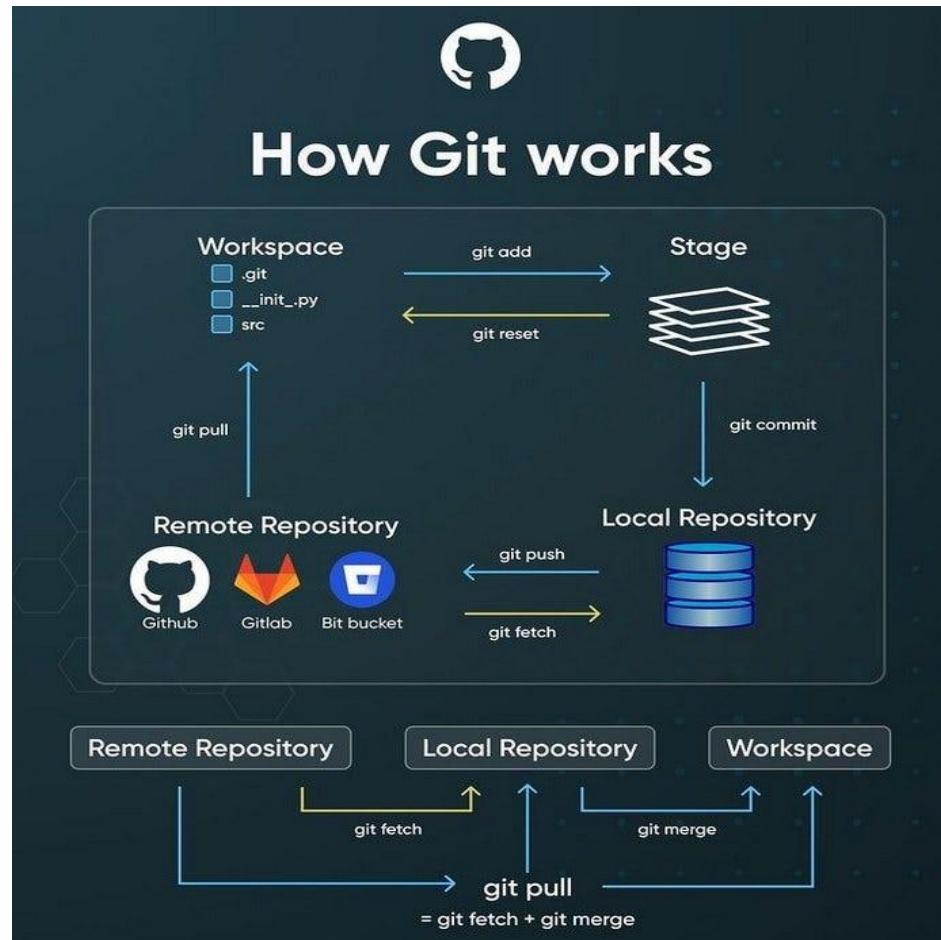
**MongoDB** served as our database solution, offering flexibility and scalability for handling our data storage needs efficiently.

**Express.js** provided a robust framework for building our backend infrastructure, facilitating the creation of RESTful APIs and managing HTTP requests seamlessly.

**Node.js** acted as the runtime environment for our server-side JavaScript code, enabling non-blocking, event-driven architecture for high-performance server-side applications.

**React** empowered us to develop a dynamic and interactive user interface, enabling the creation of engaging single-page applications with reusable components.





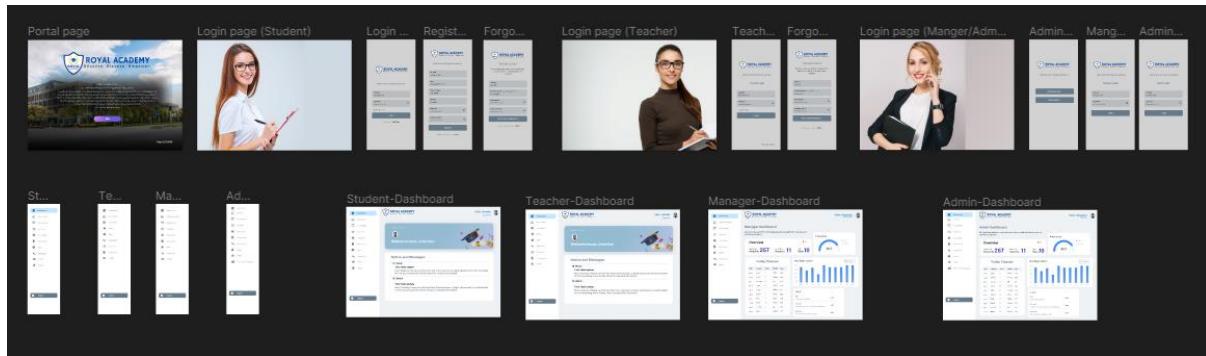
Additionally, we utilized **GitHub** for version control and collaboration, allowing team members to manage code changes, track issues, and merge contributions seamlessly.

Link : [https://github.com/Eshmika/Royal\\_institute.git](https://github.com/Eshmika/Royal_institute.git)

In terms of project management, we adopted an **Agile methodology**, emphasizing iterative development, continuous feedback, and adaptability to changing requirements. This approach enabled us to deliver incremental improvements and respond effectively to stakeholder feedback throughout the development lifecycle.



For design prototyping and collaboration, we utilized **Figma**, a powerful design tool that facilitated the creation of wireframes and mockups. Figma streamlined our design process, enabling seamless collaboration among team members and stakeholders to visualize and iterate on the user interface design.



Link: <https://www.figma.com/file/gmYI8K08n1ysULtvHpmfBC/Royal-Academy?type=design&node-id=126%3A5578&mode=design&t=srT9rynpWTgKtW8L-1>

## **THE STRUCTURE OF THE PROJECT**

### **SECTION 1:**

The first part of the report emphasizes on the difficulties of the manual system and as a solution how the developed system provides the relevant functionalities.

### **SECTION 2:**

The report's second section contains sections on requirement analysis, design, implementation, and testing. Analyze requirement analysis using activity diagrams and case diagrams. Interfaces, Class Diagrams, and ER Diagrams show the system's general architecture. The system's test cases and module architectures are described in the implementation.

### **SECTION 3:**

Third part of the report includes references used as support to complete the project report successfully.

## **CHAPTER 2 - REQUIREMENTS**

### **STAKEHOLDER ANALYSIS**

There are several stakeholders who have an interest in the success of this institute management system project. Our client, the owner of the institute, is the primary stakeholder who operates the institute. Our client is interested in an online platform that will help take action on managing institute tasks, which will result in the implementation of an institute management system.

Students are also important stakeholders in this system. They are the users who take the facilities from the system. They use the system to make their educational activities more convenient, which helps them manage their time. Students benefit from many functionalities, which make this system more effective. For example, students can make payments online, view classes on the timetable, view enrolled classes' lesson materials, secure their personal data, ask subject-related questions, and provide feedback regarding teachers and institute.

Another significant group of stakeholders in this system are teachers. They can provide lesson materials through the system, which will be helpful for their teaching-related tasks. The system can help teachers publish their notices for the students and request class arrangements as well. Also, the teacher can view their salaries, and through feedback, they can get an idea about the areas they have to improve. The teachers can monitor the attendance through the system.

The manager is also a stakeholder in the institute management project. A manager can manage students' payments, teachers' salaries, and classes. The system helps to maintain the new class timetable and salary calculations. Also, this system provides the facility to manage a vast amount of data, which will ease the tasks related to the manager.

Admin also can be taken as a stakeholder in institute management project, where the system helps to do all administrative tasks more efficiently. This system facilitates generate reporting which will be important to the admin to make more reliable decisions based on the generated reports.

## **REQUIREMENTS ANALYSIS**

### **Requirements Analysis for Institute Management System:**

#### **Q&A and Feedback Management:**

- The system should allow to add new questions to relevant teachers.
- The system should allow to add feedbacks to teachers and manager.
- The system should allow to view newly added questions to add the answers.
- The system should allow to view newly added service feedbacks to provide a reply.
- The system should provide facility to search frequently asked questions.
- The system should provide a record of feedbacks regarding facilities of Institute.

#### **Salary Management:**

- The system should allow the manager to create a salary details form (Name, Number of paid students, Number of free card Students, Monthly class fee)
- The system should allow the manager to update the detail form as per the teacher's request.
- The system should allow to Implement algorithms or rules to calculate salaries based on predefined criteria.
- The system should allow to ensure that only authorized users with appropriate permissions can access salary information.
- The system should allow the manager to delete teacher record if the teacher is no longer.

#### **Timetable Management:**

- The system should allow users to view the current timetable.
- The system should allow manager to add, edit, and delete timetable entries.
- The system should validate timetable entries to ensure there are no conflicts with existing schedules.
- The system should allow to detect and alert users about any conflicts such as overlapping timings or resource allocation issues.

#### **User Management:**

- The system should allow students/teachers to register to the system.
- The system should provide options for different types of user accounts, such as staff, members, and managers.
- The system should provide a login and authentication mechanism for users to access the system.
- The system should allow users to update their personal information
- The system should allow users to reset their passwords.
- The system should provide users to enter a security question to secure their details.

#### Financial Management:

- Students should be able to initiate payments for specific subjects within their classes.
- Students should have the capability to access and review their payment records.
- Students should be able to update or delete their payment records.
- Students should have the ability to cancel a payment before manager approval, with the canceled amount being transferred to the student's financial vault.
- Teachers should be able to search and retrieve payment records using students' IDs for reference and monitoring purposes.
- 5.6. Managers should have the authority to verify and approve student payments

#### Enrollment and Attendance Management:

- The system should allow students to submit their enrollment preferences.
- The system should allow managers to manually enroll or unenroll students in classes as needed.
- The system should automatically record attendance when students attend online classes, without requiring manual intervention.
- The system should provide managers with the capability to scan unique QR codes assigned to each student for recording physical attendance.
- The system should allow managers to input student IDs manually in emergencies or situations where QR codes are unavailable.
- The system should enable managers to view attendance records for all classes.
- The system should provide managers with the authority to edit attendance records if necessary, ensuring data accuracy and completeness.

#### Class Management:

- The system should allow students to view the current monthly schedule
- The system should allow students to view additional class details
- The system should allow teachers to add additional class and update class schedule
- The system should allow teachers to edit and delete classes
- The system should allow manager to approve class schedule to update system class schedule

#### Lesson Material Management:

- The system should allow students to view lesson materials easily and download them for offline access.
- The system should allow students to search for lesson materials using keywords or names to quickly locate the required materials.
- The system should allow teachers to upload various types of lesson materials such as documents, video links, and photos.
- The system should allow teachers to add details about the lesson material such as topics, descriptions, and additional notes.
- The system should allow teachers to edit the lesson materials and delete outdated lesson materials according to their preferences.
- The system should allow teachers to add notices about the relevant class.

## **REQUIREMENT MODELING**

Requirement Modeling for Institute Management System:

1. Q&A and Feedback Management:

- 1.1. The system shall allow students to add new questions to relevant teachers
- 1.2. The system shall allow students to add feedbacks to teachers and manager.
- 1.3. The system shall allow teachers to view newly added questions to add the answers.
- 1.4. The system shall allow manager to view newly added service feedbacks to provide a reply.
- 1.5. The system shall provide facility to students to search frequently asked questions.
- 1.6. The system shall allow manager to provide a record of feedbacks regarding facilities of Institute.

2. Salary Management:

- 2.1. The system shall allow the manager to create a salary details form (Name, Number of paid students, Number of free card Students, Monthly class fee)
- 2.2. The system shall allow the manager to update the detail form as per the teacher's request.
- 2.3. The system shall allow to Implement algorithms or rules to calculate salaries based on predefined criteria.
- 2.4. The system shall allow to ensure that only authorized users with appropriate permissions can access salary information.
- 2.5. The system shall allow the manager to delete teacher record if the teacher is no longer working with the institute.

3. Timetable Management:

- 3.1. The system shall allow users to view the current timetable.
- 3.2. The system shall allow manager to add, edit, and delete timetable entries.
- 3.3. The system shall validate timetable entries to ensure there are no conflicts with existing schedules.
- 3.4. The system shall allow to detect and alert users about any conflicts such as overlapping timings or resource allocation issues.

**4. User Management:**

- 4.1. The system shall allow students/teachers to register to the system.
- 4.2. The system shall provide options for different types of user accounts, such as staff, members, and managers.
- 4.3. The system shall provide a login and authentication mechanism for users to access the system.
- 4.4. The system shall allow users to update their personal information
- 4.5. The system shall allow users to reset their passwords.
- 4.6. The system should provide users to enter a security question to secure their details.

**5. Financial Management:**

- 5.1. The system shall allow students to initiate payments for specific subjects within their classes.
- 5.2. The system shall allow students to access and review their payment records.
- 5.3. The system shall allow students to update or delete their payment records.
- 5.4. The system shall allow students to cancel a payment before manager approval, with the canceled amount being transferred to the student's financial vault.
- 5.5. The system shall allow teachers to search and retrieve payment records using students' IDs for reference and monitoring purposes.
- 5.6. The system shall allow managers to verify and approve student payments

**6. Enrollment and Attendance Management:**

- 6.1. The system shall allow students to submit their enrollment preferences.
- 6.2. The system shall allow managers to manually enroll or unenroll students in classes as needed.
- 6.3. The system shall automatically record attendance when students attend online classes, without requiring manual intervention.
- 6.4. The system shall provide managers with the capability to scan unique QR codes assigned to each student for recording physical attendance.
- 6.5. The system shall allow managers to input student IDs manually in emergencies or situations where QR codes are unavailable.
- 6.6. The system shall enable managers to view attendance records for all classes.
- 6.7. The system shall provide managers with the authority to edit attendance records if necessary, ensuring data accuracy and completeness.

**7. Class Management:**

- 7.1. The system shall allow students to view the current monthly schedule
- 7.2. The system shall allow students to view additional class details
- 7.3. The system shall allow teachers to add additional class and update class schedule
- 7.4. The system shall allow teachers to edit and delete classes
- 7.5. The system shall allow manager to approve class schedule to update system class schedule

**8. Lesson Material Management:**

- 8.1. The system shall allow students to view lesson materials easily and download them for offline access.
- 8.2. The system shall allow students to search for lesson materials using keywords or names to quickly locate the required materials.
- 8.3. A The system shall allow teachers to upload various types of lesson materials such as documents, video links, and photos.
- 8.4. A The system shall allow teachers to add details about the lesson material such as topics, descriptions, and additional notes.
- 8.5. A The system shall allow teachers to edit the lesson materials and delete outdated lesson materials according to their preferences.
- 8.6. A The system shall allow teachers to add notices about the relevant class.

## CHAPTER 3 - DESIGNING AND DEVELOPMENT

### Union Diagram of Actors

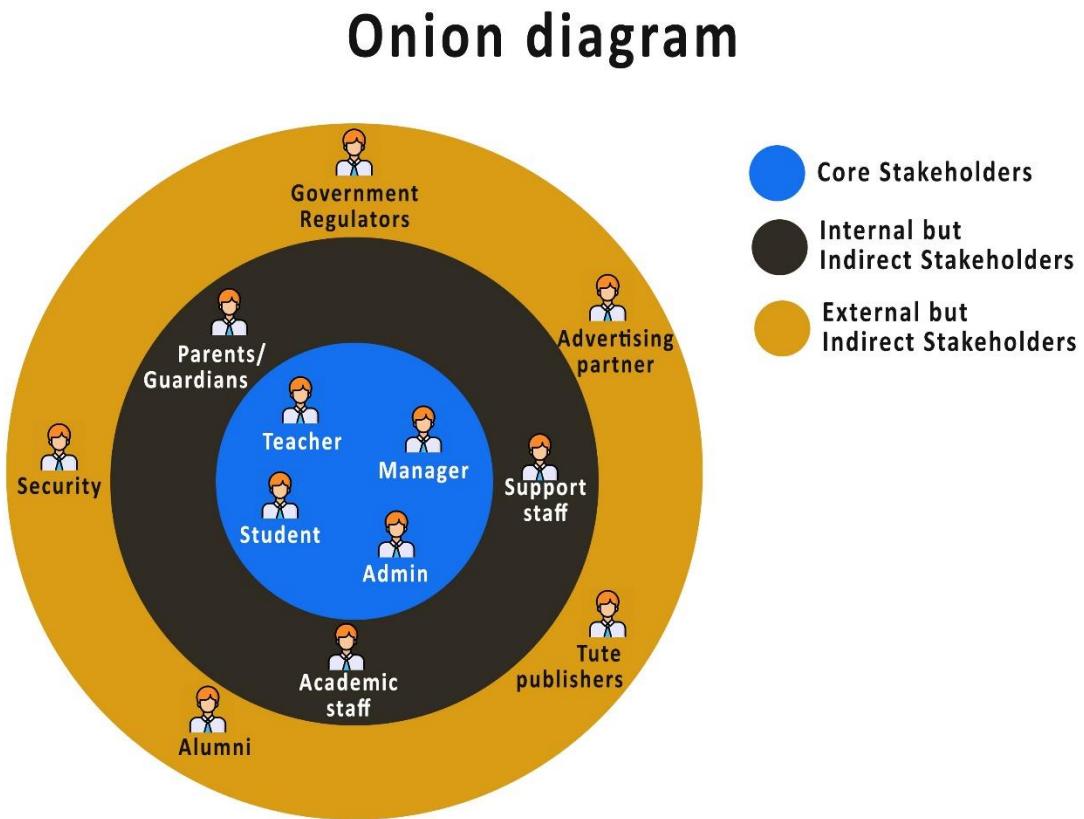


Figure 2-Union Diagram

# **DIAGRAMS OF COMPONENTS**

## **Q & A and Feedback Management – IT22001184**

This system helps students interact with teachers and managers in an efficient way. The Q&A management helps students solve their subject-related questions by providing the question to the relevant teacher. Not like in physical mode, this section helps students ask questions without any hesitation. Feedback management helps teachers and managers get an idea of the sections they have to improve in their teaching and in the institute.

### **Use Case Scenario of Q&A Management**

*Table 3 – Submit Question Usecase scenario*

Use case Name	Submit question	
Actor	Student	
Goal	The goal of this use case is to get answers to the subject related questions.	
Overview	This use case involves the students submitting their subject related questions by selecting relevant subject and teacher. Then those questions will be confirmed and answered by the relevant teacher. Students can edit until teacher response to them. Also, students can delete the questions. Those submitted questions can be viewed by students as well.	
Pre-conditions	The student must be registered to the system.	
Post-conditions	The student gets “successfully question submitted” message.	
Basic Path	Step	Action
	1	Student clicks the “Q & A” button.
	2	From there student click the “Q & A” button.
	3	The student then clicks on the “Add question” button.
	4	The student search for the subject and the relevant teacher accordingly.
	5	The student enters the student ID number and the relevant question on the provided platform.
	6	The student clicks on the “Submit” button.
	7	If the student ID number is valid, the system shows the alert as “Question submitted”.

	8	When the student clicks “ok” on the alert, the student prompts to the “My Questions” page.
	9	The system shows “Edit” and “Delete” options until the student get an answer to the question.
	10	If the student wants to change the question, can click on the “Edit” button.
	11	The system directs the students to edit the question with existing data.
	12	The student can edit the question without any request and click on submit.
	13	When the teacher has confirmed the question and give a response, the system notifies to the student.
	14	If the student wants to delete the question, can click on the “Delete” button.
	15	The student can click the “exit” button to exit from the “My Questions” page.
Extensions	Step	Branching Action
	6a	When the students click “Submit” button but hasn’t select a subject and a teacher, the system shows alert to select a subject and a teacher.
	6b	If the question field is empty student get an alert to fill that field.
	7a	If the student ID is invalid, the system shows the alert as “Invalid student ID.”.
	9a	If the teacher has given a response to the question the student cannot edit the question.

## Use case diagram of Q&A and Feedback Management.

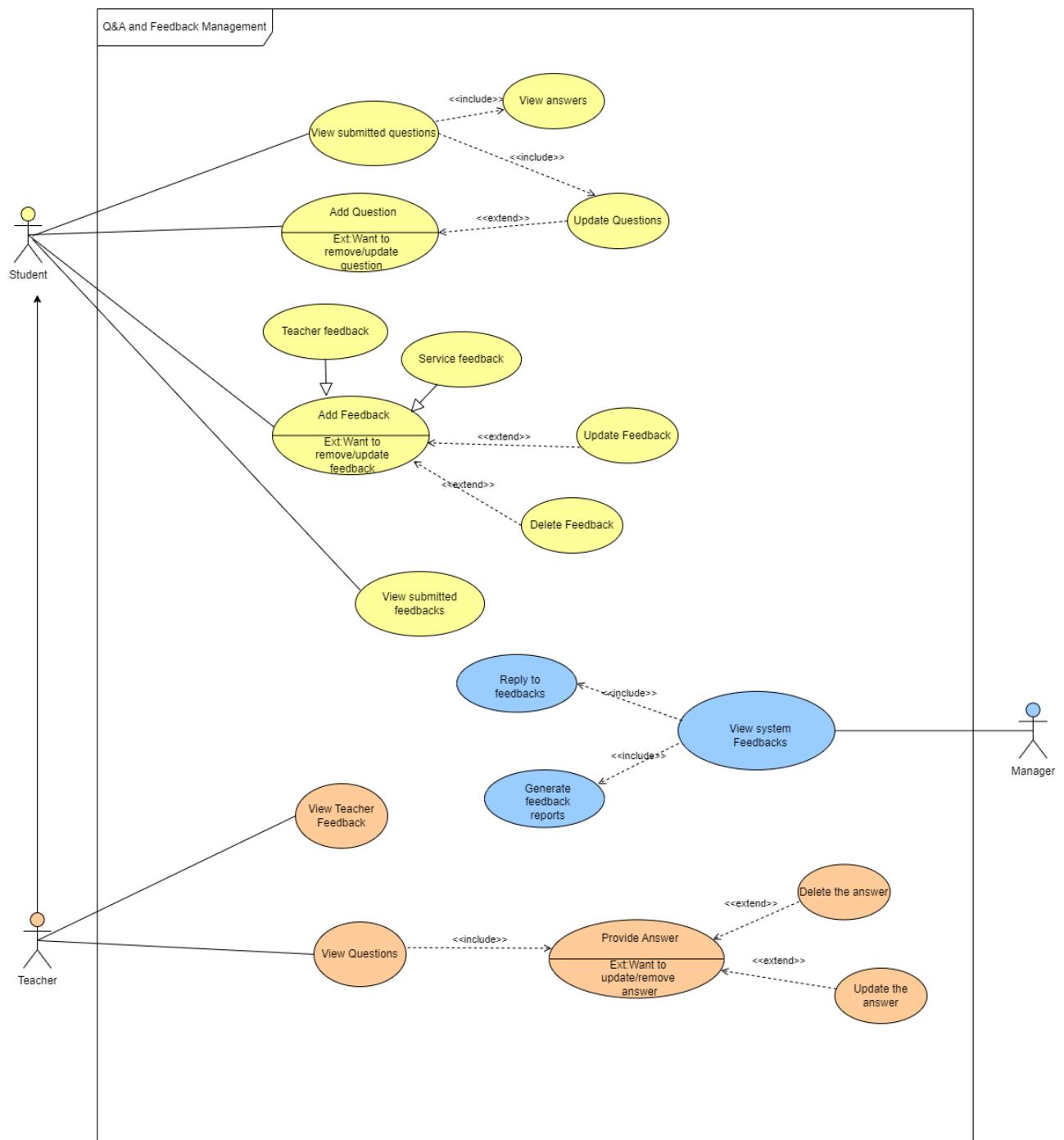


Figure 3. 1- Q&A and Feedback Management Usecase Diagram

## Activity diagram of Q&A Management.

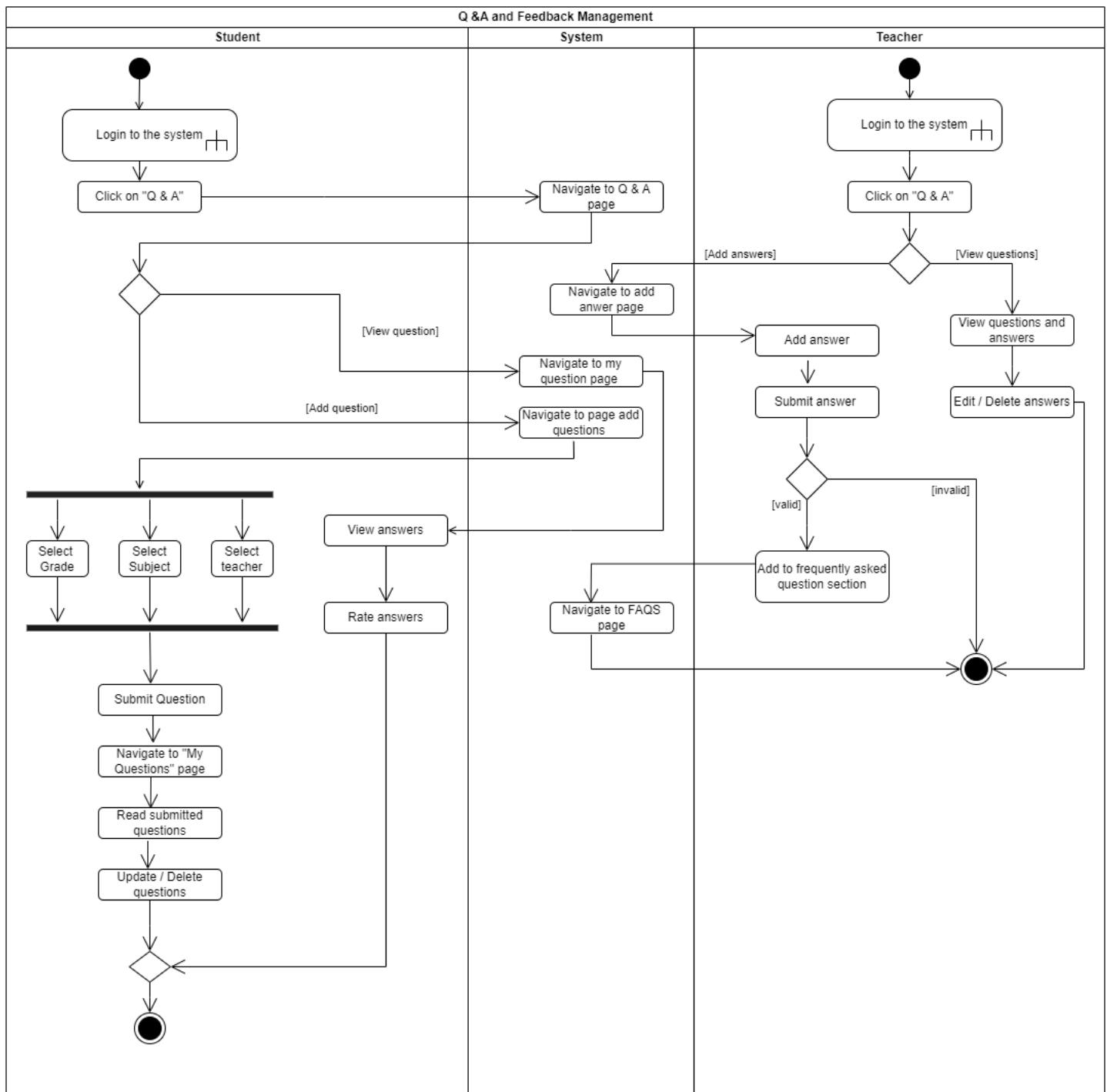


Figure 3. 2-Q&A Management Activity Diagram

## Sequence diagram of Q & A Feedback Management.

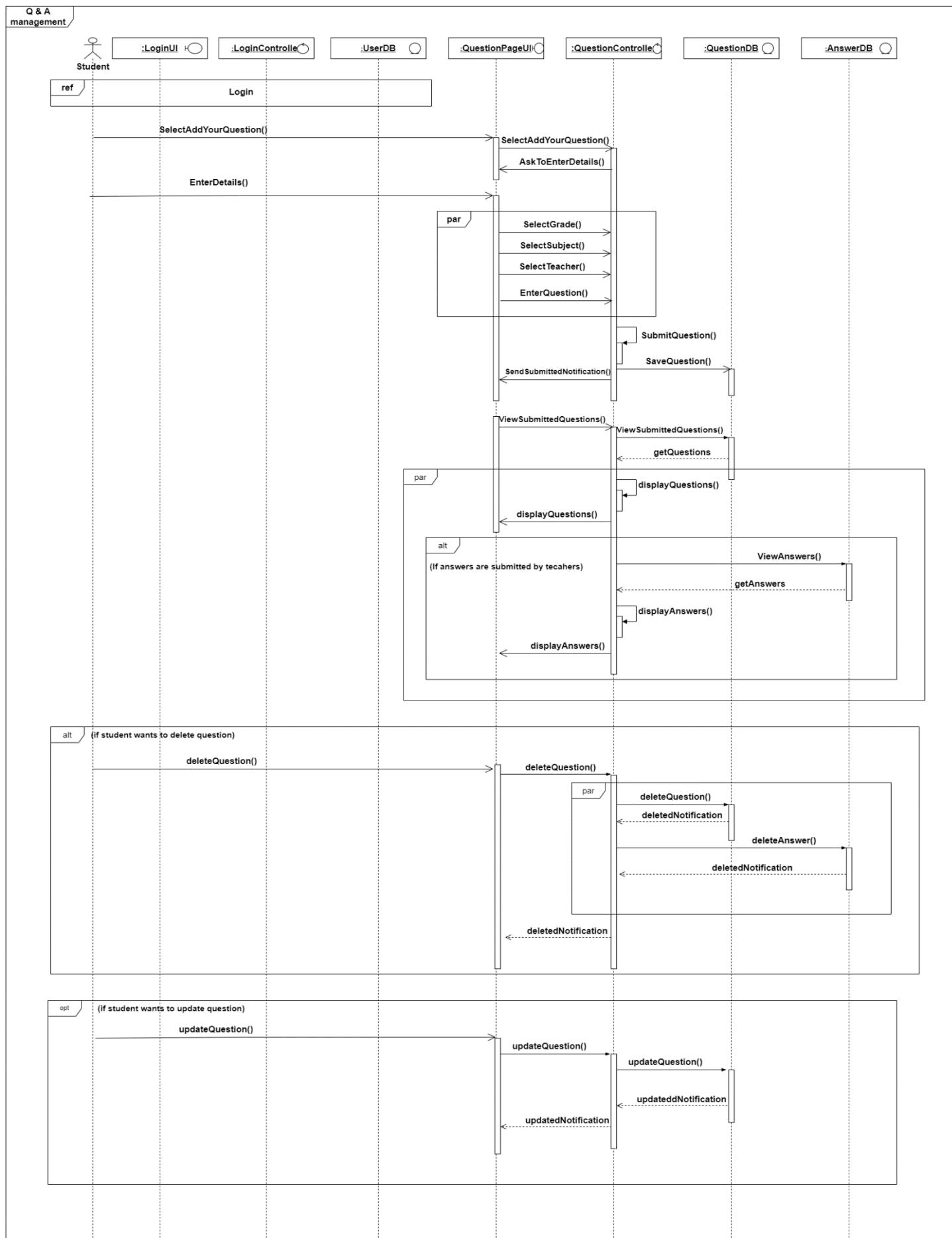


Figure 3. 3-Q&A and Feedabck Sequence Diagram

## **Salary Management – IT22365750**

Salary management system is a system that is designed to manage salary transaction between the teachers and the institute. The salary management system generates reports such as student reports, free card students report, teacher's salary reports and institute income reports. Once the payment of the teacher is paid by the institute, tutor will be notified by an email.

### **Use Case Scenario of User Management**

*Table 4 - Salary Management Usecase Scenario*

Use Case Name	Salary Management	
Actors	Manager (Primary), Teacher (Secondary)	
Goal	The goal of this use case is to enable the manager of effectively manage the teacher's salary by adding, deleting and editing salary data, while providing views of the salary for teachers.	
Overview	The manager login into the system and navigates to the salary management feature. From there the manager can manage the salary and ensure that any changes made are accurately reflected in the system.	
Pre-conditions	Managers and teacher must register to the system.	
Post-conditions	Teacher can check their salary and Managers can check all payment reports.	
Basic Path	Step	Action
	1	Registered Manager log the login page.
	2	Enter User credentials.
	3	Click login button.
	4	The system will check login credentials.
	5	The system shows a login successful message.
	6	The system redirects to the home page.
	7	Search teachers name using the search option
	8	Select Add salary button.
	9	The System displays a form and requests the manager to fill in the form.
	10	The system requests the name of the teacher.
	11	The system requests number of enrolled students.
	12	The system requires a monthly class fee.

