



**Project and Thesis Management System – ProjectITM**

**Submitted by**

**Nusrat Zaman**

**ID: 201-51-021**

**Department of Information Technology & Management**

**Faculty of Science and Information Technology**

**Daffodil International University**

**Supervised by**

**Nusrat Jahan**

**Assistant Professor and Head**

**Department of Information Technology & Management**

**Faculty of Science and Information Technology**

**Daffodil International University**

A project report has been submitted in partial fulfillment of the requirement for the degree of Bachelor of Science in Information Technology & Management

20<sup>th</sup> December, 2024

## Approval

This project titled on “**ProjectITM**”, submitted by “**Nusrat Zaman, 201-51-021**”, to the Department of Information Technology & Management, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Information Technology & Management, and approval as to its style and contents.

### BOARD OF EXAMINERS



**Chairman**

-----  
 Nusrat Jahan  
 Head, and Assistant Professor  
 Department of Information Technology & Management  
 Faculty of Science and Information Technology  
 Daffodil International University



**Internal**

-----  
 Dr. Bimal Chandra Das  
 Associate Dean, Faculty of Science and Information Technology  
 Professor, Dept. of Information Technology & Management  
 Daffodil International University



**Internal**

-----  
 Nafees Imran,  
 Lecturer  
 Dept. of Information Technology & Management  
 Faculty of Science and Information Technology  
 Daffodil International University



**External**

-----  
 Dr. M. Shamim Kaiser,  
 Professor  
 Institute of Information Technology  
 Jahangirnagar University

## PROJECT DECLARATION

The project “Nusrat Zaman” is conducted under the supervision of Nusrat Jahan, Assistant Professor and Head of the Department of Information Technology & Management at Daffodil International University. I state that the project is my original work for the B.Sc. in Information Technology & Management and neither the entire report nor any part has been submitted for another degree in this or any other institution.

Submitted by:

*Nusrat Zaman*

-----  
Nusrat Zaman  
ID: 201-51-021  
Batch: 1st  
Department of Information Technology & Management  
Faculty of Science and Information Technology  
Daffodil International University

Certified by:



-----  
Nusrat Jahan  
Head, and Assistant Professor  
Department of Information Technology & Management  
Faculty of Science and Information Technology  
Daffodil International University

## **ACKNOWLEDGEMENT**

I am profoundly grateful to Allah for this privilege and determination to complete this project successfully. I want to thank my supervisor, Nusrat Jahan, for providing careful guidance through the project development, from the initial phases of selecting the project scope to the successful completion of the project.

## **ABSTRACT**

Project and Thesis Management System, ProjectITM is a web-based application which is designed and developed to handle final year projects and theses within department environments. This system addresses the challenges of managing multiple student projects by providing a centralized platform. This system will help supervisor to maintain student lists and project list. Supervisor and student can create, view, update, and/or delete any project or any details throughout the system.

## TABLE OF CONTENTS

Approval .....	i
Project Declaration.....	ii
Acknowledgement .....	iii
Abstract .....	iv
Table of Contents .....	v
List of Figures .....	ix
List of Tables .....	x
Chapter 1: Introduction .....	1
1.1 Overview .....	1
1.2 Purpose.....	1
1.2.1 Background .....	1
1.2.2 Benefits and Beneficiaries .....	2
1.2.3 Goals .....	2
1.3 Stakeholders .....	3
1.4 Project schedule .....	4
1.4.1 Gantt Chart.....	4
1.4.2 Release plan/Milestone .....	4
Chapter 2: Requirement Specification .....	5
2.1 Functional Requirements .....	5
2.2 Non-Functional requirements .....	7
2.3 Data requirements .....	7
2.4 Performance requirements .....	8

2.4.1 Speed and Latency .....	8
2.4.2 Accuracy requirements .....	8
2.4.3 Capacity requirements .....	8
2.5 Dependability requirements .....	8
2.5.1 Reliability requirements .....	8
2.5.2 Availability .....	9
2.5.3 Robustness requirements .....	9
2.5.4 Safety-Critical requirements .....	9
2.6 Maintainability and Supportability requirements .....	9
2.6.1 Maintenance requirements .....	9
2.6.2 Supportability requirements .....	9
2.6.3 Adaptability requirements .....	10
2.6.4 Scalability requirements .....	10
2.7 Security requirements .....	10
2.7.1 Access requirements .....	10
2.7.2 Integrity .....	10
2.7.3 Privacy .....	10
2.8 Usability and Human-Interaction requirements .....	10
2.8.1 Ease of use .....	10
2.8.2 Personalized requirements .....	11
2.8.3 Understandability requirements .....	11
2.8.4 Accessibility requirements .....	11
2.8.5 Documentation requirements .....	11

2.8.6 Guidance requirements .....	11
2.9 Look and Feel requirements.....	11
2.9.1 Appearance .....	11
2.9.2 Style requirements .....	11
2.10 Operational and Environmental requirements .....	12
2.10.1 Physical requirements .....	12
2.10.2 Requirements for interfacing with adjacent systems .....	12
2.10.3 Projectization requirements .....	12
2.10.4 Release requirements .....	12
2.11 Functional requirements mapping.....	13
Chapter 3: System Analysis .....	14
3.1 Use case diagram .....	14
3.2 Use cases .....	15
3.3 Use case description.....	16
3.4 Activity diagram .....	37
3.5 Sequence diagram .....	57
Chapter 4: System design specification .....	74
4.1 Entity relation diagram .....	74
4.2 Development tools and technology.....	75
4.2.1 Frontend Technology .....	75
4.2.2 Backend technology .....	75
4.2.3 Implemented tools and platforms.....	75
Chapter 5: System testing .....	76

5.1 Testing features .....	76
5.1.1 Features to be tested.....	76
5.1.2 Features not to be tested.....	76
5.2 Testing strategies .....	76
5.2.1 Test approach .....	76
5.2.2 Testing schedule.....	76
5.3 Test cases .....	77
5.3.1 Test case - Login.....	77
5.3.2 Test case – Register/Create Account .....	77
Chapter 6: User manual .....	79
6.1 User manual (user).....	79
6.2 User manual (student) .....	79
6.3 User manual (supervisor).....	82
6.4 User manual (admin).....	85
6.5 User manual (supervisor, student) .....	90
6.6 User manual (supervisor, admin).....	90
Chapter 7: Project summary.....	93
7.1 GitHub Link .....	93
7.2 Limitations .....	93
7.3 Obstacles and achievements .....	93
7.4 Future scope .....	93
Plagiarism Result .....	94

## LIST OF FIGURES

1.4.1	Gantt Chart	4
1.4.2	Milestone	4
3.1	ProjectITM use case diagram	14
3.4.1	Registration	37
3.4.2	Login	38
3.4.3	Recover password	39
3.4.4	Create project/thesis	40
3.4.5	View project and thesis list	41
3.4.6	Edit project/thesis details from project list	42
3.4.7	update project/thesis status	43
3.4.8	search and filter specific project/thesis	44
3.4.9	Provide feedback	45
3.4.10	View total students	46
3.4.11	Delete project/thesis	47
3.4.12	Export project/thesis details	48
3.4.13	View assigned project/thesis	49
3.4.14	Upload/attach documents	50
3.4.15	Respond to comments/feedback	51
3.4.16	Pre-register supervisor	52
3.4.17	View all supervisors	53
3.4.18	Update and delete supervisor and student accounts	54
3.4.19	Receive student registration details	55
3.4.20	Update student status	56

## LIST OF TABLES

3.3.1	Register/Create account	16
3.3.2	Login	17
3.3.3	Recover password	18
3.3.4	Create project/thesis	19
3.3.5	View project and thesis list	20
3.3.6	Edit project/thesis details from project list	21
3.3.7	Update project/thesis status	22
3.3.8	Search and filter specific project/thesis	23
3.3.9	Provide feedback	25
3.3.10	View total students	26
3.3.11	Delete project/thesis	27
3.3.12	Export project/thesis details	28
3.3.13	View assigned project/thesis	29
3.3.14	Upload/attach documents	30
3.3.15	Respond to comments/feedback	31
3.3.16	Pre-register supervisor	32
3.3.17	View all supervisors	33
3.3.18	Update and delete supervisor and student accounts	34
3.3.19	Receive student registration information	35
3.3.20	Update student status	36

## **CHAPTER 01: INTRODUCTION**

### **1.1 Overview**

‘ProjectITM’ is a platform for managing final year projects and theses. This system is created to simplify the management of final-year projects and theses for students, supervisors, and administrators. This application provides a centralized solution for handling the workflows of projects and theses.

### **1.2 Purpose**

ProjectITM is a comprehensive platform aimed to bridge the gap between students and supervisors in department environments. The primary objective of ‘ProjectITM’ is to provide a single source for the students and supervisors to effectively collaborate on projects and resources. By delivering features like project creation, student assignment, semester-wise project list and details, and student management, this system intends to make final year project/thesis management easier, efficient, and more productive.

#### **1.2.1 Background**

The management of student projects is crucial to academic programs, particularly in final-year courses when students are required to complete intensive research or practical projects. ProjectITM is designed and developed to address challenges such as maintaining a well-organized list of students and projects/theses per semester, tracking the progress of projects, and providing structured and timely feedback to students.

## **1.2.2 Benefits & Beneficiaries**

### **Benefits**

1. The system utilizes role-based authentication and authorization for Administrator, Supervisor, and Student.
2. Supervisors can quickly search for preferred semester, specific project/thesis, and student.
3. Students can update project milestones for feedback and check supervisor details.
4. If any information is inaccurate, the admin has the authority to accept or reject a student registration request.
5. A suitable email and notification system for users.

### **Beneficiaries**

1. Supervisor
2. Student
3. Department

## **1.2.3 Goals**

The goals of ProjectITM are very simple.

1. Project/Thesis completion within six months (based on start and end date).
2. Maintain project/thesis lists and student lists per semester and per supervisor.
3. Effortless collaboration with feedback.

### **1.3 Stakeholders**

- Supervisor
- Student
- Administrator
- Department

## 1.4 Project Schedule

### Gantt chart

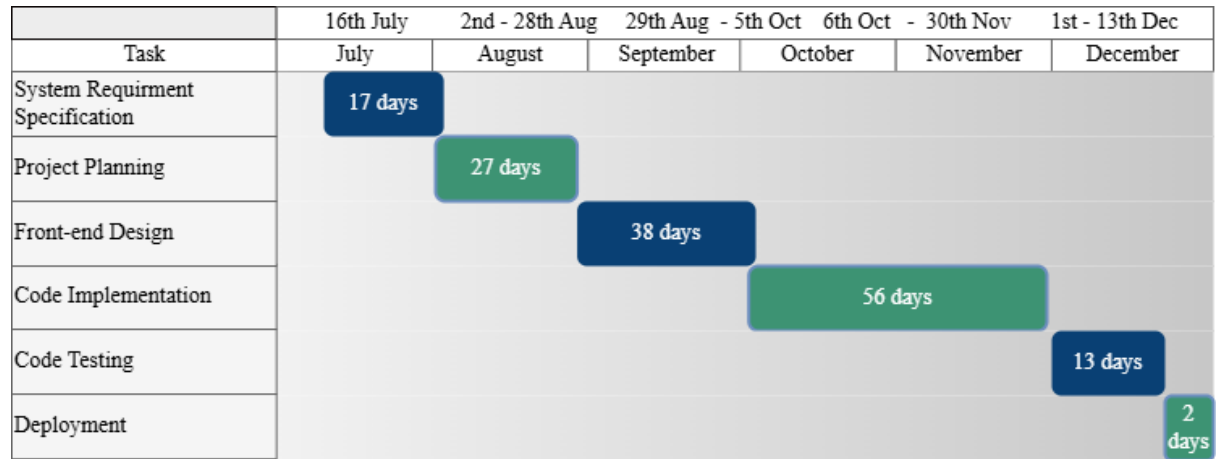


Fig: 1.4.1 Gantt chart

### Release Plan/Milestone

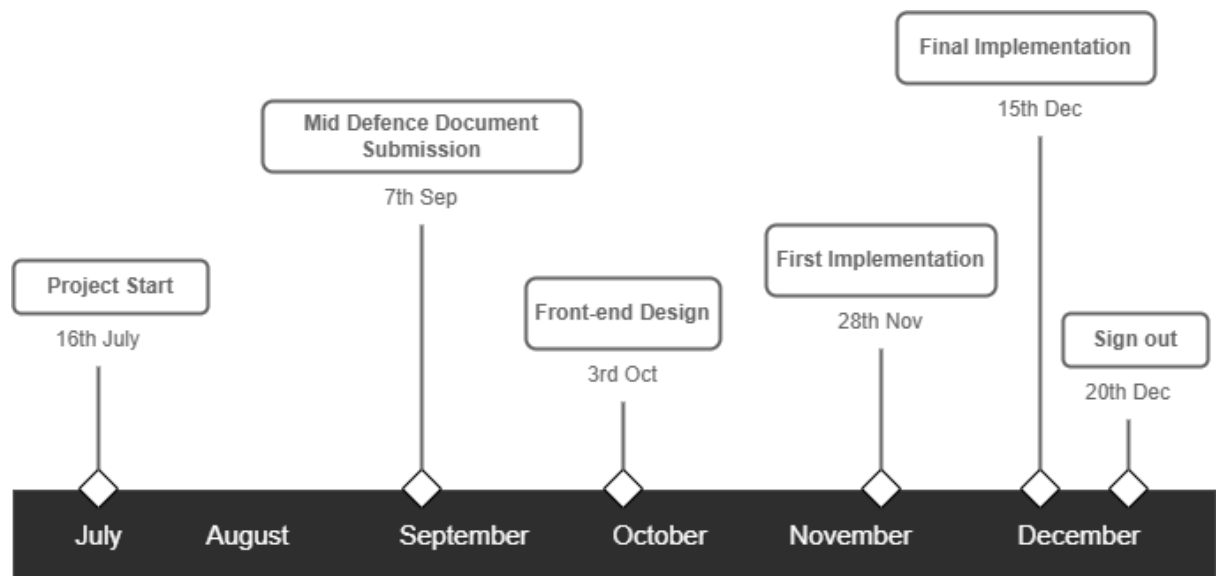


Fig: 1.4.2 Release plan/milestone

## CHAPTER 2: REQUIREMENT SPECIFICATION

### 2.1 Functional Requirements

- FR-1:** Students can register or create an account using their university email.
- FR-2:** Supervisors can login to the system using their login credentials provided by admin.
- FR-3:** Students can login only after admin approval.
- FR-4:** Admin can login with system-provided credentials.
- FR-5:** Supervisors can create new thesis/project entries in the system specifying name, title, description/objectives, project status, expected duration (start date and end date) and assign a specific student by selecting their email address/ student ID.
- FR-6:** Supervisors can view semester-wise project and thesis lists.
- FR-7:** Supervisors can edit the details of any project or thesis.
- FR-8:** Supervisors can view specific project/thesis details from the project list.
- FR-9:** Supervisors can update the status of any project/thesis ('Not Started', 'In Progress', and 'Completed').
- FR-10:** Supervisors can search for specific project/thesis by email, id, project/thesis title and name.
- FR-11:** Supervisors can filter based on project type (Thesis and Project) and status (Not Started, In Progress, and Completed) in project list or searched projects/theses.
- FR-12:** Supervisors can provide necessary comments/feedback on project progress or documents.
- FR-13:** Supervisors can delete projects/theses when needed or completed.

**FR-14:** Supervisors can view the total students, total thesis students, and total project students per semester.

**FR-15:** Supervisors and Students can export the details of a project/thesis into a pdf format.

**FR-16:** Students can view their assigned thesis/project in their workspaces.

**FR-17:** Students can upload/attach files, images, documents, and links in their project details page.

**FR-18:** Students can update and track the progress of the project/thesis and mark it as completed when finished.

**FR-19:** Students can respond to supervisor comments or feedback.

**FR-20:** Admin can pre-register supervisors' accounts by entering their First name, Last name, Email, Designation and a Password.

**FR-21:** Admin can view a list of all supervisors.

**FR-22:** Admin can update supervisors' details if needed and delete accounts if necessary.

**FR-23:** Admin will receive students' details from registration form as 'Pending Student'.

**FR-24:** Admin can check and update the student status to 'Approved' or 'Declined'.

**FR-25:** Admin can view student details, update student details and delete any account if needed.

**FR-26:** Supervisor, Student, and Admin will each have a dashboard with profile, role-specific features, and logout options. They can view and update their profile.