	13	The system requests a number of free card students.
	14	The system will be generating the monthly salary.
	15	After the finalized salary, manager click on the ‘submit’ button.
	16	The system processes the transfer.
	17	Notifies the teacher by sending an email.
Extensions	Step	Branching Action
	2a	If the login credentials are incorrect manager cannot login to the system.
	15a	If any detail is missing in the form manager cannot proceed further.

## Use case diagram of Salary Management.

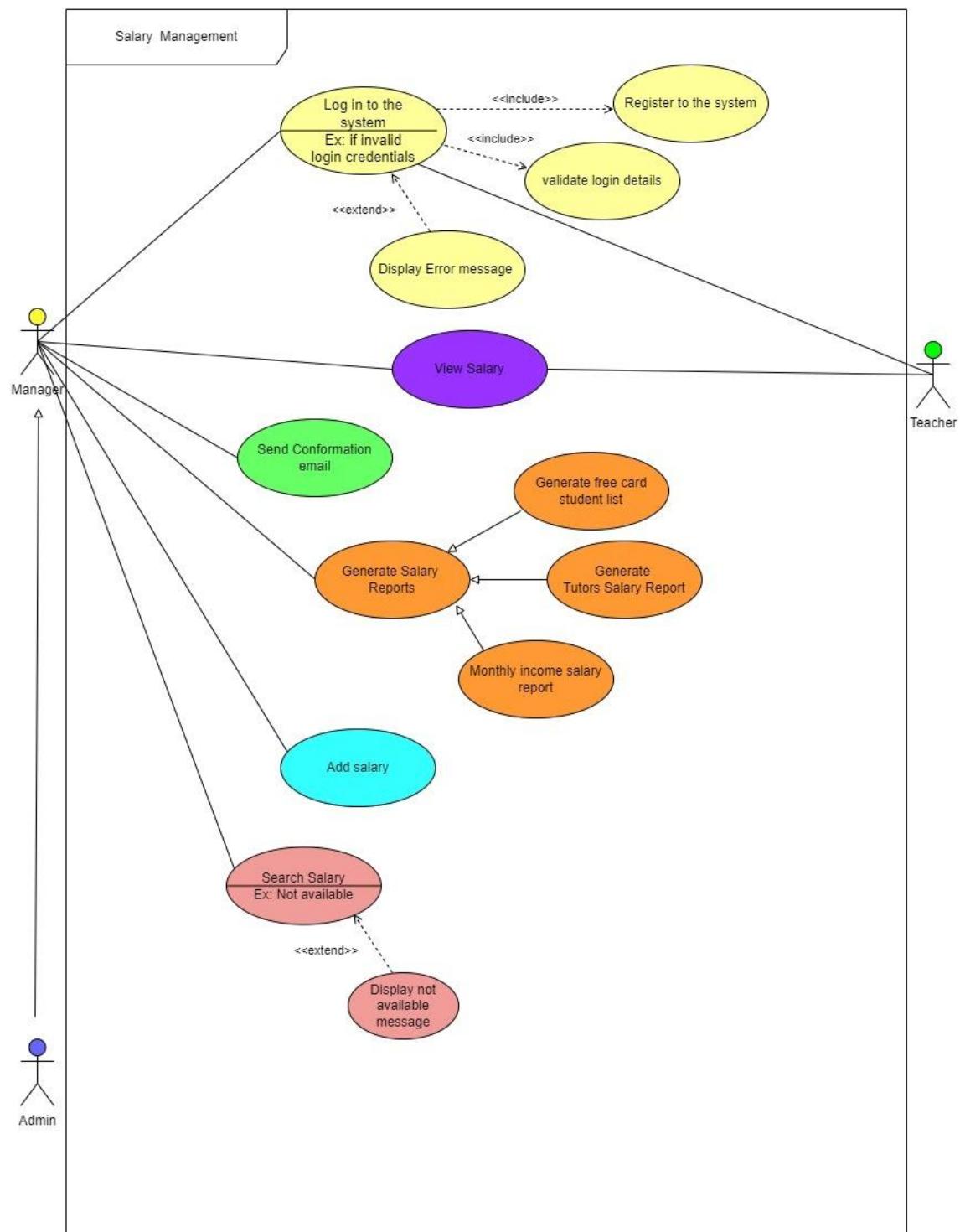


Figure 3. 4-Salary Management Usecase Diagram

## Activity diagram of Salary Management.

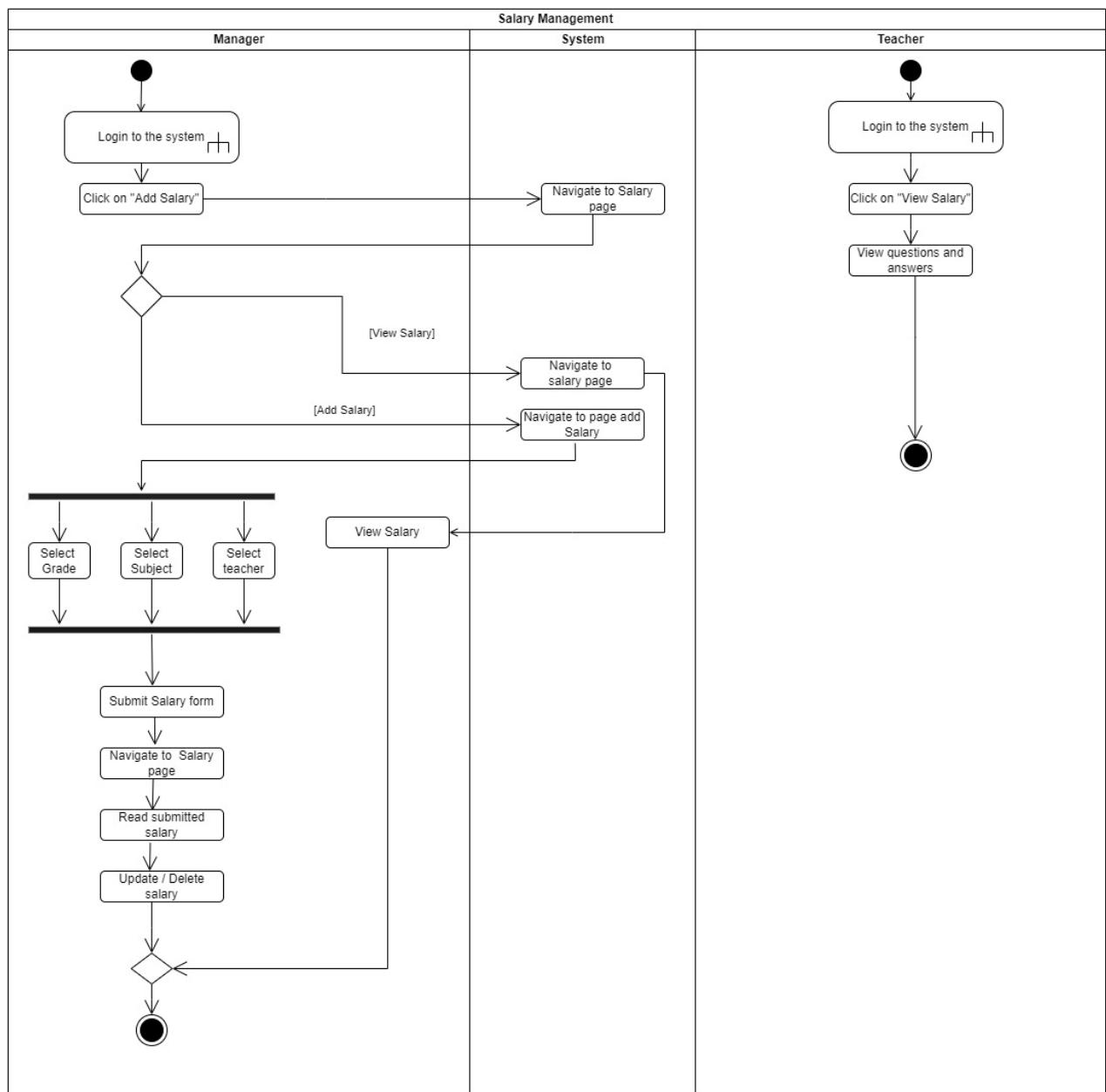


Figure 3. 5-Salary Management Activity Diagram

### Sequence diagram of Salary Management.

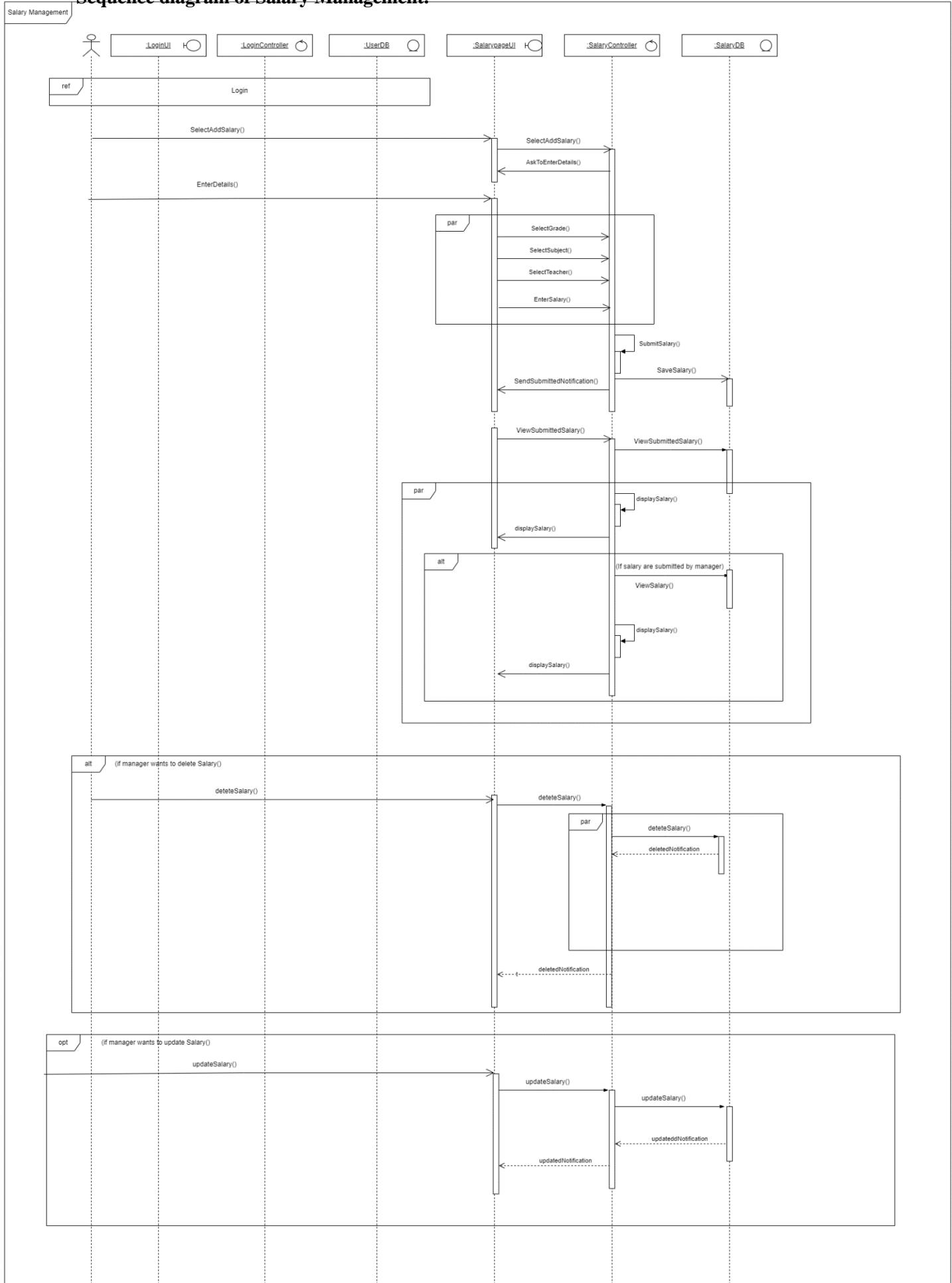


Figure 3. 6-Salary Management Sequence Diagram

## **Timetable Management – IT22923288**

The Timetable Management System is a user-friendly tool designed to streamline class scheduling and ensure everyone stays on track. Admins and managers have the power to add new class times, edit existing entries, and view the entire timetable effortlessly. Teachers and students benefit from easy access to their personalized timetables, allowing them to stay organized and plan their days effectively. With the ability to search for classes by date, grade, subject, or teacher's name, finding the right information is quick and hassle-free.

### **Use Case Scenario of Customer Affairs Management**

*Table 5 - Timetable Management Usecase scenario*

Use case Name	Timetable Management	
Actor	Manager/Teacher/Student/Admin	
Goal	The goal of this use case is to enable the manager to effectively manage the institute's timetable by adding, deleting, and editing timetable data, while providing views of the timetable for users.	
Overview	The manager logs into the Institute Management System and navigates to the timetable management feature. From there, the manager can view the current timetable, make modifications as necessary, and ensure that any changes made are accurately reflected in the system.	
Pre-conditions	The manager must be authenticated and logged into the Institute Management System.	
Post-conditions	Any changes made to the timetable are updated and reflected accurately in the system.	
Basic Path	Step	Action
	1	Logs in to the Institute Management System.
	2	System displays the dashboard of the manager.
	3	Selects the 'Manage timetable' button from the dashboard.
	4	The system displays the latest updated timetable with options for edit and delete and the 'Add time's option.
	5	User selects the "Edit" option for a specific row in the timetable.
	6	The system prompts the user to modify the selected timetable entry.

	7	User makes changes to the timetable entry such as adjusting the timing, room allocation, instructor, or any other relevant information.
	8	Once modifications are done, the user confirms the changes.
	9	The system validates the modified timetable entry to ensure no conflicts with existing schedules or any other constraints.
	10	The system then displays a confirmation message indicating the successful update of the timetable.
	11	User has the option to continue editing other timetable entries, add new entries, or return to the dashboard.
Extensions	Step	Branching Action
	1a	If username or password or both are incorrect, the system displays an error message
	9a	If validation fails, the system notifies the user of the conflict or issue and prompts for corrections.

### Use case diagram of Timetable Management.

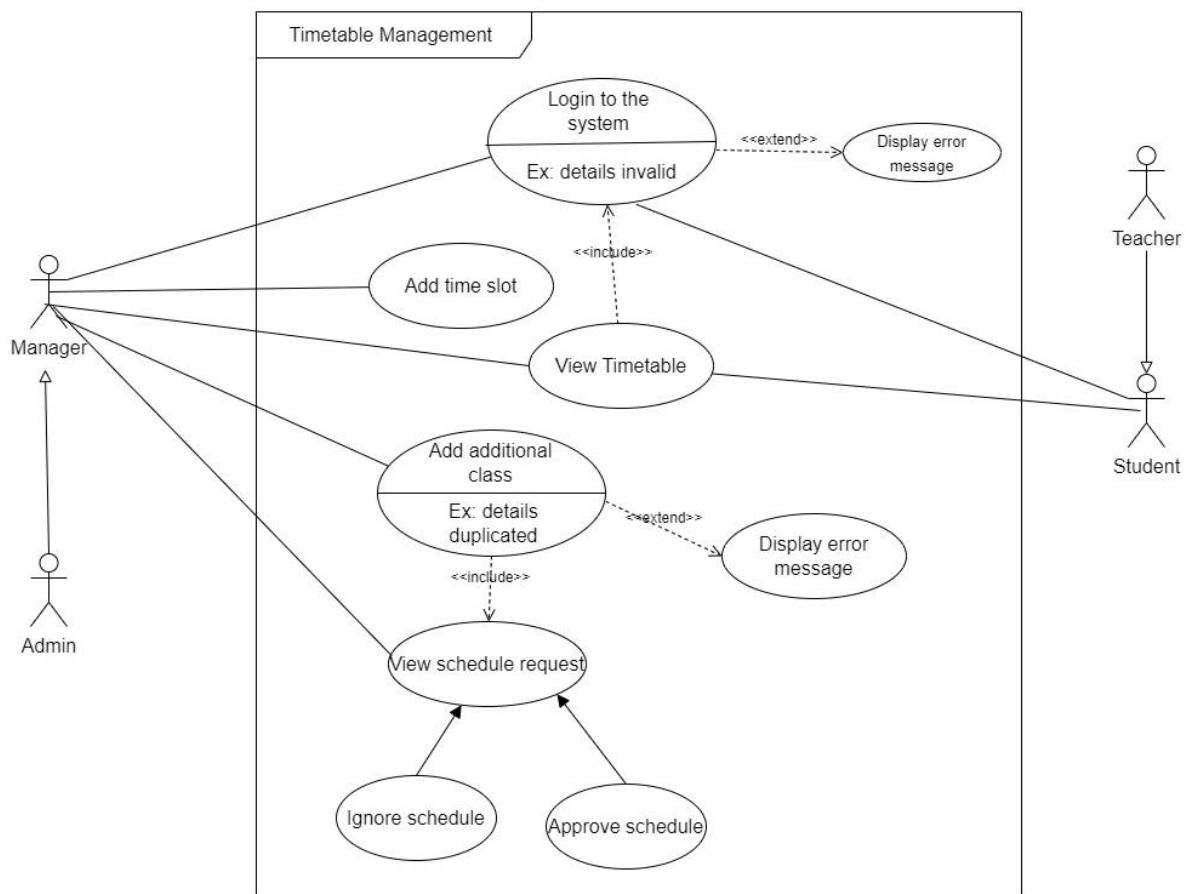
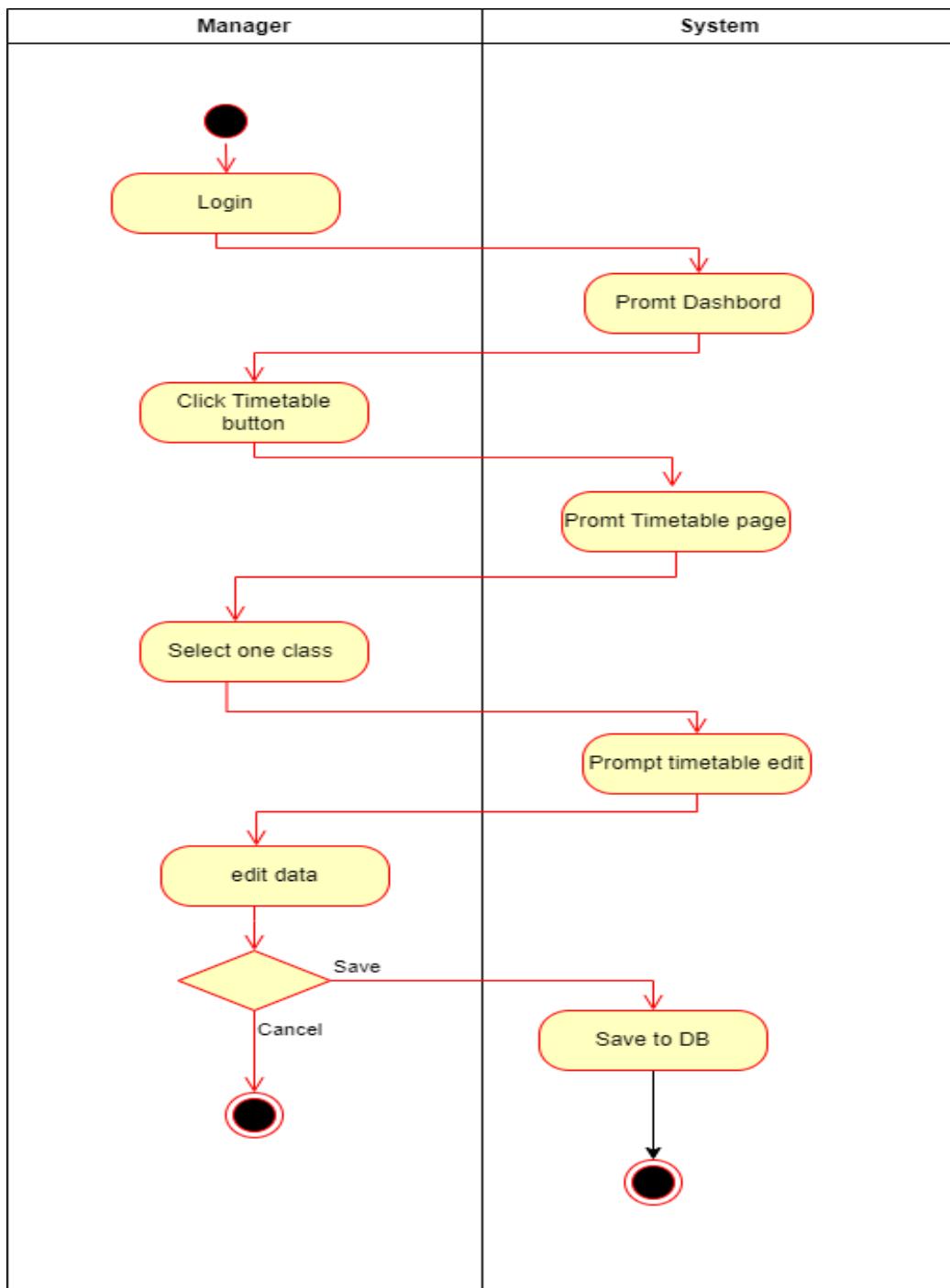


Figure 3. 7-Timetable Management Usecasee Diagram

## Activity diagram of Timetable Management.



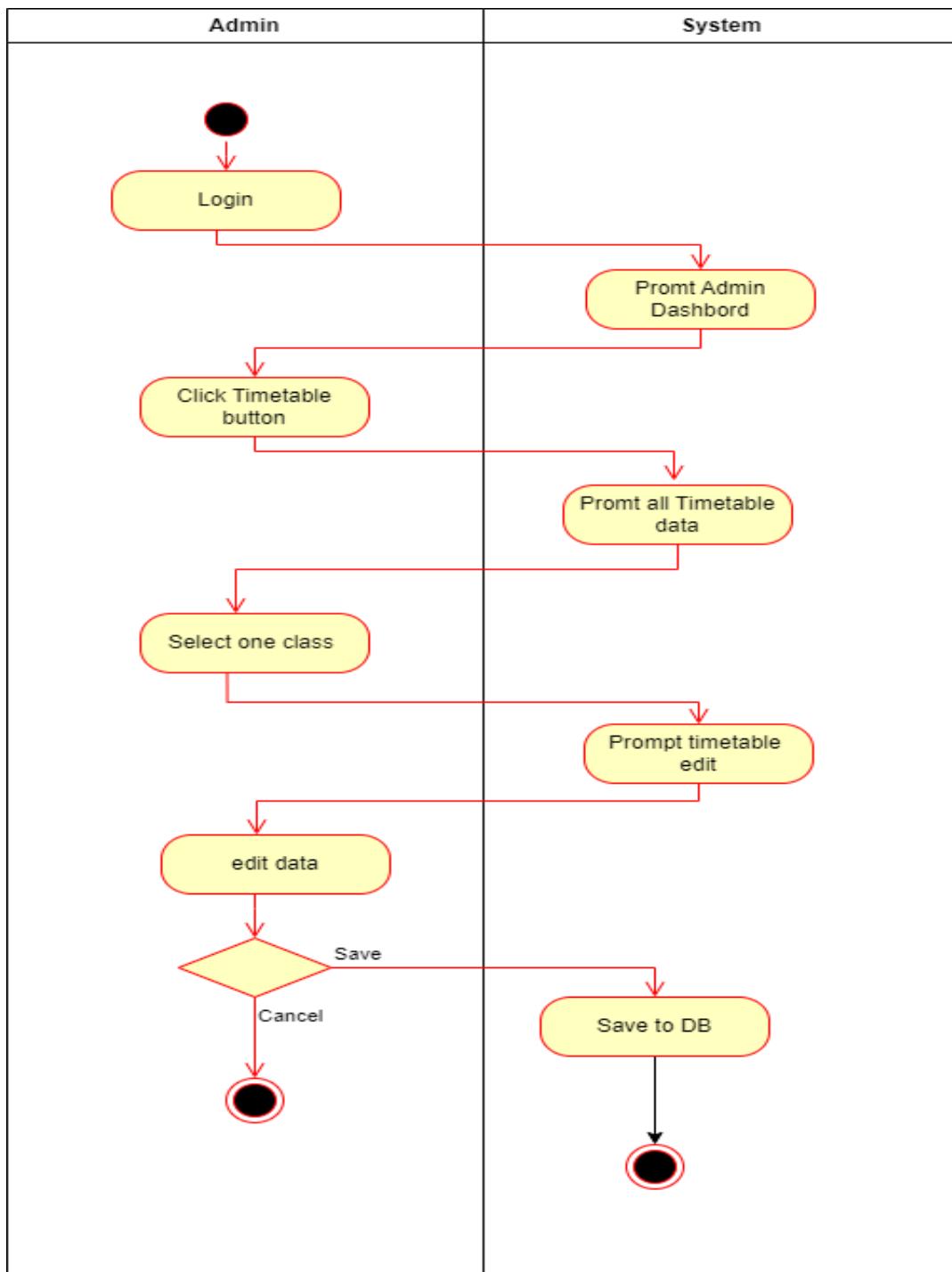


Figure 3. 8-Timetable Management Activity Diagram

## Sequence diagram of Timetable Management.

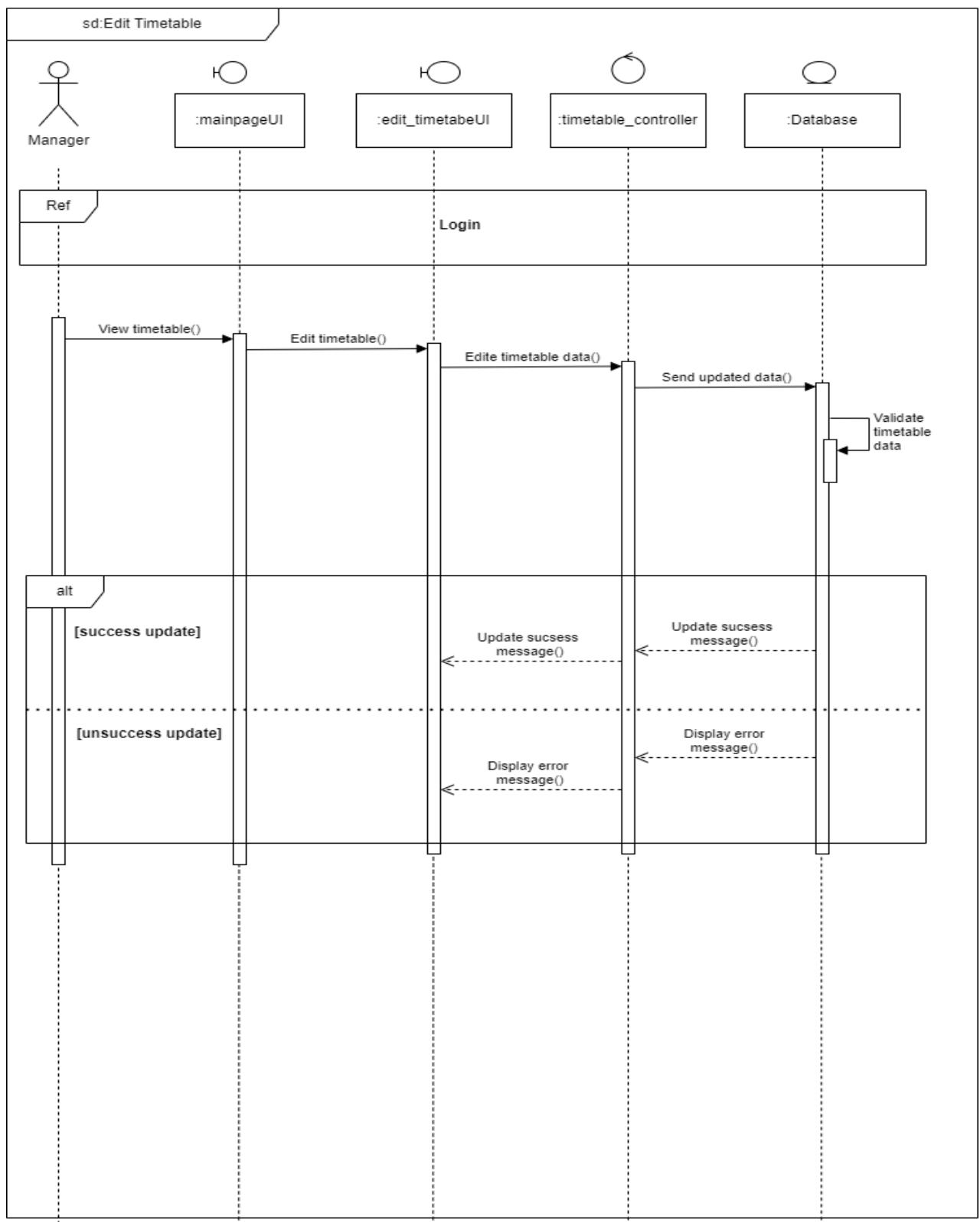


Figure 3. 9-9 – Timetable Management Sequence Diagram

## **User Management - IT22004390**

User management involves the registration process of users to manage the profiles and access privileges of registered users, including students, teachers, managers, and admin. Users are provided with a seamless registration process, where they can input their necessary details to create accounts and gain access to the system. Once registered, users are granted secure login credentials, enabling them to manage their profiles effectively by updating personal information such as contact details and preferences.

### **Use Case Scenario of User Management**

*Table 6 – Manage User Profiles Usecase Scenario*

Name	Manage User Profiles	
Actor	Admin	
Goal	Keep user profiles in the system accurate and organized	
Overview	This use case describes the process of the admin managing all user profiles and updating users and their details in the system.	
Pre-condition	Admin must be logged in to the system.	
Post-condition	The admin has successfully managed user profiles.	
Basic Path	Step	Action
	1	Admin navigates to the login interface of the system.
	2	Admin enters his login credentials (username & password).
	3	The system validates user details.
	4	The system displays the admin dashboard.
	5	Admin searches the specific user by user ID.
	6	Select the specific user.
	7	Navigate to the user account.
	8	Click the profile edit button.
	9	Delete the existing email of the user.
	10	Add a new email to the user profile.