## 2.2 Non-Functional Requirements

1. System must send emails to supervisors with login credentials. It should also send emails to students when their registration request will be approved and project creation process will be completed.
2. System must have a password recovery feature.
3. System should validate each input field with appropriate messages.
4. User passwords must be converted to hashed passwords before sending from the backend to the database for storing.
5. Application must verify the identity of users accessing the system and define access controls to restrict actions based on user roles and permissions.
6. The system should adapt responsiveness for mobile devices and tablets to provide a seamless experience across different screen sizes and resolutions.

## 2.3 Data Requirements

1. **Registration:** Email field must contain '@diu.edu.bd' for validating university email and student id must include '-51-'. The feature of 'password' and 'confirm password' must be same. Student should get the list of supervisors to select.
2. **Login:** Email and password must be required for authentication. A pre-registered email will be needed to recover password in forget password page.
3. **Project:** Supervisor must get their registered student.
4. **Student Request:** Admin must receive the student registration request entries.

## **2.4 Performance Requirements**

### **2.4.1 Speed and Latency**

- Each page should not take more than 3 seconds for loading pages content.
- Backend/Database query response time must be less than 2 seconds.
- Exporting project details to PDF should be completed within 5 seconds.

### **2.4.2 Accuracy Requirements**

- Role-based all the project and thesis details should be stored and retrieved with 100% accuracy.
- Notifications and Emails should be sent to the appropriate user with accurate and up-to-date information.
- System should return 100% relevant results based on search and filter functions.

### **2.4.3 Capacity Requirements**

- Image file must be less than 1 MB and pdf file should not exceed 2 MB.
- System should support 500 users without performance issues.
- The infrastructure of the system should be able to handle growing users.

## **2.5 Dependability Requirements**

### **2.5.1 Reliability**

- Features like supervisor details creation, project/thesis creation, notifications should function without failures.
- Data should be accurately saved, retrieved, and displayed.

### **2.5.2 Availability**

- Student details must be available for supervisors.
- Supervisors list should be available in the registration form to select one.
- System must function 24/7 with minimal downtime.

### **2.5.3 Robustness Requirements**

- Supervisors can remove any project/thesis after creating.
- Admin can approve or decline any student's registration request.
- The system should provide meaningful error messages and recover to handle unexpected inputs or user errors.

### **2.5.4 Safety-Critical Requirements**

- System must ensure that passwords are never stored in plain text.
- System should prevent unauthorized access to confidential information.
- Admin can delete any user if needed.

## **2.6 Maintainability and Supportability Requirements**

### **2.6.1 Maintenance Requirements**

- Administrators and developers will be responsible for maintaining the system.
- System code must be written following best practices and system should use Git and GitHub for tracking the changes.

### **2.6.2 Supportability Requirements**

- System will provide a detailed guideline for each user role.
- System must support devices like Android, iPhone, Windows, Mac, Linux etc.

### **2.6.3 Adaptability Requirements**

- System must be adaptable and responsive across multiple devices – mobile, tablets, laptop and desktop.
- The application should maintain multiple users at a time.

### **2.6.4 Scalability Requirements**

- System must be scalable for exceeding users and projects.
- User should be able to recover their password using their email.

## **2.7 Security Requirements**

### **2.7.1 Access Requirements**

- Only admin can create supervisor credentials.
- Only supervisor can create project/thesis entries.
- Supervisor and Student can view the project details page.
- Admin can manage any user for entire system.
- Supervisors can manage their provided students.

### **2.7.2 Integrity**

- System must ensure data integrity by validating input fields.

### **2.7.3 Privacy**

- A user can not view other user's information and workspace without authorization based on their role.

## **2.8 Usability and Human-Interaction Requirements**

### **2.8.1 Ease of Use**

- Dashboards for all user roles should display key features and data.
- The user interface should be simple, clear, and consistent across all pages.

### **2.8.2 Personalized Requirements**

- Users can customize their profile details.

### **2.8.3 Understandability Requirements**

- System should use clear, concise messages for easy understanding.
- System should provide proper feedback to ensure the outcome of users' actions in real time.

### **2.8.4 Accessibility Requirements**

- Supervisor and user can check project completion percentage.
- Each feature will be authorized for certain users.

### **2.8.5 Documentation Requirements**

- User will have separate manual for use.
- User can provide suggestions about the system.

### **2.8.6 Guidance Requirements**

- A workshop will be provided to final year students.

## **2.9 Look and Feel Requirements**

### **2.9.1 Appearance**

- The system should consistently use margins, padding, and alignment for a polished and professional appearance.

### **2.9.2 Style Requirements**

- Colors are selected from department logo.
- Fonts should be clean and easy to read.
- Style should be decent and standard.

## **2.10 Operational and Environmental Requirements**

### **2.10.1 Physical Environment**

- Users should be able to access the system remotely from any location.
- Supported operating systems should include Linux, Windows, MacOS and modern web browsers (Chrome, Firefox, Safari, Opera and Edge etc).

### **2.10.2 Requirements for interfacing with Adjacent Systems**

- Laptop/Desktop will be recommended for the system.
- API authentication and data exchange should comply with RESTful standards.

### **2.10.3 Projectization Requirements**

- A testing phase will be conducted with selected users to identify and resolve bugs.
- Proper readme file should be included.

### **2.10.4 Release Requirements**

- Initial release should include all core features.
- System should collect user feedback and include release notes.

## 2.11 Functional Requirements Mapping

<b>F.R.id</b>	<b>Functionality</b>
FR-1	Registration
FR-20	
FR-2	Login
FR-3	
FR-4	
FR-5	Create Project or Thesis
FR-6	View Project and Thesis
FR-8	
FR-16	
FR-7	Modify Project/Thesis
FR-9	Update Project/Thesis Status
FR-10	Search and Filter Project/Thesis
FR-11	
FR-12	Feedback and comment on project progress
FR-19	
FR-13	Delete project/thesis
FR-14	View student details
FR-15	Export project/thesis details
FR-17	Upload files and update project details
FR-18	Track progress
FR-21	Manage students and supervisors
FR-22	
FR-23	
FR-24	
FR-25	
FR-26	Dashboard

## CHAPTER 03: SYSTEM ANALYSIS

### 3.1 Use Case Diagram

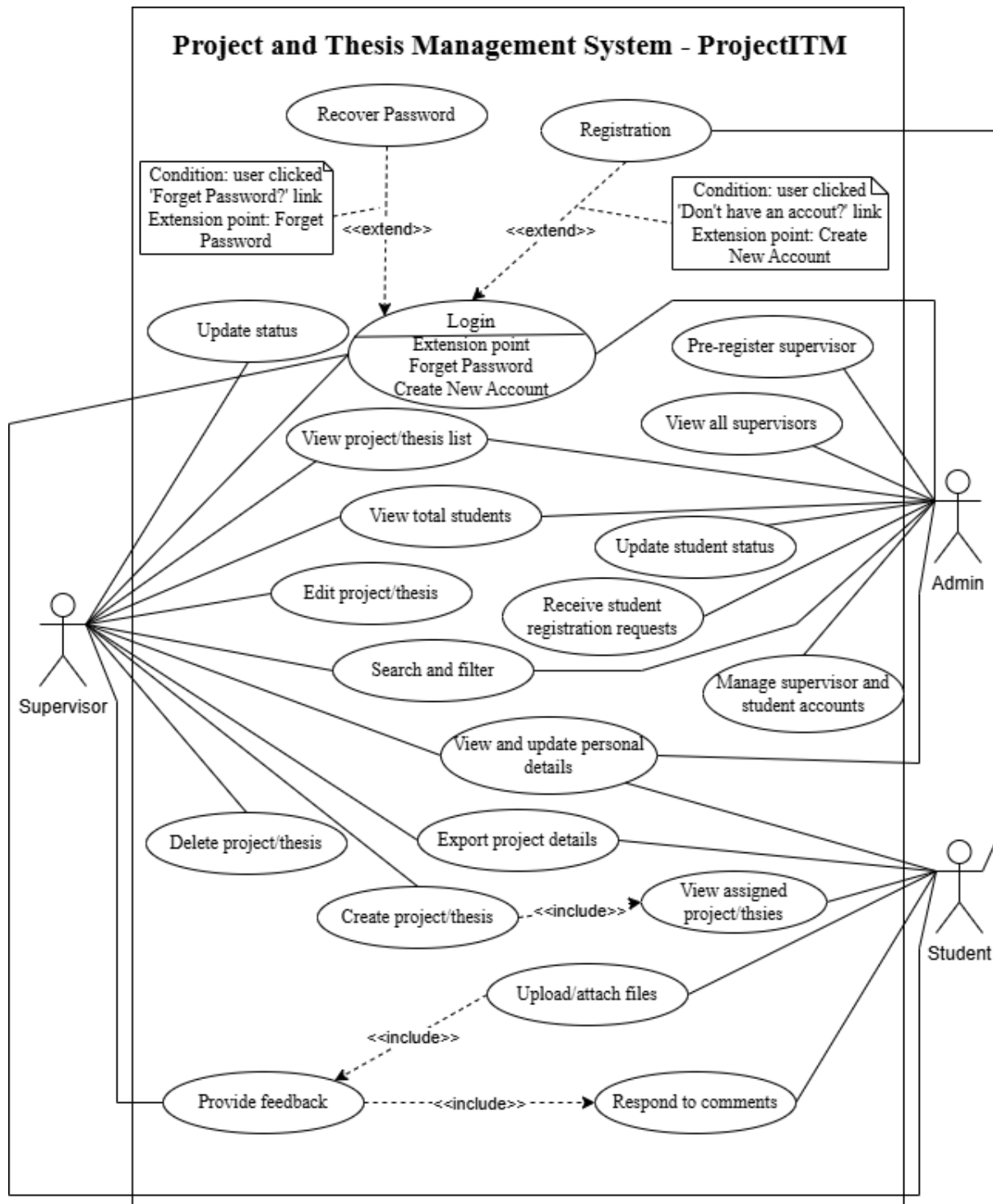


Fig: 3.1 ProjectITM Use Case Diagram

### 3.2 Use Cases

- UC-1: Register/Create account (Student)
- UC-2: Login (Supervisor, Student, Admin)
- UC-3: Recover password (Supervisor, Student)
- UC-4: Create project/thesis (Supervisor)
- UC-5: View project and thesis list (Supervisor, Admin)
- UC-6: Edit project/thesis details from project list (Supervisor)
- UC-7: Update Project/Thesis Status (Supervisor)
- UC-8: Search and filter specific project/thesis (Supervisor, Admin)
- UC-9: Provide feedback (Supervisor)
- UC-10: View total students (Supervisor, Admin)
- UC-11: Delete project/thesis (Supervisor)
- UC-12: Export project/thesis details (Supervisor, Student)
- UC-13: View assigned project/thesis (Student)
- UC-14: Upload/attach documents (Student)
- UC-15: Respond to comments/feedback (Student)
- UC-16: Pre-register supervisor (Admin)
- UC-17: View all supervisors (Admin)
- UC-18: Update and delete supervisor and student accounts (Admin)
- UC-19: Receive student registration details (Admin)
- UC-20: Update student status (Admin)

### 3.3 Use case Description

Use case number	UC-1
Use case name	Register/Create account
Summary	Student wants to create an account in the system
Triggering event	If a user (student) decides to create a new account, clicks on 'Register' button and accesses the registration page.
Brief description	Student can create/register by providing personal information (First name, last name, university email, id, gender, academic semester, and batch), Academic information, and password and confirm password.
Actors	Student
Extended cases	None
Included cases	None
Stakeholder	Student, Admin
Requirement	The user must have a valid university email address and must not have an existing account.
Primary path	<ol style="list-style-type: none"> <li>1) Student clicks on 'Register' button on homepage or clicks on 'Get Started' button on homepage.</li> <li>2) Get registration form</li> <li>3) Student provides the details.</li> <li>4) User clicks 'Register' button.</li> <li>5) System sends the registration details to admin.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	System sends a message 'Wait for admin approval' and redirects the user to the homepage. Admin is notified of new registration requests.

Table: 3.3.1 use case "Registration"

Use case number	UC-2
Use case name	Login
Summary	Registered user can securely access to the system
Triggering event	When a user wants to access their account, they click on 'Log in' button and get the login page.
Brief description	User can login by providing their valid credentials like email and password. This allows them to access their account.
Actors	Student, Supervisor, Admin
Extended cases	UC-1: Registration UC-3: Recover Password
Included cases	UC-16: Pre-register Supervisors UC-19: Receive student registration details UC-20: Update student status
Stakeholder	Student, Admin, Supervisor
Requirement	The user must have a registered account to the system.
Primary path	<ol style="list-style-type: none"> <li>1) User clicks on 'Log in' button.</li> <li>2) Get login page</li> <li>3) User provides email and password</li> <li>4) User clicks 'Login' button.</li> <li>5) System checks the user's credentials.</li> <li>6) User is logged in when the credentials are valid.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	User is successfully logged in and is redirected to the dashboard page.

Table: 3.3.2 use case 'Login'

Use case number	UC-3
Use case name	Recover password
Summary	When a user forgets their password, they can recover their account through email.
Triggering event	User clicks on 'Forgot Password' link on login page.
Brief description	Registered user can recover their password by providing their registered email address. System will send a password reset link to the user's email, which they can use to set a new password. They will get the password recover page by clicking the link.
Actors	Student, Supervisor
Extended cases	None
Included cases	None
Stakeholder	Student, Admin, Supervisor
Requirement	User must register or create an account previously and remember the pre-registered email address
Primary path	<ol style="list-style-type: none"> <li>1) User clicks on 'Forgot Password?' link on login page.</li> <li>2) Get the Reset Password page.</li> <li>3) User gives the registered email in input box.</li> <li>4) User clicks 'Get OTP' button.</li> <li>5) System sends an OTP to the user's email.</li> <li>6) User enters the OTP to the 'Enter the OTP' page.</li> <li>7) System checks the OTP and redirects to the reset password page.</li> <li>8) User enters password and confirm password and clicks "Reset Password" button.</li> <li>9) System updates the user's password and redirects the user to log in page.</li> </ol>
Alternative path	None
Exceptional path	None

Post-condition	The user successfully resets their password and can log in.
----------------	---

Table: 3.3.3 use case 'Recover Password'

Use case number	UC-4
Use case name	Create project/thesis
Summary	Supervisor initiates a new project or thesis.
Triggering event	Supervisor clicks on 'Create' button under project section.
Brief description	Supervisor can create a new project or thesis within the system specifying name, Use case name, description, start date, end date, and assigned student.
Actors	Supervisor
Extended cases	UC-5: View project and thesis list
Included cases	None
Stakeholder	Student, Admin, Supervisor
Requirement	Supervisor must be logged in and has necessary permission to create.
Primary path	<ol style="list-style-type: none"> <li>1) Supervisor clicks 'Create' button under project section.</li> <li>2) Supervisor navigates to 'create project' page.</li> <li>3) Supervisor selects project type – Project or Thesis.</li> <li>4) Supervisor enters project/thesis details, sets expected duration for completion, and assigned student.</li> <li>5) Supervisor click 'Create Project/Thesis' button.</li> <li>6) System generates the project.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	The new project is available for assigned student. Supervisor and admin can view the project/thesis.

Table: 3.3.4 use case 'Create Project/Thesis'

Use case number	UC-5
Use case name	View project and thesis list
Summary	User wants to view project/thesis list per semester.
Triggering event	When user wants to check the list, they selects that semester.
Brief description	Supervisor and admin can view semester wise project and thesis counts.
Actors	Supervisor, Admin
Extended cases	None
Included cases	UC-8: Search and filter specific project/thesis
Stakeholder	Admin, Supervisor
Requirement	Supervisor must be logged in and has access to project/thesis list.
Primary path	<ol style="list-style-type: none"> <li>1) Supervisor clicks 'All' button under project section.</li> <li>2) Supervisor navigates to 'Project and Thesis List based on Semester' page.</li> <li>3) System displays semester-wise list of cards.</li> <li>4) Supervisor clicks on a specific semester card.</li> <li>5) System retrieves projects and theses lists for that selected semester.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	Supervisor successfully views the list for selected semester.

Table: 3.3.5 use case 'View project and thesis list'

Use case number	UC-6
Use case name	Edit project/thesis details from project list
Summary	Supervisor needs to edit any details about an existing project/thesis.
Triggering event	Supervisor clicks on 'Edit' button on project list page.
Brief description	Supervisor can modify the project briefing by altering the input fields for project/thesis.
Actors	Supervisor
Extended cases	None
Included cases	UC-5: View project and thesis list
Stakeholder	Supervisor, Student
Requirement	Supervisor must be logged in and has access to project/thesis list.
Primary path	<ol style="list-style-type: none"> <li>1) Supervisor clicks 'All' button under project section.</li> <li>2) Supervisor navigates to 'Project and Thesis List based on Semester' page.</li> <li>3) System displays semester-wise list of cards.</li> <li>4) Supervisor clicks on a specific semester card.</li> <li>5) System retrieves projects and theses lists for that selected semester.</li> <li>6) Supervisor clicks 'Edit' button.</li> <li>7) System displays a popup with necessary input fields for project/thesis modification.</li> <li>8) Supervisor changes the required fields.</li> <li>9) Supervisor clicks 'Save Changes' button.</li> <li>10) System updates the project/thesis details.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	Supervisor successfully updates project/thesis details.

Table: 3.3.6 use case 'Edit project/thesis details from project list'

Use case number	UC-7
Use case name	Update project/thesis status
Summary	Supervisor needs to update the status of project/thesis.
Triggering event	Supervisor tends to change the project/thesis status based on student activity.
Brief description	When students starts or completes their project or thesis, supervisor initiates to change the current status.
Actors	Supervisor
Extended cases	None
Included cases	UC-5: View project and thesis list
Stakeholder	Supervisor, Student
Requirement	Supervisor must be logged in and has permission to change status.
Primary path	<ol style="list-style-type: none"> <li>1) Supervisor clicks 'All' button under project section.</li> <li>2) Supervisor navigates to 'Project and Thesis List based on Semester' page.</li> <li>3) System displays semester-wise list of cards.</li> <li>4) Supervisor clicks on a specific semester card.</li> <li>5) System retrieves projects and theses lists for that selected semester.</li> <li>6) Supervisor clicks on current status.</li> <li>7) System displays all options for status.</li> <li>8) Supervisor selects the new status.</li> <li>9) System updates the status of project or thesis.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	The status of project or thesis is updated successfully.

Table: 3.3.7 use case 'Update project/thesis status'

Use case number	UC-8
Use case name	Search and filter specific project/thesis
Summary	Supervisor wants to find specific project or thesis.
Triggering event	When a specific project or thesis or specific projects/theses list is needed, supervisor selects search and filter options.
Brief description	Supervisor can search by project name, Use case name, student id, and student email. Supervisor can filter upon searched result.  Supervisor can filter project/thesis based on project type – Project and Thesis and based on status – All status, Not started, In progress, Completed.
Actors	Supervisor
Extended cases	None
Included cases	UC-5: View project and thesis list
Stakeholder	Supervisor
Requirement	Supervisor must be logged in and has proper permission.
Primary path	<ol style="list-style-type: none"> <li>1) Supervisor clicks ‘All’ button under project section.</li> <li>2) Supervisor navigates to ‘Project and Thesis List based on Semester’ page.</li> <li>3) System displays semester-wise list of cards.</li> <li>4) Supervisor clicks on a specific semester card.</li> <li>5) System retrieves projects and theses lists for that selected semester.</li> <li><b>6) Search:</b> <ul style="list-style-type: none"> <li>• Supervisor clicks on search input.</li> </ul> </li> </ol>

	<ul style="list-style-type: none"> <li>• Supervisor enters the search term.</li> <li>• System displays matched result.</li> </ul> <p><b>7) Filter:</b></p> <ul style="list-style-type: none"> <li>• Supervisor applies necessary filters.</li> <li>• System updates the list based on the applied filters.</li> </ul> <p><b>8) Search and Filter:</b></p> <ul style="list-style-type: none"> <li>• Supervisor enters search terms.</li> <li>• System retrieves the searched lists.</li> <li>• Supervisor selects one or more filters.</li> <li>• System updates the searched lists based on applied filters.</li> </ul>
Alternative path	None
Exceptional path	None
Post-condition	Matching projects or theses are displayed successfully.

Table: 3.3.8 use case ‘Search and filter specific project/thesis’

Use case number	UC-9
Use case name	Provide feedback
Summary	Supervisor wants to provide feedback about a project or thesis.
Triggering event	When supervisor wants to give feedback, suggestions, or additional information related to project/thesis.
Brief description	Supervisor can submit feedback on project/thesis works that enables better communication between students and supervisors.

Actors	Supervisor
Extended cases	None
Included cases	UC-5: View project and thesis list UC-9: Receive Notification
Stakeholder	Supervisor, Student
Requirement	Supervisor must be logged in and has permission to give feedback.
Primary path	<ol style="list-style-type: none"> <li>1) Supervisor clicks ‘All’ button under project section.</li> <li>2) Supervisor navigates to ‘Project and Thesis List based on Semester’ page.</li> <li>3) System displays semester-wise list of cards.</li> <li>4) Supervisor clicks on a specific semester card.</li> <li>5) System retrieves projects and theses lists for that selected semester.</li> <li>6) Supervisor clicks on ‘View’ button on specific project/thesis.</li> <li>7) System provides the details page of that particular project/thesis.</li> <li>8) Supervisor navigates to feedback section.</li> <li>9) Supervisor writes the feedback/comment.</li> <li>10) Supervisor submits the feedback.</li> <li>11) System updates and notifies the student.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	System shows a feedback submission successful message.

Table: 3.3.9 use case ‘Provide feedback’

Use case number	UC-10
Use case name	View total students
Summary	Supervisor/Admin needs to check student details.
Triggering event	When supervisor/admin wants to check total supervised student list, they click 'View Student' button.
Brief description	Admin can view total students list of the department. Supervisor can view students list under their supervision.
Actors	Supervisor, Admin
Extended cases	None
Included cases	None
Stakeholder	Supervisor, Admin
Requirement	Supervisor and admin must be logged in and has permission to view students.
Primary path	<ol style="list-style-type: none"> <li>1) User clicks 'View' button under student section.</li> <li>2) User navigates to 'All Students' page.</li> <li>3) System retrieves and displays the student list.</li> <li>4) User can search specified students list.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	User views the student data or searched data.

Table: 3.3.10 use case "View total students"

Use case number	UC-11
Use case name	Delete project/thesis
Summary	Supervisor wants to remove a project or thesis from the project list
Triggering event	When supervisor selects a project/thesis to delete, they click 'Delete' button.
Brief description	Supervisor can delete any project/thesis permanently if the project/thesis is no longer needed or completed.
Actors	Supervisor
Extended cases	None
Included cases	None
Stakeholder	Supervisor, Student
Requirement	Supervisor must be logged in and the project/thesis must be exist.
Primary path	<ol style="list-style-type: none"> <li>1) Supervisor clicks 'All' button under project section.</li> <li>2) Supervisor navigates to 'Project and Thesis List based on Semester' page.</li> <li>3) System displays semester-wise list of cards.</li> <li>4) Supervisor clicks on a specific semester card.</li> <li>5) System retrieves projects and theses lists for that selected semester.</li> <li>6) Supervisor selects a specific project or thesis.</li> <li>7) Supervisor clicks on delete icon button.</li> <li>8) System asks for confirmation.</li> <li>9) Supervisor confirms the deletion.</li> <li>10) System displays success message.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	System removes the project/thesis and updates the list page.

Table: 3.3.11 use case "Delete project/thesis"

Use case number	UC-12
Use case name	Export project/thesis details
Summary	User wants to export a project/thesis information.
Triggering event	If user needs to generate a project/thesis report, they click on 'Export Project/Thesis' button.
Brief description	User can download project/thesis details in pdf format.
Actors	Supervisor, Student
Extended cases	None
Included cases	None
Stakeholder	Supervisor, Student
Requirement	User has the necessary permission to download a project/thesis report.
Primary path	<ol style="list-style-type: none"> <li>1) User navigates to a specific project/thesis details page.</li> <li>2) User clicks on 'Preview' button to preview the pdf.</li> <li>3) User clicks on 'Export Project/Thesis' button.</li> <li>4) System generates the file</li> <li>5) User downloads the file.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	Project/Thesis details are downloaded as a pdf format.

Table: 3.3.12 use case "Export project/thesis details"

Use case number	UC-13
Use case name	View assigned project/thesis
Summary	Student views their assigned project/thesis
Triggering event	If any student wants to check the details of their project/thesis, they click 'Project Overview' button.
Brief description	Student can access their project/thesis details page after successful login from their dashboard.
Actors	Student
Extended cases	None
Included cases	None
Stakeholder	Student
Requirement	Student must be logged in and has been assigned a project/thesis.
Primary path	<ol style="list-style-type: none"> <li>1) Student logs in and accesses their dashboard.</li> <li>2) Student clicks 'Project Overview' button.</li> <li>3) System displays project details page.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	System successfully retrieved the project details page.

Table: 3.3.13 use case 'View assigned project/thesis'

Use case number	UC-14
Use case name	Upload/attach documents
Summary	Student needs to upload/attach any files to their project or thesis.
Triggering event	When student has to update project/thesis, they click 'Upload' button.
Brief description	Student can update project/thesis description by uploading necessary files or documents or images. Student can update multiple sections of project details page.
Actors	Student
Extended cases	None
Included cases	None
Stakeholder	Student, Supervisor, Admin
Requirement	Student must be logged in and has been assigned a project/thesis.
Primary path	<ol style="list-style-type: none"> <li>1) Student logs in and accesses their dashboard.</li> <li>2) Student clicks 'Project Overview' button.</li> <li>3) System displays project details page.</li> <li>4) Student navigates to specific section.</li> <li>5) Student clicks on upload button.</li> <li>6) Student selects a file.</li> <li>7) Student clicks 'Save Changes' button.</li> <li>8) System uploads the file and shows successful message.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	Student successfully uploads and attaches files to the project/thesis.

Table: 3.3.14 use case 'Upload/attach documents'

Use case number	UC-15
Use case name	Respond to comments/feedback
Summary	Student replies to feedback from their supervisor.
Triggering event	If student needs to reply to supervisor's comment, they click reply section.
Brief description	Student can communicate with their supervisor by responding to feedback or comments from supervisor.
Actors	Student
Extended cases	None
Included cases	UC-9: Provide feedback
Stakeholder	Student, Supervisor
Requirement	Student must be logged in and feedback must exist.
Primary path	<ol style="list-style-type: none"> <li>1) Student navigates to project/thesis details page.</li> <li>2) Student navigates to feedback section.</li> <li>3) Student selects a feedback thread to reply.</li> <li>4) Student writes response.</li> <li>5) Student clicks 'Reply' button.</li> <li>6) System saves the response.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	Student successfully replied and response is recorded.

Table: 3.3.15 use case 'Upload/attach documents'

Use case number	UC-16
Use case name	Pre-register supervisor
Summary	Admin creates new supervisor account
Triggering event	Admin clicks ‘Add’ button whenever is needed to register a new supervisor in the system.
Brief description	Admin pre-registers a supervisor by adding First name, last name, email, designation, gender. Admin generates a temporary password for each supervisor.
Actors	Admin
Extended cases	None
Included cases	None
Stakeholder	Admin, Supervisor
Requirement	Admin must be logged in and has permission to create supervisor account.
Primary path	<ol style="list-style-type: none"> <li>1) Admin clicks Add button under supervisor section.</li> <li>2) System retrieves Add Supervisor page.</li> <li>3) Admin enters necessary information about a supervisor.</li> <li>4) Admin creates a temporary password.</li> <li>5) Admin clicks ‘Add Supervisor’ button.</li> <li>6) System asks for confirmation.</li> <li>7) Admin confirms to add supervisor.</li> <li>8) System registers the supervisor.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	System successfully sends an email to supervisor with login credentials.

Table: 3.3.16 use case ‘Pre-register supervisor’

Use case number	UC-17
Use case name	View all supervisors
Summary	Admin views supervisor list.
Triggering event	Admin clicks 'View' to access the supervisor list.
Brief description	Admin can view the list of all supervisors' accounts.
Actors	Admin
Extended cases	None
Included cases	None
Stakeholder	Admin
Requirement	Admin must be logged in and has permission to view supervisor account.
Primary path	<ol style="list-style-type: none"> <li>1) Admin clicks View button under supervisor section.</li> <li>2) System retrieves All Supervisor page.</li> <li>3) Admin can search specific supervisor.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	Admin views the supervisor list successfully.

Table: 3.3.17 use case 'View all supervisors'

Use case number	UC-18
Use case name	Update and delete supervisor and student accounts
Summary	Admin manages user accounts.
Triggering event	Admin selects account based on necessary actions.
Brief description	Admin can modify or delete any user account (Student or Supervisor).
Actors	Admin
Extended cases	None
Included cases	None
Stakeholder	Admin, Student, Supervisor
Requirement	Admin must be logged in and has permission to manage user accounts.
Primary path	<p>1) Admin clicks View button under selected user's section. System retrieves the required page.</p> <ul style="list-style-type: none"> <li>• <b>Update:</b> <ul style="list-style-type: none"> <li>○ Admin selects user account and clicks 'Edit' button.</li> <li>○ Admin changes necessary fields.</li> <li>○ Admin clicks 'Save changes' button.</li> <li>○ System updates the details.</li> </ul> </li> <li>• <b>Delete:</b> <ul style="list-style-type: none"> <li>○ Admin selects user account and clicks 'Delete' button.</li> <li>○ System asks for confirmation.</li> <li>○ Admin provides the confirmation.</li> <li>○ System deletes the user account.</li> </ul> </li> </ul>
Alternative path	None
Exceptional path	None

Post-condition	Accounts are either updated or deleted.
----------------	---

Table: 3.3.18 use case 'Update and delete supervisor and student accounts'

Use case number	UC-19
Use case name	Receive student registration details
Summary	Admin receives student registration information
Triggering event	When a student completes registration
Brief description	Admin will receive the details of a newly registered student as pending student.
Actors	Admin
Extended cases	None
Included cases	None
Stakeholder	Admin, Student
Requirement	Student must complete the registration process.
Primary path	<ol style="list-style-type: none"> <li>1) Admin clicks 'Review' route under students section.</li> <li>2) System sends the registration details under pending student.</li> <li>3) Admin reviews details</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	System successfully dispatches the information to admin

Table: 3.3.19 use case 'Receive student registration details'

Use case number	UC-20
Use case name	Update student status
Summary	When admin wants to update the student status after review.
Triggering event	When a student completes registration and admin chooses to update the status.
Brief description	Admin can update the status of a student after examining the registration details.
Actors	Admin
Extended cases	None
Included cases	None
Stakeholder	Admin, Supervisor
Requirement	Admin must be logged in.
Primary path	<ol style="list-style-type: none"> <li>1) Admin clicks 'Review' route under students section.</li> <li>2) System sends the registration details under pending student.</li> <li>3) Admin reviews details</li> <li>4) Admin clicks 'Approve' button if the details of a student is valid.</li> <li>5) Admin clicks 'Decline' button if any information of the student is invalid.</li> <li>6) System updates the status after confirmation.</li> </ol>
Alternative path	None
Exceptional path	None
Post-condition	Student status is updated and supervisor is notified.