	11	Save the user details.
	12	The system displays a new updated user profile.
	13	Redirect to the admin dashboard.
Alternative path	step	
	3a	If user details are invalid, Display “Incorrect Username or Password” and ask to Re-enter login credentials.
	5a	If the user ID is not available, Display the Invalid User ID message
	12a	If successful display an updated Successful message.
	12b	If unsuccessful display update error message, display re-enter details

## Use case diagram of User Management.

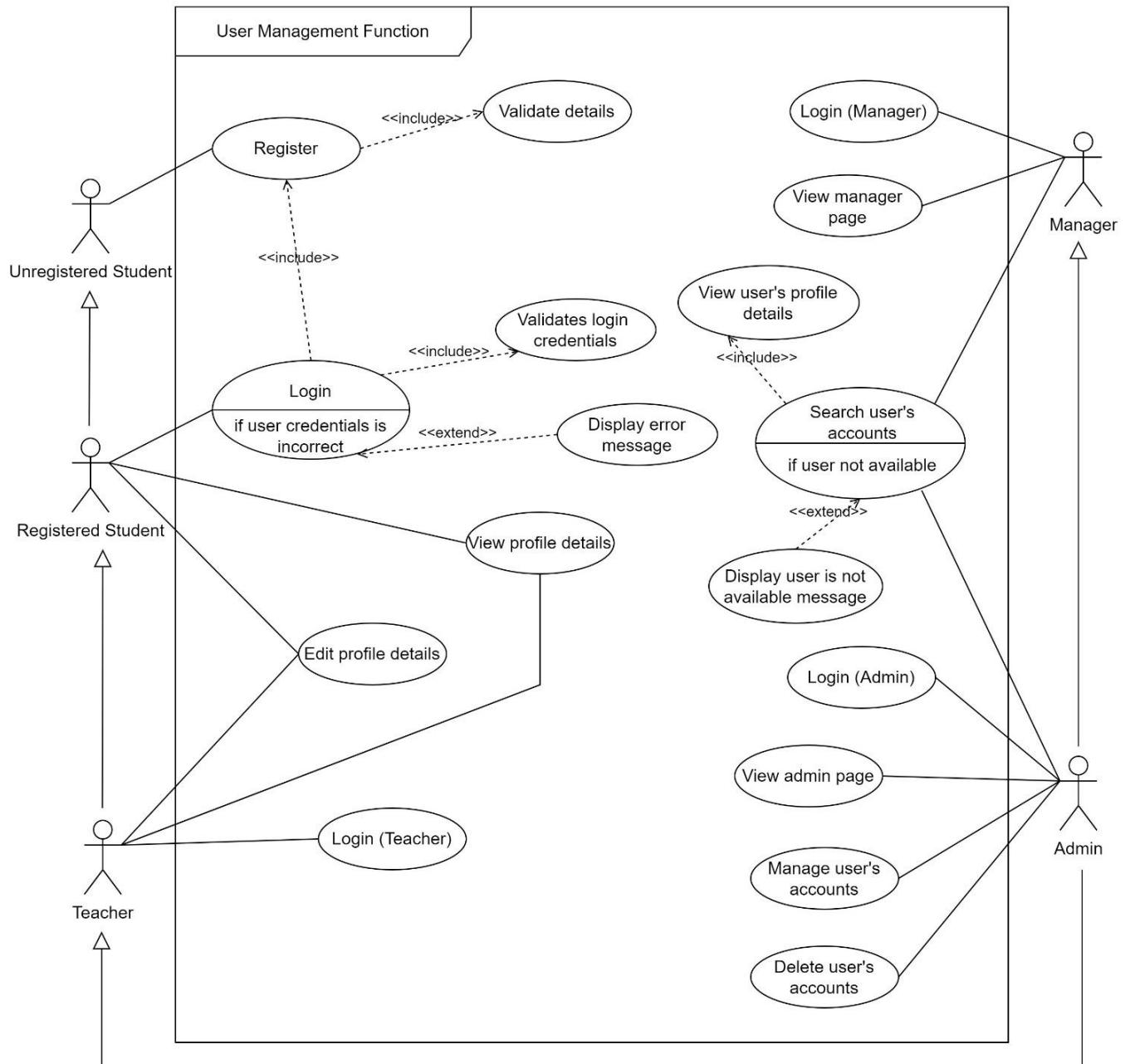


Figure 3. 10-User Management Usecase Diagram

## Activity diagram of User Management.

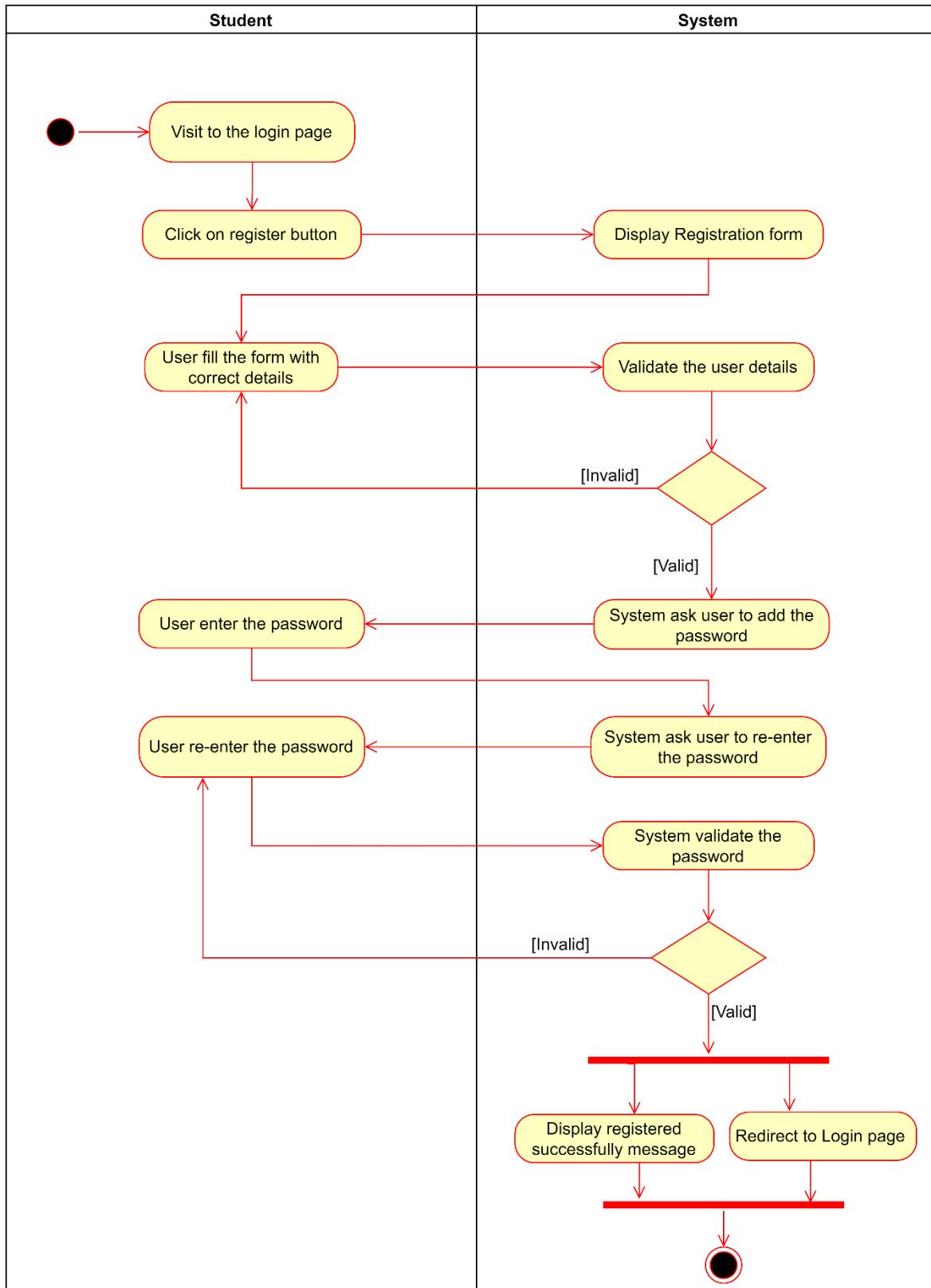


Figure 3. 11-User registration Activity Diagram

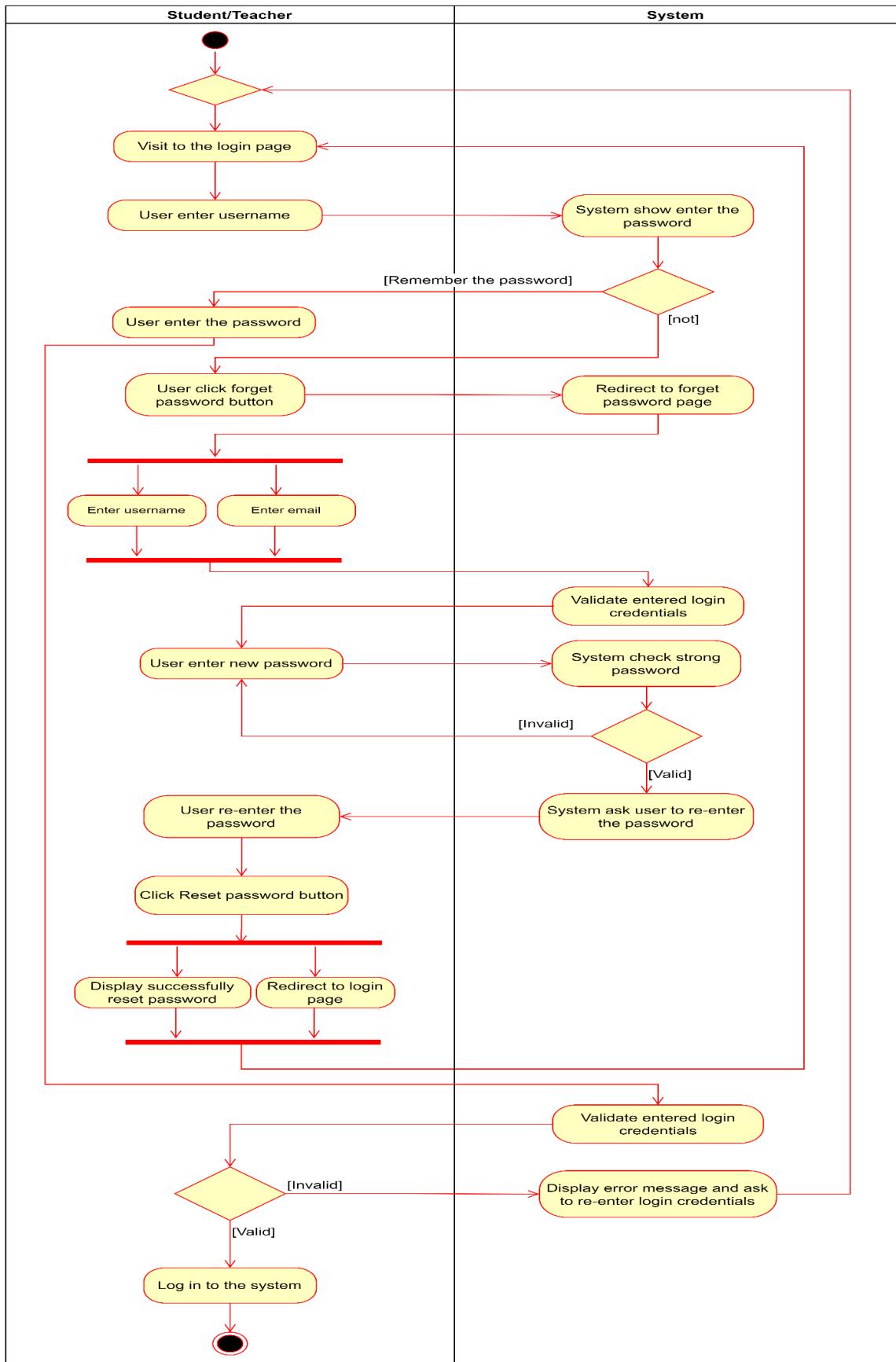


Figure 3. 12-User Login Activity Diagram

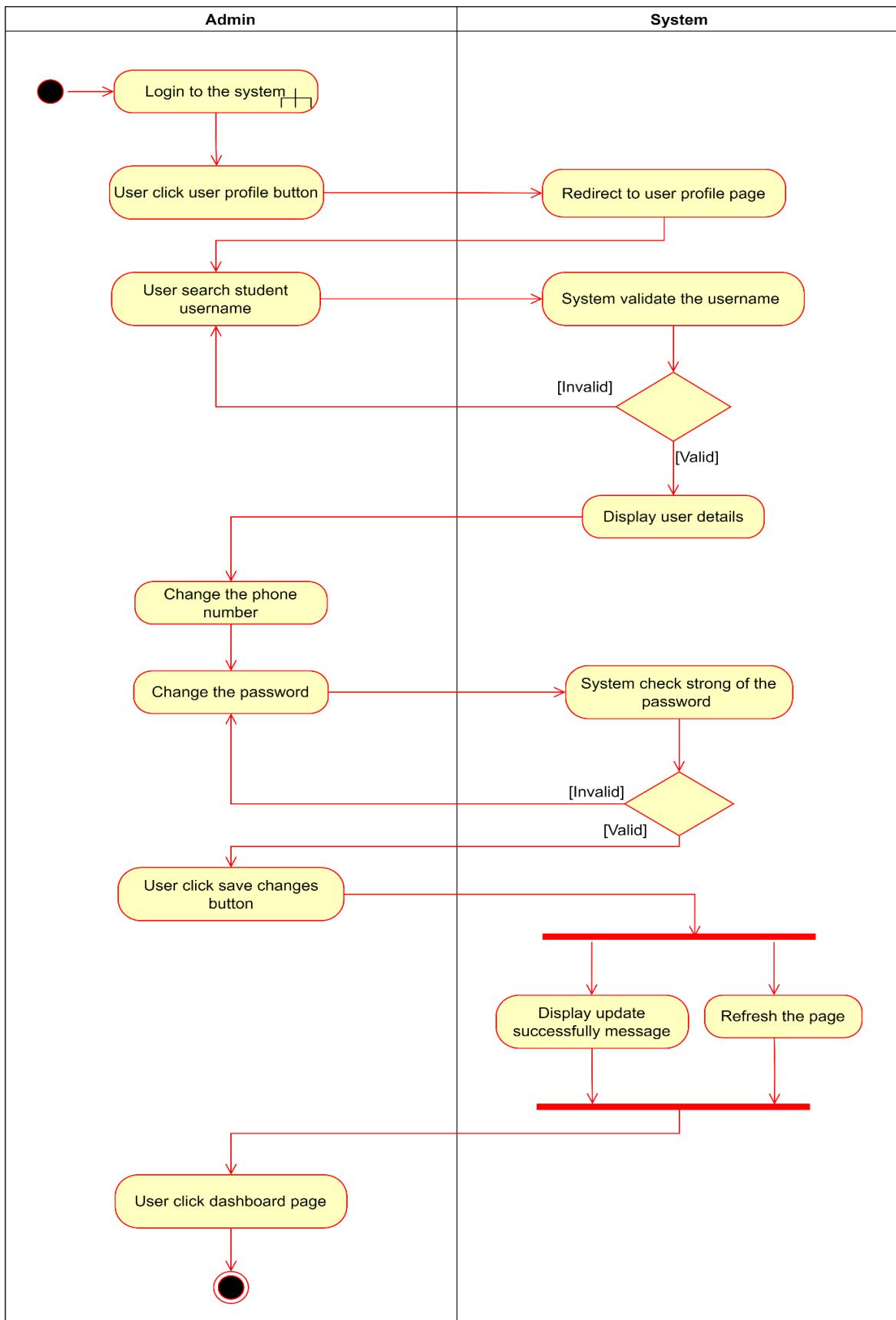


Figure 3. 13-User management Activity Diagram

## Sequence diagram of User Management.

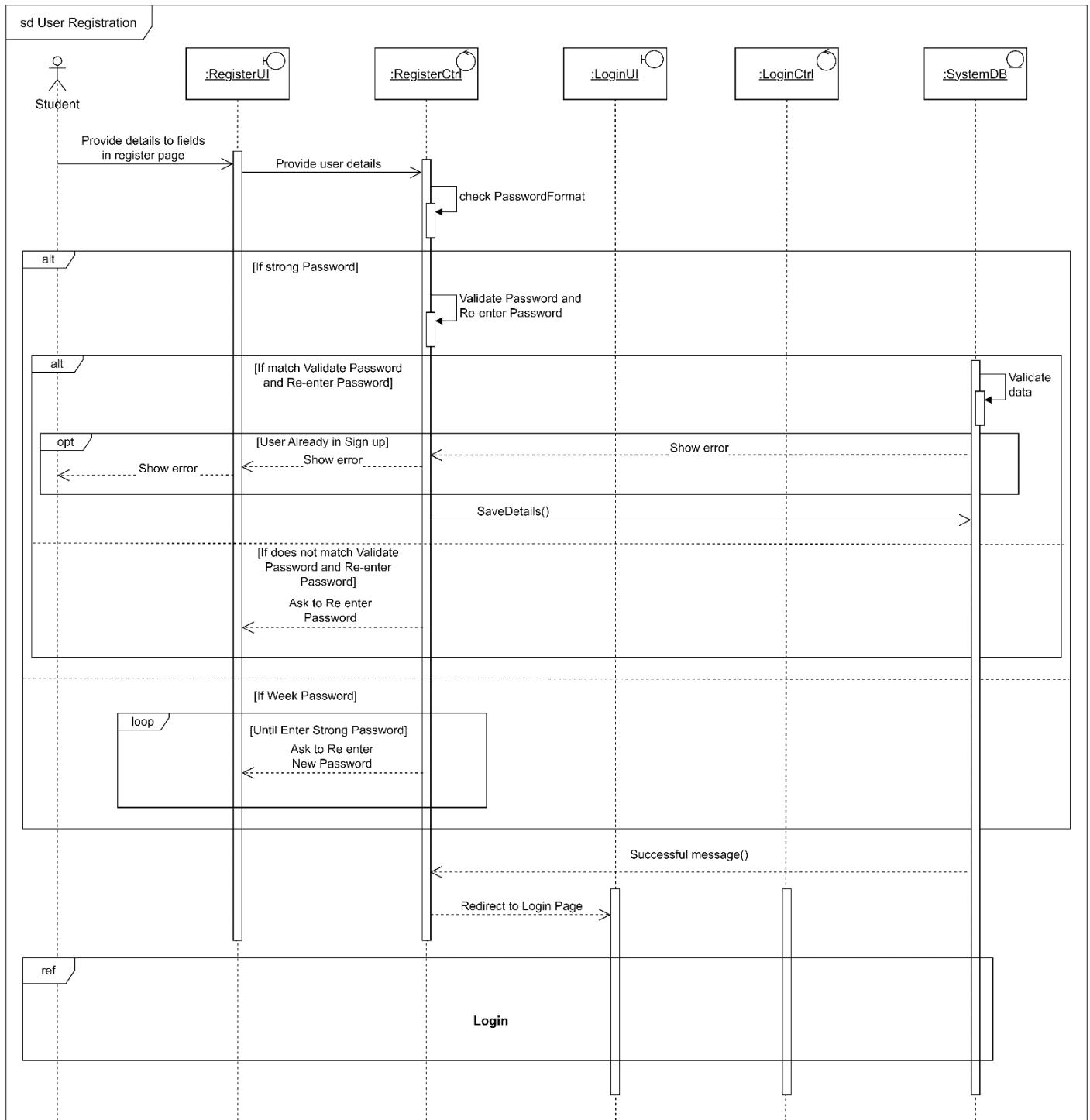


Figure 3. 14-User Management Sequence Diagram

## **Financial Management – IT22341136**

The Financial Management is responsible for managing financial transactions related to student fees and other payments within an educational institution. The system provides students with two options for paying their fees - online or through bank deposits. The students have the option to cancel their payment as well. If they choose to cancel their payment, the cancelled amount will be transferred to their e-vault, and the vault amount will be updated accordingly. Both students and teachers have access to view payment records. Additionally, Teachers can search for payment records by using students' ID numbers to check whether the students have made their payments or not. Both students and teachers have the option to delete outdated or incorrect entries and viewed transactions from their records.

### **Use Case Scenario of Financial Management**

*Table 7 - Financial Management usecase scenario*

Use case Name	Make a Payment	
Actor	Registered Student	
Goal	To make a payment to enroll into the course	
Overview	This use case describes the process of a student making a payment to the institute to enroll into the course.	
Pre-conditions	Student Must log in to the system as a registered student.	
Post-conditions	The registered student has successfully initiated a payment to the institute account.	
Basic Path	Step	Action
	1	Registered Student goes to the login page.
	2	Enter User credentials.
	3	Click the login button.
	4	The system will check credentials.
	5	The system shows a login successful message.
	6	The system redirects to the home page.
	7	Select 'Payment'.
	8	Registered Student Select Payment Type. (Online)
	9	Registered Student select the card type (Visa, Master, Amex)
	10	Registered Student enter the card details. (16-digit code, expire date, CCV)

	11	Registered Student enters the institute's account number.
	12	Registered Student enters the institute's Bank Name.
	13	The system validates the institute's account details.
	14	Registered Student and enter the Amount.
	15	Registered Student specify additional details, such as the purpose of the transfer or a reference note.
	16	The system displays a summary of the payment.
	17	Registered Student confirms the payment by clicking "Confirm".
	18	The system generates a one-time OTP and sends it to the Register Student's registered mobile number or email address.
	19	The Registered Student receives the OTP.
	20	Registered Student enters it into the provided field.
	21	The system validates the OTP.
	22	The system processes the transfer.
	23	The system deducts the specified amount from the student's source account.
	24	The system credits it to the institute's account.
	25	The system generates a transfer confirmation or receipt.
	26	The system redirects to the home page.
Extensions	Step	Branching Action
	4a	If credentials are invalid system shows login failed and redirects to the login page to try again.
	13a	Display an error message if the registered student enters an institute's account number that does not match the institute's bank details.
	16a	If the registered student decides to cancel the payment after reviewing the summary, they can click a "Cancel" button.
	21a	Display an error message if the entered OTP number is invalid.
	21b	Allow the student to enter the OTP number again.
	21c	The system informs the user OTP has expired, if the OTP entered by the registered student exceeds the time limit for validation, The student can request a new OTP to continue the transaction.
	22a	Display an error message if the registered student's source account has insufficient funds to cover the payment.

	22b	The system displays an error message and advises the registered student to contact customer support for assistance due to an internal error or failure to process the payment for any reason.
	25a	The system may provide the option for the registered student to download or print the payment confirmation for their records and receive an email confirmation.

## Use case diagram of Financial Management.

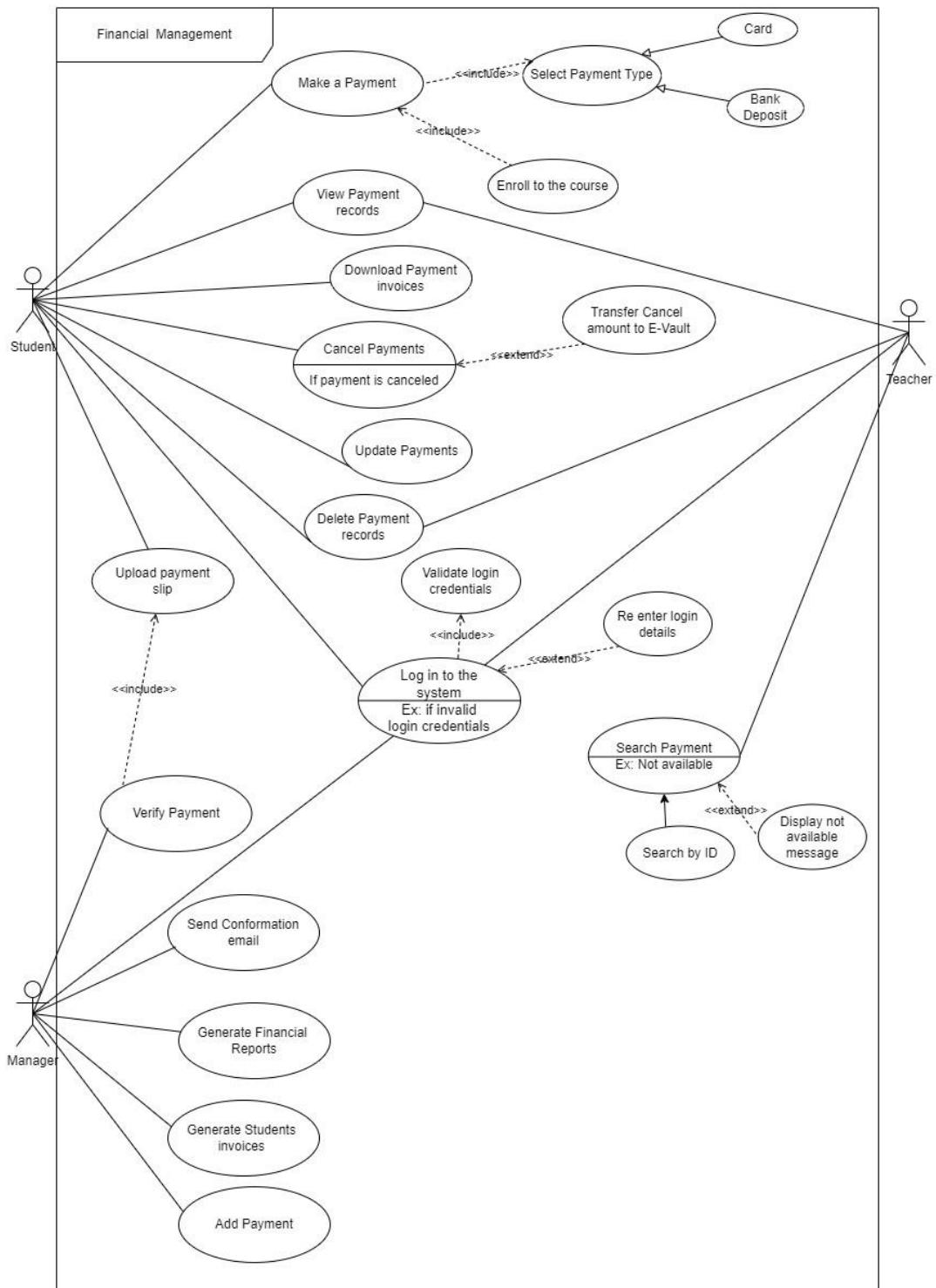


Figure 3. 15-Financial Management Usecase Diagram

## Activity diagram of Financial Management.

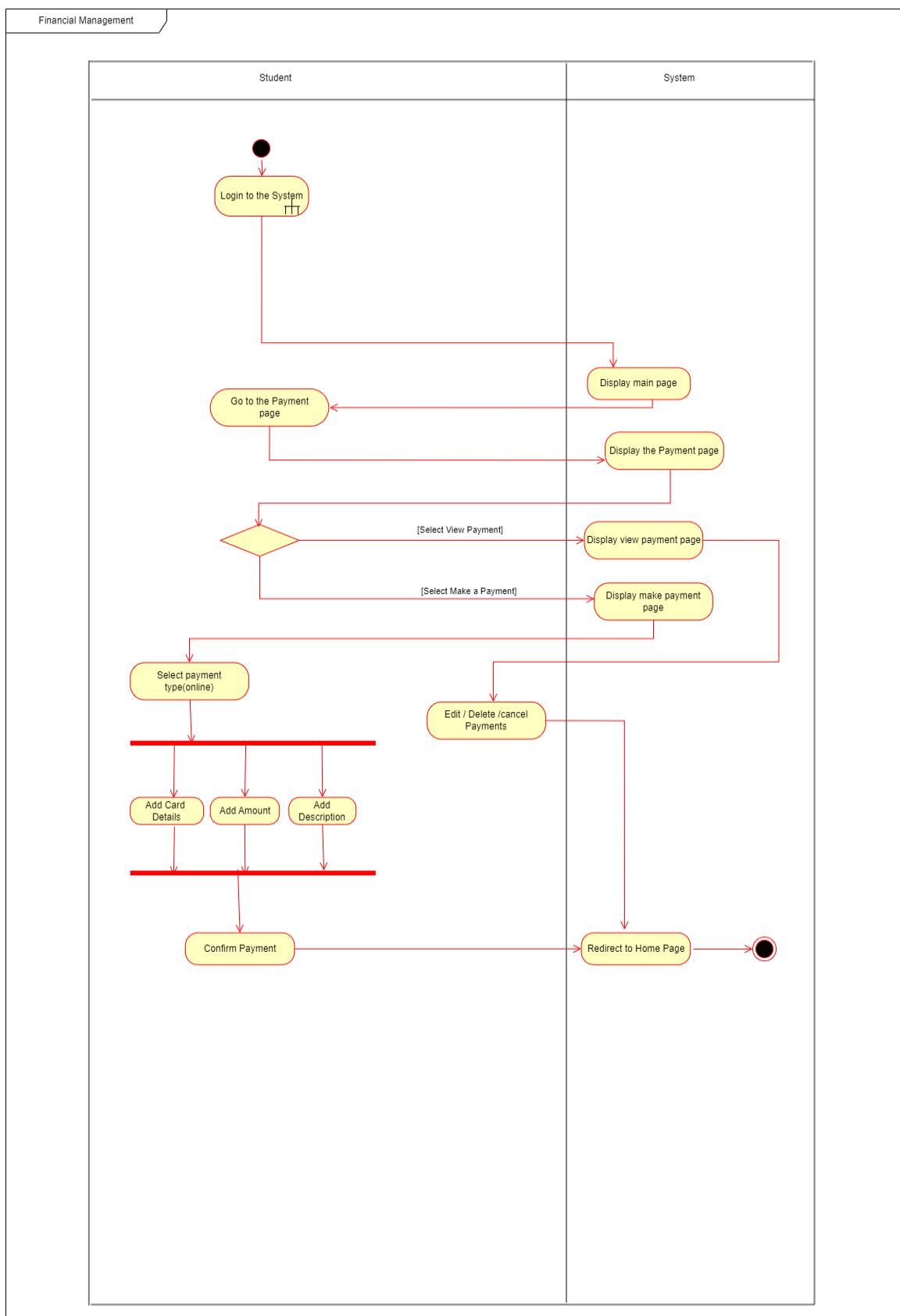


Figure 3. 16– Payment selection Activity Diagram

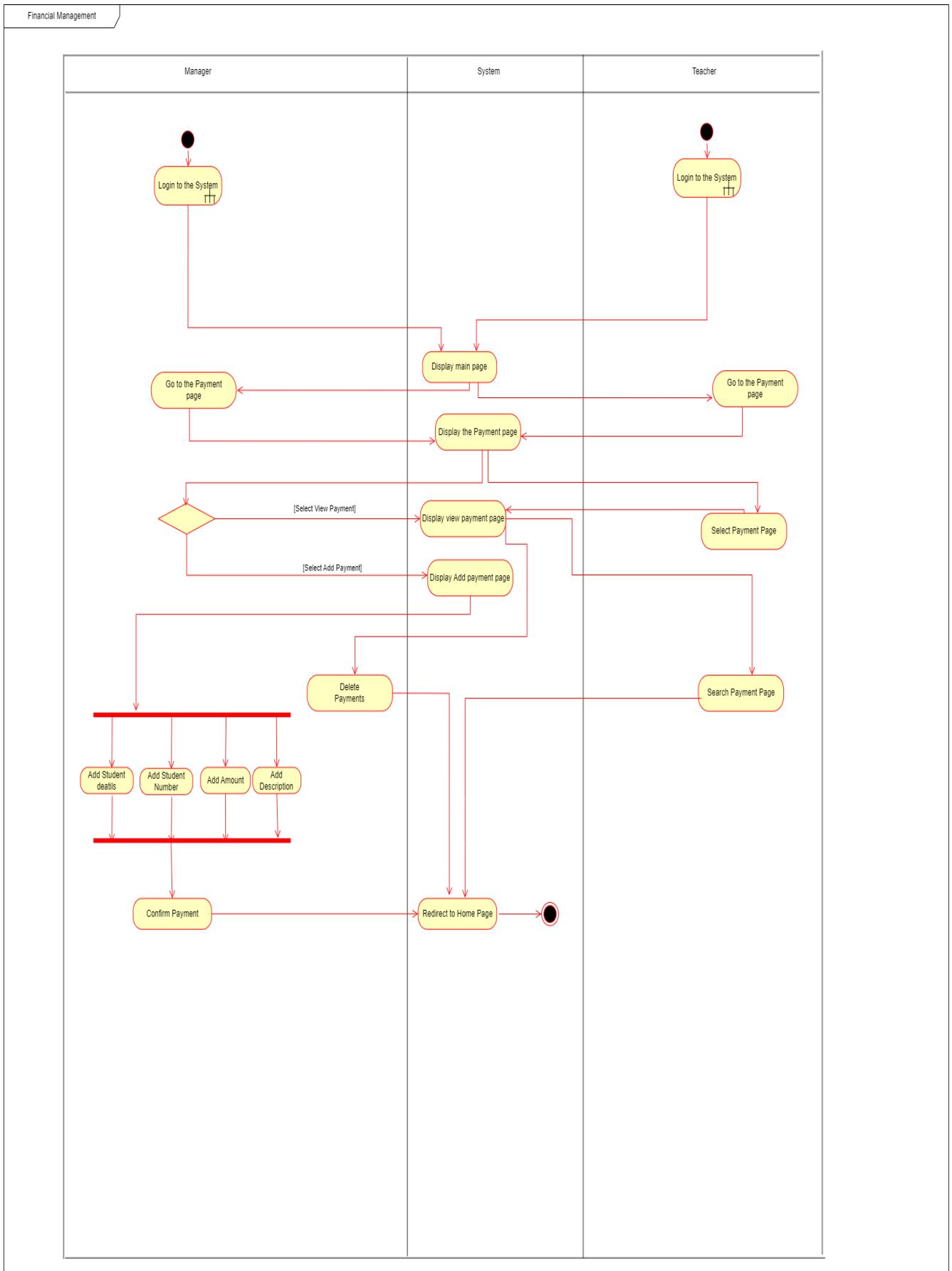
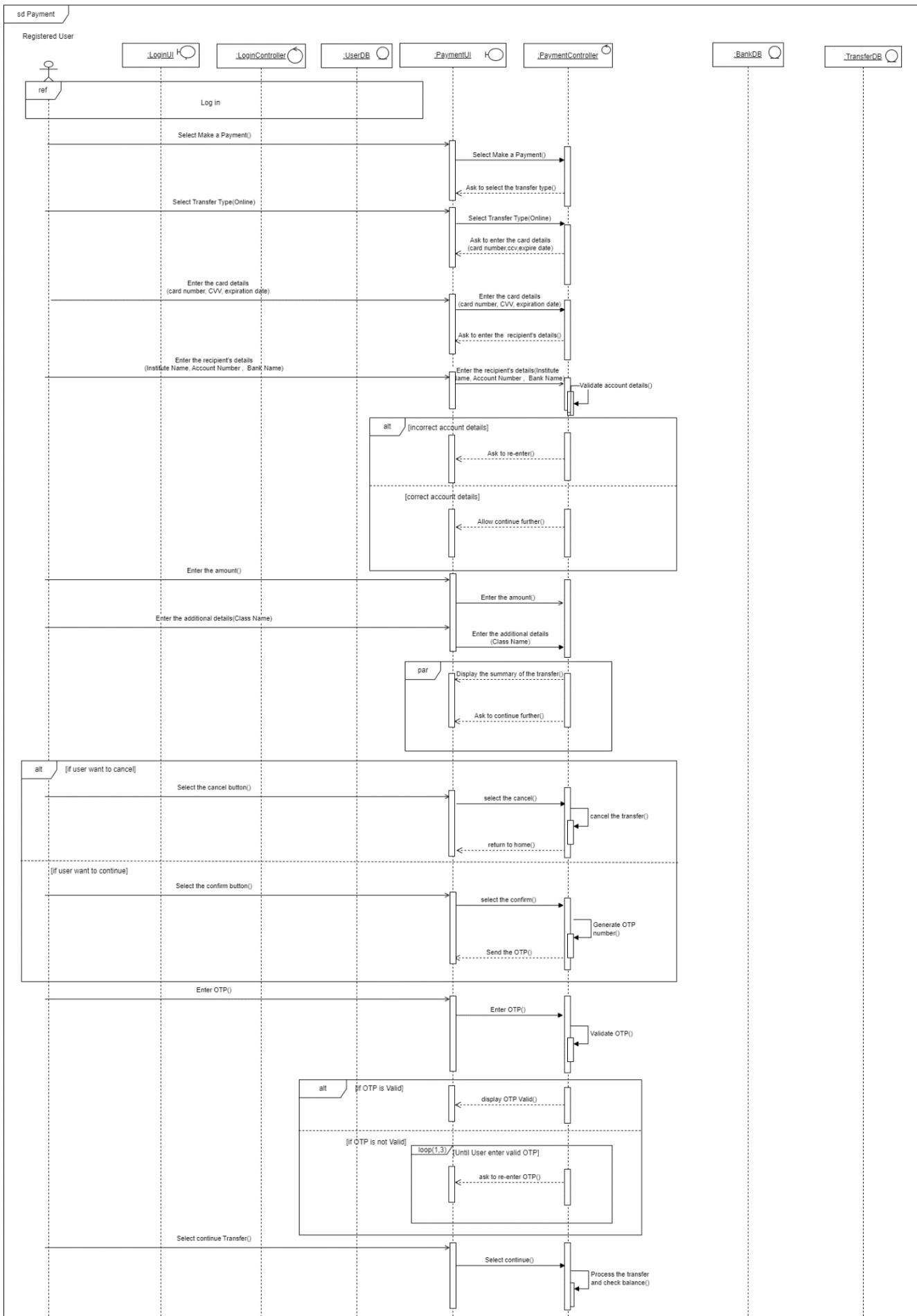