Table: 3.3.20 use case 'Update student status'

### 3.4 Activity Diagram

UC-1: Register/Create account (Actor: Student)

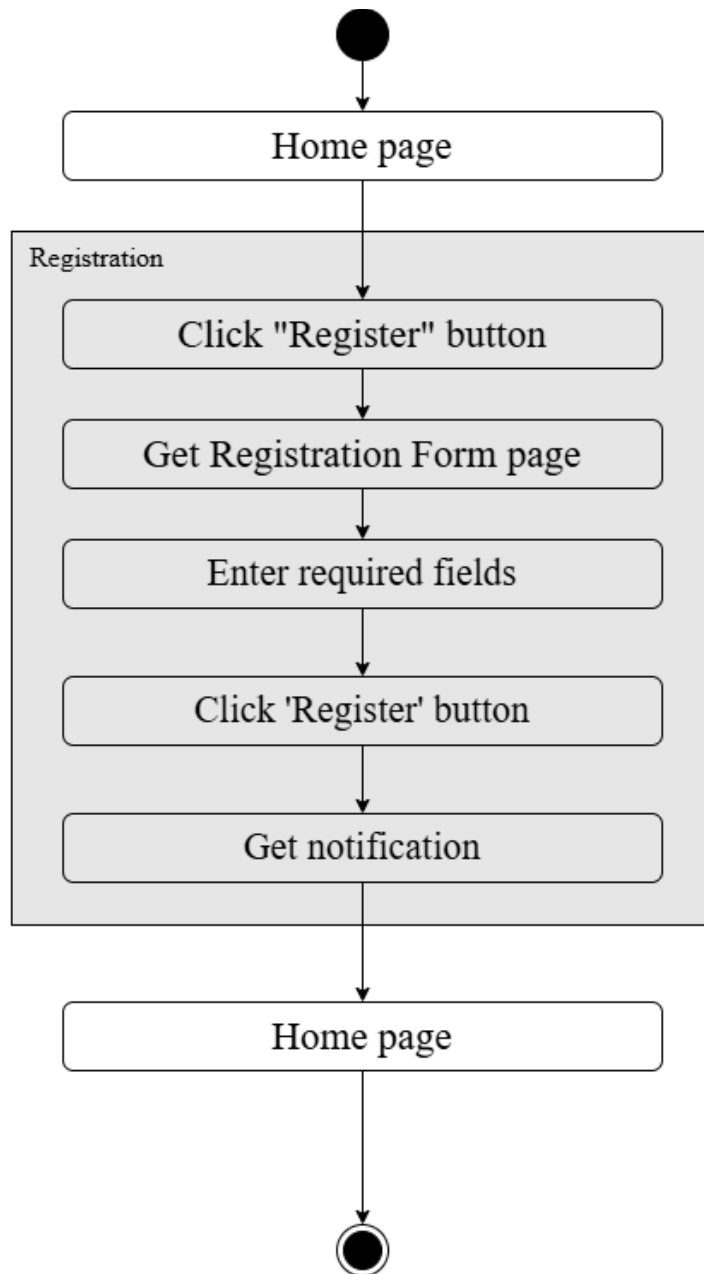


Fig: 3.4.1 Registration

UC-2: Login (Actor: Student, Supervisor, and Admin)

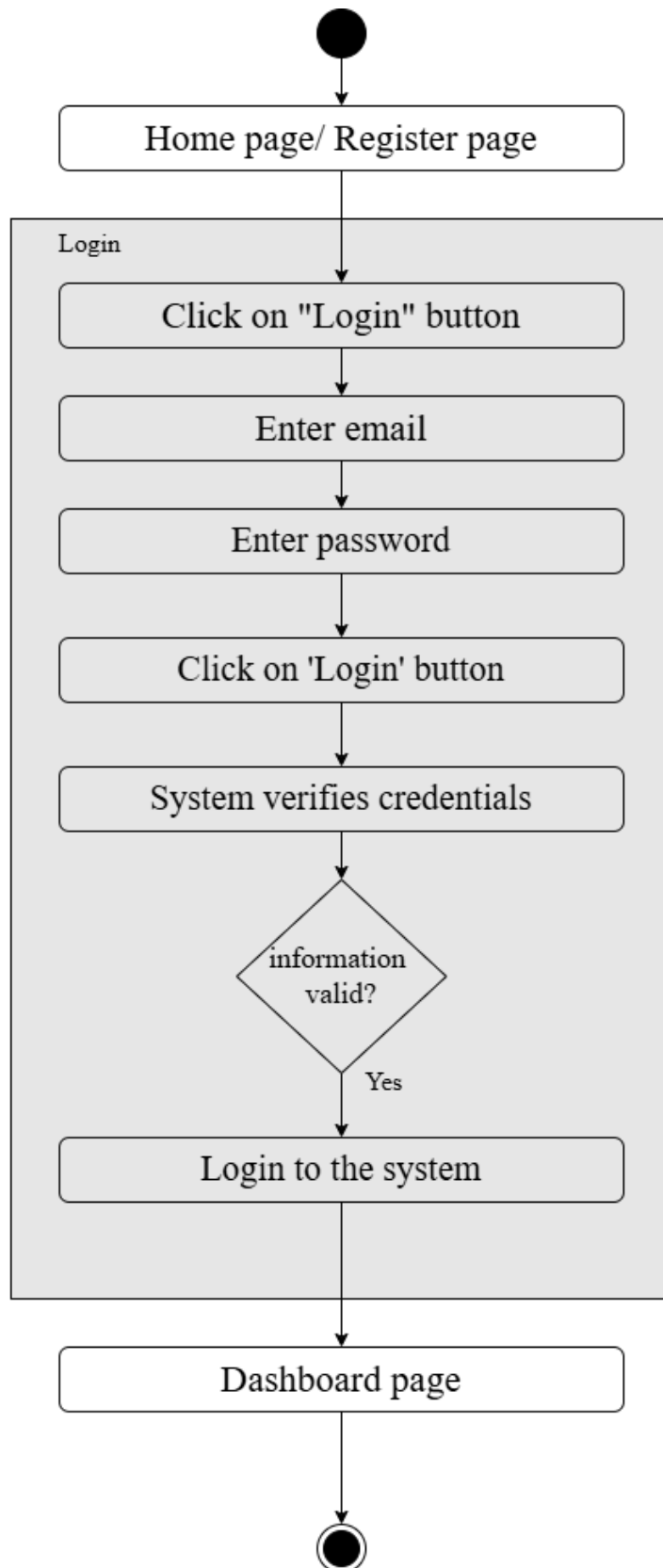


Fig: 3.4.2 Login

## UC-3: Recover Password (Actor: Supervisor, Student)

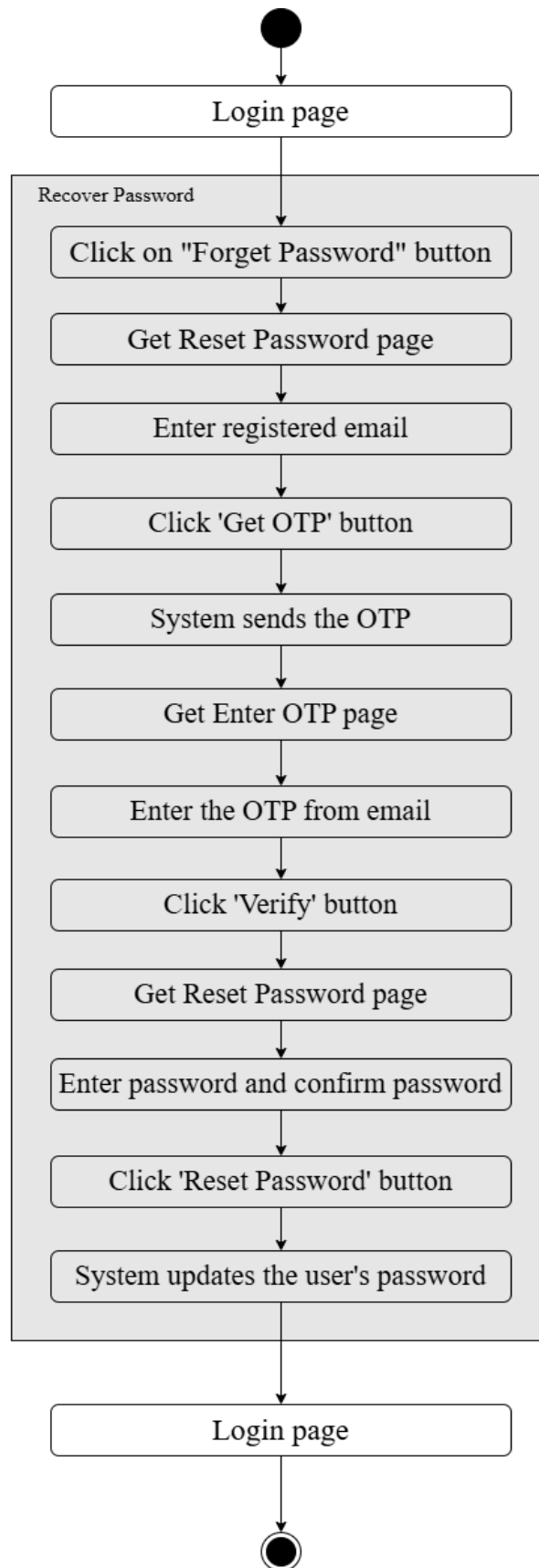


Fig: 3.4.3 Recover Password

UC-4: Create project/thesis (Actor: Supervisor)

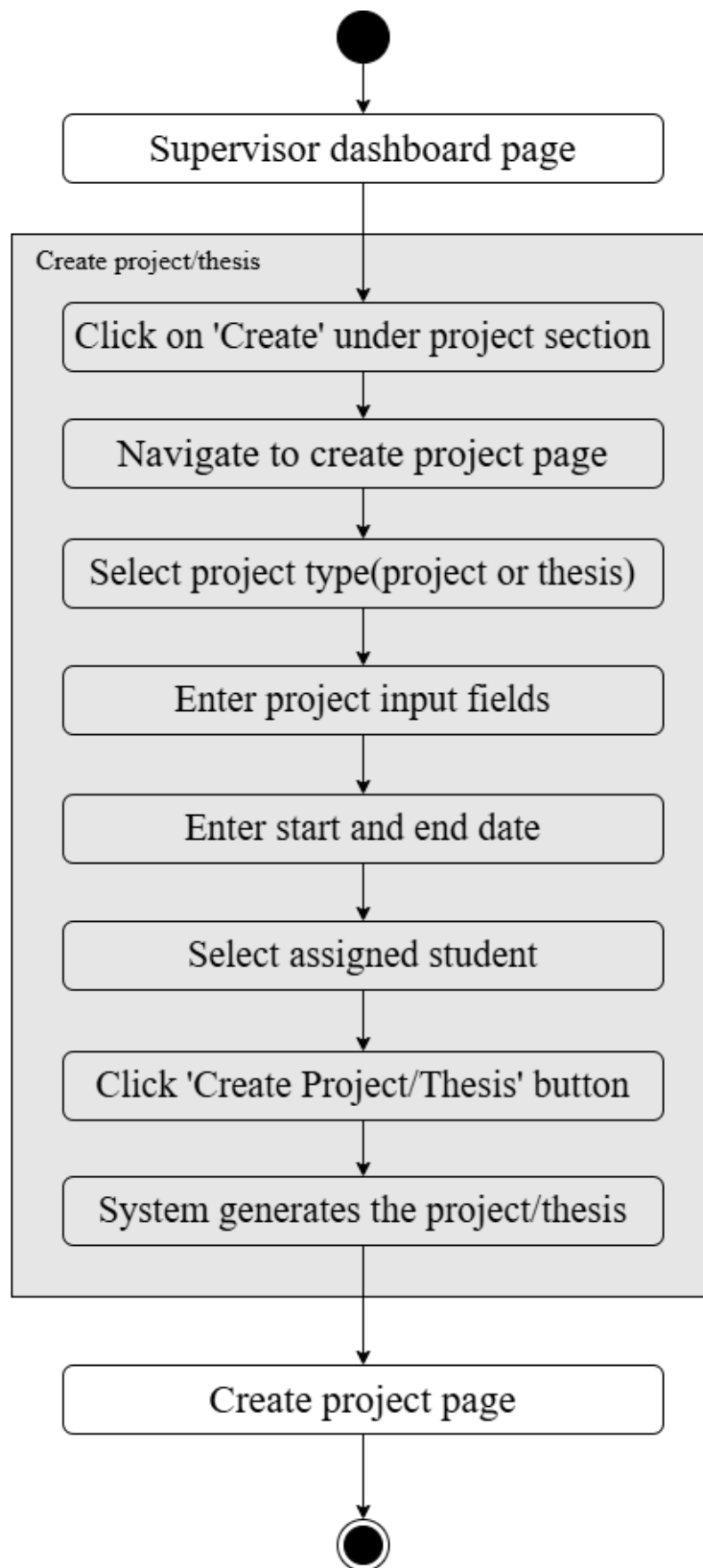


Fig: 3.4.4 Create project/thesis

UC-5: View project and thesis list (Actor: Supervisor, Admin)

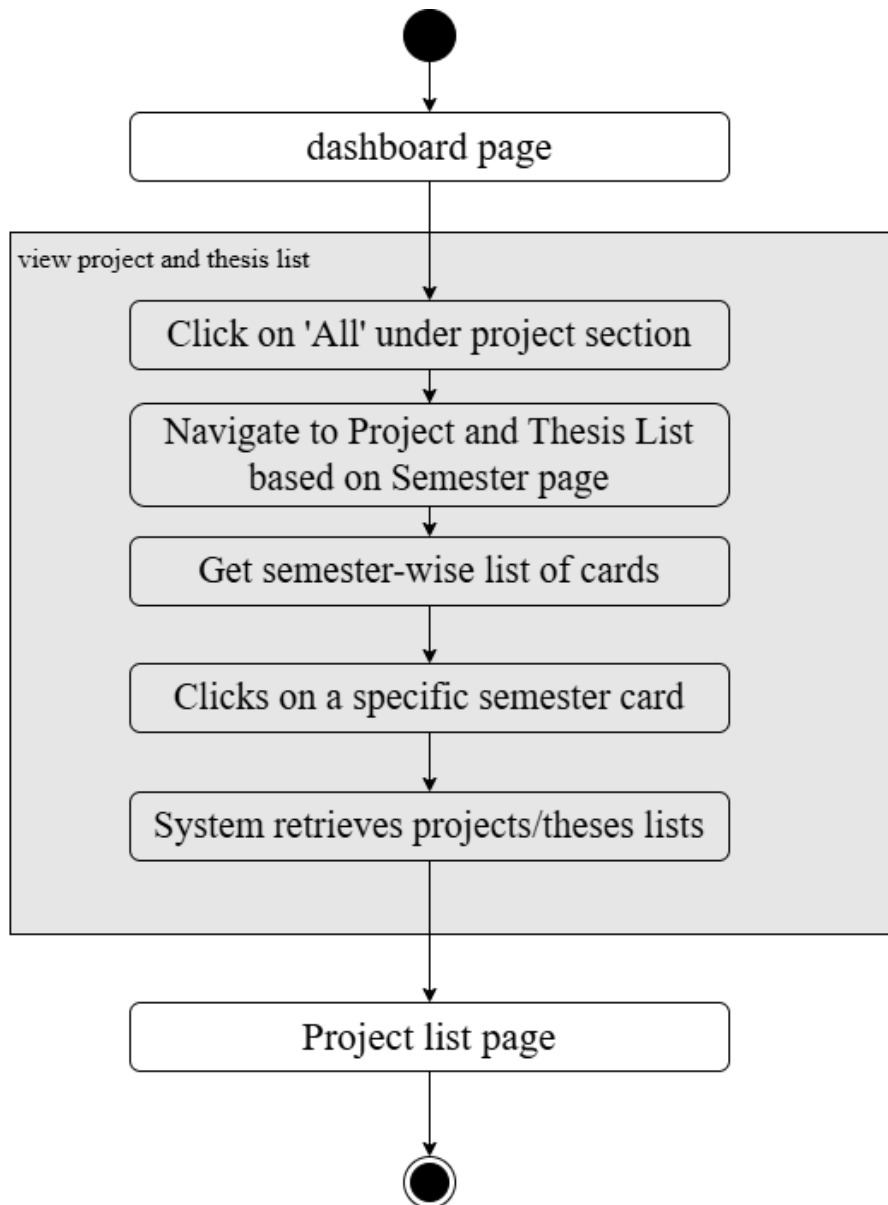
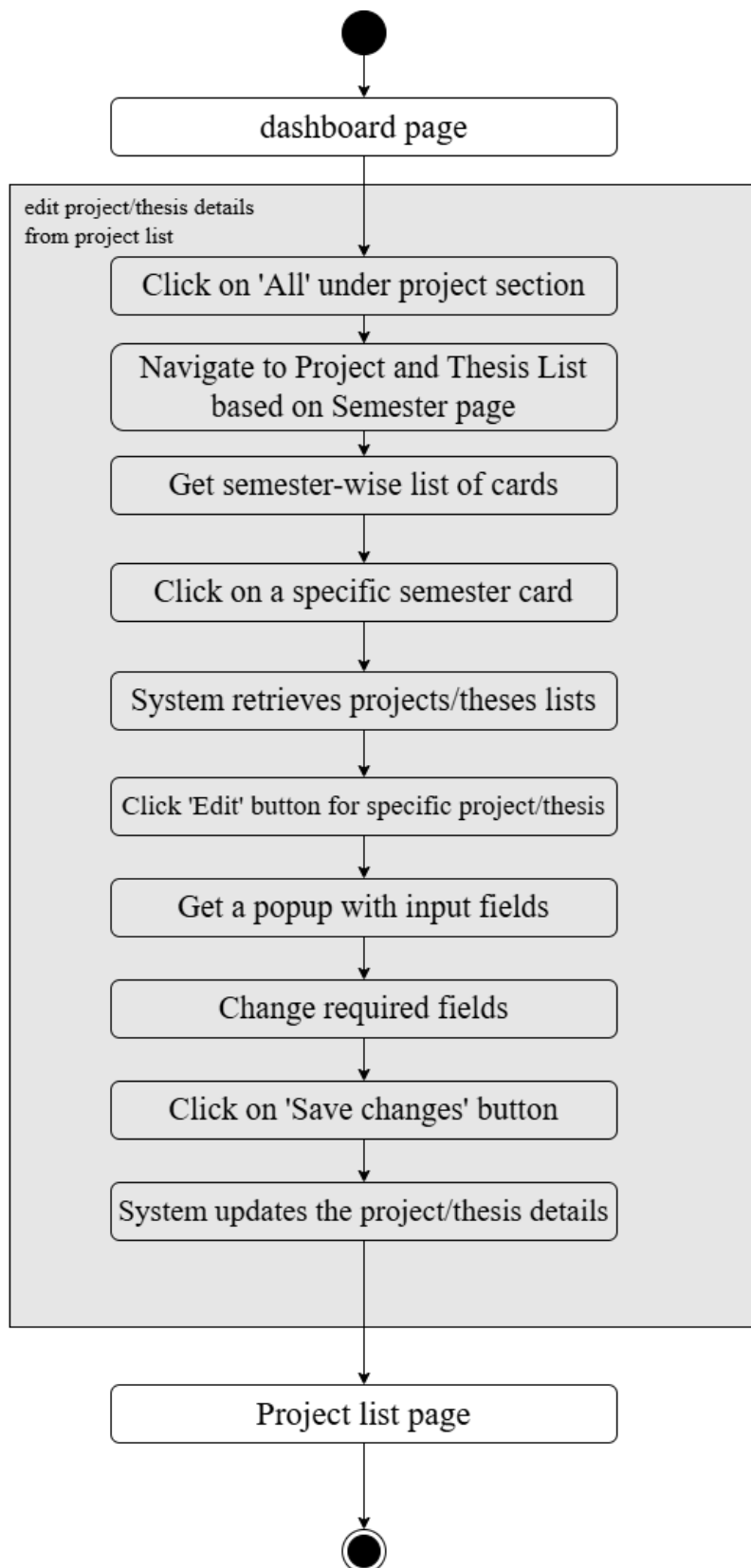


Fig: 3.4.5 View project and thesis list

UC-6: Edit project/thesis details from project list (Actor: Supervisor)



Fig; 3.4.6 Edit project/thesis details from project list

UC-7: Update project/thesis status (Actor: Supervisor)

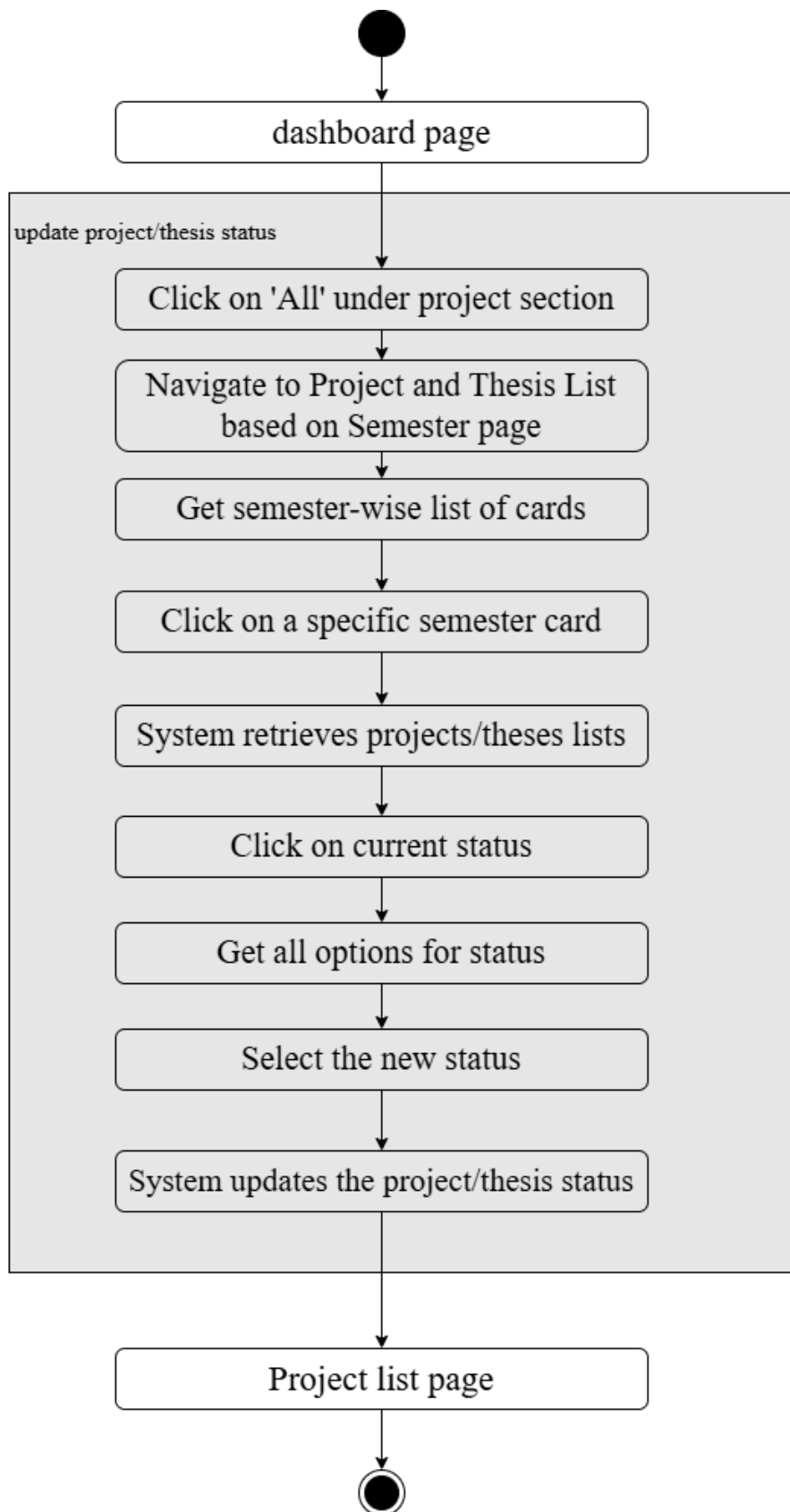


Fig: 3.4.7 update project/thesis status

## UC-8: Search and filter specific project/thesis

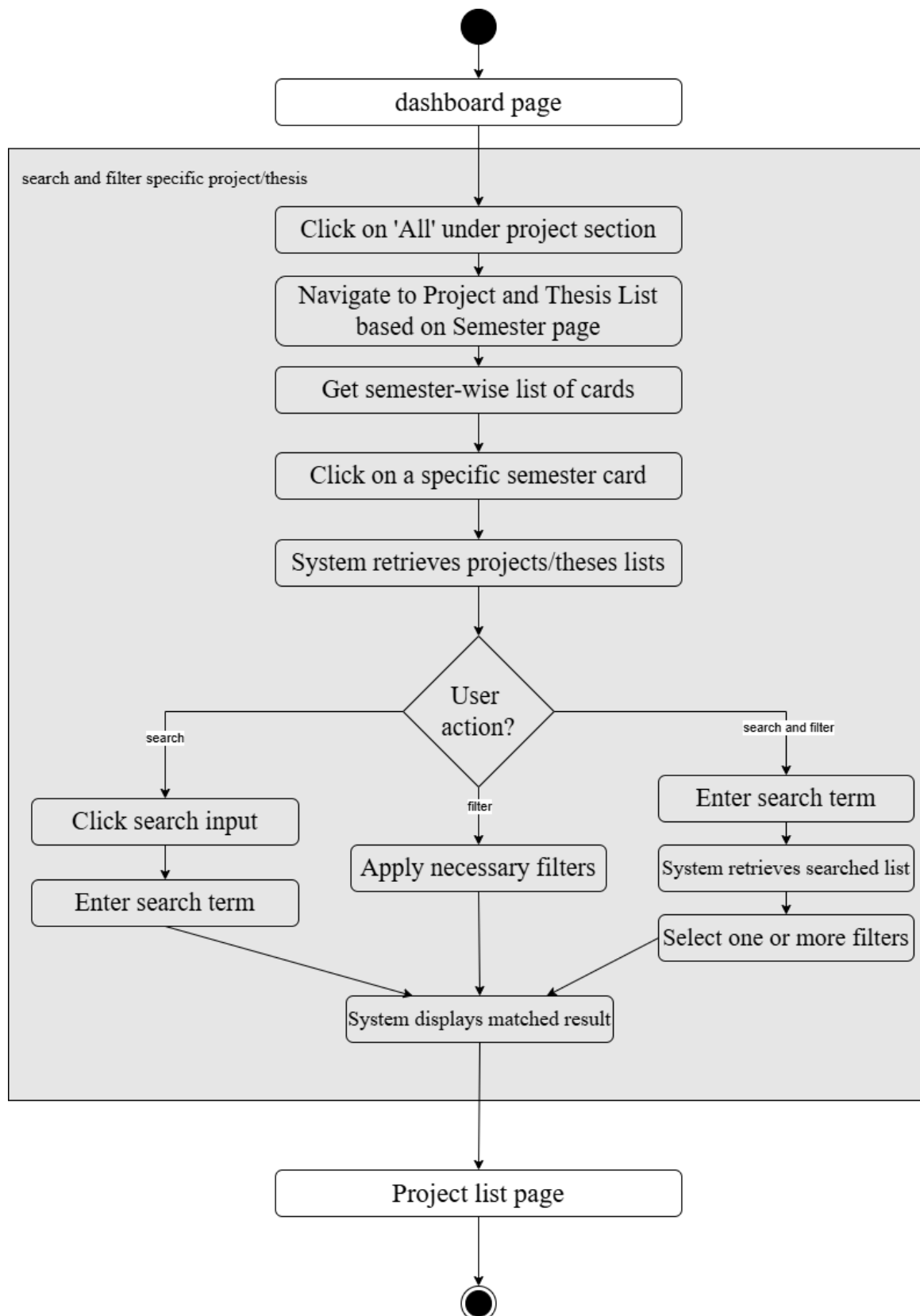


Fig: 3.4.8 search and filter specific project/thesis

## UC-9: Provide feedback

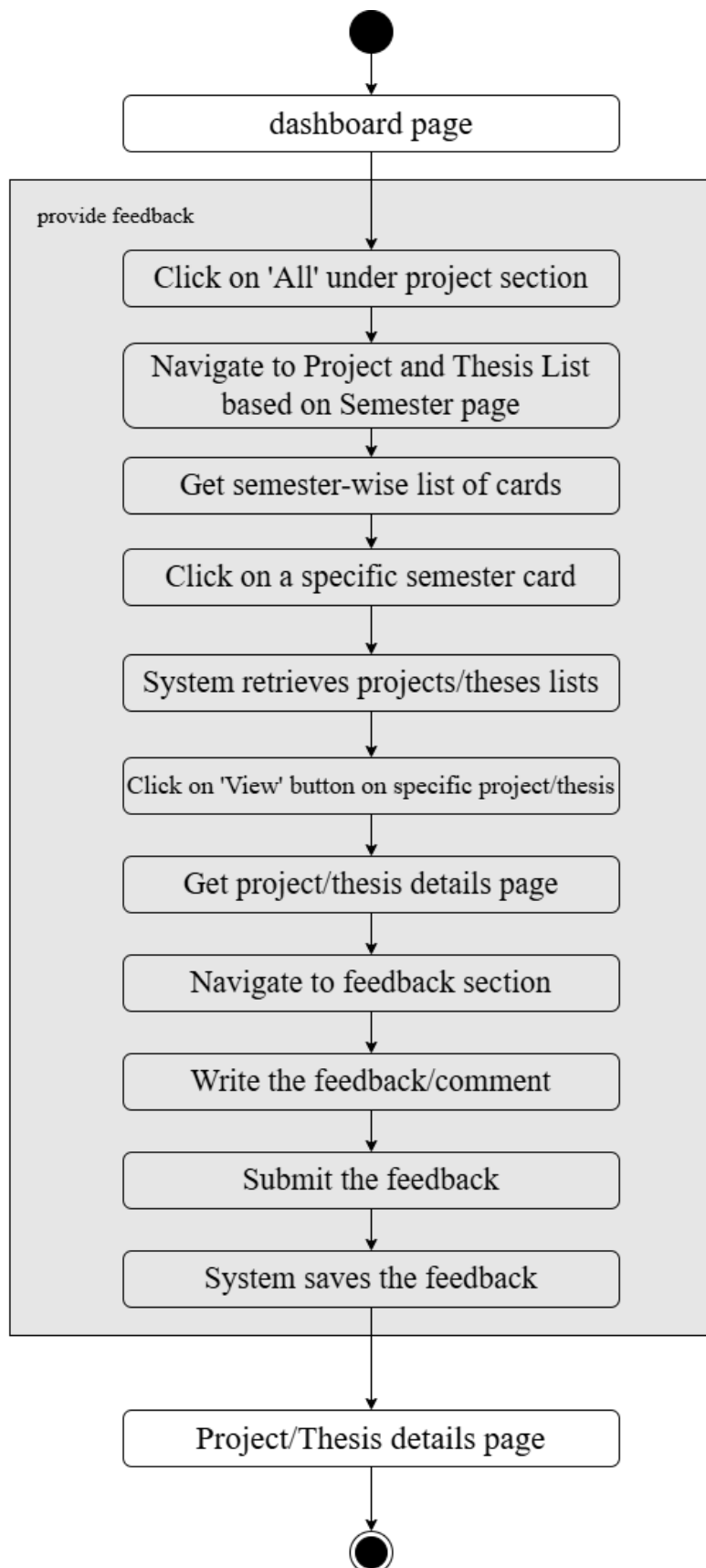


Fig: 3.4.9 provide feedback

UC-10: View total students (Actor: Supervisor and Admin)