Figure 3. 17—Financial Management Activity Diagram

## Sequence Diagram of Financial Management



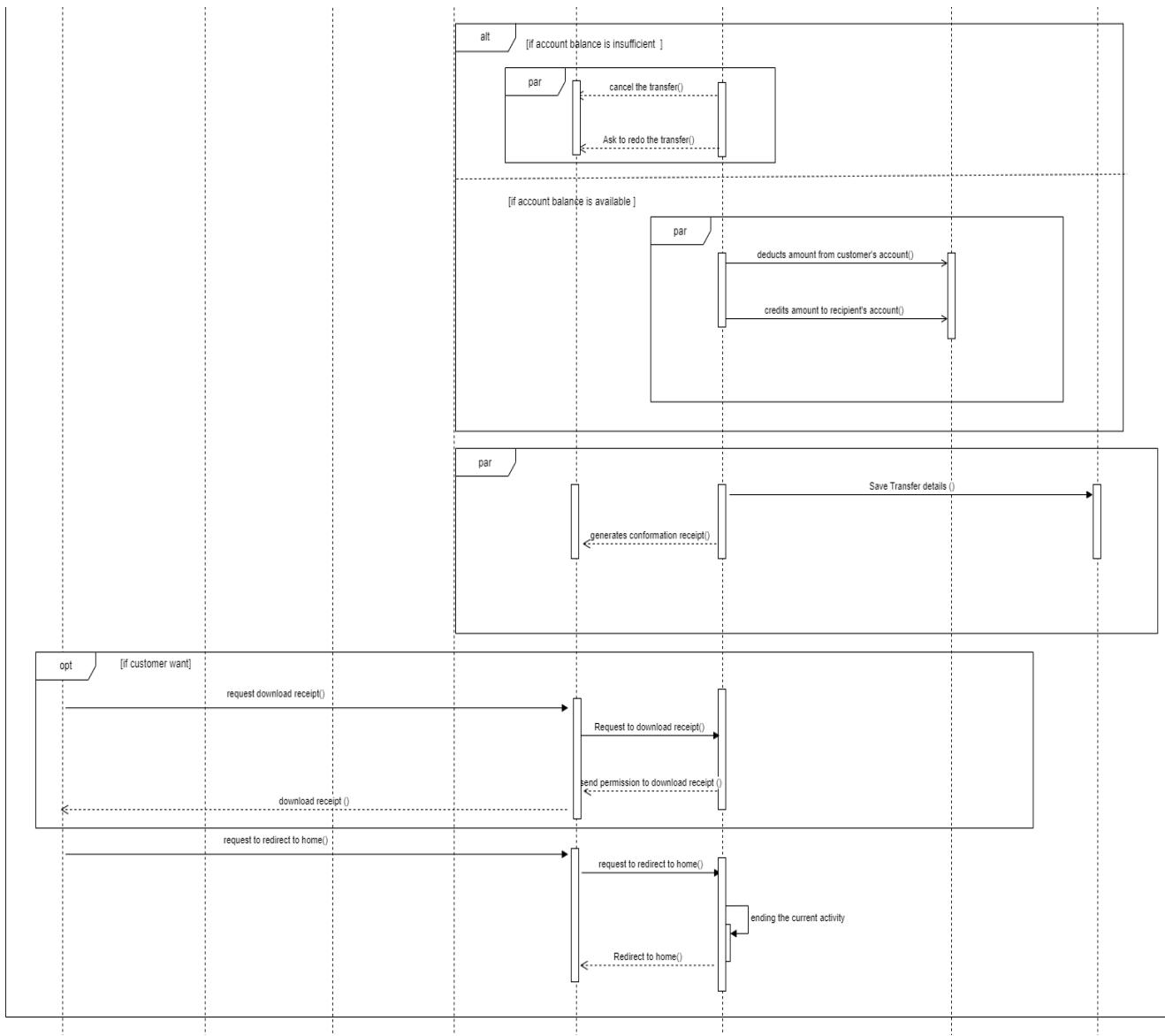


Figure 3. 18—Financial Management Sequence Diagram

## **Enrollment and Attendance Management - IT22004840**

Enrollment management plays a pivotal role in the Royal Institute Management System, facilitating seamless student enrollment and class administration. Here's how the system handles enrollments for students, managers, and teachers. By incorporating these enrollment management features, the Royal Institute Management System streamlines the enrollment process for students, managers, and teachers alike. From self-enrollment options for students to comprehensive enrollment reports for teachers, the system prioritizes efficiency, transparency, and user empowerment in managing class enrollments within the institute. Efficient attendance tracking is paramount for ensuring accountability and monitoring student engagement within the Royal Institute Management System. the system addresses attendance management for students, managers, and teachers.

### **Use Case Scenario of Enrollment and Attendance Management.**

*Table 8 – Mark Attendance usecase scenario*

Use case Name	Mark Attendance	
Actor	Manager/Teacher/Student/Admin	
Goal	The goal of this use case is to allow managers to recording and managing attendance, both for online and physical classes.	
Overview	This use case involves the recording of attendance for both online and physical classes. Managers, students, and teachers have access to attendance records, with managers having additional capabilities to edit student records and attendance data.	
Pre-conditions	Students must be registered in the system. Managers and teachers must be authenticated and logged into the system.	
Post-conditions	Attendance records are accurately maintained.	
	1	Attendance Recording
	1.1	For online classes
	1.1.1	Students browse available classes and select their preferred dates.
	1.1.2	Students attend their classes.
	1.1.3	Attendance is automatically recorded when students join online classes.
	1.2	For physical classes
	1.2.1	Managers scan unique QR codes assigned to each student for attendance recording.

	2	Manager Attendance Management
	2.1	Managers log into the system.
	2.2	Managers navigate to the Attendance management section.
	2.3	Managers can view attendance records for all classes.
	2.4	Managers have the authority to edit attendance records if necessary.
Extensions	1.1.1a	If a student's preferred dates are not available, the system notifies the student and suggests alternative options.
	1.2.1a	If QR codes are unavailable, managers can input student IDs manually.

## Use case diagram of Enrollment and Attendance Management.

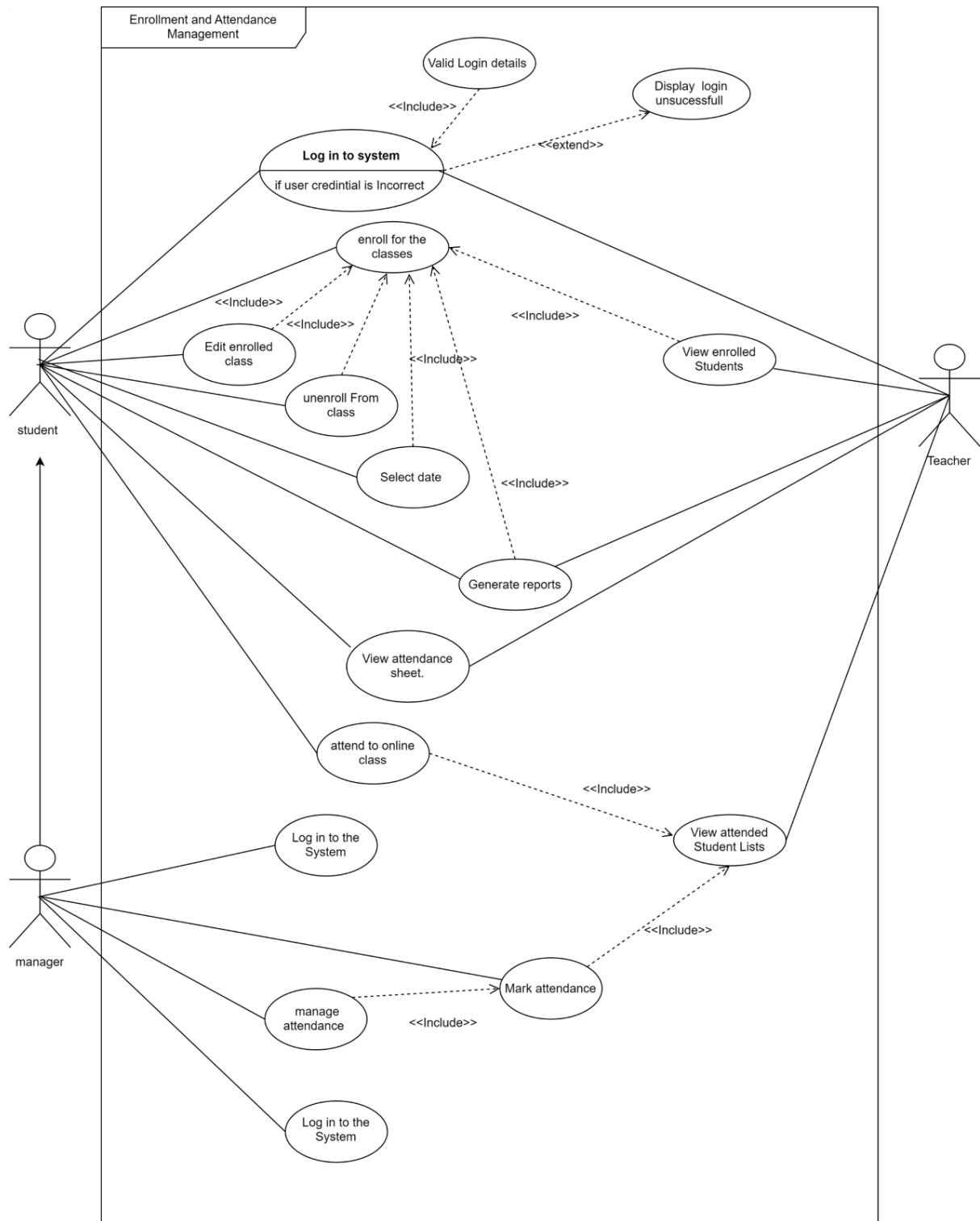
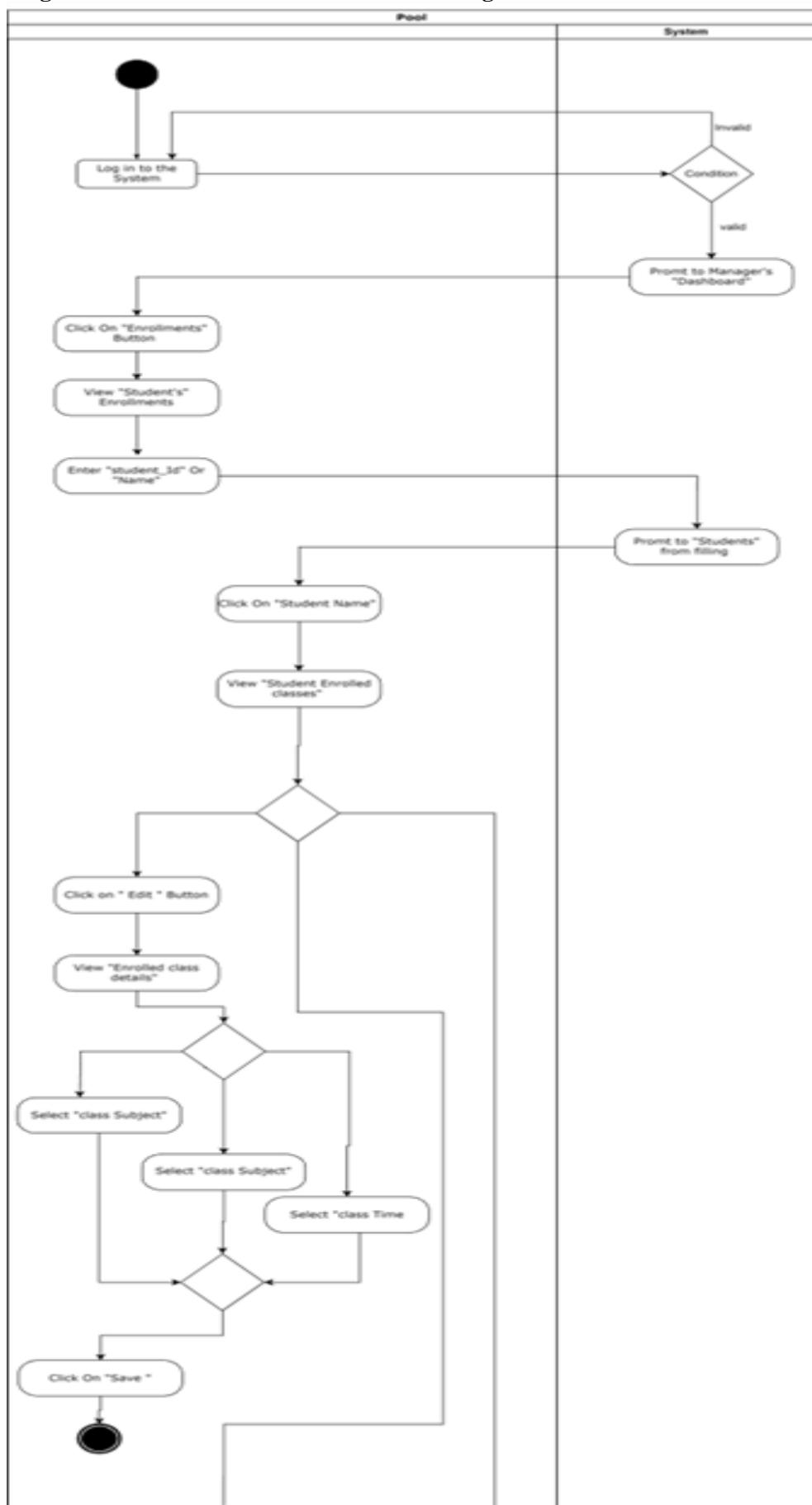
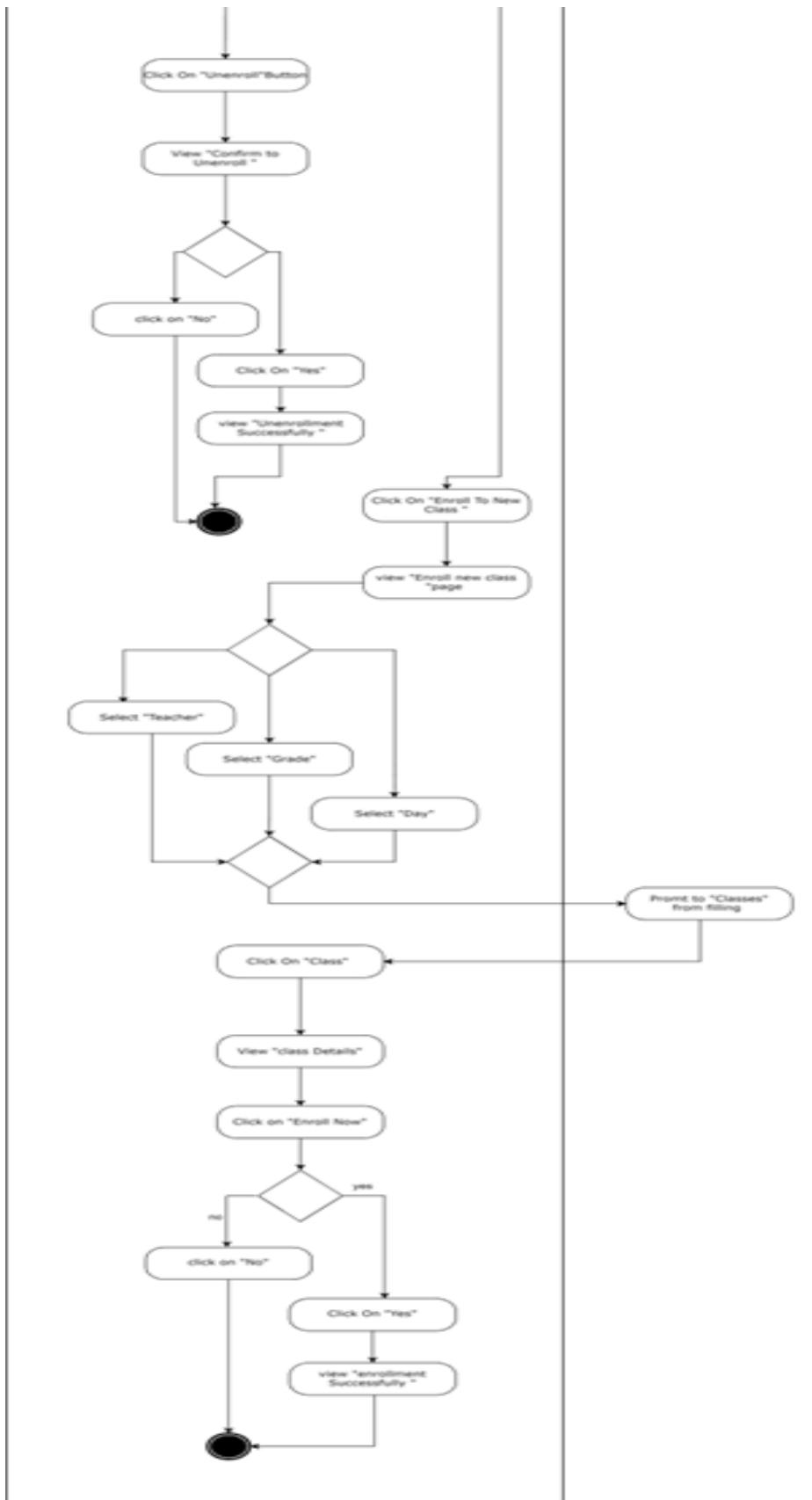


Figure 3. 19-Enrollment and Attendance Management Usecase Diagram

## Activity diagram of Enrollment and Attendance Management.





*Figure 3. 20—Enrollment and Attendance Management Activity Diagram*

## Sequence diagram of Enrollment and Attendance Management

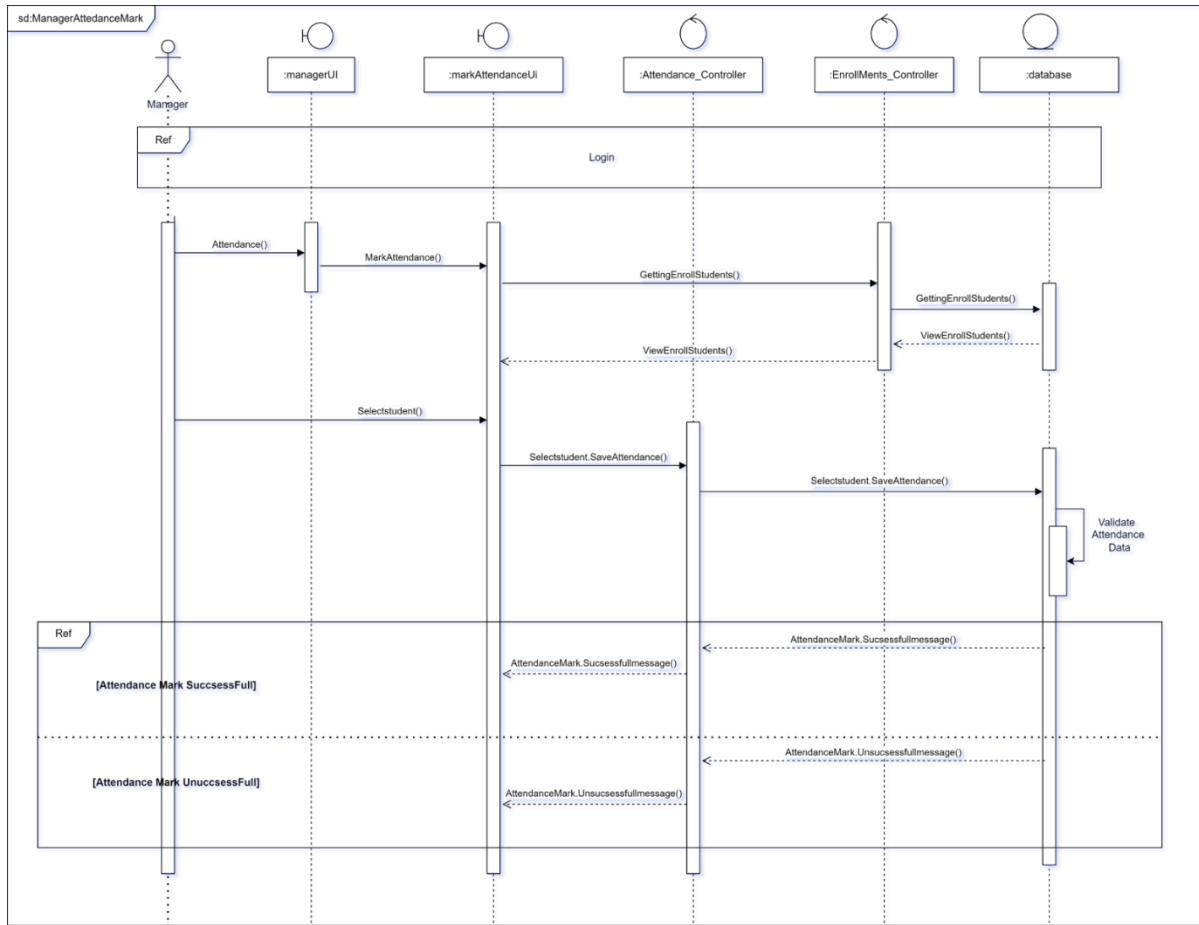


Figure 3. 21—Enrollment and Attendance Management Sequence Diagram

## **Class Management - IT22329424**

The Class Management Function is responsible for managing classes related to current classes and adding class and additional classes within an educational institution. The System allows students, teachers, manager and admin to view current classes. Teachers who have the authority to add, edit or delete classes and request additional classes. Also, the System ensures the accuracy and integrity of classes by validating them against existing classes, focusing on detecting conflicts or inconsistencies with the classes, and alerting teachers to take appropriate actions. Also, Managers can approve or reject additional classes requests and teacher can view the status of additional classes.

### **Use Case Scenario of Class Management.**

*Table 9 - Class Management usecase scenario*

Use case Name	Add Class	
Actor	Teacher	
Goal	The goal of this use case is to enable the teacher to effectively manage the institute's class schedule by adding, deleting, and editing class information.	
Overview	The teacher logs into the Institute Management System and navigates to the add class feature. From there, the teacher can add additional classes and update the current class schedule.	
Pre-conditions	Teacher should login to the system	
Post-conditions	Successful adding of class details updates the class information	
	1	Login to the account using teacher login details
	2	The system presents the teacher with a dashboard
	3	Teacher clicks “Add New Class” button
	4	System displays “Add New Class” page
	5	Teacher adds the new class and enter details related to the added class
	6	System asks to confirm
	7	If the teacher confirms system display “New class adding successfully”
	8	System displays “Add New Class” page
	9	If teacher want to edit class, click on edit button
	10	System displays edit class
	11	After edit, clicks on “Save changes” button
	12	System display “save changes successfully”

	13	System displays “Add New Class” page
Extensions	1.a	If login details are incorrect. System asks to re-enter
	5.a	Teacher entering class detail are incorrect. System asks to reenter detail
	5.b	System displays unsuccessful message
	7.a	System cancels the adding new class process and returns to the “Add new class” page

### Use case diagram of Class Management.

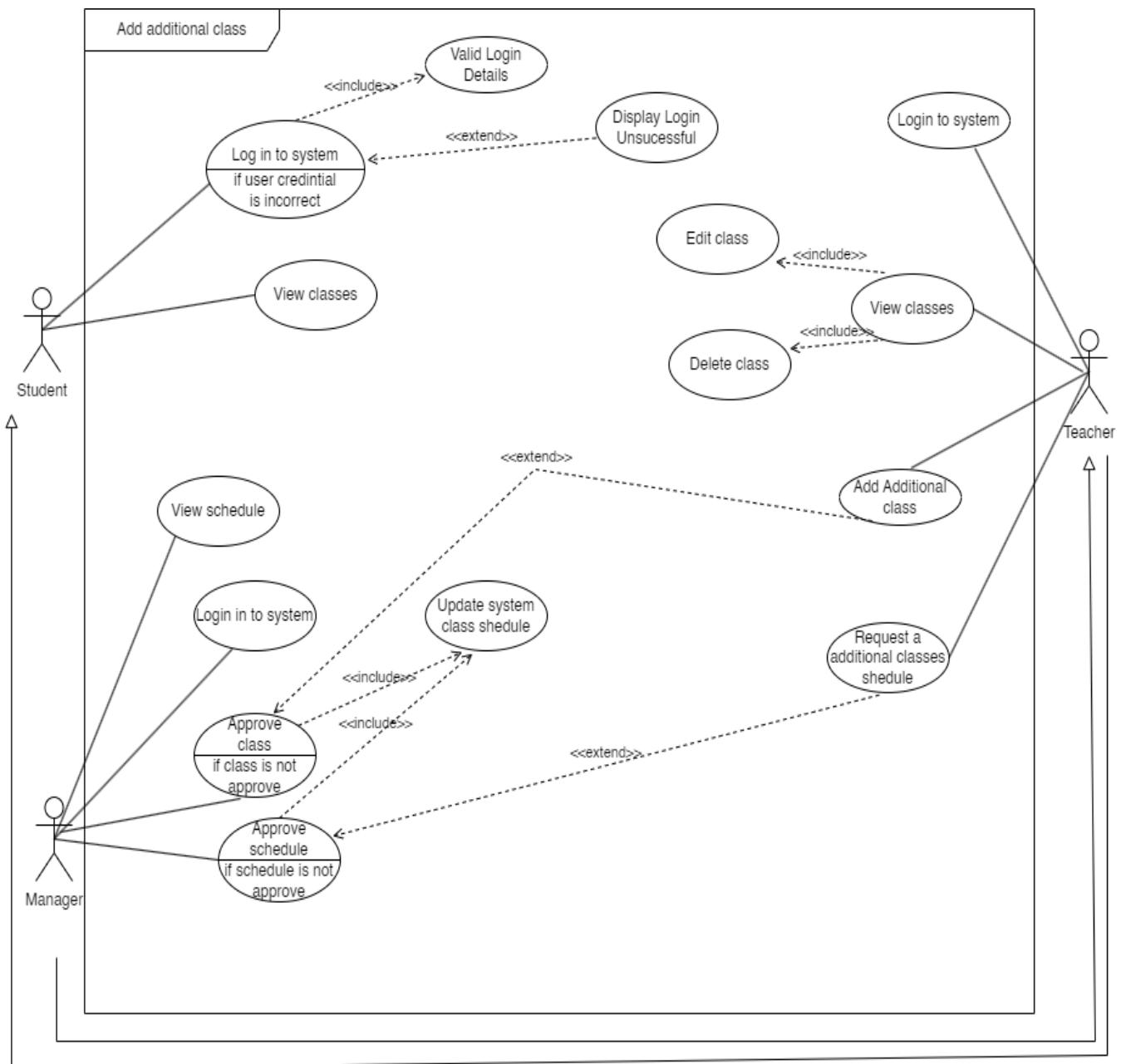


Figure 3. 22– Class Management Usecase Diagram

## Activity diagram of Class Management.

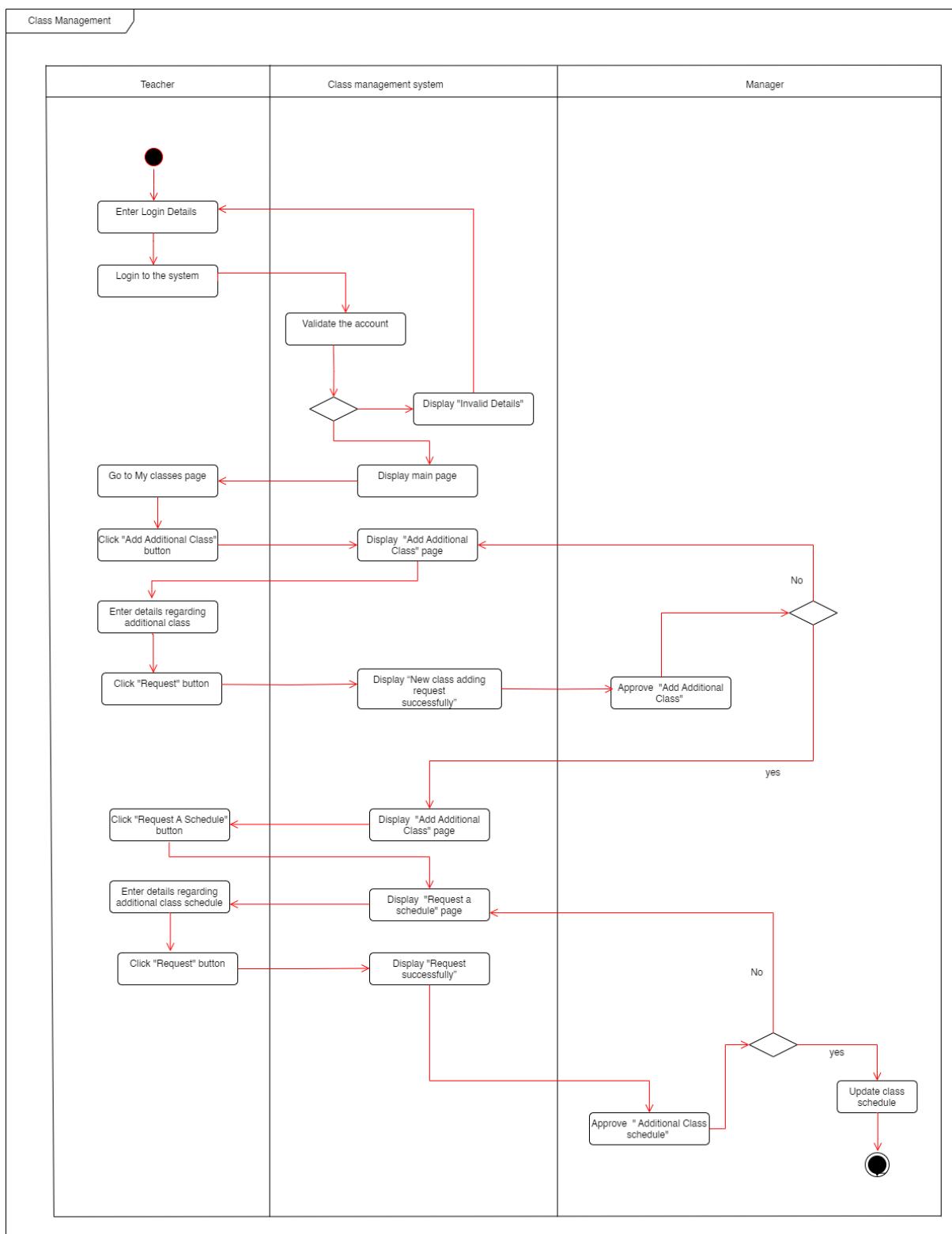


Figure 3. 23-Class Management Activity Diagram

## Sequence diagram of Class Management.

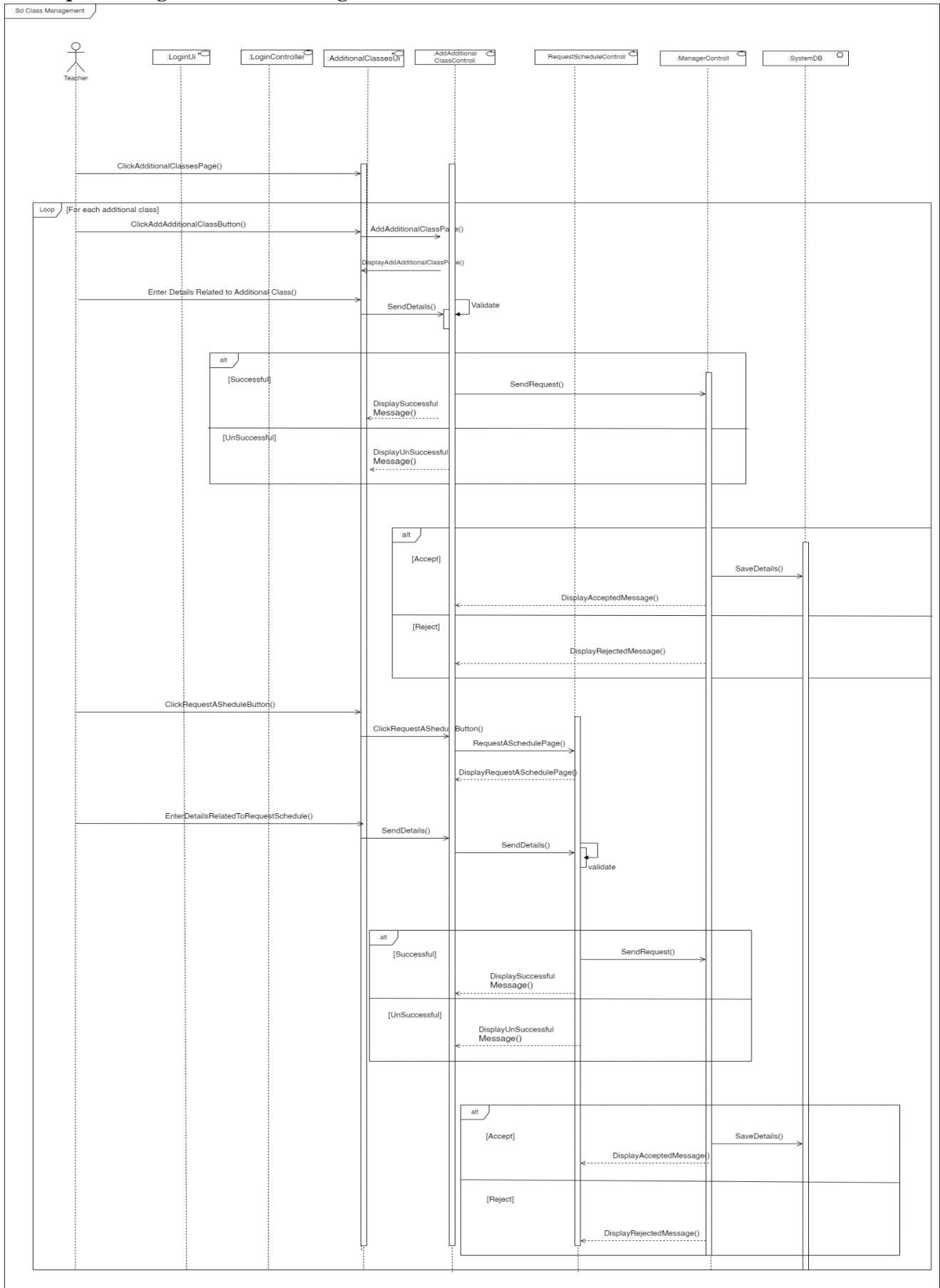


Figure 3. 24-- Class Management Sequence Diagram

## **Lesson Material Management - IT22902702**

The Lesson Material Management function simplifies the organization and accessibility of educational resources. Teachers can effortlessly upload, categorize, and manage various types of lesson materials including documents, photos, and video links. This feature ensures a seamless flow of information to students, fostering a collaborative learning environment. Students benefit from easy access to relevant materials, enhancing the overall educational experience. This function makes it easier for teachers to handle tasks and helps share lessons and information more effectively. It simplifies administrative work, making it smoother for everyone involved in teaching and learning.