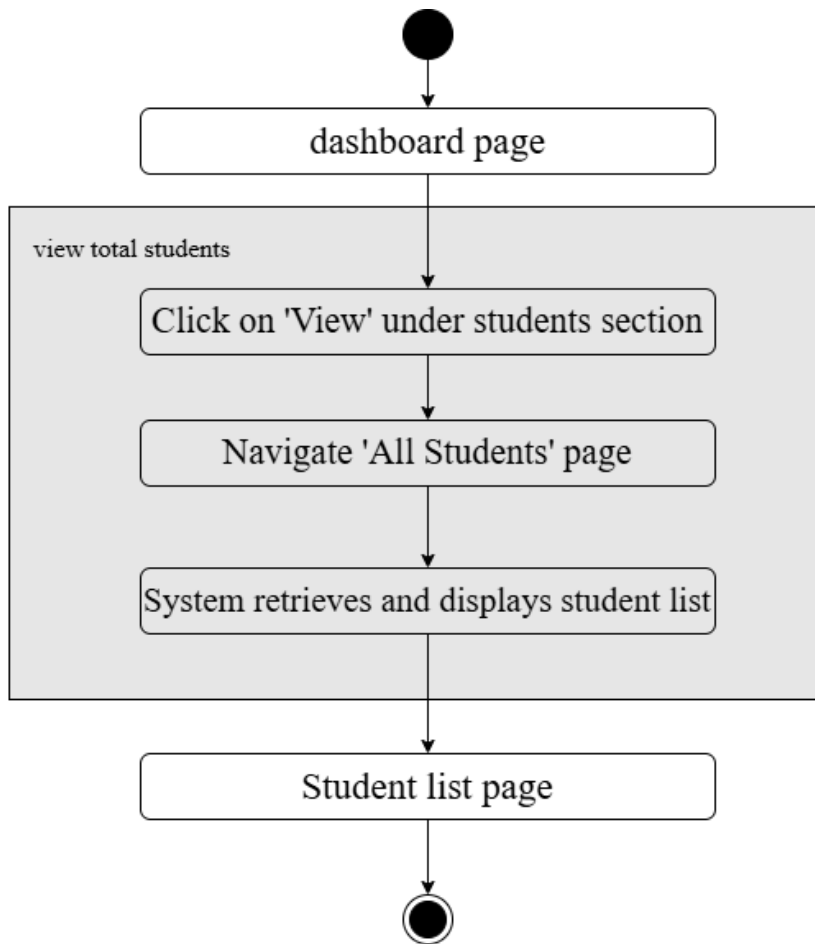


Fig: 3.4.10 view total students

## UC-11: delete project/thesis (Actor: Supervisor)

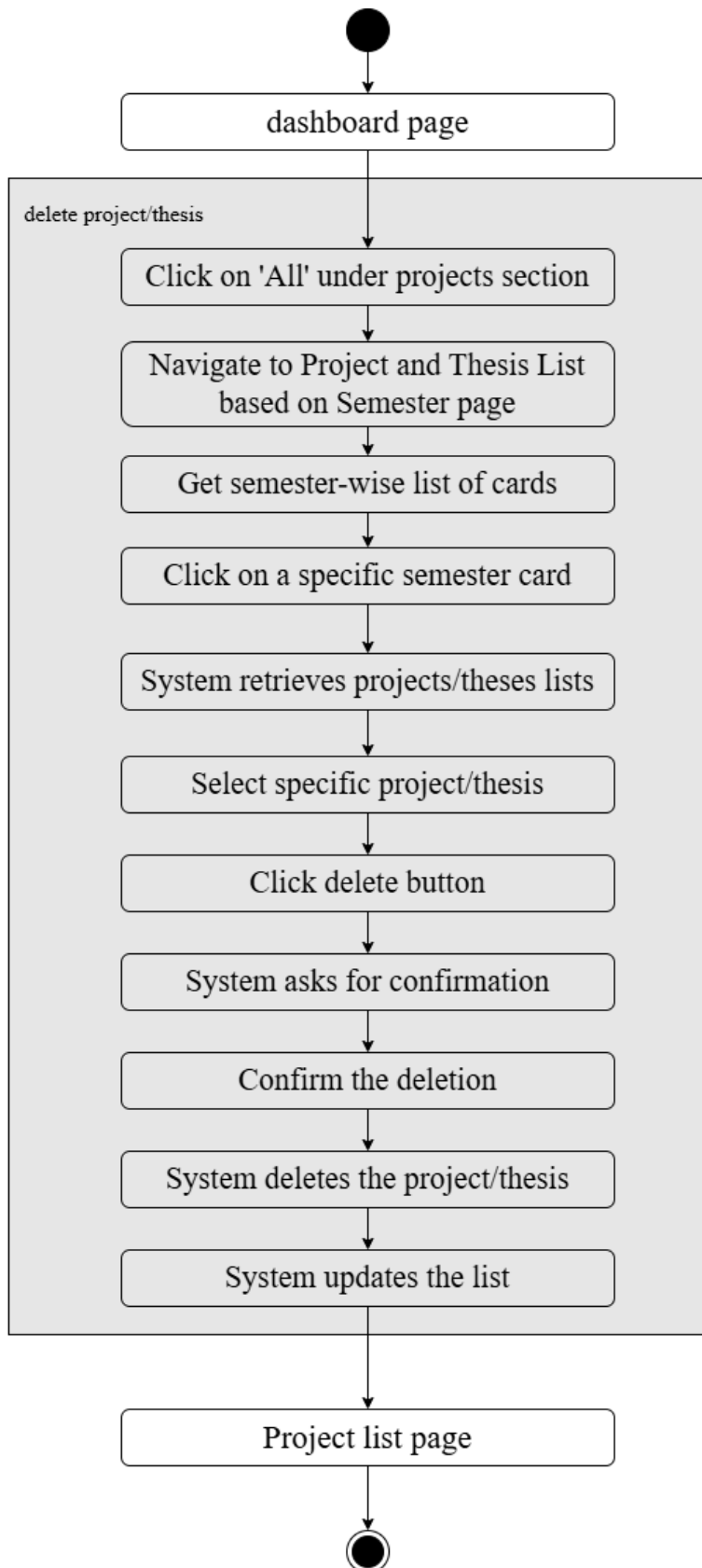


Fig: 3.4.11 delete project/thesis

UC-12: Export project/thesis details (Actor: Supervisor, Student, and Admin)

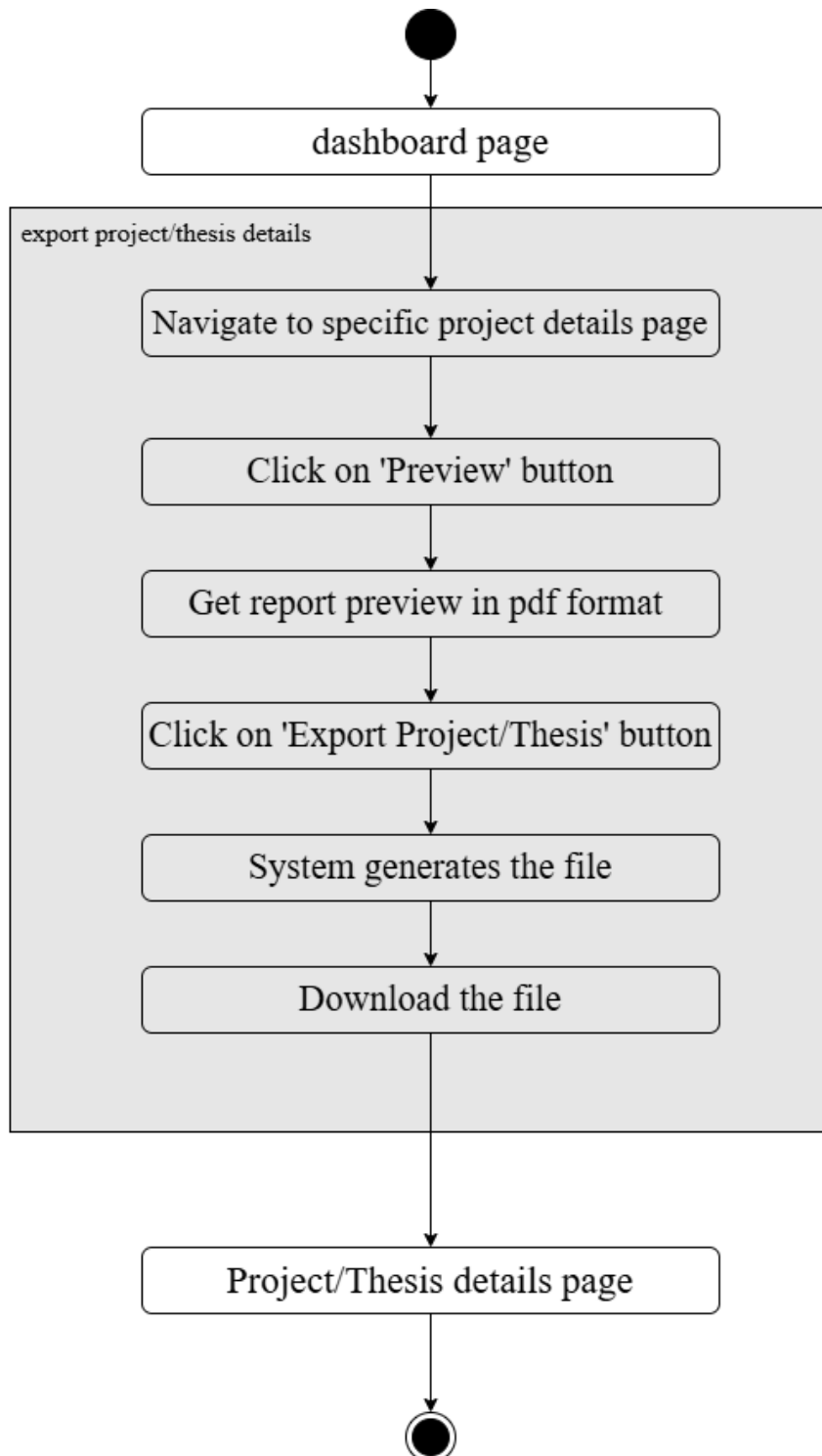


Fig: 3.4.12 export project/thesis details

UC-13: View assigned project/thesis (Actor: Student)

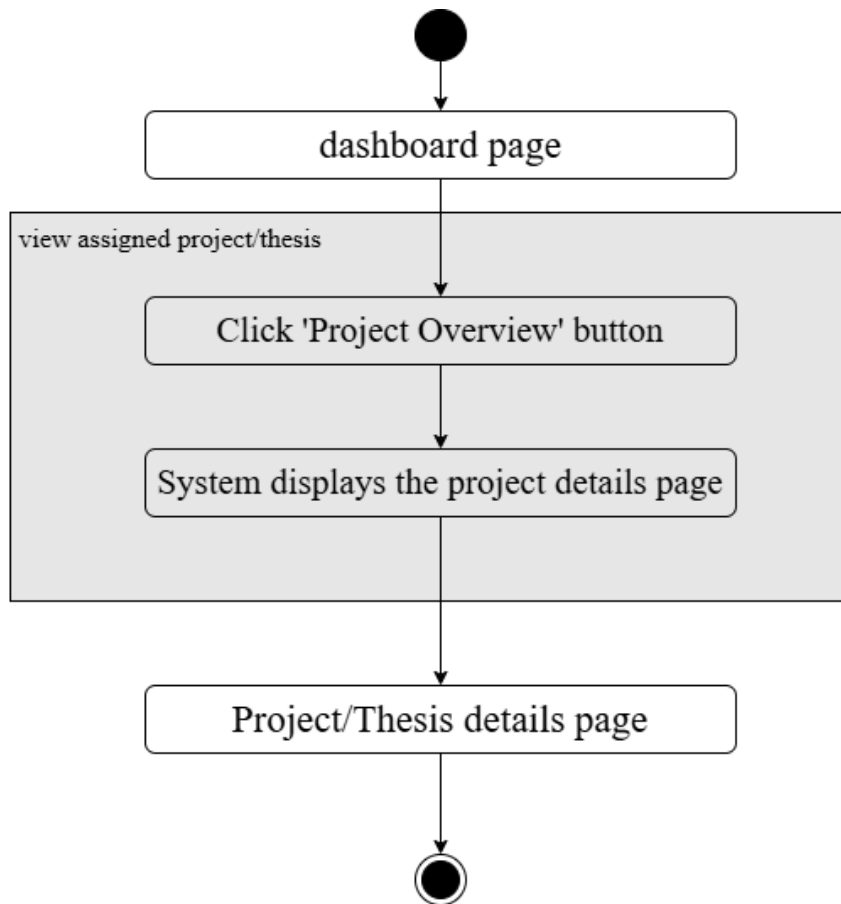


Fig: 3.4.13 view assigned project/thesis

## UC-14: Upload/attach documents (Actor: Student)

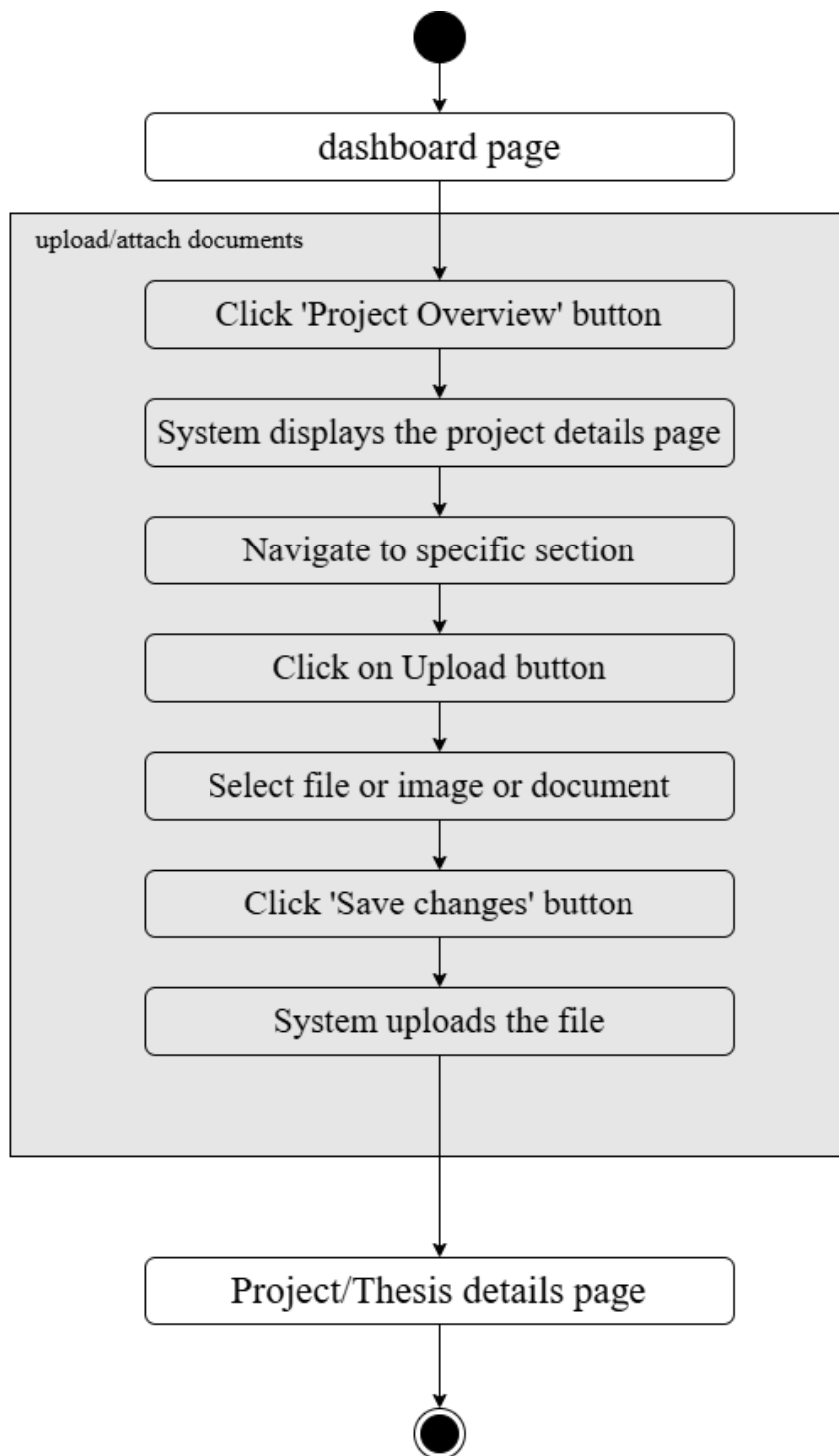


Fig: 3.4.14 upload/attach documents

UC-15: Respond to feedback/comments (Actor: Student)