### **Use Case Scenario of Lesson Material Management.**

*Table 10-Lesson Material Management Usecase Scenario*

<b>Name</b>	Add Lesson Material	
<b>Actor</b>	Teacher	
<b>Goal</b>	To upload and manage lesson materials efficiently within the institute management system.	
<b>Overview</b>	This use case describes the process of a teacher adding lesson materials to the system and then entering the details of the lesson material	
<b>Pre-condition</b>	The Teacher must be logged in to the system.	
<b>Post-condition</b>	The Teacher has successfully added lesson material.	
<b>Basic Path</b>	<b>Step</b>	<b>Action</b>
	1	The teacher navigates to the login interface of the system.
	2	The teacher enters his login credentials (username & password).
	3	The system validates user details.
	4	The system displays the main dashboard.
	5	The teacher navigates to the class page and selects a specified class that needs to add the materials.
	6	The system displays the specified class subject page.
	7	The teacher selects to add lesson material.

	8	The system displays a form to add materials and details.
	9	The teacher adds details with the required information and adds the new lesson material for the next lesson.
	10	The teacher reviews the information and clicks the Submit button to add the lesson material.
	11	The system validates the input details and ensures the files are added correctly and meet size limits.
	12	The system adds the class materials to the specified class page.
<b>Extensions</b>	<b>Step</b>	Branching Action
	3a	If user details are invalid, Display “Incorrect Username or Password” and ask to Re-enter login credentials.
	9a	If the teacher doesn’t fill in the required information, ask to fill it again.
	10a	If the filled details are incorrect, the teacher edits them again.
	11a	If validation is successful, it displays a confirmation message.
	11b	If validation fails, the system displays error messages indicating the specific issues and allows the teacher to correct them and resubmit.

## Use case diagram of Lesson Material Management.

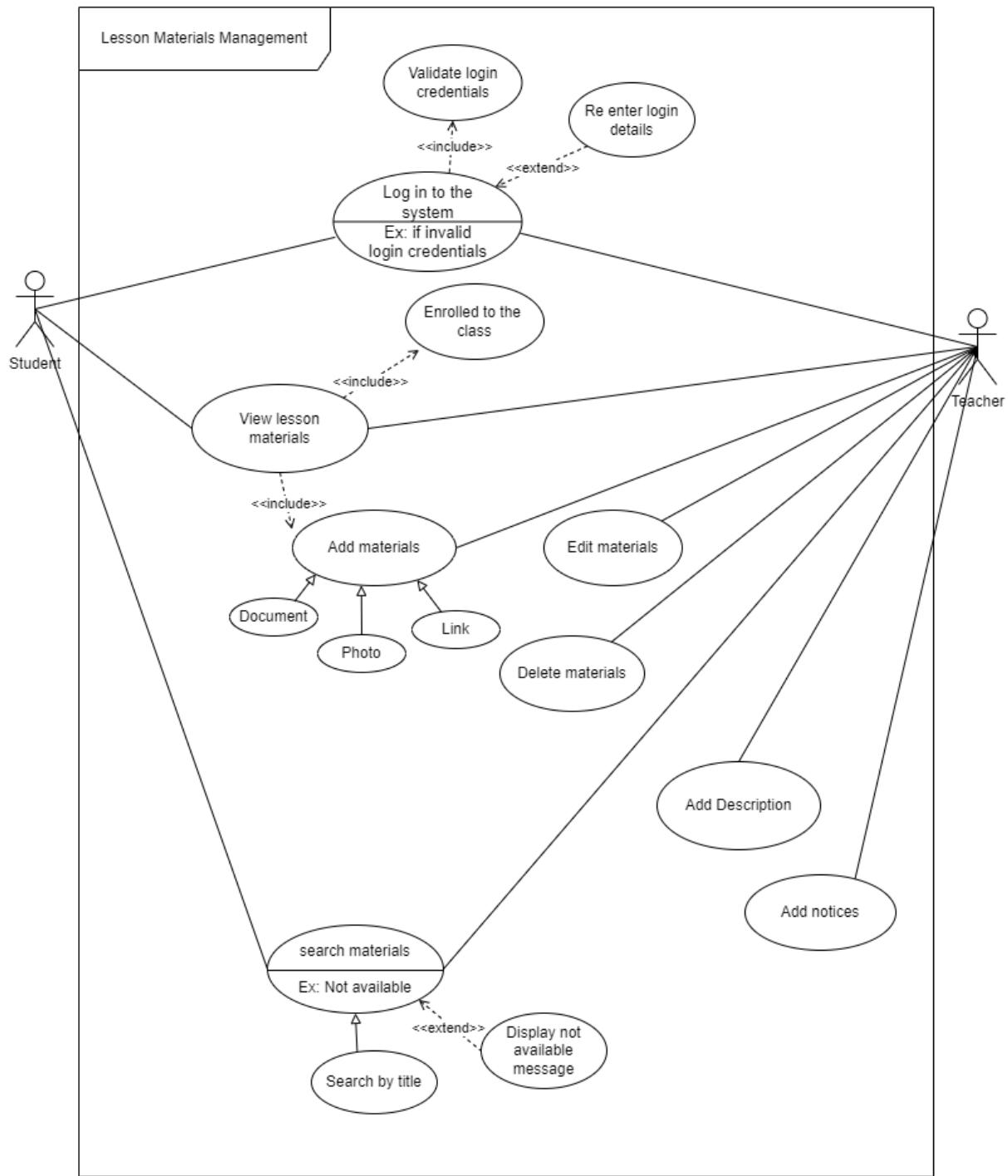
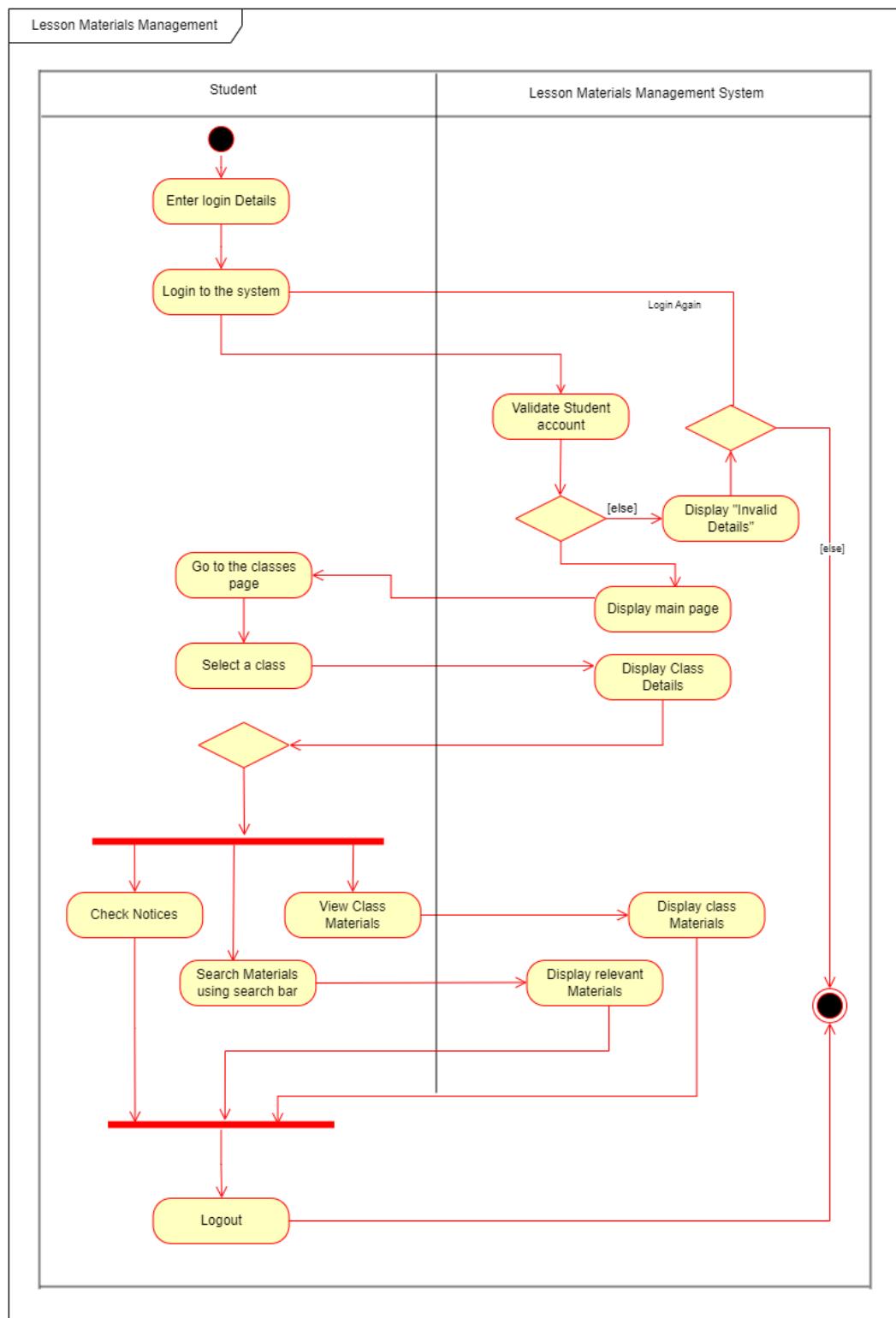


Figure 3. 25- Lesson Material Management Usecase Diagram

## Activity diagram of Lesson Material Management.



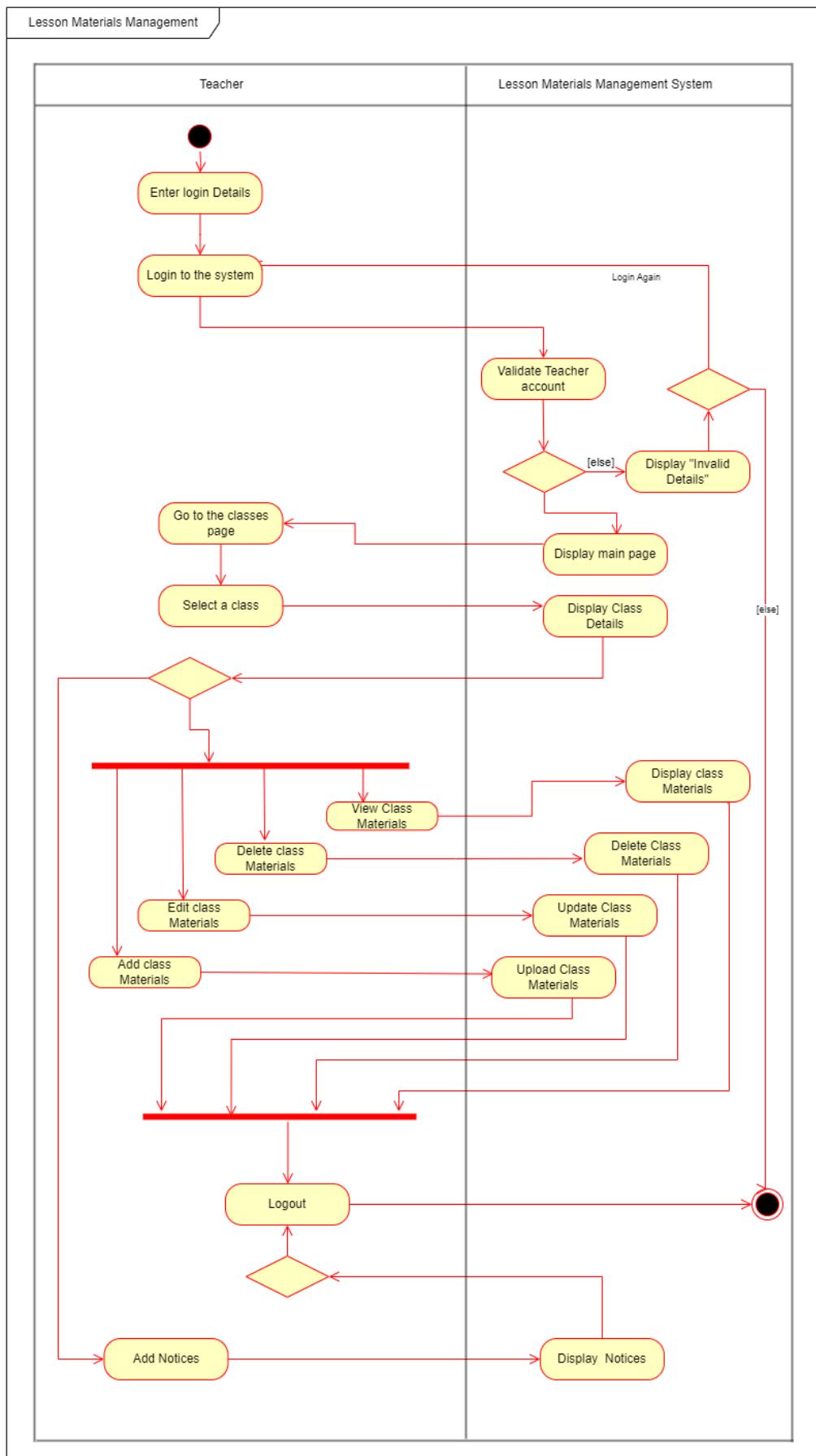


Figure 3. 26-Lesson Material Management Activity Diagram

## Sequence diagram of Lesson Material Management.

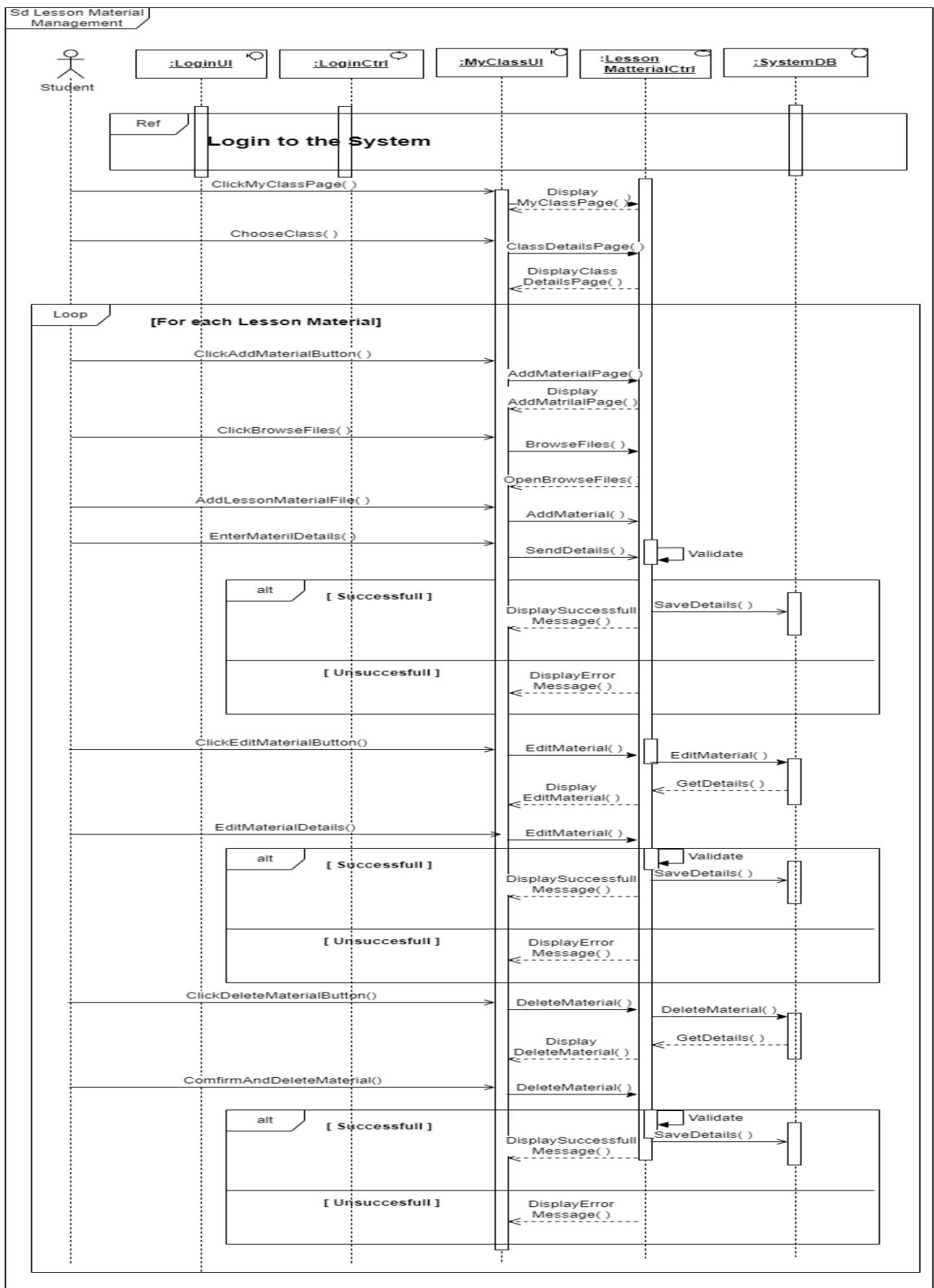


Figure 3. 27—Lesson Material Management Sequence Diagram

## **NON-FUNCTIONAL REQUIREMENTS**

### **Scalability:**

As the institute expands, design the system to accommodate a growing workload. The system must be scalable in order to accommodate growing numbers of users, transactions, or data without compromising stability or performance.

### **Performance:**

A fair amount of time should pass before the system reacts to user activities. Without experiencing a discernible drop in performance, the system needs to be able to accommodate a growing number of courses, learners, and teachers. Performance bottlenecks should not occur when several users utilize the system concurrently.

### **Reliability:**

Data loss or corruption should not occur as a result of the system's ability to gracefully recover from errors such as server crashes or network outages. Data loss should be promptly prevented by performing routine backups and putting protocols in place for speedy data restoration.

### **Compatibility:**

It should be possible to use the system with widely used web browsers like Chrome, Firefox, and Safari. Integration with other institute systems, including student information systems, should be possible.

### **Usability:**

The system places emphasis on simplicity and ease of use in recognition of its diverse user base, with the aim of ensuring a smooth experience for all. In order to keep things simple and make it easier for students to find and use the features they need, the design places a strong emphasis on clarity.

### **Security**

The system is carefully built with strong security features to guarantee the integrity, confidentiality, and safety of any personal data. To protect sensitive data and maintain confidentiality, use authorization, authentication, and encryption methods.

## **PERFORMANCE REQUIREMENTS**

The performance requirements focus on the responsiveness of the user interface (UI). Meeting the performance requirements ensures that users experience a responsive and efficient system, where interactions are seamless and delays are minimized. We can take into consideration the request time and the response time between the client side to the server side and other only client-side functions that operate in the browser in performance requirements.

- Search operations: Ensures that users can quickly find relevant information without experiencing delays or frustration.
- Report Generation: Involve complex data processing and aggregation, so it's important to set realistic performance targets to ensure that users can access critical information in a timely manner.
- File uploads and downloads: This should complete within a specified time limit, such as 10-20 seconds for larger files, while downloads should start promptly and proceed without interruptions.
- Components should load within a second: The corresponding components (e.g., menus, forms, data) should load quickly, ideally within one second.
- User authentication: Involves verifying the identity of users who are trying to access the system, typically by checking their credentials (e.g., username and password) against stored records in the authentication system.

## High-level Architecture Diagram

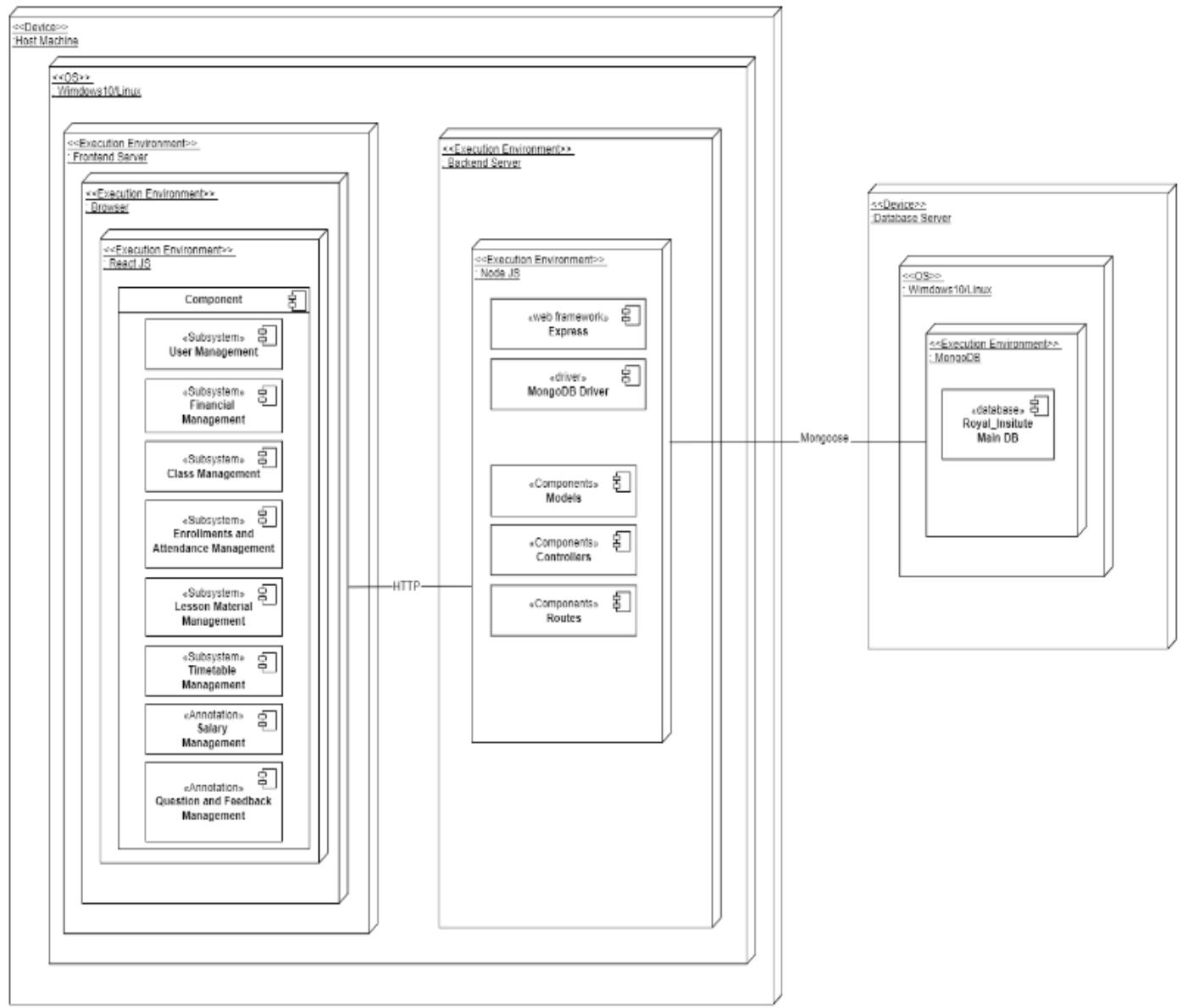


Figure 3. 28-High-level Architecture Diagram

## Class Diagram

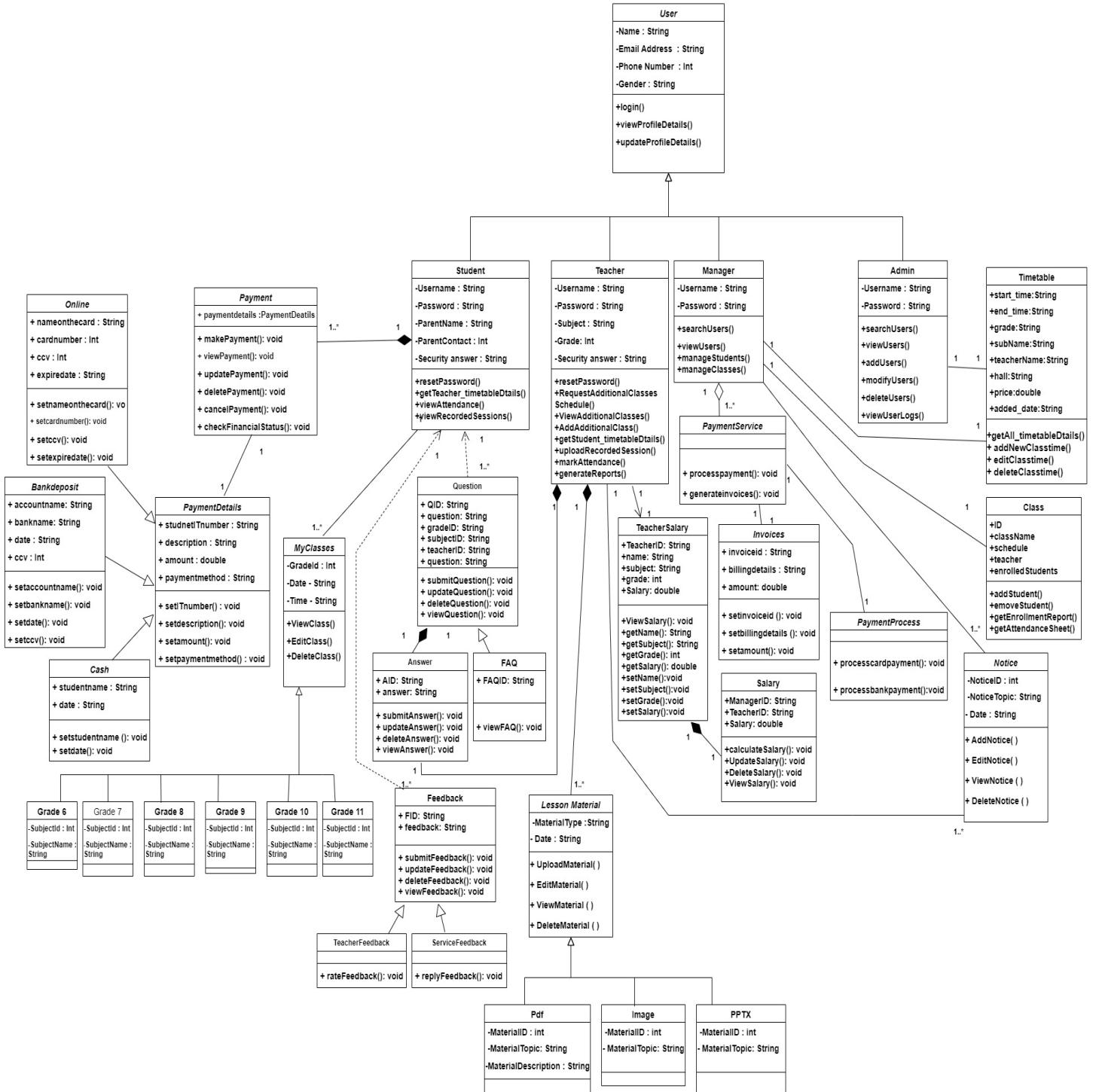


Figure 3. 29-Class Diagram

## ER Diagram

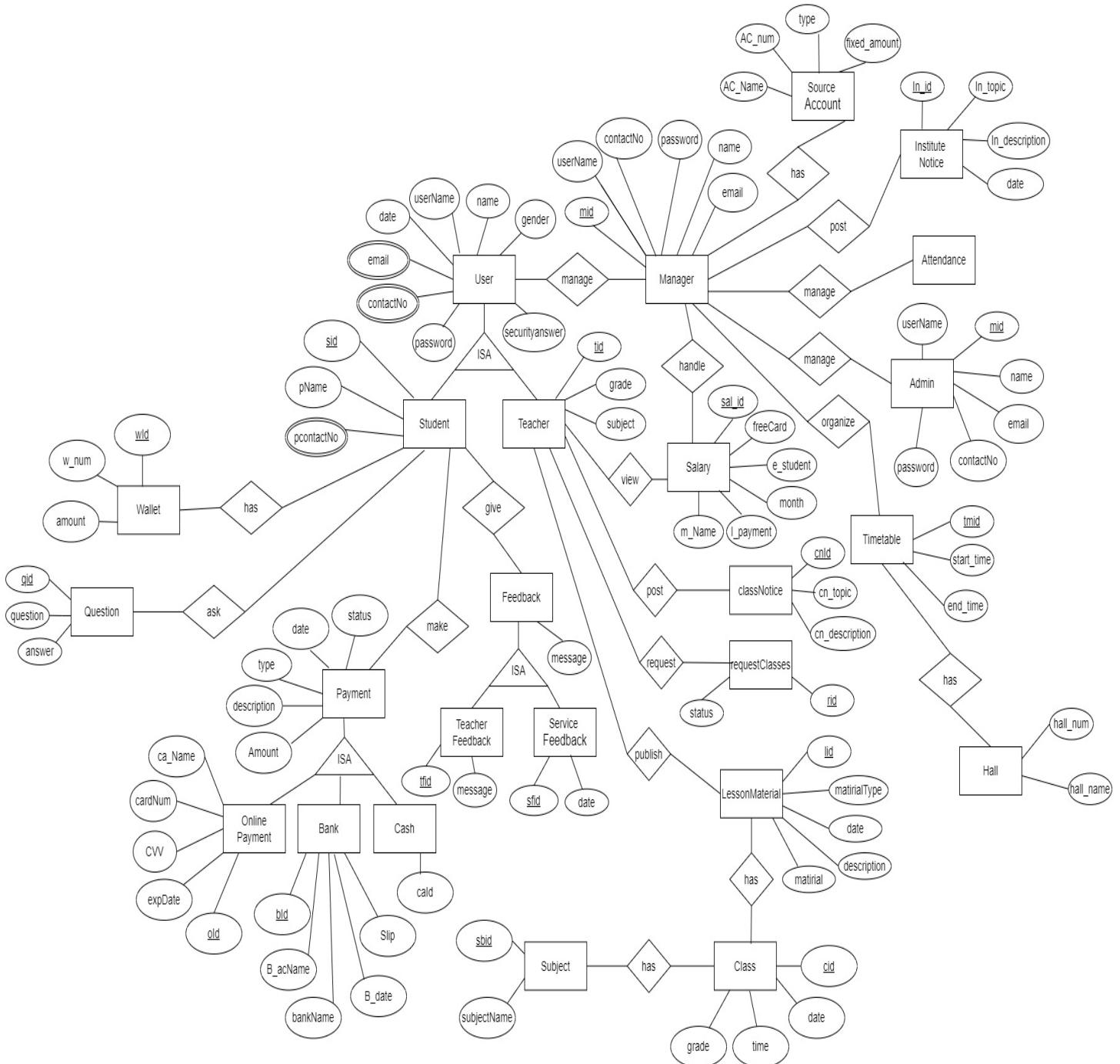


Figure 3. 30-- EER Diagram

# DATABASES

## Database schema

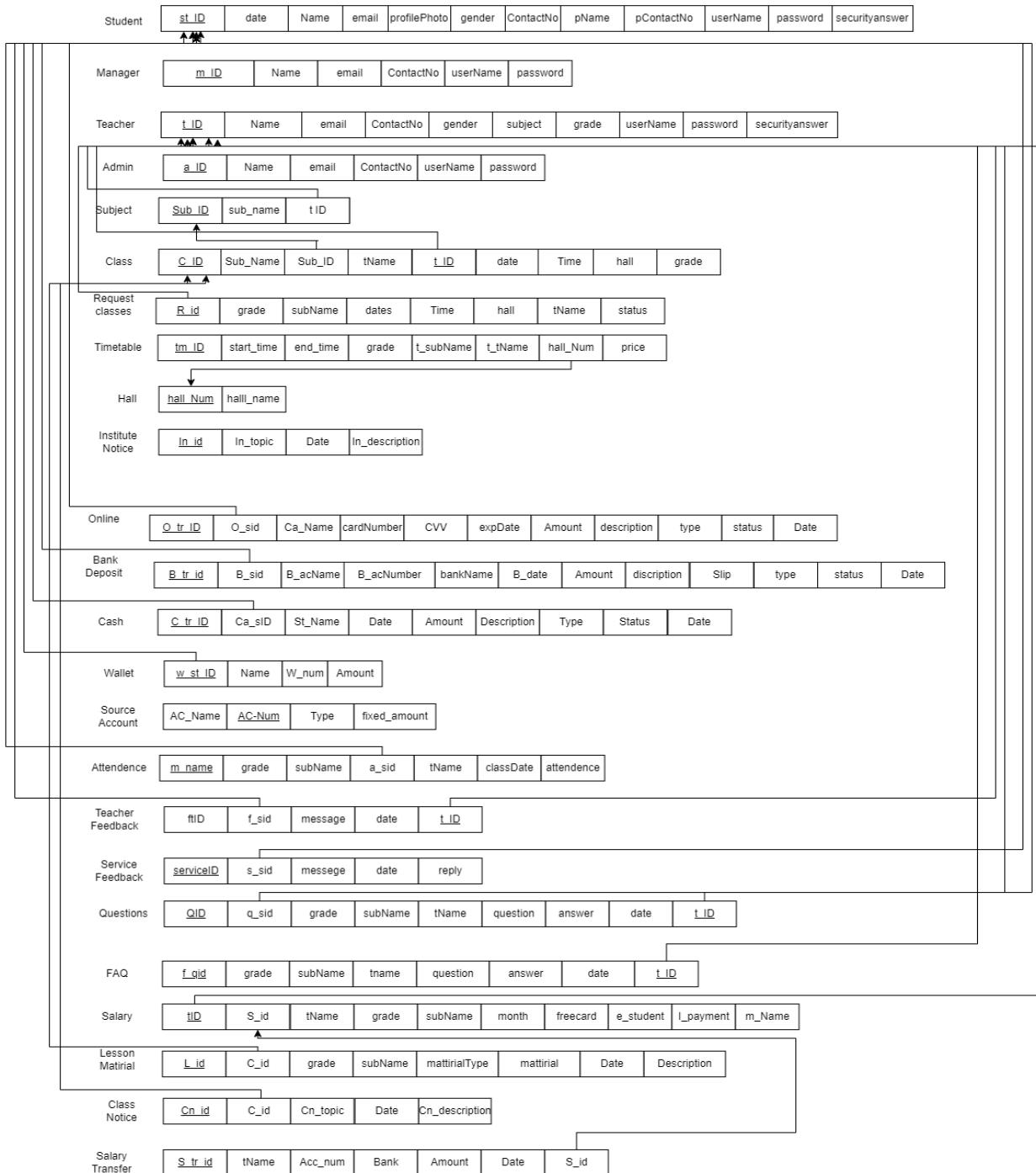


Figure 3. 31-- Database Schema

## **PROCESSES**

- User Registration: Allow users to register to the system by providing their personal information. Validate those details and store data in the system.
- User Management: Provide functionality to user management, including option for different user types (Student, Teacher, Manager, Admin), Profile update and deletion.
- Payment Handling: Implement a payment process to handle class payments to enrolled to specific classes. Establish different payment methods as online payments, bank payments and bank deposits. Use of payment gateways to securely process online payments. Display status and generate reports to track payments.
- Attendance Handling: Implement a process to handle students' attendance by taking their attendance through the system.
- Class Management: Allow teachers to manage classes by providing class schedules.
- Lesson Material Management: Allow teachers to add lesson materials to the relevant classes. Also provide a method to display notices for students.
- Timetable Management: Allow to represent all the class schedules in a format of a timetable with relevant time slots.
- Salary Management: Establish a payment process to handle payments of teachers. Handle no of free cards and a classes' standard class fee to manage salaries.
- Q&A and Feedback Facility: Implement a platform for students to ask subject related questions and ensure prompt responses and resolutions. Establish a process to provide feedbacks regarding teachers and institute.
- Generate Reports: Establish a process to generate various reports to analysis data regarding different sections of the management system.

## **WORKFLOWS**

- ❖ Beginning of the workflow start with user registration to the system, providing their details by providing unique username and password. Once registered, the user can sign into the system using their credentials. The system validates the user's logging credentials to ensure the information is correct. If user forget the password, they can reset their passwords as well.
- ❖ After the login, user can select classes relevant to their preferences. Upon selecting a class, the user proceeds to make payment for the class using a preferred payment method. Students can view the payment status to analyze the payments.
- ❖ Upon successful payment, user will be enrolled to that paid class that grant access to the lesson materials and classes. Also, student can view the timetable that allocated to relevant classes time slots. Additionally, user has the option to unenroll from the classes as well. The student can view notices though the dashboard.
- ❖ After completing the enrollments students can join in for the sessions relevant to that specific class. Also, students can resent their questions to the teachers through the Q&A platform and through the feedback platform students can present their feedbacks regarding teachers and the institute.
- ❖ In addition to students, teachers can also register to the system by providing their relevant details and creating a unique username and password. Similar to students, teachers can sign into the system using their credentials, and the system validates their logging credentials.
- ❖ Once logged in teachers can add lesson materials to the relevant classes. The teachers can request for classes with time slots from the manager. The teachers can view the salary status to verify successful salary transactions. Teachers can provide solutions for the questions presented by students. They can also check feedback provided by students to monitor teaching provided by them.
- ❖ Furthermore, manager can schedule class time slots for students, ensuring proper allocation of time slots and halls. Manager can check feedbacks provided by students to monitor services of institute.
- ❖ Manager can generate final reports based on various parameters. These reports provide valuable insights for institute analysis and decision-making purposes.
- ❖ The manager handles the payment of the enrolled classes of students. Validate the enrollment for the classes by checking the class payments. The manger is responsible in creating of salaries of teachers. Admin is responsible of handling user accounts.
- ❖ The workflow continues as students and teachers interact with the system based on their respective privileges. Finally, when the workflow is completed or at a designated time, the system allows to logout from the session gracefully.
- ❖ In conclusion this workflow describes the steps involved in the student and teacher interactions with the system, tasks of manager and admin as well. Those interactions include tasks such as registration, sign-in, account creation, class selection, payments, enrollments, lesson material handling, timetable handling, salary management, question and answer managing, feedback monitoring, report generation and system closure.

## **DEVELOPMENT ASPECTS**

Developing this Institute Management System involves various aspects to ensure it meets the needs of Institute and stakeholders effectively.

### **1.Requirement Analysis:**

Understood the specific requirements of the institute, including administrative processes, academic workflows, reporting needs, and stakeholder expectations, is essential.

### **2.User Interface Design:**

The UI is designed considering the diverse users of the system. It is responsive, accessible, and customizable to accommodate different preferences and needs.

### **3.Database Design:**

Designing a database schema is essential for storing and managing various types of data, including student records, class information, academic schedules, financial data, and administrative documents.

### **4.Functionality Development:**

Implementing core functionalities such as student enrollment, attendance tracking, grading, scheduling, class management, fee management and communication tools. Each functionality is developed considering the institute's specific requirements and workflows.

### **5. Security measures:**

Implemented security measures to protect sensitive data and prevent unauthorized access.

### **6.Usability Testing:**

Conducted usability testing and gathering feedback from end-users to identify usability issues, refine features, and improve overall user experience. Usability testing helped to ensure that the system meets the needs and expectations of users and is easy to use and navigate.

# User Interfaces

## Q & A and Feedback Management – IT22001184

The screenshot shows the Q & A section of the Royal Academy platform. On the left, a sidebar lists various navigation options: Dashboard, My Classes, Enrollments, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet. A 'Logout' button is at the bottom of this sidebar. The main area features the Royal Academy logo and the tagline 'Educate. Elevate. Empower.'. A welcome message says, 'Hello, Tishan Dinelka Grade 10 Student'. Below this, a section titled 'Connect with your teachers' contains three buttons: 'ADD QUESTIONS', 'MY QUESTIONS', and 'FAQS'.

Figure a. 1-Question page (Student)

The screenshot shows the 'Add Your Question' form. The sidebar and user profile are identical to the previous screenshot. The main form has a title 'Connect with your teachers - Add Your Question'. It includes fields for 'Grade' (set to 10), 'Select Teacher' (a dropdown menu), 'Subject' (a dropdown menu), 'Student ID' (SID243380), and a large 'Question' input area with the placeholder 'Enter your Question'.

Figure a. 2-Add Question page(Student)

The screenshot shows the Royal Academy student dashboard. On the left, a sidebar lists various options: Dashboard, My Classes, Enrollments, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet. A 'Logout' button is at the bottom. The main area is titled 'Connect With Your Teachers - My Questions'. It displays two questions in boxes:

- Question:** What is decimal?  
**Answer:** It is a term we use.  
Buttons: Edit (green), Delete (dark red).
- Question:** What is called as gates?  
**Answer:** a description  
Buttons: Edit (green), Delete (dark red).

The top right corner shows a user profile with the name 'Hello, Tishan Dinelka Grade 10 Student' and a small profile picture.

Figure a. 3-My Question page – View Questions(Student)

The screenshot shows the Royal Academy student dashboard with the 'Update Your Question' form open. The sidebar and user profile are identical to Figure a. 3. The main area is titled 'Connect with your teachers - Update Your Question'.

The form fields are:

- Grade: 10
- Select Teacher: Eshmika Hettiarachchi
- Subject: ICT
- Student ID: SID243380
- Question: What is decimal?

Figure a. 4- Update Question page(Student)

The screenshot shows a student dashboard for Royal Academy. On the left, a sidebar lists various menu items: Dashboard, My Classes, Enrollments, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet. A 'Logout' button is at the bottom of this sidebar. The main content area features the Royal Academy logo and the tagline 'Educate. Elevate. Empower.'. A greeting message 'Hello, Tishan Dinelka Grade 10 Student' is displayed along with a small profile picture. Below this, a section titled 'We Want to Hear from You' contains a message welcoming users to share their thoughts and experiences, followed by a large blue button labeled 'ADD YOUR FEEDBACKS'. Another blue button labeled 'MY FEEDBACKS' is also visible.

Figure a. 5- Feedback page(Student)

This screenshot shows the 'Select Feedback Type' page. The layout is identical to Figure a. 5, with the same sidebar and header. The main content area now features a title 'We Want to Hear from You - Add Your Feedbacks' and a heading 'Pick Feedback Type'. It includes two large blue buttons: 'TEACHER FEEDBACK' and 'SERVICE FEEDBACK'.

Figure a. 6– Select Feedback Type page(Student)

**We Want to Hear from You - Teacher Feedback**

Grade

Select Teacher

Subject

Student ID

Feedback

Figure a. 7–Add Teacher Feedback page(Student)

**We Want to Hear from You - Service Feedback**

Student ID

Grade

Feedback

Hello, Tishan  
Dinelka  
Grade 10  
Student

Figure a. 8–Add Service Feedback page(Student)

The screenshot shows the 'My Feedbacks' section for a student named Dinelka. The interface includes a sidebar with navigation links like Dashboard, My Classes, Enrollments, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet. A 'Logout' button is also present. The main content area features a header 'We Want to Hear from You - My Feedbacks'. Below this, there are two feedback entries:

- Feedback 1:** Grade: 10, Subject: History, Teacher: Amila Herath, Feedback: Good. Includes 'Edit' and 'Delete' buttons.
- Feedback 2:** Grade: 10, Subject: Music, Teacher: Nirmala Athapaththu, Feedback: Enjoyed. Includes 'Edit' and 'Delete' buttons.

Figure a. 9- My Feedbacks page(Student)

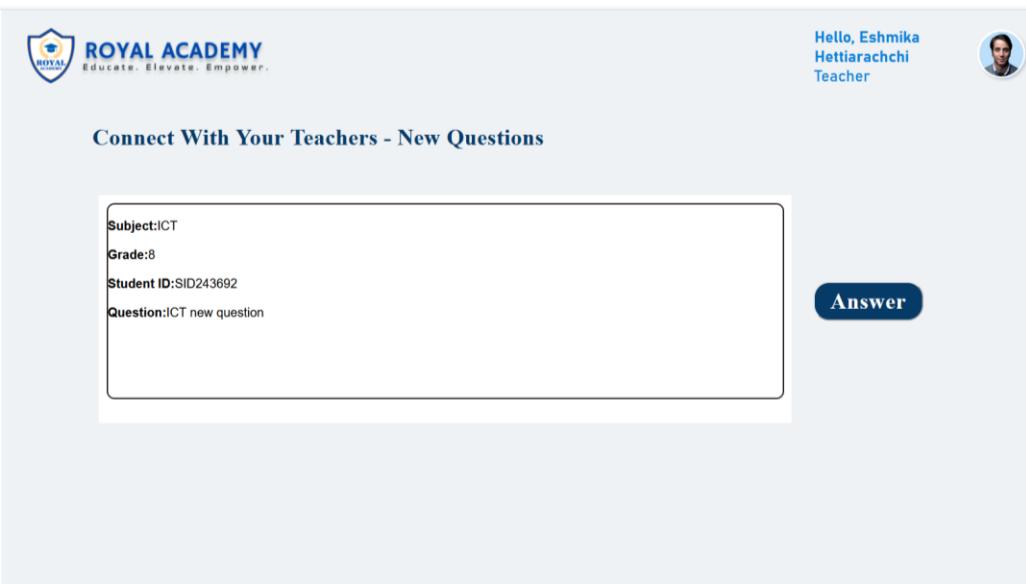
The screenshot shows the 'Teacher Question' section. The sidebar includes links for Dashboard, My Classes, Lesson Material, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Salary, along with a 'Logout' button. The main content area has a header 'Connect With Your Teachers' and a sub-header 'NEW QUESTIONS'. It lists 'Solved Questions' with one entry shown:

**Solved Questions**

**Student ID: SD000**  
**Grade: Grade 5**  
**Subject: ICT**  
**Question:** What is called as binary?  
**Answer:** definitiol

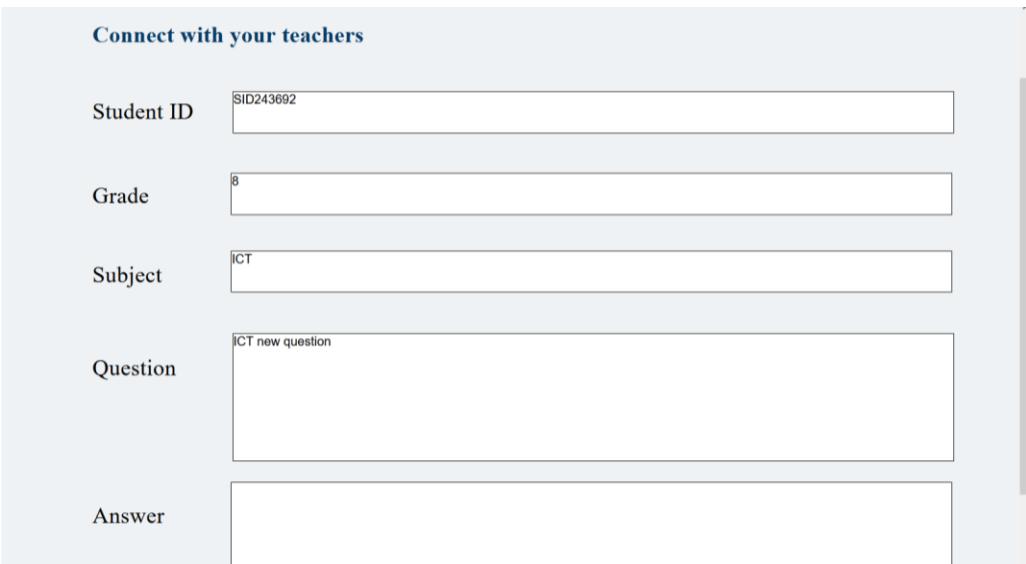
At the bottom, there is another box for a new question: **Student ID: SD345**, **Grade: Grade 6**.

Figure a. 10-Teacher Question page(Teacher)



The screenshot shows a teacher's dashboard with a sidebar on the left containing links for Dashboard, My Classes, Lesson Material, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Salary. A 'Logout' button is also present. The main content area features the Royal Academy logo and the text 'Hello, Eshmika Hettiarachchi Teacher'. Below this, a section titled 'Connect With Your Teachers - New Questions' displays student information: Subject: ICT, Grade: 8, Student ID: SID243692, and Question: ICT new question. A blue 'Answer' button is located to the right of the question text.

Figure a. 11– Teacher View New Question page(Teacher)



The screenshot shows a teacher's question reply form. The sidebar on the left includes the same set of links as Figure a. 11. The main form is titled 'Connect with your teachers' and contains fields for Student ID (SID243692), Grade (8), Subject (ICT), and Question (ICT new question). Below these, there is a large text area for the answer, which is currently empty. A 'Logout' button is located at the bottom left of the sidebar.

Figure a. 12- Teacher Question Reply page(Teacher)

The screenshot shows the 'We Want to Hear from You - My Feedbacks' section. On the left sidebar, there are various menu items: Dashboard, My Classes, Lesson Material, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Salary. Below these is a 'Logout' button. At the top right, a user profile is displayed with the name 'Hello, Eshmika Hettiarachchi Teacher' and a small profile picture. The main content area has a heading 'Feedback' and a box containing student information: Grade: 8, Subject: ICT, Teacher: Eshmika Hettiarachchi, and Feedback: ICT good.

Figure a. 13Teacher Feedback page(Teacher)

The screenshot shows the 'Connect with your teachers' section. On the left sidebar, there are various menu items: Dashboard, My Classes, Lesson Material, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Salary. Below these is a 'Logout' button. The main content area has a form for updating a reply. It includes fields for Student ID (SD000), Grade (Grade 5), Subject (ICT), Question ('What is called as binary?'), and Answer ('definition').

Figure a. 14– Teacher Update Reply page (Teacher)

The screenshot shows a user interface for a teacher. On the left is a sidebar with icons for Dashboard, My Classes, Enrollments, Subject, Payment, TimeTable, Attendance, Feedbacks, Profile, and Salary, along with a Logout button. At the top center is the Royal Academy logo with the tagline "Educate. Elevate. Empower.". In the top right corner, there is a greeting "Hello, Iresh Manager" next to a small profile picture. The main content area is titled "Connect With Your Teachers - New Questions". It displays two feedback entries in separate boxes:

- Grade: Grade 9**  
Feedback: Service is Good.  
**Reply**
- Grade: 8**  
Feedback: Service Good  
**Reply**

At the bottom of the main content area, there is a small box labeled "Grade: 10".

Figure a. 15– Teacher Not Answered Question page (Teacher)

The screenshot shows a user interface for a manager. On the left is a sidebar with icons for Dashboard, My Classes, Enrollments, Subject, Payment, TimeTable, Attendance, Feedbacks, Profile, and Salary, along with a Logout button. The main content area has a title "Over View of Feedbacks" and a sub-section "Feedbacks". A button "VIEW NEW FEEDBACKS" is located above the feedback list. To the right of the feedback list is a button "Generate Feedback Report". The feedback list displays one entry:

<b>Grade: Grade 10</b>
Feedback: Delivering of online lessons are good.
Reply: noted

At the bottom right of the feedback entry are "Edit" and "Delete" buttons.

Figure a. 16-Manager Feedback page (Manager)

We Want to Hear from You - Service Feedabcks

Student ID

r44444

Feedback

Service is Good.

Response

**Logout**

Figure a. 17– Manager View Service Feedback page (Manager)

ROYAL ACADEMY  
Educate. Elevate. Empower.

Hello, Iresh  
Manager

Generate Report

Select Month:

Generate

**Logout**

Figure a. 18– Manager Service Feedback Generate Report page (Manager)

## Feedback Report for June

[Download PDF](#)

Student ID

Grade

Feedback

Date

Total Feedbacks: 0

Figure a. 19– Manager Service Feedback Report (Manager)

## Salary Management - IT22365750

The screenshot shows a user interface for managing teacher salaries. On the left, a sidebar lists various menu items: Dashboard, My Classes, Enrollments, Subject, Payment, TimeTable, Attendance, Feedbacks, Profile, and Salary. A 'Logout' button is also present. The main area features the 'ROYAL ACADEMY' logo at the top right, with a greeting 'Hello, Irosh Manager' and a profile picture. Below the logo, a dark blue header bar displays the text 'My Salary'. Underneath, there is a search bar with the placeholder 'Search by teacher name...'. A table lists four teachers with their details:

Teacher Name	Teacher ID	Subject Name	Grade	Attend Students	Free Card Amount	Institute Payment	Monthly Salary	Date	Action
Amila Hearth	TID241222	History	10	50	200	8000	14000	2024-06-21	<button>Update</button> <button>view</button> <button>Delete</button>
Kusal Gamage	TID248542	Tamil	9	1223	6000	22000	152000	2024-06-18	<button>Update</button> <button>view</button> <button>Delete</button>
Waruni Gunathilaka	TID241344	Sinhala	10	10	0	1000	5000	2024-01-13	<button>Update</button> <button>view</button> <button>Delete</button>
Sanath Irugalla	TID247941	Science	10	100	1000	1000	34500	2024-05-15	<button>Update</button> <button>view</button> <button>Delete</button>

Figure b. 1-View Salary

The screenshot shows a form for entering new salary information. The sidebar and top navigation are identical to the previous screenshot. The main area features the 'ROYAL ACADEMY' logo and a 'Hello, Irosh Manager' greeting. A large button labeled 'Make a Salary' is centered above a series of input fields. The fields are labeled: 'Enter Teacher Name:' (with a dropdown arrow), 'Enter Teacher ID:' (with a placeholder 'Enter ID'), 'Enter Subject Name:' (with a placeholder 'Enter Subject'), 'Enter Grade:' (with a dropdown arrow), 'Enter Subject Fee:' (with a placeholder 'Subject fee'), 'Enter Attend Students:' (with a placeholder 'Students'), and 'Enter Free Card Amount:' (with a placeholder '00.00').

**Enter Subject Fee:**

**Enter Attend Students:**

**Enter Free Card Amount:**

**Enter Institute Payment:**

**Calculate**

**Enter Monthly Salary :**

**Enter Date:**

**Upload Payment Files:**  No file chosen

**Logout** **Save and Submit** **Back**

Figure b. 2-Make Salary

**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Hello, Irosh  
Manager

**Add Salary**

**View Salary**

**Logout**

Figure b. 3-Salary Page



Figure b. 4-Generate report page

A screenshot of a salary report page. At the top, it says 'Teacher Salary Report for 2024-04'. Below this is a table with columns: Teacher Name, Teacher ID, Subject, Grade, Attend Students, Free Card Amount, Institute payment, Month Salary, and Date. The table data is as follows:

Teacher Name	Teacher ID	Subject	Grade	Attend Students	Free Card Amount	Institute payment	Month Salary	Date
Eshmika Hettiarachchi	TID241972	ICT	6	100	100	1000	98900	2024-04-04
Eshmika Hettiarachchi	TID241972	ICT	6	100	100	1000	98900	2024-04-12
Eshmika Hettiarachchi	TID241972	ICT	6	100	100	1000	98900	2024-04-01
Eshmika Hettiarachchi	TID241972	ICT	6	100	100	1000	98900	2024-04-09

**Total Users: 4**  
**Total Students: 400**  
**Total Free Card Amount: 400.00**  
**Total Institute Amount: 4000.00**  
**Total Salary Amount: 395600.00**

Figure b. 5-Salary Report

## Timetable Management – IT22923288

The screenshot shows a monthly calendar for May 2024. The days of the week are labeled from Sunday to Saturday. Specific events are highlighted in colored boxes: a brown box for Maths on Wednesday, May 8th, and a blue box for Maths on Friday, May 16th. The interface includes search bars for grade, teacher, and subject, and navigation buttons for Today, Back, Next, Month, Week, Day, and Agenda.

c. 1– Student Timetable – Monthly View

The screenshot shows a weekly agenda view from May 22 to May 24, 2024. The agenda is organized by date, time, and event. On Wednesday, May 22, there are two entries: one from 4:30 pm to 5:30 pm for Maths with teacher Shyamal Weerasekara in H004, and another from 4:30 pm to 5:30 pm for Sinhala with teacher Waruni Gunathilaka in H001. On Friday, May 24, there is one entry from 4:30 pm to 5:30 pm for Science with teacher Sanath Irugal Bandara in H003. The interface includes search bars and navigation buttons.

c. 2– Student Timetable– Weekly Agenda View

**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Search by grade    Search by teacher    Search by subject

Today    Back    Next    April 2024    Month    Week    Day    Agenda

Sun	Mon	Tue	Wed	Thu	Fri	Sat
31	01	02	03	04	05	06
07	08	09	10	11	12	13
14	15	16	17	18	19	20
Maths Senaka Perera H002	Sinhala Waruni Gunathilak H003	Maths Senaka Perera H003	History Asanka H005			
21	22	23	24	25	26	27

**Logout**

Hello,  
Eshmika  
Hettiarachchi  
Teacher

c. 3– Teacher Timetable – Monthly View

**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Search by grade    Search by teacher    Search by subject

Today    Back    Next    04/14/2024 – 05/14/2024    Month    Week    Day    Agenda

Date	Time	Event
Tue Apr 16	8:30 am – 10:30 am	Maths Senaka Perera H003
Wed Apr 17	4:17 pm – 7:15 pm	History Asanka H005
	4:17 pm – 7:15 pm	History Asanka H005
Sun Apr 21	3:30 pm – 5:30 pm	Maths Senaka Perera

**Logout**

Hello,  
Eshmika  
Hettiarachchi  
Teacher

c. 4– Teacher Timetable – Weekly Agenda View

- [Dashboard](#)
- [My Classes](#)
- [Enrollments](#)
- [Subject](#)
- [Payment](#)
- [TimeTable](#)
- [Attendance](#)
- [Feedbacks](#)
- [Profile](#)
- [Salary](#)

Logout

ROYAL ACADEMY  
Educate. Elevate. Empower.

Hello, Irosh  
Manager

Manager	Added Date	Date	Class_ID	Start Time	End Time	Grade	Subject	Teacher	Hall	Price	Actions	
											Edit	Delete
Irosh	2024-05-14	2024-05-22	4	16:30	17:30	6	Maths	Shyamal Weerasekara	H004	500		
Irosh	2024-05-14	2024-05-22	5	16:30	17:30	10	Sinhala	Waruni Gunathilaka	H001	500		
Irosh	2024-05-14	2024-05-24	7	16:30	17:30	10	Science	Sanath Pragal Bandara	H003	500		
Eshmika Hettiarachchi	2024-04-21	2024-04-21	14	15:30	17:30	6	Maths	Senaka Perera	H002	500		
Eshmika Hettiarachchi	2024-04-22	2024-04-22	15	08:30	10:30	10	Sinhala	Waruni Gunathilaka	H003	500		
Eshmika Hettiarachchi	2024-04-24	2024-04-24	19	08:30	10:30	10	Maths	Senaka Perera	H003	500		
Eshmika Hettiarachchi	2024-04-16	2024-04-16	3	08:30	10:30	11	Maths	Senaka Perera	H003	500		
Irosh	2024-04-17	2024-04-17	22	16:17	19:15	12	History	Asanka	H005	500		
Irosh	2024-04-17	2024-04-17	22	16:17	19:15	12	History	Asanka	H005	500		
Eshmika Hettiarachchi	2024-04-24	2024-04-24	19	08:30	10:30	10	Maths	Senaka Perera	H003	500		

Select Month:

c. 5 – Manager Timetable – View

Logout

ROYAL ACADEMY  
Educate. Elevate. Empower.

Hello, Irosh  
Manager

### Add New Class Time

Date:	<input type="text" value="mm/dd/yyyy"/>	Start Time:	<input type="text" value="12:47 PM"/>	End Time:	<input type="text" value="--:-- --"/>
Grade:	<input type="button" value="Select Grade"/>	Subject:	<input type="button" value="Select Subject"/>	Teacher:	<input type="button" value="Select Teacher"/>
Hall:	<input type="button" value="Select Hall"/>	Price:	<input type="text" value="1500"/>	Added Date:	<input type="text" value="05/14/2024"/>

c. 6-Add new class

 Dashboard

 My Classes

 Enrollments

 Subject

 Payment

 TimeTable

 Attendance

 Feedbacks

 Profile

 Salary

 Logout

## Update Timetable

Date: 05/22/2024

Start Time: 04:30 PM

End Time: 05:30 PM

Grade: Grade 6

Subject: Maths

Teacher: Shyamal Weerasekara

Hall: H004

Price: 500

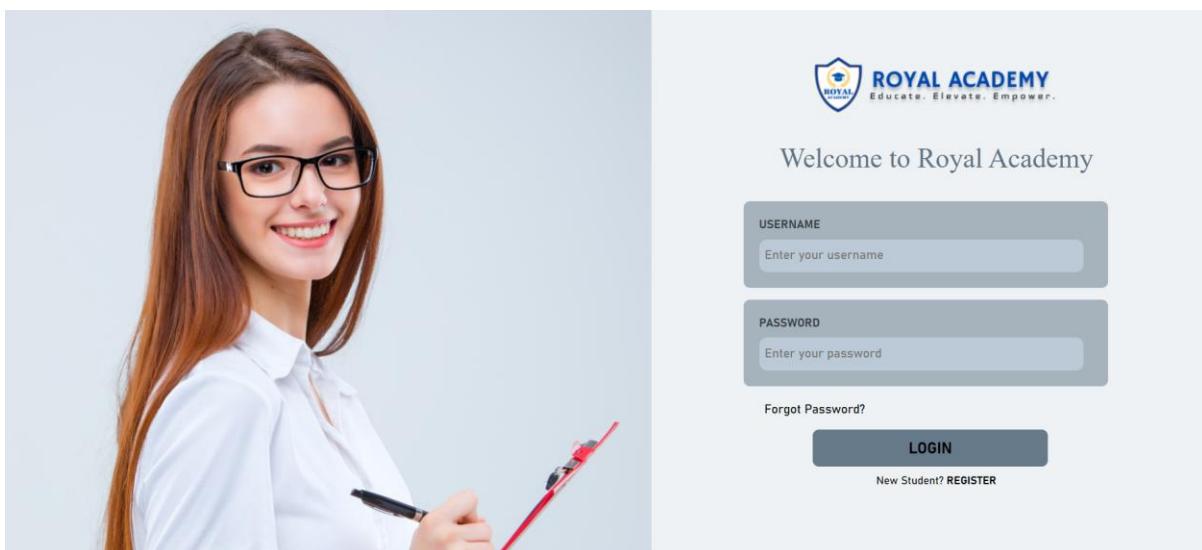
Added Date: 05/14/2024

c. 7– Update Timetable View

## User Management - IT22004390



d. 1–Portal



d. 2–Student login



Welcome to Royal Academy

FULL NAME  
Enter your full name

EMAIL  
Enter your email

Contact Number  
Enter your contact number

GRADE  
Select Grade

GRADE  
Select Grade

USERNAME  
Enter your username

STUDENT ID  
SID247000

PASSWORD  
Enter your password

RE-ENTER PASSWORD  
Enter your password again

SIGN UP

Already have an Account? [Log IN](#)

d. 3– Student Register



TROUBLE LOGIN?