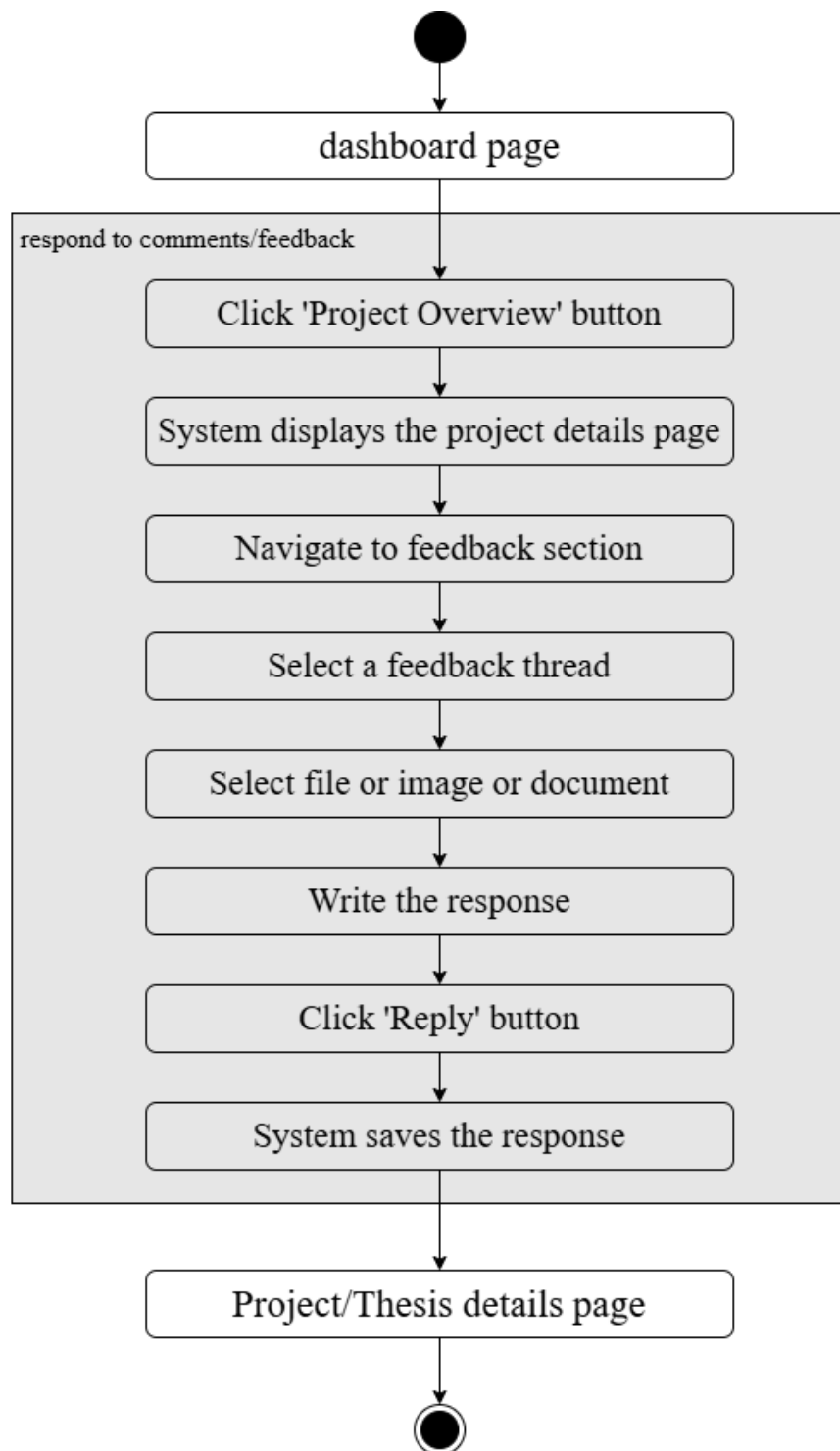


Fig: 3.4.15 respond to comments/feedback

## UC-16: Pre-register supervisor (Actor: Admin)

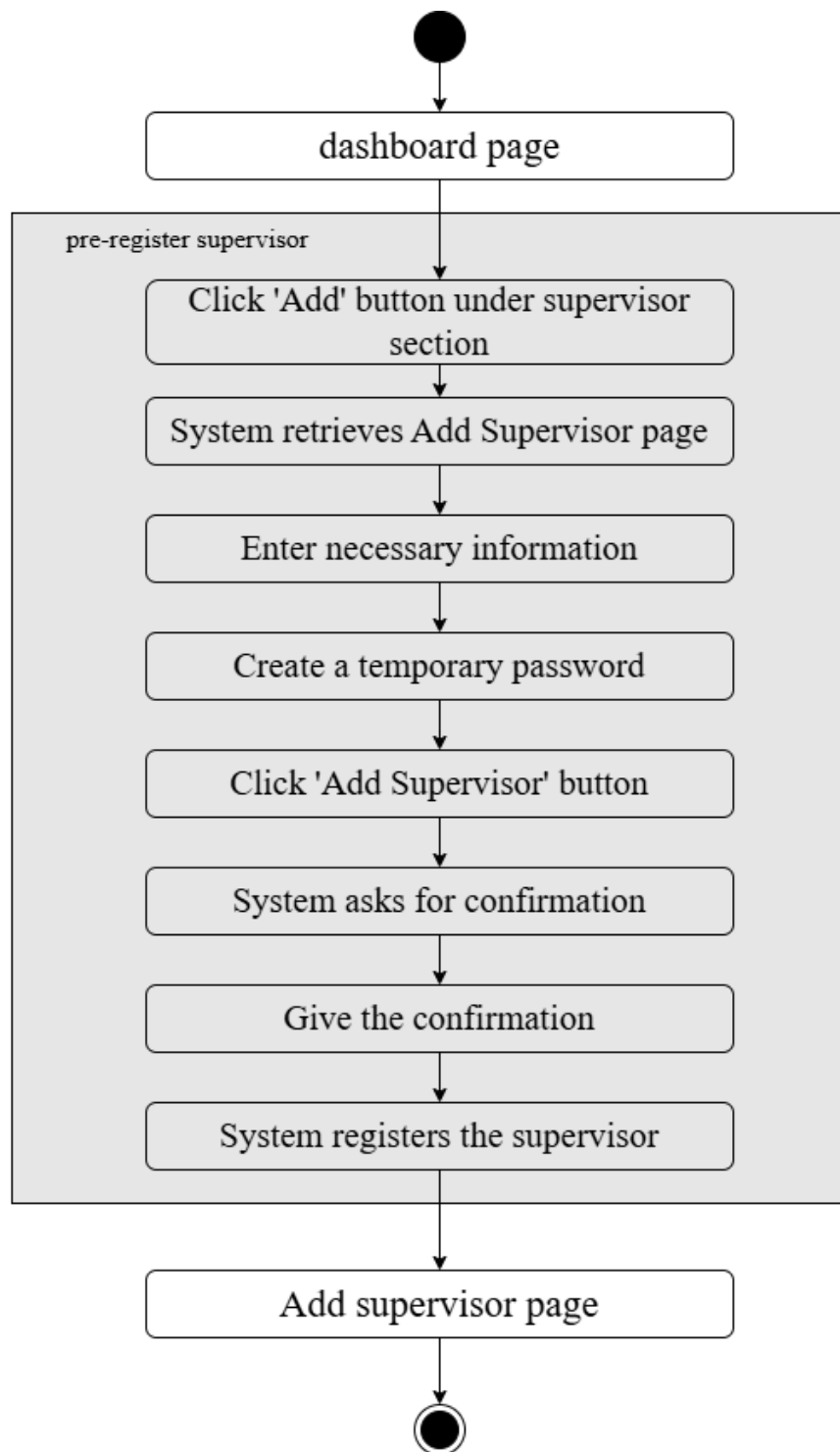


Fig: 3.4.16 pre-register supervisor

UC-17: View all supervisors (Actor: Admin)