Please enter your username and answer the security question in the fields below to continue

USERNAME  
Enter your username

SECURITY QUESTION - What city were you born in?  
Enter your answer

NEW PASSWORD  
Enter your new password

RE-ENTER PASSWORD  
Enter your password again

RESET YOUR PASSWORD

Already have an Account? [Log IN](#)

d. 4– Student Forgot Password

- [Dashboard](#)
- [My Classes](#)
- [Payment](#)
- [TimeTable](#)
- [Attendance](#)
- [Q&A](#)
- [Feedbacks](#)
- [Profile](#)
- [Wallet](#)

  
 [Logout](#)

ROYAL ACADEMY  
Educate. Elevate. Empower.

### User Profile

**Eshmika Hettiarachchi**  
 SID243692  
 Student

[Edit User Details](#)

---

**Full name**  
Eshmika Hettiarachchi

**Username**  
eshmika

**Gender**  
Male

---

<b>Email Address</b>	<b>Phone Number</b>
eshmika@gmail.com	713280445

---

<b>Parent Name</b>	<b>Parent Phone Number</b>
Irosh	716365807

---

**Security Question - What city were you born in?**  
Kiribathgoda

d. 5– Student User profile

- [Dashboard](#)
- [My Classes](#)
- [Payment](#)
- [TimeTable](#)
- [Attendance](#)
- [Q&A](#)
- [Feedbacks](#)
- [Profile](#)
- [Wallet](#)

  
 [Logout](#)

ROYAL ACADEMY  
Educate. Elevate. Empower.

### User Profile

**Eshmika Hettiarachchi**  
 Student

[Choose File](#)

[Delete](#)

---

**Full name**  
Eshmika Hettiarachchi

**Username**  
eshmika

**Gender**  
 Male  Female

Full name  
Eshmika Hettiarachchi

Username  
eshmika

Gender  
 Male  Female

Email Address  
eshmika@gmail.com

Phone Number  
713280445

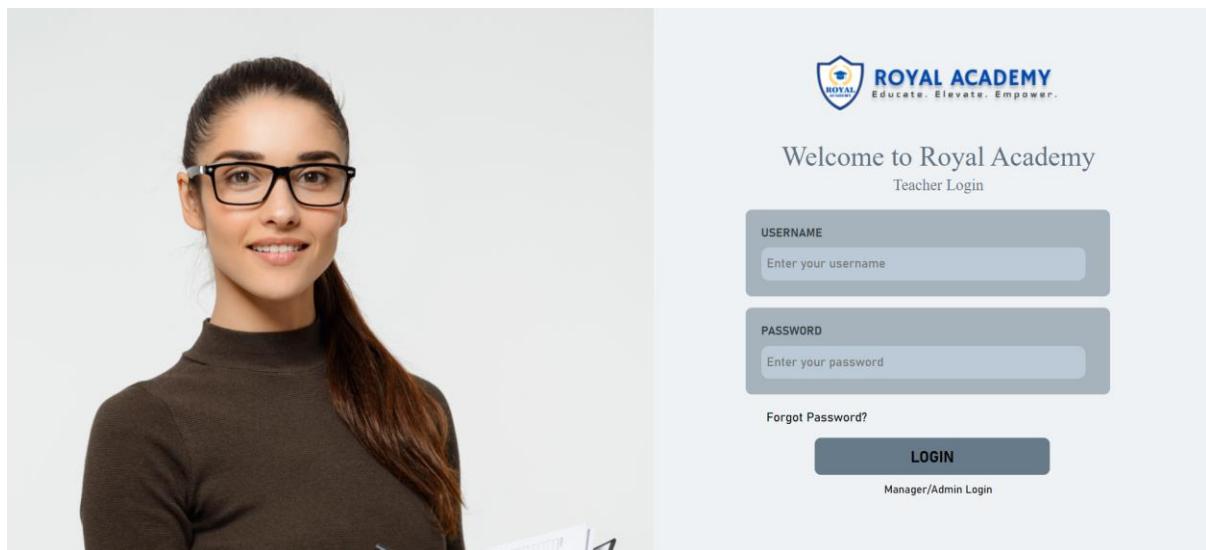
Parent Name  
Irosh

Parent Phone Number  
716365807

Security Question – What city were you born in?  
Kiribathgoda

**Save changes** **Cancel**

d. 6– Student user profile edit



d. 7– Teacher login

**User Profile**

**Full name**  
Amila Herath  
TID241020  
Teacher

**Email Address** amilaherath@gmail.com

**Phone Number** 702255011

**Subject** History

**Security Question - What city were you born in?**  
Kottawa

d. 8 – Teacher user profile

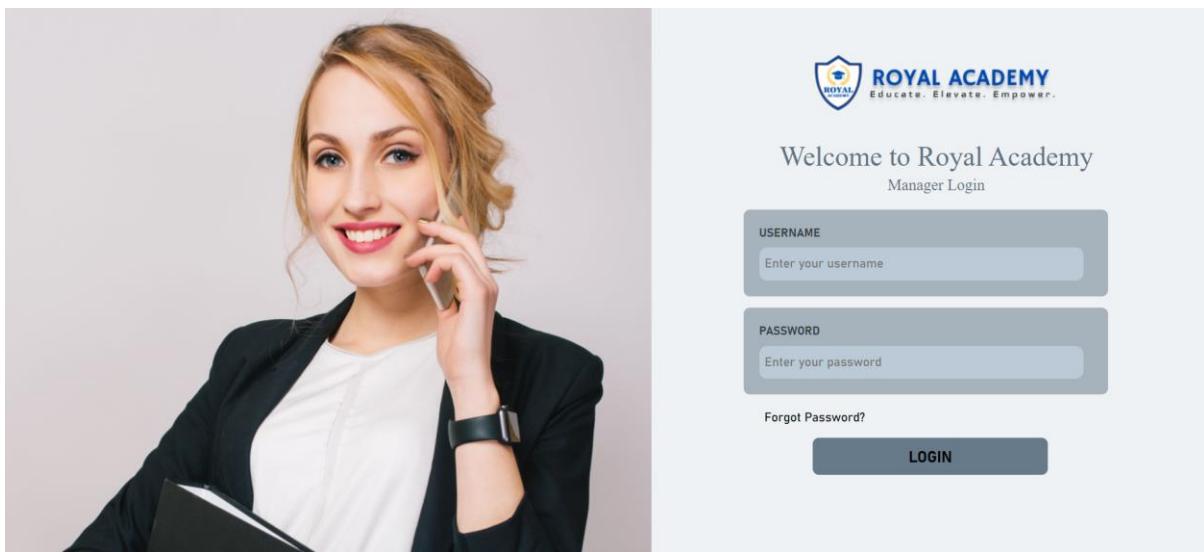
**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Welcome to Royal Academy

**Manager Login**

**Admin Login**

d. 9 – Manager/Admin portal



d. 10– Manager login

- [Dashboard](#)
- [My Classes](#)
- [Enrollments](#)
- [Subject](#)
- [Payment](#)
- [TimeTable](#)
- [Attendance](#)
- [Feedbacks](#)
- [Profile](#)
- [Salary](#)

ROYAL ACADEMY
  
Educate. Elevate. Empower.

Hello, Iosh  
Manager

#### Student Details

**Student count: 3**

Search...									
Student ID	Student Name	Email	Phone	Grade	Username	Gender	Parent name	Parent phonenumber	Security Answer
SID243380	Tishan Dinelka	tishan@gmail.com	775456892 10	tishan	Male	Dinelka	716589224	Gampaha	
SID241890	Ashan Gunathilaka	ashan@gmail.com	758956421 10	ashan	Male	None	0	None	
SID243692	Eshmika Hettiarachchi	eshmika@gmail.com	713280445 11	eshmika	Male	Iosh	716365807	Kiribathgoda	

#### Teacher Details

**Teacher count: 5**

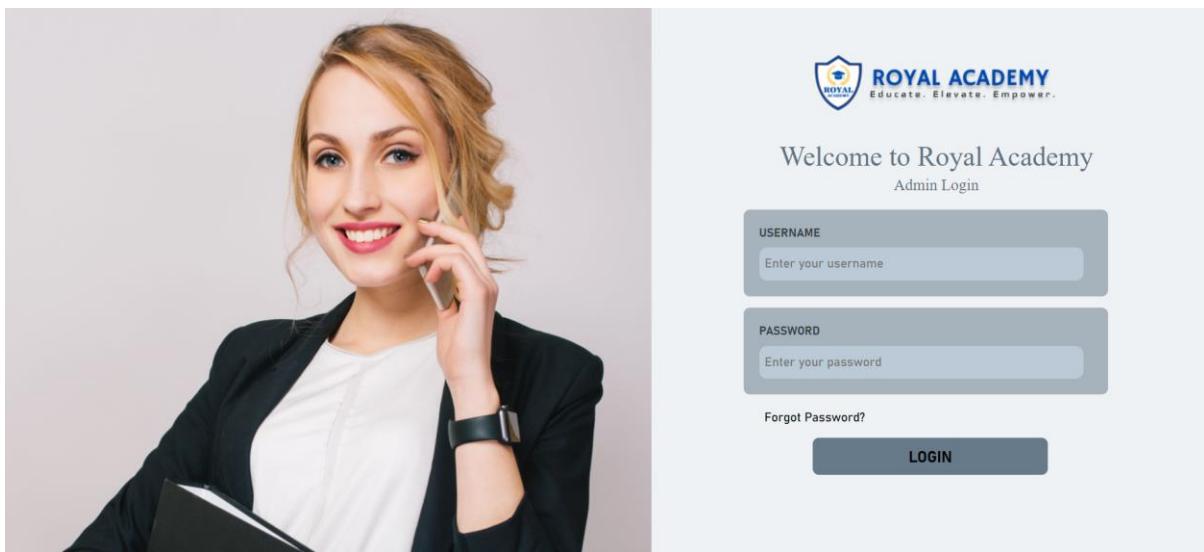
Student ID	Student Name	Email	Phone	Grade	Username	Gender	Parent name	Parent phonenumber	Security Answer
SID243380	Tishan Dinelka	tishan@gmail.com	775456892 10	tishan	Male	Dinelka	716589224	Gampaha	
SID241890	Ashan Gunathilaka	ashan@gmail.com	758956421 10	ashan	Male	None	0	None	
SID243692	Eshmika Hettiarachchi	eshmika@gmail.com	713280445 11	eshmika	Male	Iosh	716365807	Kiribathgoda	

#### Teacher Details

**Teacher count: 5**

Teacher ID	Teacher Name	Email	Phone	Username	Gender	Subject	Security Answer
TID241972	Eshmika Hettiarachchi	eshmika@gmail.com	713280445	eshmika	Male	ICT	Kiribathgoda
TID242154	Nirmala Athapaththu	nirmalaatapatpaththu@gmail.com	7100832457	nirmala	Female	Music	Colombo
TID241020	Amila Herath	amilaherath@gmail.com	702255011	amila	Male	History	Kottawa
TID248699	Waruni Gunathilak	warunigunathilaka@gmail.com	776452784	waruni	Female	Sinhala	Malabe
TID244002	Iosh Gunathilaka	iohs.gunathilaka@gmail.com	774024680	iohs	Male	Computer	Kiribathgoda

d. 11– Manager student and teacher details



d. 12– Admin login

The image shows the Admin profile dashboard. On the left is a sidebar with icons for Dashboard, My Classes, Lesson Materials, Payment, Profile, and Salary, along with a Logout button. The main area displays the User Profile for Eshmika Hettiarachchi, Admin. It includes a profile picture, the name "Eshmika Hettiarachchi Admin", and buttons for "Search users", "Add Teacher", "Add Manager", "Add Admin", and "Generate Report". Below this are sections for "Full name" (Eshmika Hettiarachchi), "Username" (eshmika), "Email Address" (eshmika2020@gmail.com), and "Phone Number" (716365807). The top right corner shows a greeting "Hello, Eshmika Hettiarachchi Admin" and a small profile picture.

d. 13– Admin profile dashboard

 Dashboard  
 My Classes  
 Lesson Materials  
 Payment  
 Profile  
 Salary  
  
Logout


**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Hello, Eshmika  
Hettiarachchi  
Admin

### Student Details

Student count: 3

Student ID	Student Name	Email	Phone	Grade	Username	Gender	Parent name	Parent phonenumber	Security Answer
SID243380	Tishan Dinelka	tishan@gmail.com	775456892 10	tishan	Male	Dinelka	716589224	Gampaha	<span style="background-color: #555; color: white; padding: 2px 5px; border-radius: 5px;">Update</span> <span style="background-color: red; color: white; padding: 2px 5px; border-radius: 5px;">Delete</span>
SID241890	Ashan Gunathilaka	ashan@gmail.com	758956421 10	ashan	Male	None	0	None	<span style="background-color: #555; color: white; padding: 2px 5px; border-radius: 5px;">Update</span> <span style="background-color: red; color: white; padding: 2px 5px; border-radius: 5px;">Delete</span>
SID243692	Eshmika Hettiarachchi	eshmika@gmail.com	713280445 11	eshmika	Male	Irosh	716365807	Kiribathgoda	<span style="background-color: #555; color: white; padding: 2px 5px; border-radius: 5px;">Update</span> <span style="background-color: red; color: white; padding: 2px 5px; border-radius: 5px;">Delete</span>

### Teacher Details

Teacher count: 5

Student ID	Student Name	Email	Phone	Grade	Username	Gender	Parent name	Parent phonenumber	Security Answer
SID243380	Tishan Dinelka	tishan@gmail.com	775456892 10	tishan	Male	Dinelka	716589224	Gampaha	<span style="background-color: #555; color: white; padding: 2px 5px; border-radius: 5px;">Update</span> <span style="background-color: red; color: white; padding: 2px 5px; border-radius: 5px;">Delete</span>
SID241890	Ashan Gunathilaka	ashan@gmail.com	758956421 10	ashan	Male	None	0	None	<span style="background-color: #555; color: white; padding: 2px 5px; border-radius: 5px;">Update</span> <span style="background-color: red; color: white; padding: 2px 5px; border-radius: 5px;">Delete</span>
SID243692	Eshmika Hettiarachchi	eshmika@gmail.com	713280445 11	eshmika	Male	Irosh	716365807	Kiribathgoda	<span style="background-color: #555; color: white; padding: 2px 5px; border-radius: 5px;">Update</span> <span style="background-color: red; color: white; padding: 2px 5px; border-radius: 5px;">Delete</span>

### Teacher Details

Teacher count: 5

Teacher ID	Teacher Name	Email	Phone	Username	Gender	Subject	Security Answer	
TID241972	Eshmika Hettiarachchi	eshmika@gmail.com	713280445	eshmika	Male	ICT	Kiribathgoda	<span style="background-color: #555; color: white; padding: 2px 5px; border-radius: 5px;">Update</span> <span style="background-color: red; color: white; padding: 2px 5px; border-radius: 5px;">Delete</span>
TID242154	Nirmala Athapaththu	nirmalaatapatththu@gmail.com	7100832457	nirmala	Female	Music	Colombo	<span style="background-color: #555; color: white; padding: 2px 5px; border-radius: 5px;">Update</span> <span style="background-color: red; color: white; padding: 2px 5px; border-radius: 5px;">Delete</span>
TID241020	Amila Herath	amilaherath@gmail.com	702255011	amila	Male	History	Kottawa	<span style="background-color: #555; color: white; padding: 2px 5px; border-radius: 5px;">Update</span> <span style="background-color: red; color: white; padding: 2px 5px; border-radius: 5px;">Delete</span>
TID248699	Waruni Gunathilaka	warunigunathilaka@gmail.com	776452784	waruni	Female	Sinhala	Malabe	<span style="background-color: #555; color: white; padding: 2px 5px; border-radius: 5px;">Update</span> <span style="background-color: red; color: white; padding: 2px 5px; border-radius: 5px;">Delete</span>

d. 14 – Admin student and teacher details with update delete

 Dashboard  
 My Classes  
 Lesson Materials  
 Payment  
 Profile  
 Salary  
  
Logout


**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Hello, Eshmika  
Hettiarachchi  
Admin

### Add Teacher

Teacher

Teacher ID

Full name

Username

Gender

Page | 9

Male Female

Email Address

Phone Number

Subject

Security Question - What city were you born in?

Password

Re-enter Password

Add User Cancel

d. 15– Admin add teacher

Hello, Eshmika Hettiarachchi Admin

ROYAL ACADEMY Educate. Elevate. Empower.

Generate Report

Select Month: ..... - - -

Generate

User Report for 2024-04

Download PDF

Student Name	Phone	Grade	User Name	Student ID	Gender
Tishan Dinelka	775456892	10	tishan	SID243380	Male
Ashan Gunathilaka	758956421	10	ashan	SID241890	Male
Eshmika Hettiarachchi	713280445	11	eshmika	SID243692	Male

Total Users: 3

d. 16– Generate Report (Admin)

## **Financial Management - IT22341136**

Sign in Royal Academy

localhost:3000/payonline/SB0210

Payment Form

Online

Bank Deposit

Dashboard

My Classes

Payment

TimeTable

Attendance

Q&A

Feedbacks

Profile

Logout

Customize

Payment Details

Enter IT Number :  
SID243380

Enter Description:  
History

Enter Date:  
05/14/2024

Enter Amount:  
1000.00

I accept the terms and conditions

Pay Now

### e. 1-Make Payment Online

Dashboard

My Classes

Payment

TimeTable

Attendance

Q&A

Feedbacks

Profile

Logout

ROYAL ACADEMY  
Educate. Elevate. Empower.

Hello, Tishan Dinelka  
Grade 10  
Student

Payment Form

Online

Bank Deposit

Payment Details

Enter IT Number:  
SID243380

Enter Account Name:  
Enter Name

Sign in Royal Academy

localhost:3000/paybank/SB0210

**Enter Name:**

**Enter Account Number:**  0000000000

**Enter Bank Name:**

**Enter Description:**  History

**Enter Date:**  05/14/2024

**Enter Amount:**  1000.00

**Choose File:**  No file chosen

I accept the terms and conditions

**Pay Now**

### e. 2-Make Payment Bank

Sign in Royal Academy

localhost:3000/viewonline

**ROYAL ACADEMY** Educate. Elevate. Empower.

Hello, Tishan Dinelka Grade 10 Student

**My Payments**

**Online** **Bank** **Cash**

Transactions ID	Description	Date	Amount	Status	Action
SID243380	Commerce	2024-05-04	1500.00	Approved	<b>Cancel</b> <b>Edit</b> <b>Delete</b>
SID243380	Commerce	2024-05-07	1500.00	Pending	<b>Cancel</b> <b>Edit</b> <b>Delete</b>

### e. 3-View Payment Online

The screenshot shows the Royal Academy student dashboard at [localhost:3000/viewbank](http://localhost:3000/viewbank). The left sidebar includes links for Dashboard, My Classes, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet, along with a Logout button. The top right corner displays a student profile for "Hello, Tishan Dinelka Grade 10 Student". The main content area features the "ROYAL ACADEMY Educate. Elevate. Empower." logo. Below it, a teal header bar says "My Payments". Underneath are three buttons: "Online", "Bank", and "Cash". A table lists two payment transactions:

Transactions ID	Account Name	Account Number	Bank Name	Description	Date	Amount	View	Status	Action
SID243380	Eshmika	123456	HNB	ICT	2024-04-21	1500.00	<button>view</button>	Approved	<button>Cancel</button> <button>Edit</button> <button>Delete</button>
SID243380	Asha	12345781	BOC	History	2024-05-07	1000.00	<button>view</button>	Pending	<button>Cancel</button> <button>Edit</button> <button>Delete</button>

e. 4-View Payment Bank

The screenshot shows the Royal Academy student dashboard at [localhost:3000/viewcash](http://localhost:3000/viewcash). The left sidebar and top right corner are identical to the previous screenshot. The main content area features the "ROYAL ACADEMY Educate. Elevate. Empower." logo. Below it, a teal header bar says "My Payments". Underneath are three buttons: "Online", "Bank", and "Cash". A table lists one payment transaction:

IT Number	Student Name	Description	Date	Amount	Status	Action
SID243380	Tishan	History	2024-05-07	1500.00	Pending	<button>Delete</button>

e. 5View Payment Cash

The screenshot shows the Royal Academy student dashboard. On the left is a sidebar with icons for Dashboard, My Classes, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet, along with a Logout button. The main area features the Royal Academy logo and a user profile for 'Hello, Tishan Dinelka Grade 10 Student'. A modal dialog box titled 'Delete Payment' asks 'Are you sure you want to delete the Payment Record?' with 'Yes, proceed!' and 'Cancel' buttons. Below the dialog is a table of payment transactions:

ID	Description	Date	Amount	Status	Action
SID243380	Commerce	2024-05-04	1500.00	Approved	<button>Cancel</button> <button>Edit</button> <button>Delete</button>
SID243380	Commerce	2024-05-07	1500.00	Pending	<button>Cancel</button> <button>Edit</button> <button>Delete</button>

e. 6-Delete Payments

The screenshot shows the Royal Academy student dashboard. The sidebar and user profile are identical to the previous screenshot. A modal dialog box titled 'Edit Payment' contains a 'Payment Details' form with fields for IT Number (SID243380), Description (Commerce), Date (05/07/2024), and Amount (1500.00). Below the form are 'Save' and 'Cancel' buttons.

e. 7-Update Payment

**Edit Payment**

**Payment Details**

Enter IT Number :

Enter Description:

Enter Date:

Enter Amount:

**Save**

**Cancel**

e. 8-Cancel Payment

**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Hello, Tishan Dineka  
Grade 10  
Student

**My Wallet**

**Student ID Number**

**Student Name**

**Wallet Number**

**Amount**

e. 9-Wallet

The screenshot shows the 'My Payments' section of the teacher financial dashboard. It displays a table of payment records:

Student IT Number	Date	Amount	Description	Type	Status
SID241890	2024-05-08	1500	ICT	Online	Pending
SID243380	2024-04-21	1500.00	ICT	Bank	Approved
SID243692	2024-05-08	1500.00	ICT	Bank	Pending
SID123456	2024-05-08	1000.00	ICT	Cash	Approved

e. 10-View Payments

The screenshot shows the manager financial dashboard. It features three main buttons in the center:

- Add a Payment
- View Payments
- Top up Wallet

e. 11-Fee Main

Sign in

Royal Academy

localhost:3000/mgpay

**Payment Form**

**Enter IT Number:**  
SID123456

**Enter Student Name:**  
Enter Name

**Enter Description:**  
Class Name

**Enter Date:**  
05/14/2024

**Enter Amount:**  
00 00

**Confirm**

Logout

e. 12-Add Payment

Sign in

Royal Academy

localhost:3000/mgview

**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Hello,  
Eshmika  
Hettiarachchi  
Manager

**Student Payments**

Student IT Number	Description	Date	Amount	Type	Status	Action
SID243380	Commerce	2024-05-07	1500.00	Online	Pending	<button>Edit</button> <button>Delete</button>
SID243380	History	2024-05-08	1000.00	Online	Pending	<button>Edit</button> <button>Delete</button>
SID243380	History	2024-05-08	1000.00	Online	Pending	<button>Edit</button> <button>Delete</button>
SID243380	History	2024-05-08	1000	Online	Pending	<button>Edit</button> <button>Delete</button>

Logout

e. 13-View Payment

The screenshot shows a web-based application for the Royal Academy. On the left, there's a sidebar with various navigation links: Dashboard, My Classes, Enrollments, Subject, Payment, TimeTable, Attendance, Feedbacks, Profile, and Salary. A Logout button is also present. The main content area features the Royal Academy logo and a user profile for 'Hello, Eshmika Hettiarachchi Manager'. In the center, a modal dialog box is displayed with a question mark icon and the title 'Delete Payment'. The message asks, 'Are you sure you want to delete the Payment Record?'. Two buttons are available: 'Yes, proceed!' (blue) and 'Cancel' (red). Below the modal, a table lists payment records for student SID243380. The table columns include Student IT Number, Description, Date, Amount, Status, and Action (Edit or Delete). The first three rows show 'History' payments of 1000.00 each, all marked as 'Pending'. The fourth row shows a payment of 1000, also pending.

e. 14-Delete Payment

This screenshot shows the 'Add a Payment' form. The form fields are as follows: IT Number (SID243380), Description (History), Date (05/08/2024), Amount (1000.00), Type (Online), and Status (Pending). At the bottom of the form are two buttons: 'Save' and 'Cancel'.

e. 15-Edit Payment

The screenshot shows a web browser window titled "Royal Academy" at "localhost:3000/ManagerWallet". On the left, there is a sidebar with various navigation links: Dashboard, My Classes, Enrollments, Subject, Payment, TimeTable, Attendance, Feedbacks, Profile, Salary, and Logout. The main content area has a light blue header bar with the word "Wallet". Below it, there is a search form with a text input field containing "SID243380" and a "Search" button. To the right of the search form is a larger, semi-transparent overlay. This overlay contains three input fields: "Enter IT Number:" with "SID243380", "Enter wallet Id:" with "WID2370", and "Enter Date:" with "05/14/2024". Below these fields is another input field for "Enter Amount:" with "1000.00". At the bottom of this overlay is a "Confirm" button.

e. 16-Top Up Wallet

The screenshot shows a web browser window titled "Royal Academy" at "localhost:3000/adgenerate". On the left, there is a sidebar with links: Dashboard, My Classes, Lesson Materials, Payment, Profile, Salary, and Logout. The main content area features the "ROYAL ACADEMY" logo with the tagline "Educate. Elevate. Empower.". In the top right corner, there is a user profile with the name "Hello, Eshmika Hetliarachchi Admin" and a small profile picture. The central part of the screen has a large blue rectangular background with a white "Generate Report" button in the center. Above the button, the text "Select Month" is followed by a dropdown menu showing "April 2024". Below the button is a red "Generate" button. The URL at the bottom of the page is "localhost:3000/adreport?month=2024-04".

e. 17-Generate Report

Sign in Royal Academy localhost:3000/adreport?month=2024-05

Dashboard My Classes Lesson Materials Payment Profile Salary Logout

### ROYAL ACADEMY Educate. Elevate. Empower.

Hello, Eshmika Hettiarachchi Admin

#### My Payments for 2024-05

Download PDF

Student ID Number	Description	Date	Amount	Type	Status
SID243380	Commerce	2024-05-04	1500.00	Online	Approved
SID243380	Commerce	2024-05-07	1500.00	Online	Pending
SID243380	History	2024-05-08	1000.00	Online	Pending
SID243380	History	2024-05-08	1000.00	Online	Pending
SID243380	History	2024-05-08	1000	Online	Pending
SID243380	Science	2024-05-08	1000	Online	Pending

Sign in Royal Academy localhost:3000/adreport?month=2024-05

Dashboard My Classes Lesson Materials Payment Profile Salary Logout

SID243380	English	2024-05-08	3000	Online	Pending
SID243380	Maths	2024-05-08	1300	Online	Pending
SID241890	ICT	2024-05-08	1500	Online	Pending
SID243380	History	2024-05-07	1000.00	Bank	Pending

### Payment Statistics

Total Students: 16  
Approved Payments: 3  
Rejected Payments: 0  
Pending Payments: 13  
Online Payments: 10  
Bank Payments: 3  
Cash Payments: 3  
Total Amount: 21500.00

e. 18-Report

## Enrollment and Attendance Management – IT22004840

The screenshot shows the Royal Academy's enrollment management interface. On the left, a sidebar lists various student management options: Dashboard, My Classes, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet. A 'Logout' button is also present. The main content area features the Royal Academy logo and a success message: 'Student enrolled successfully!'. It displays a table of available classes:

Class ID	Subject	Teacher	Class fee	Action
SB0110	ICT	Kasun Amarasiri	1500.00	Enroll
SB0111	ICT	Kasun Amarasiri	1500.00	Enroll
SB0210	History	Amila Hearth	1000.00	Enroll
SB0211	History	Amila Hearth	1000.00	Enroll
SB0310	Sinhala	Waruni Gunathilak	1200.00	Enroll
SB0311	Sinhala	Waruni Gunathilak	1200.00	Enroll
SB0410	Science	Sanath Irugal Bandara	1000.00	Enroll

A user profile on the right indicates: Hello, Eshmika Hettiarachchi Grade 11 Student.

f. 1– Student self enroll

The screenshot shows the Royal Academy's attendance management interface. The sidebar includes: Dashboard, My Classes, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet. A 'Logout' button is also present. The main content area features the Royal Academy logo and a search bar for 'View Attendance by Class' and 'View Attendance By Date'. It displays a table of attendance records:

Class ID	Subject	Date	Time	Class ID	Subject	Date	Time
SB0111	ICT	2024-04-23T18:28:10.642Z	23:58:10	SB0111	ICT	2024-04-23T18:28:10.642Z	23:58:10
SB0211	History	2024-05-05T11:34:08.732Z	17:4:8	SB0211	History	2024-05-05T11:34:08.732Z	17:4:8
SB0411	Science	2024-05-05T11:31:57.463Z	17:1:57	SB0411	Science	2024-05-05T11:31:57.463Z	17:1:57
SB0211	History	2024-05-05T11:24:47.648Z	16:54:47	SB0211	History	2024-05-05T11:24:47.648Z	16:54:47
SB0211	History	2024-05-07T10:50:02.755Z	16:20:2	SB0211	History	2024-05-07T10:50:02.755Z	16:20:2
SB0510	Maths	2024-05-07T10:45:54.575Z	16:15:54	SB0510	Maths	2024-05-07T10:45:54.575Z	16:15:54
C001	Mathematics	2024-04-19T08:58:27.765Z	14:28:27	C001	Mathematics	2024-04-19T08:58:27.765Z	14:28:27
C001	Mathematics	2024-04-19T08:58:24.304Z	14:28:24	C001	Mathematics	2024-04-19T08:58:24.304Z	14:28:24

A user profile on the right indicates: Hello, Eshmika Hettiarachchi Grade 11 Student.

f. 2– Student View Attendance

The screenshot shows the Royal Academy teacher dashboard. On the left, a sidebar lists various menu items: Dashboard, My Classes, Lesson Material, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Salary. A 'Logout' button is at the bottom of the sidebar.

The main content area has the 'ROYAL ACADEMY Educate. Elevate. Empower.' logo at the top. It displays the title 'Attendance' and a search bar with 'View Attendance' placeholder text. Below the search bar are two input fields: one containing 'SB0210' and another containing 'tishan'.

A table titled 'Attendance' lists student records:

Class ID	Student ID	Date	Time
SB0210	tishan	2024-05-06T03:21:46.930Z	8:51:46
SB0210	tishan	2024-05-05T11:34:02.277Z	17:4:2

At the bottom of the table are two buttons: 'Download Filtered Attendances Report' and 'Download All Attendances Report'.

In the top right corner, a user profile is shown with the text 'Hello, Eshmika Hettiarachchi Teacher' and a small circular profile picture.

f. 3 – Teacher View Attendance

The screenshot shows the Royal Academy manager dashboard. The sidebar includes: Dashboard, My Classes, Enrollments, Subject, Payment, TimeTable, Attendance, Feedbacks, Profile, and Salary. A 'Logout' button is at the bottom.

The main area features the 'ROYAL ACADEMY Educate. Elevate. Empower.' logo. It displays a form for adding an enrollment:

Student ID	tishan
Class ID	SB0210
Teacher ID	TID241222
Subject	History
Teacher	Amila Hearth
Grade	10

Below the form is a blue 'Submit' button and a 'Back' link.

In the top right corner, a user profile is shown with the text 'Hello, Irosh Manager' and a small circular profile picture.

f. 4 Figure 10.34 – Manager Add Enroll



**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Hello, Irosh  
Manager 

**Enrollments**

Search by Studentid , class Id , teacher id or Subject...

Student ID	Class ID	Teacher ID	Subject	Grade	Action
IT22004851	C011	T078	music	12	<button>Delete</button>
eshmika	SB0211	TID241222	History	11	<button>Delete</button>
eshmika	SB0110	TID241111	ICT	10	<button>Delete</button>
tishan	SB0110	TID241111	ICT	10	<button>Delete</button>
eshmika	SB0210	TID241222	History	10	<button>Delete</button>
eshmika	SB0510	TID247845	Maths	10	<button>Delete</button>
stu123	cla456	teach789	Mathematics	10	<button>Delete</button>

[Logout](#)

f. 5 – Manager View Enroll



**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Hello, Irosh  
Manager 

**Attendance**

[Download PDF](#)

**Mark Attendance**

Search...

Student ID	Class ID	Teacher ID	Subject	Grade	Attendance Mark
IT22004851	C011	T078	music	12	<button>Mark</button>
eshmika	SB0211	TID241222	History	11	<button>Mark</button>
eshmika	SB0110	TID241111	ICT	10	<button>Mark</button>
tishan	SB0110	TID241111	ICT	10	<button>Mark</button>
eshmika	SB0210	TID241222	History	10	<button>Mark</button>
eshmika	SB0510	TID247845	Maths	10	<button>Mark</button>

**View Attendance**

mm/dd/yyyy

Student ID	Class ID	Date	Time
IT22004841	C011	2024-05-06T03:21:57.586Z	8:51:57
tishan	SB0210	2024-05-06T03:21:46.930Z	8:51:46
IT22004851	C011	2024-04-23T18:28:08.141Z	23:58:8
IT22004841	C011	2024-04-23T18:28:05.595Z	23:58:5
IT55004846	C010	2024-04-23T18:28:16.629Z	23:58:16
eshmika	SB0111	2024-04-23T18:28:10.642Z	23:58:10
IT55004846	C010	2024-04-19T14:20:06.635Z	19:50:6

f. 6 – Manager Mark and View Attendance

## Class Management – IT22329424

The screenshot shows the Royal Academy student dashboard. On the left is a sidebar with icons for Dashboard, My Classes, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet. A 'Logout' button is at the bottom of the sidebar. The main area has a header with the Royal Academy logo and the text 'Hello, Tishan Dinelka Grade 10 Student'. Below this is a section titled 'My Subjects' with a table:

Subject Name	Actions
ICT	<button>View Class</button>
Commerce	<button>View Class</button>

g. 1– Enrolled student subjects

The screenshot shows the Royal Academy teacher dashboard. On the left is a sidebar with icons for Dashboard, My Classes, Lesson Material, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Salary. A 'Logout' button is at the bottom of the sidebar. The main area has a header with the Royal Academy logo and the text 'Hello, Eshmika Hettiarachchi Teacher'. Below this is a form titled 'Add Additional Classes' with fields for Teacher (Eshmika Hettiarachchi), Class Id, Teacher Id (TID241972), Grade, Date1 (dd/mm/yyyy), Subject (ICT), and buttons for Cancel, Request, and Request A Schedule.

g. 2– Teacher Add Additional Classes

The screenshot shows the Royal Academy Teacher Dashboard. On the left, there is a sidebar with various menu items: Dashboard, My Classes, Lesson Material, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Salary. Below the sidebar is a 'Logout' button. At the top right, there is a welcome message 'Hello, Eshmika Hettiarachchi' followed by the title 'Teacher' and a small profile picture. The main content area is titled 'Add Classes'. It contains several input fields: 'Teacher' (Eshmika Hettiarachchi), 'Class Id' (empty), 'Teacher Id' (TID241972), 'Subject' (ICT), 'Time' (empty), 'Date' (empty), and 'Grade' (empty). At the bottom of the form are two buttons: 'Cancel' (red) and 'Save' (green).

g. 3 – Teacher Add Classes

The screenshot shows the Royal Academy Teacher Dashboard. The sidebar and top right corner are identical to the previous screenshot. The main content area is titled 'Edit Class'. It contains the same set of input fields as the 'Add Classes' form: 'Teacher' (Eshmika Hettiarachchi), 'Class Id' (10), 'Teacher Id' (TID241972), 'Subject' (ICT), 'Time' (2.00p.m-4.00p.m), 'Date' (Monday), and 'Grade' (8). The 'Cancel' and 'Save' buttons are at the bottom.

g. 4 – Teacher Edit Class

**My Classes**

Teacher	Class Id	Teacher Id	Subject	Time	Date	Grade	Edit	Delete
Eshmika Hettiarachchi	10	TID241972	ICT	2.00p.m-4.00p.m	Monday	8	<button>Edit</button>	<button>Delete</button>
Eshmika Hettiarachchi	10	TID241972	ICT	2.00p.m-4.00p.m	Tuesday	8	<button>Edit</button>	<button>Delete</button>
Eshmika Hettiarachchi	10	TID241972	ICT	4.00p.m-6.00p.m	Wednesday	9	<button>Edit</button>	<button>Delete</button>

**Add Classes**

**View Additional classes**

g. 5 – Teacher My Classes

**Request A Schedule**

**Teacher**  
Eshmika Hettiarachchi

**Class Id**

**Teacher Id**  
TID241972

**Grade**

**Date 1**  
dd/mm/yyyy

**Date 2**  
dd/mm/yyyy

**Date 3**  
dd/mm/yyyy

**Class Id**

**Teacher Id**  
TID241972

**Grade**

**Date 1**  
dd/mm/yyyy

**Date 2**  
dd/mm/yyyy

**Date 3**  
dd/mm/yyyy

**Date 4**  
dd/mm/yyyy

**Subject**  
ICT

**Cancel**

**Request**

g. 6 – Teacher Request Schedule

**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Hello, Eshmika Hettiarachchi  
Teacher



Dashboard

My Classes

Lesson Material

Payment

TimeTable

Attendance

Q&A

Feedbacks

Profile

Salary

**View Additional Classes**

Teacher	Grade	Subject	Date1	Date2	Date3	Date4	Status
Eshmika Hettiarachchi	7	ICT	2024-05-14				Rejected
Eshmika Hettiarachchi	9	ICT	2024-05-20				Approved
Eshmika Hettiarachchi	10	ICT	2024-05-22				Pending
Eshmika Hettiarachchi	9	ICT	2024-05-14	2024-05-15	2024-05-16	2024-05-17	Pending
Eshmika Hettiarachchi	6	ICT	2024-05-03	2024-05-10	2024-05-17	2024-05-24	Pending

Add Additional Class

My Classes

**Logout**

g. 7 – Teacher View Additional Classes

**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Hello, Eshmika Hettiarachchi  
Manager



Dashboard

My Classes

Enrollments

Subject

Payment

TimeTable

Attendance

Feedbacks

Profile

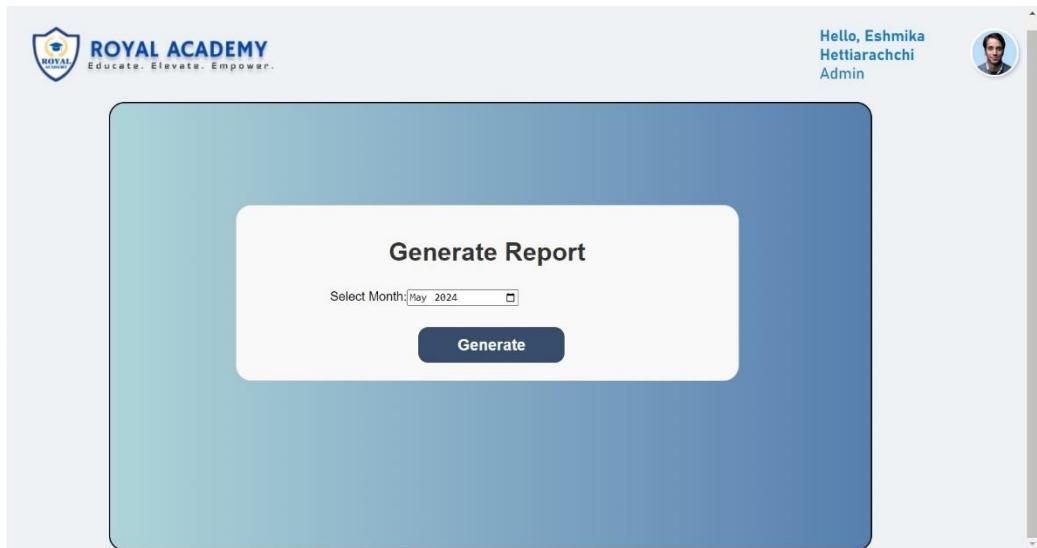
Salary

**Requested Additional Classes**

Teacher	Grade	Subject	Date 1	Date 2	Date 3	Date 4	Action
Eshmika Hettiarachchi	7	ICT	2024-05-14				<b>Edit</b> <b>Delete</b>
Eshmika Hettiarachchi	10	ICT	2024-05-22				<b>Edit</b> <b>Delete</b>
Waruni Gunathilak	6	Sinhala	2024-05-10				<b>Edit</b> <b>Delete</b>
Eshmika Hettiarachchi	9	ICT	2024-05-14	2024-05-15	2024-05-16	2024-05-17	<b>Edit</b> <b>Delete</b>
Eshmika Hettiarachchi	6	ICT	2024-05-03	2024-05-10	2024-05-17	2024-05-24	<b>Edit</b> <b>Delete</b>

**Logout**

g. 8 – Manager View Requested Classes



This screenshot shows the "Class Report for 2024-05" page. At the top, there's a "Download PDF" link. Below it is a table with columns: Teacher, Grade, Subject, Date1, and Status. The table contains three rows of data:

Teacher	Grade	Subject	Date1	Status
Eshmika Hettiarachchi	7	ICT	2024-05-14	Rejected
Eshmika Hettiarachchi	10	ICT	2024-05-22	Pending
Waruni Gunathilak	6	Sinhala	2024-05-10	Pending

**Total Classes: 3**

g. 9—Admin Generate Report

## Lesson Material Management - IT22902702

The screenshot shows the Royal Academy student dashboard. On the left, a sidebar lists navigation options: Dashboard, My Classes, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet. A "Logout" button is at the bottom. The main area has a light blue header bar with the Royal Academy logo and the text "ROYAL ACADEMY Educate. Elevate. Empower.". To the right of the header is a user profile section with the text "Hello, Tishan Dinelka Grade 10 Student" and a small profile picture. Below the header, a "Class Details" section shows "ICT - Grade 10" and "Teacher: Eshmika Hettiarachchi". A "Notices" section contains two entries: one from May 7 about a schedule change and one from May 8 about an assignment deadline extension. Both notices include a brief description and a "View Material" link.

This screenshot shows the Royal Academy student dashboard with a similar layout to the first one. The sidebar includes: Dashboard, My Classes, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Wallet, with a "Logout" button. The main area features a "Lesson Materials" section with three items: "Information and Communication Technology" (date: 2024-05-07), "Fundamentals of a computer system" (date: 2024-05-07), and "Web Designing Using Multimedia" (date: 2024-05-14). Each item has a "View Material" and "Download" button. A search bar labeled "Search Materials..." is located above the material list. The "Notices" section is identical to the one in the first screenshot.

h. 1 – My Class Page with Lesson Materials and Class Notices (Student View)

- Dashboard
- My Classes
- Lesson Material
- Payment
- TimeTable
- Attendance
- Q&A
- Feedbacks
- Profile
- Salary

Logout



Hello,  
Eshmika  
Hettiarachchi  
Teacher



## Class Details

ICT

Teacher: Eshmika Hettiarachchi

## Notices

[Add New Notice](#)

### Grade 10 Notices

2024-05-07

#### Change in Tomorrow's Schedule

Hello Everyone, Tomorrow's class changed to guest speaker session, same time, seminar room. See you there!

- Dashboard
- My Classes
- Lesson Material
- Payment
- TimeTable
- Attendance
- Q&A
- Feedbacks
- Profile
- Salary

Logout

## Notices

[Add New Notice](#)

### Grade 10 Notices

2024-05-07

#### Change in Tomorrow's Schedule

Hello Everyone, Tomorrow's class changed to guest speaker session, same time, seminar room. See you there!

[Edit Notice](#)

[Delete Notice](#)

2024-05-08

### Assignment Deadline Extension

Dear Students, Assignment deadline extended to Friday, May 17th, 11:59 PM. Use the extra time wisely!

[Edit Notice](#)

[Delete Notice](#)

The screenshot shows a teacher's dashboard with a sidebar on the left containing links for Dashboard, My Classes, Lesson Material, Payment, TimeTable, Attendance, Q&A, Feedbacks, Profile, and Salary. A Logout button is also present. The main content area is titled "Lesson Materials" and features a "Add New Material" button. A search bar labeled "Search Materials..." is at the top right. Below it, a section for "Grade 9 Materials" is shown, dated 2024-05-08, with a topic titled "Preparation of Computer Specifications". It includes a brief introduction, four buttons for "View Material", "Download", "Edit Material", and "Delete Notice", and a note about the date. Another section for "Electronic Spreadsheets and Programming" is also listed with similar buttons.

h. 2-My Class Page with Lesson Materials and Class Notices with All Grades(Teacher View)

The screenshot shows a modal dialog titled "Add Notice". It contains fields for "Enter Grade:" (a dropdown menu with "Select" option), "Notice Topic:" (an input field with placeholder "Enter topic"), "Date:" (an input field with "05/14/2024" and a calendar icon), and "Description:" (a large input field with placeholder "Enter description"). At the bottom are two buttons: "Create" (in blue) and "Cancel" (in grey).

h. 3-Add Class Notice Page (Teacher View)

The screenshot shows a modal window titled "Lesson Material Upload". At the top, there is a large input field with a dashed border labeled "Drag and Drop Files Here" and a "Choose File" button below it. Below this is a section titled "Lesson Material Details" containing the following fields:

- Enter Grade: A dropdown menu with "Select" as the current value.
- Topic: An input field with "Enter topic" placeholder text.
- Date: A date input field showing "05/14/2024" with a calendar icon to its right.
- File Type: A dropdown menu with "Select" as the current value.
- Description: A text area with "Enter description" placeholder text.

At the bottom of the modal are two buttons: a blue "Upload" button on the left and a dark grey "Cancel" button on the right.

h. 5 – Add Lesson Materials Page (Teacher View)

The screenshot shows a modal window titled "Edit Notice". It contains the following fields:

- Notice Topic: An input field with "Change in Tomorrow's Schedule" placeholder text.
- Date: A date input field showing "05/07/2024" with a calendar icon to its right.
- Description: A text area with "Hello Everyone, Tomorrow's class changed to guest speaker session, same time, seminar" placeholder text.

At the bottom of the modal are two buttons: a blue "Edit" button on the left and a dark grey "Cancel" button on the right.

h. 4 – Edit Class Notice Page (Teacher View)

**Edit Lesson Material**

Topic:

Date:  File Type:

Description:

**Save** **Cancel**

h. 6 – Edit Lesson Material Page (Teacher View)

**ROYAL ACADEMY**  
Educate. Elevate. Empower.

Hello,  
Eshmika  
Hettiarachchi  
Admin

**Generate Report**

Select Month:

**Generate**

h. 7 – Generate Report Page (Admin View)

## Lesson Report for 2024-05

[Download PDF](#)

Grade	Subject	Teacher	Date	Topic	File Type
11	ICT	Eshmika Hettiarachchi	2024-05-05	Web Designing Using Multimedia	pdf
11	History	Amila Herath	2024-05-05	Establishment of British Power in Sri Lanka	pdf
10	ICT	Eshmika Hettiarachchi	2024-05-07	Information and Communication Technology	pdf
10	ICT	Eshmika Hettiarachchi	2024-05-07	Fundamentals of a computer system	pdf
10	History	Amila Herath	2024-05-07	Sources of Studying History	pdf
11	History	Amila Herath	2024-05-07	National Renaissance in Sri Lanka	image
10	Commerce	Jagath Silva	2024-05-08	neww	image
9	ICT	Eshmika Hettiarachchi	2024-05-08	Preparation of Computer Specifications	pdf
9	ICT	Eshmika Hettiarachchi	2024-05-08	Electronic Spreadsheets and Programming	pdf
11	ICT	Eshmika Hettiarachchi	2024-05-08	Information and Communication technology and Society	image
10	ICT	Eshmika Hettiarachchi	2024-05-14	Web Designing Using Multimedia	pdf

### Lessons Statistics

Total Lessons: 11

ICT Lessons: 7

History Lessons: 3

Commerce Lessons: 1

*h. 8– Generated Report Page (Admin View)*

# CHAPTER 4 - TESTING

## TEST CASES AND RESULTS

### Q&A and Feedback Management – IT22001184

*Table 11 - Test case for add question*

<b>Test case ID:</b> QMS_002	<b>Test designed by:</b> Samudra
<b>Test title:</b> Test the Question-and-Answer Function in Institute Management System	<b>Test designed day:</b> 18/ 04 / 2024
<b>Test priority (High/Medium/Low):</b> Medium	<b>Test executed by:</b> Samudra
<b>Module name:</b> Add question	<b>Test executed day:</b> 20/ 04 / 2024
<b>Description:</b> Add questions to teachers to get solutions for subject related questions	
<b>Dependencies (if there are any):</b> User must be logged in as a student	
<b>Test steps:</b> 1. Upon successful login, locate and select the "Q & A" option on the navigation. 2. The student then clicks on the “Add question” button. 3. Fill the question form with valid details. (Subject Name, Teacher, Question) 4. The student clicks on the “Submit” button. 5. System shows the alert as “Question submitted” 6. When the student clicks “ok” on the alert, the student prompts to the “Q & A” page.	

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)	Comments
QMS_002	Subject Name: Math Teacher: Senaka Perera Question: What is $2^2$ ?	Display “Question Submitted” message.	Display “Question Submitted” message.	Pass	Successfully submitted question.
QMS_002	Subject Name: Science Teacher: Question: What are atoms?	Display “Question Submitted” message.	Display “ Fill required fields” message.	Fail	Error in submitting questions

## **Salary Management - IT22365750**

*Table 12 - Test case for Add salary*

<b>Test case ID:</b> SMS_001	<b>Test designed by:</b> Nimanji
<b>Test title:</b> Test the Salary Function in Salary Management System	<b>Test designed day:</b> 18/04/2024
<b>Test priority (High/Medium/Low):</b> High	<b>Test executed by:</b> Nimanji
<b>Module name:</b> Add salary	<b>Test executed day:</b> 20/04/2024
<b>Description:</b> Create salary to do teacher monthly salary.	
<b>Dependencies (if there are any):</b> User must be logged in as the manager	
<b>Test steps:</b> <ol style="list-style-type: none"> <li>1. Navigate to login page</li> <li>2. Select login as manager</li> <li>3. Login providing valid username and password</li> <li>4. Select the “Add Salary” button.</li> <li>5. Fill in the form with valid salary details. (Teacher Name, Teacher ID, Subject Name, Grade, Attend Students, Free card amount)</li> <li>6. Upload the salary deposit proof slip.</li> <li>7. Click the “Save and Submit” button.</li> <li>8. Display “Successful” message.</li> </ol>	

<b>Test ID</b>	<b>Test Inputs</b>	<b>Expected Output</b>	<b>Actual Output</b>	<b>Result (Pass/Fail)</b>	<b>Comments</b>
SMS_001	Teacher Name: Nadika Hewage Teacher ID: TID241234 Subject Name: Science Grade: 6 Attend Students: 100 Free card amount: 1000.00	Display Message “Successful”	Display Message “Successful”	Pass	
SMS_001	Teacher Name: Senaka Perera Teacher ID: TID247536 Subject Name: Maths Grade: 10 Attend Students: Free card amount: 2500.00	Display Message “Successful”	Error message showing ‘Please fill out Attend Students field.’	Fail	

## **Timetable Management - IT22923288**

*Table 13-Test case for Timetable Management*

Test Case ID: RMS 002	Test designed by: Dinushanka
Test Title: Add new class time	Test designed day: 10.04.2024
Test Priority: High	Test executed by: Dinushanka
Module Name: Timetable Management	Test executed day: 11.04.2024
Description: Managers add new class time to timetable	
Preconditions: Manager must be login into the system	
Dependencies: none	
<ol style="list-style-type: none"><li>1. Login to the system as a manager</li><li>2. Navigate to the "timetable management" section.</li><li>3. Locate the option to add a new class.</li><li>4. Click on the "Add New Class Time" button.</li><li>5. Fill in the necessary details for the new class.</li><li>6. Click the Save button.</li></ol>	

Test ID	Test Input	Expected Output	Actual Output	Result (Pass/Fail)
RMS 002	Valid Date	System should verify the entered date and save the details successfully	Save details successfully and new class time added.	Pass
RMS 002	Invalid Time	System should verify the entered date and save the details successfully	Save details successfully and new class time added.	Fail

## User Management – IT22004390

*Table 14-Test case for User Registration*

<b>Test case ID:</b> UMF_001	<b>Test designed by:</b> Eshimka
<b>Test title:</b> Test the Student Registration Function in Institute Management System	<b>Test designed day:</b> 18/04/2024
<b>Test priority (High/Medium/Low):</b> High	<b>Test executed by:</b> Eshmika
<b>Module name:</b> Student register to the system	<b>Test executed day:</b> 20/04/2024
<b>Description:</b> Verify the functionality to register students in the system.	
<b>Dependencies (if there are any):</b> Student visit to the system.	
<b>Test steps:</b> 1. Student visit to website 2. Student clicks the “Student portal” 3. Student clicks “New user” button 4. Student redirect into the registration form 5. Student enter the personal details. (Full Name, Email, Grade, Username, Password, Reenter - Password) 6. Student clicks “Signup” button 7. System shows “Registered successfully” message to the student. 8. System redirects to home page	

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)	Comments
UMF_001	Full Name: Amaya Perera Email: amayaperera@gmail.com Grade: 10 Username: Amaya Password: amaya@123 Reenter – Password: amaya@123	Direct to the ‘Login Home page’ and display success message.	Direct to the ‘Login Home page’ and display success message.	pass	
UMF_001	Full Name: Amaya Perera Email: Grade: 10 Username: Amaya Password: amaya@123 Reenter – Password: amaya@123	Error message showing ‘Please fill out this field’	Direct to the ‘Logging Home page’ and display success message	Fail	
UMF_001	Full Name: Kasun Herath Email: amayaperera@gmail.com Grade: 9 Username: Kasun	Error message showing ‘This email is already used’	Direct to the ‘Logging Home page’ and display success message	Fail	

	Password: kasun#22 Reenter – Password: kasun#22				
UMF_001	Full Name: Amal Gamage Email: kasunherath@gmail.com Grade: 10 Username: Kasun Password: KH159 Reenter – Password: KH159	Error msg showing ‘This username is already used’	Direct to the ‘Loging Home page’ and display success message	Fail	

## **Financial Management - IT22341136**

*Table 15-test case Financial Management*

<b>Test case ID:</b> FMF_001	<b>Test designed by:</b> Ashan				
<b>Test title:</b> Test the Financial Function in Institute Management System	<b>Test designed day:</b> 18/04/2024				
<b>Test priority (High/Medium/Low):</b> High	<b>Test executed by:</b> Ashan				
<b>Module name:</b> Make payment	<b>Test executed day:</b> 20/04/2024				
<b>Description:</b> Make payments for the classes to enroll.					
<b>Dependencies (if there are any):</b> Users must be logged into the system as students.					
<b>Test steps:</b> 1. Student navigates to home page. 2. Student select “Payment” option. 3. Student select payment type. (Online, Bank deposit, Cash) 4. Student fill the form with valid payment details. (Account Name, Account Number, Bank Name, Slip Terms and Conditions) 6. Student agree with Terms and Conditions. 6. Student confirms the payment by clicking “Confirm” button. 7. The system directs to the "My Classes" page.					
<b>Test ID</b>	<b>Test Inputs</b>	<b>Expected Output</b>	<b>Actual Output</b>	<b>Result (Pass/Fail)</b>	<b>Comments</b>
FMF_001	Account Name: Sarath Bandara Account Number: 11221546 Bank Name: BOC	Display Message “Successful”	Display Message “Successful”	Pass	

	Slip: Uploaded Terms and Conditions: Check				
FMF_001	Account Name: Nimal Epa Account Number: 78541269 Bank Name: HNB Slip: Not Uploaded Terms and Conditions: Check	Display Message “Successful”	Error message showing ‘Please upload Bank Slip’	Fail	

## **Enrollment and Attendance Management - IT22004840**

*Table 16-Testcase for enrollments*

<b>Test Case ID:</b> ENTS 001	<b>Test designed by:</b> Sasindu
<b>Test Title:</b> Student Enroll to New Class	<b>Test designed day:</b> 20.04.2024
<b>Test Priority:</b> High	<b>Test executed by:</b> Sasindu
<b>Module Name:</b> Enroll Management	<b>Test executed day:</b> 21.04.2024
<b>Description:</b> Student Enroll To New Class	
<b>Preconditions:</b> Student must be login into the system	
1. Login to the system as a student . 2. Navigate to the “Enrollment management” section. 3. Click on the "Enroll" button.	

Test ID	Test Input	Expected Output	Actual Output	Result (Pass/Fail)
ENTS 001	Enroll in to a pre-enrolled class.	The system should check if the data has already been inserted and give a notification saying "You are already in that class."	notification "You are already in that class."	Pass
ENTS 001	Enroll to class	The system should check whether the data has been previously inserted or not and give a notification saying "You are enrolled in the class."	Notification: Enrollment successful.	Pass

## **Class Management - IT22329424**

*Table 17 - Testcase for Class Management*

<b>Test Case ID:</b> RMS 001	<b>Test designed by:</b> G A V Bimsara
<b>Test Title:</b> Add Class	<b>Test designed day:</b> 15.04.2024
<b>Test Priority:</b> High	<b>Test executed by:</b> G A V Bimsara
<b>Module Name:</b> Class Management	<b>Test executed day:</b> 16.04.2024
<b>Description:</b> Teachers add class to schedule	
<b>Preconditions:</b> Teacher must be login into the system	
<b>Dependencies:</b> User must be logged in as Teacher	
1 .Login to the system as a teacher 2. Navigate to the “Home page” section. 3. Locate the option to My classes. 4. Click on the "Add Class" button. 5. Fill in the necessary details for the new class. 6. Click the Save button.	

Test ID	Test Input	Expected Output	Actual Output	Result (Pass/Fail)
RMS 001	Teacher: “Eshmika” Classid: ”12” Teacherid: ”2” Subject: “Maths” Time: “6.00p.m-8.00p.m” Date: “Monday” Grade: “10”	Display Message “Successfull”	Display Message “Successfull”	Pass
RMS 001	Teacher: “Namali” Classid: ”12” Teacherid: ”2” Subject: “Maths” Time: “6.00p.m-8.00p.m” Date: Grade: “10”	Display Message “Successfull”	“Please fill out Date field” Error Message	Fail

## Lesson Material Management - IT22902702

*Table 18 - Test Case for Adding lesson materials*

<b>Test case ID:</b> LMF_001	<b>Test designed by:</b> Tishan
<b>Test title:</b> Test the Lesson Material Function in Lesson Material Management System	<b>Test designed day:</b> 18/04/2024
<b>Test priority (High/Medium/Low):</b> High	<b>Test executed by:</b> Tishan
<b>Module name:</b> Add lesson materials	<b>Test executed day:</b> 20/04/2024
<b>Description:</b> Upload and manage lesson materials efficiently within the institute management system.	
<b>Dependencies (if there are any):</b> User must be logged in to the system as the teacher.	
<b>Test steps:</b> <ol style="list-style-type: none"> <li>1. Teacher navigates to the class page.</li> <li>2. Teacher selects a specified class that needs to add the materials.</li> <li>3. The teacher selects to add lesson material</li> <li>4. The teacher adds details with the required information and adds the new lesson material for the next lesson. (Topic, Lesson Material, Description)</li> <li>5. Teacher clicks the “Submit” button to add the lesson materials.</li> <li>6. The system directs to the "My Classes" page.</li> </ol>	

Test ID	Test Inputs	Expected Output	Actual Output	Result (Pass/Fail)	Comments
LMF_001	Topic: Probability Lesson Material: Uploaded Description: Likelihood of event occurrence measured.	Display Message “Successful”	Display Message “Successful”	Pass	
LMF_001	Topic: Nature Lesson Material: Not Uploaded Description: Beauty, diversity, interconnectedness of nature.	Display Message “Successful”	Error message showing ‘Please upload Lesson Material’	Fail	

## **CHAPTER 5 - EVALUATION AND CONCLUSION**

Institute Management System involves assessing its effectiveness in meeting the institute's needs, improving operational efficiency, enhancing communication and collaboration, and supporting the overall mission and goals of the institution. Evaluation and conclusion will provide an overview of the system's performance, its impact on institute tasks, and overall benefits it has brought to the institute.

Teachers and students can communicate using this system from the comfort of their own homes, which makes it incredibly handy. Students can utilize the system to select classes based on their interests and needs. Teachers have the ability to access the system on a prearranged timetable and upload class recordings along with other relevant educational resources. It will also be noted when the pupils attend class. Students can use the system to communicate with relevant teachers and provide comments on the performance of the teachers as well as ask questions and receive responses. Students can keep track of the classes they have previously registered for by using the timetable that is also available. To receive these advantages, students and teachers must register with the system. Our manager has access to the system and can log in to handle any financial-related operations, including handling payments, in addition to students and teachers. In addition to overseeing teacher and student performance, the manager is in charge of administering teacher salaries. The person in charge of teachers and students is the admin. As a result, this method provides students with an easy and adaptable way to pay for their education using the classes and resources that are offered.

The Institute Management System provide core functionalities to diverse the needs of the stakeholders. This includes student enrollment, attendance tracking, scheduling, class management, fee management, and communication tools. Additionally, the system efficiently tracks member attendance, manages payments, and generates reports.

Through the developed functionalities our system manages to fulfill the requirements of the client. This system evaluates its ability to streamline administrative processes, automate tasks, and reduce manual effort. Also, tis system supports the institute's academic workflows and regulatory requirements effectively. We assess user satisfaction with the system's usability, interface design, accessibility, and customization options and identify any pain points, usability issues, or areas for improvement based on user feedback.

In conclusion Royal Academy Education Institute Management System effectively addresses the institute's needs, enhances operational efficiency, improves communication and collaboration, and provides a positive user experience, it can be deemed successful. Overall, this system can be used to improve the efficiency and effectiveness of institute tasks.

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## APPENDICES

Figure - System Diagram

A graphical representation of a system, showing the various components and their relationships. The system diagram typically includes various components, such as inputs, processes, outputs, feedback, and control mechanisms. Inputs are the data or materials that are fed into the system, and outputs are the results or products that are produced by the system.

Table - Literature Review

An essential component of research or project that provides a comprehensive analysis of existing knowledge on a given topic.

*Table 19 - Work*

IT number	Student Name	Work
IT22001184	Waduge S U	Q&A and Feedback Management
IT22365750	Nimanji D L K	Salary Management
IT22923288	Gayashan W G D	Timetable Management
IT22004390	Hettiarachchi E I	User Management
IT22341136	Gunathilaka M A S	Financial Management
IT22004840	Aluthgama G S D	Enrollment and Attendance Management
IT22329424	Bimsara G A V	Class Management
IT22902702	Perera I A T D	Lesson Material Management

*Table 20 – Work Distribution*

IT number	Student Name	Contribution to report
IT22001184	Waduge S U	Q&A and Feedback Management requirement analysis, diagrams, Test Cases Stakeholder Analysis Evaluation and Conclusion
IT22365750	Nimanji D L K	Salary Management requirement analysis, diagrams, Test Cases System Overview
IT22923288	Gayashan W G D	Timetable Management requirement analysis, diagrams, Test Cases Introduction and Background
IT22004390	Hettiarachchi E I	User Management requirement analysis, diagrams, Test Cases Problems and Motivations
IT22341136	Gunathilaka M A S	Financial Management requirement analysis, diagrams, Test Cases Literature Review
IT22004840	Aluthgama G S D	Enrollment and Attendance Management requirement analysis, diagrams, Test Cases Methodology
IT22329424	Bimsara G A V	Class Management requirement analysis, diagrams, Test Cases Aims and Objectives
IT22902702	Perera I A T D	Lesson Material Management requirement analysis, diagrams, Test Cases Literature Review