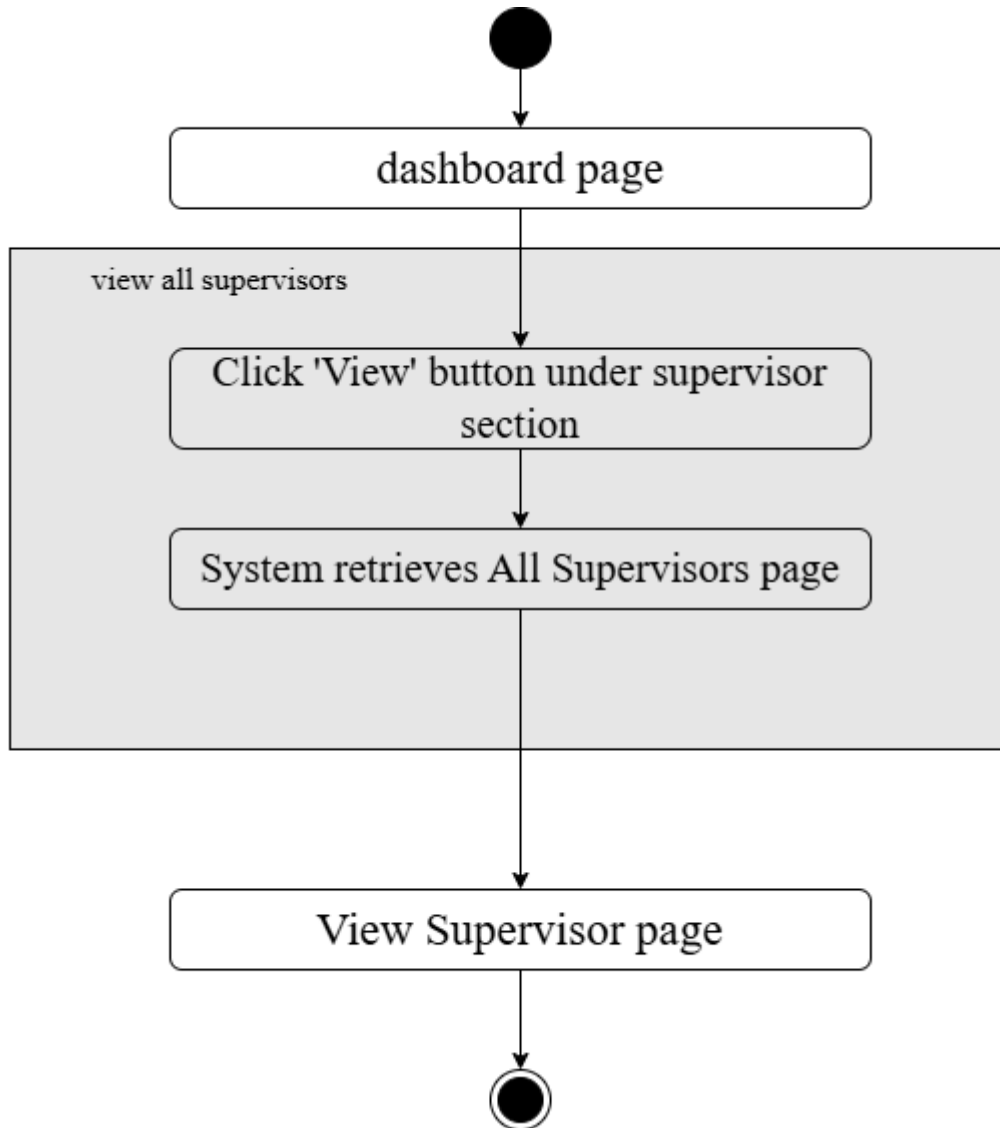


Fig: 3.4.17 view all supervisors

## UC-18: Update and delete supervisor and student account

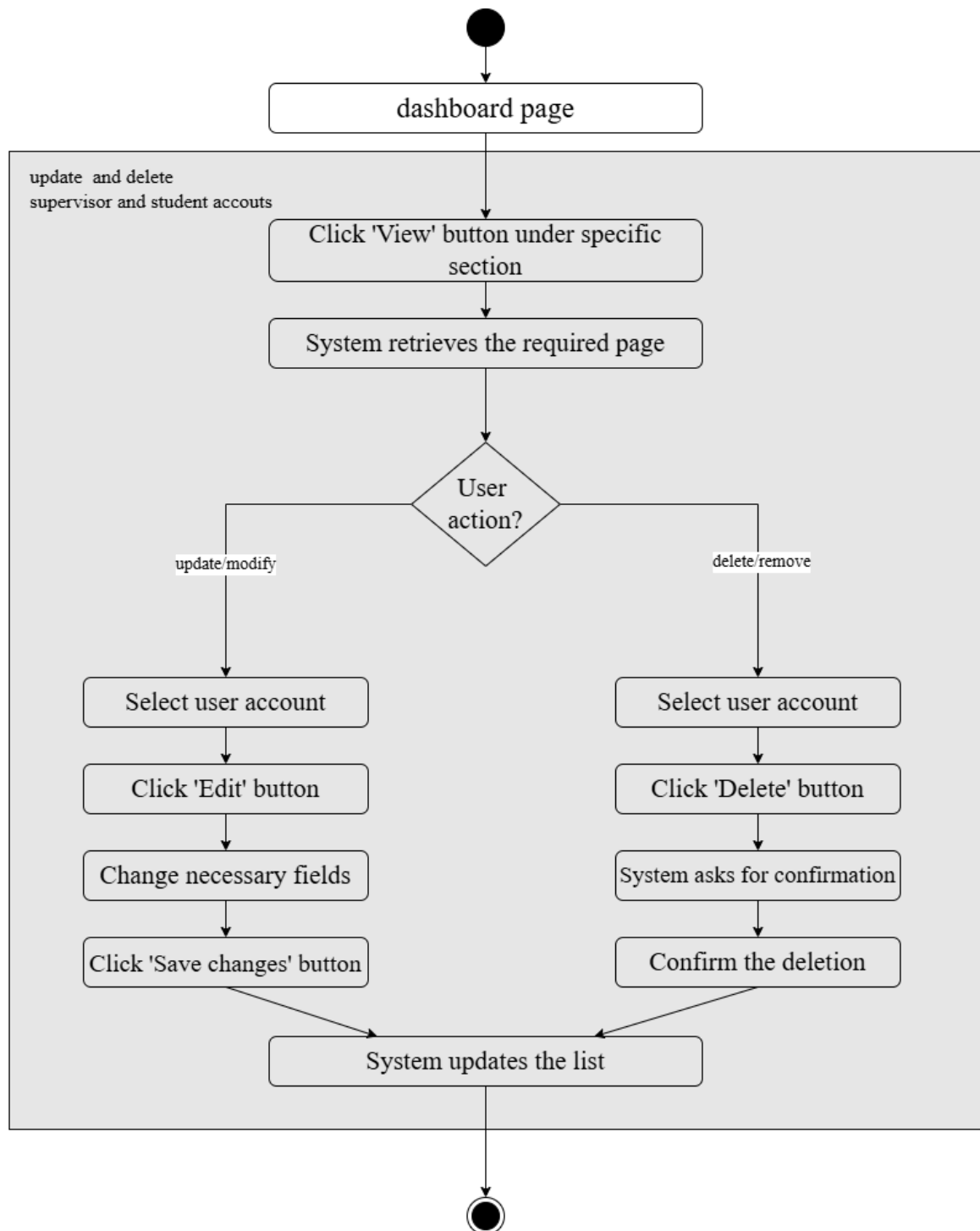


Fig: 3.4.18 update and delete supervisor and student accounts

UC-19: Receive student registration details

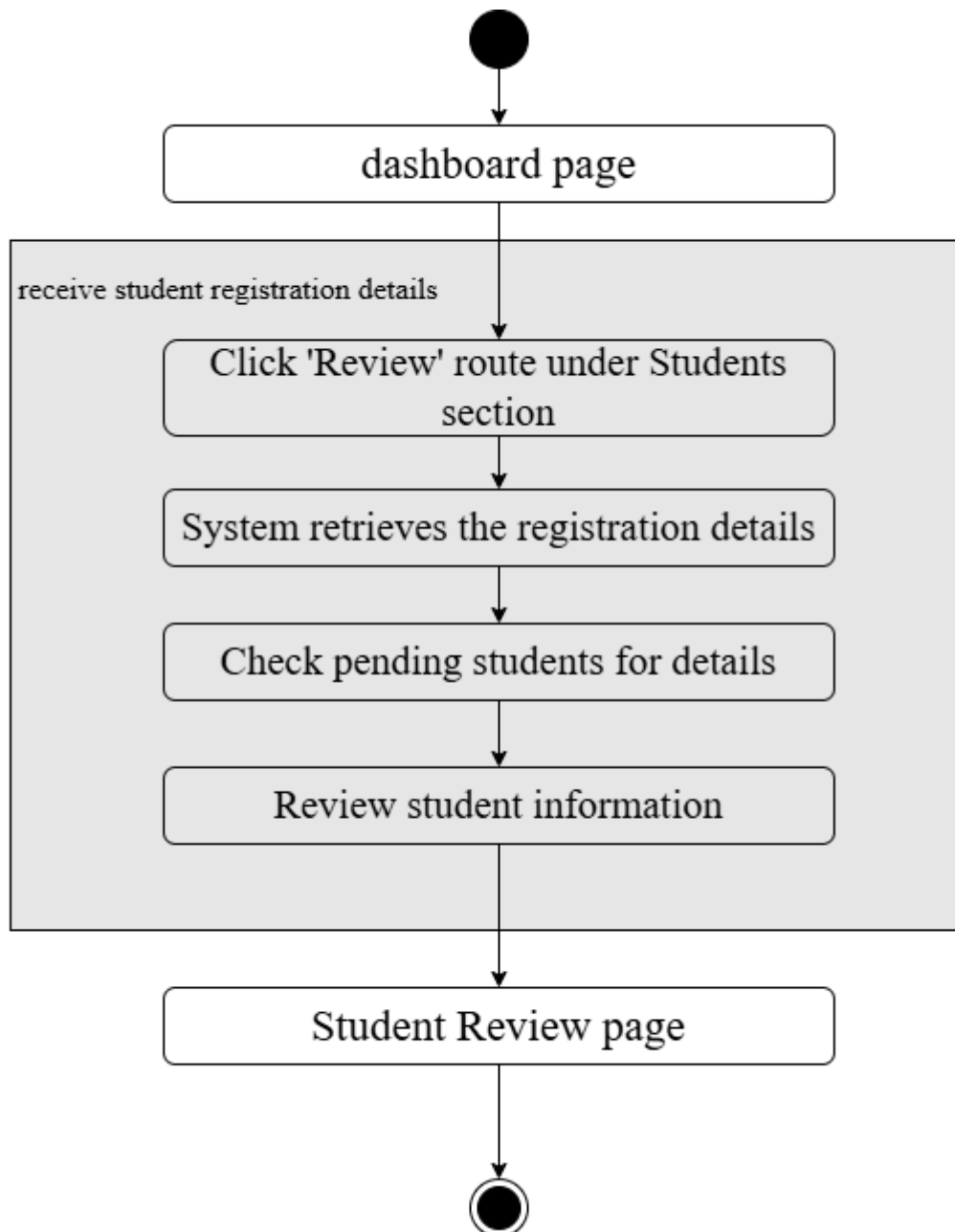


Fig: 3.4.19 receive student registration details

## UC-20: Update student status

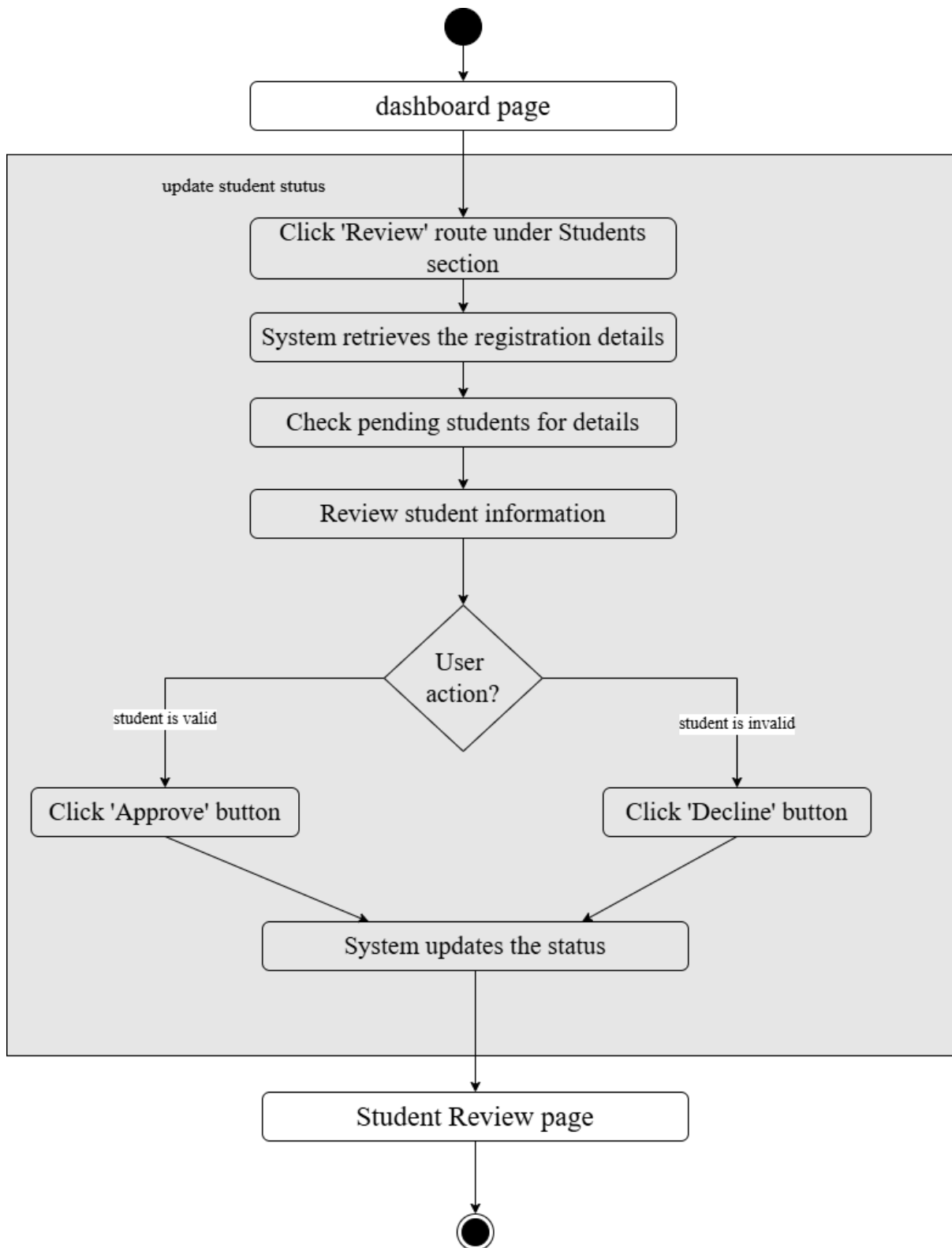


Fig: 3.4.20 update student status

### 3.5 Sequence Diagram

UC-1: Register/Create Account

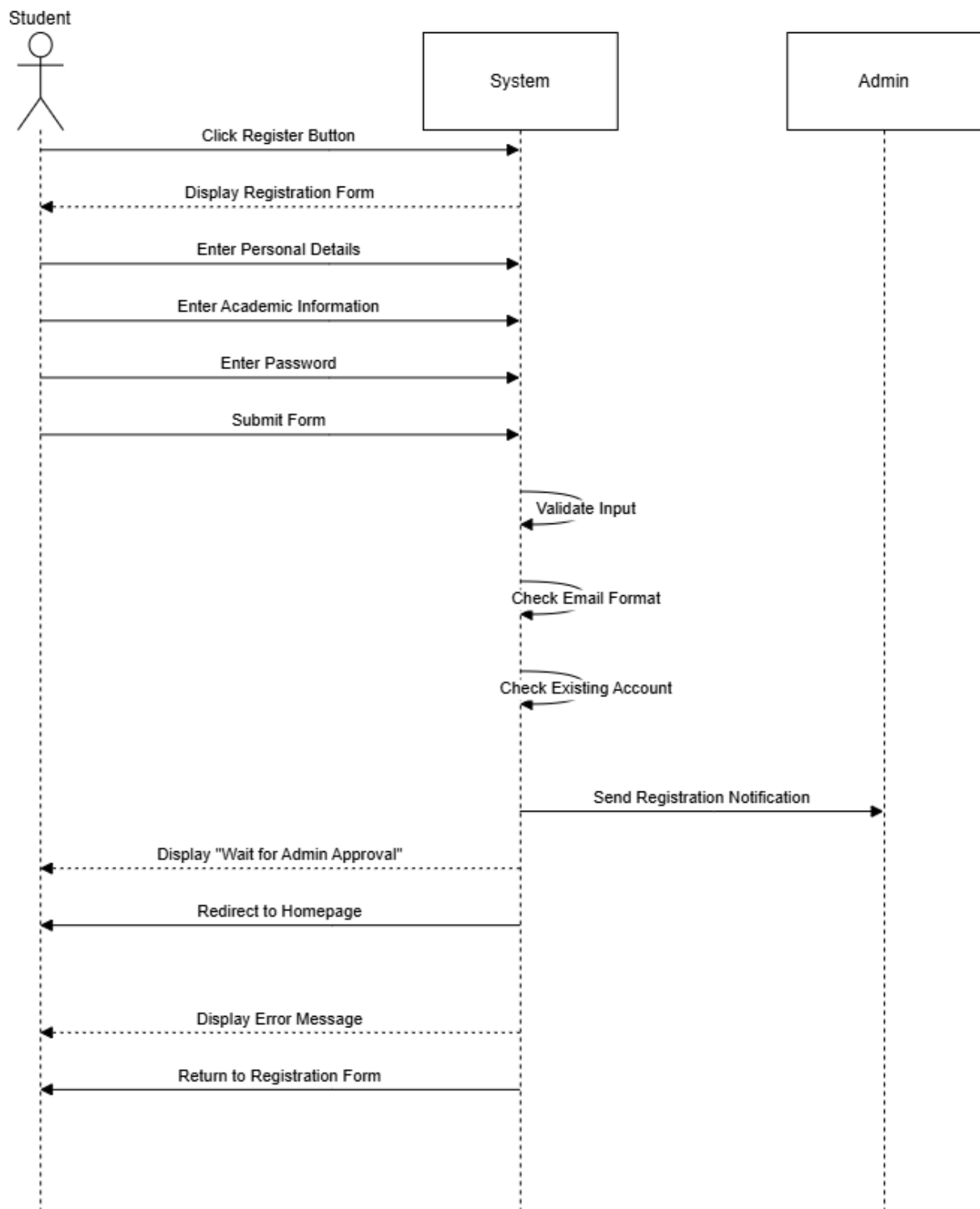


Fig: 3.5.1 register/create account

## UC-2: Login

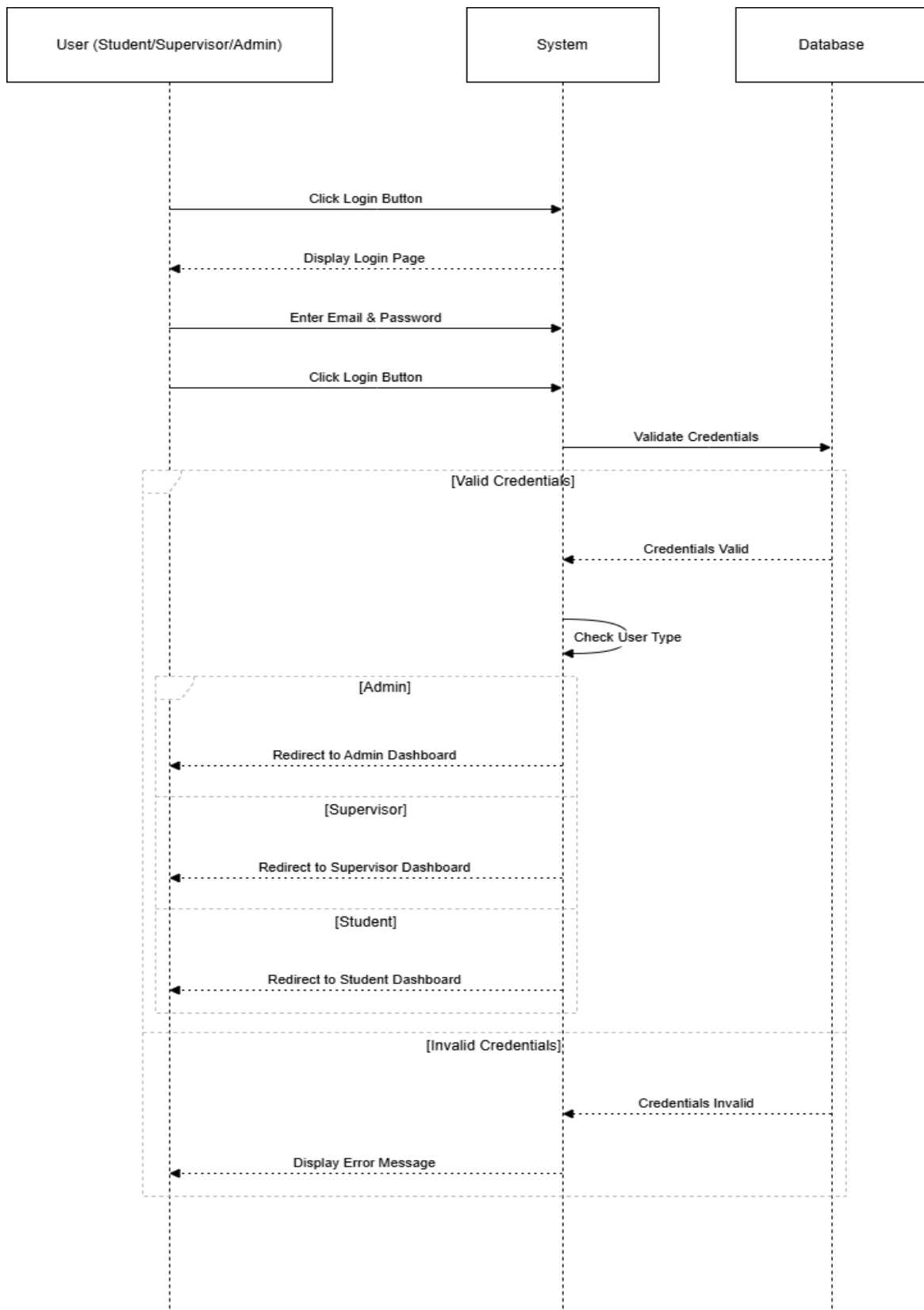


Fig: 3.5.2 login

## UC-3: Recover Password

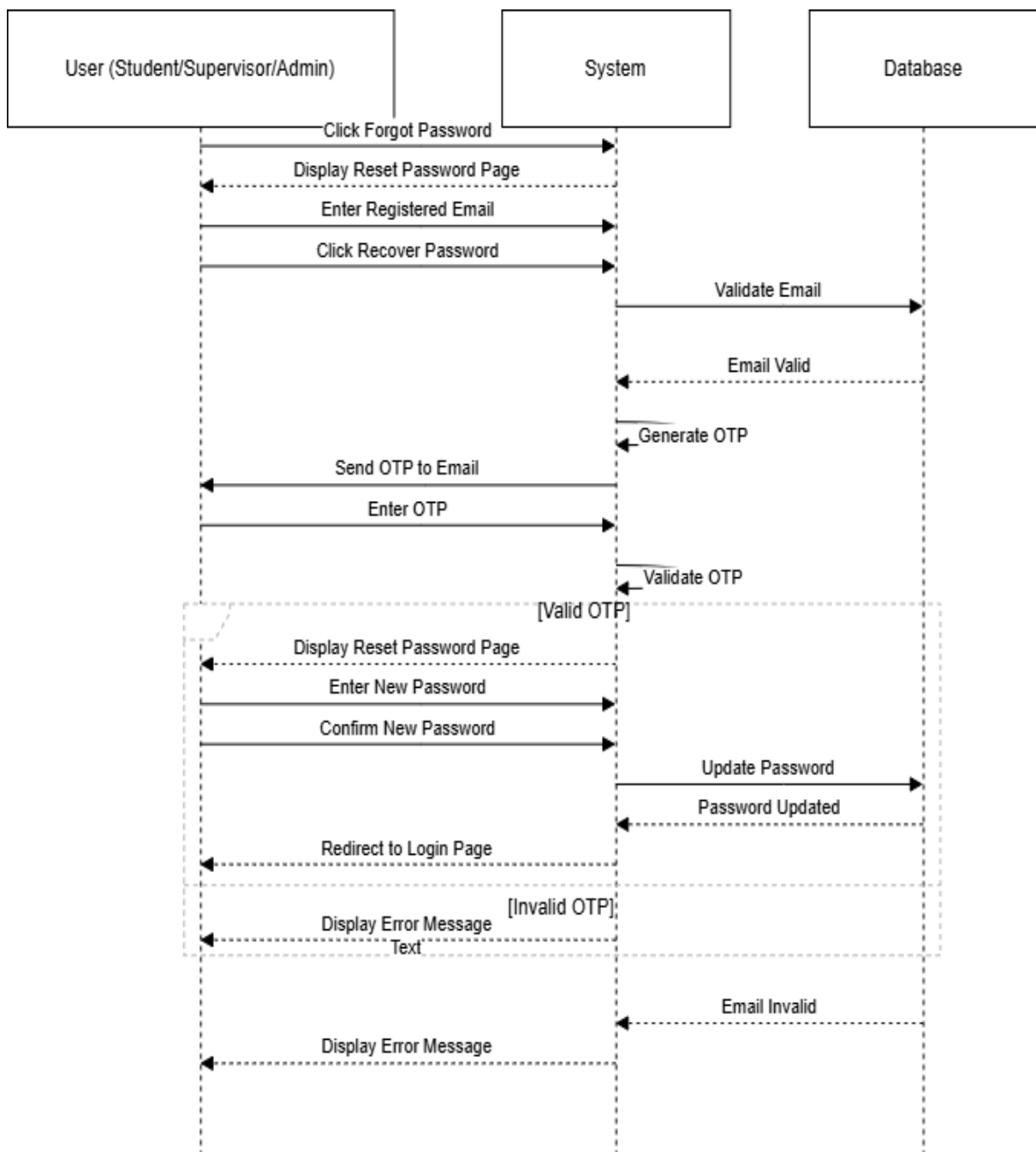


Fig: 3.5.3 recover password

## UC-4: Create project/thesis

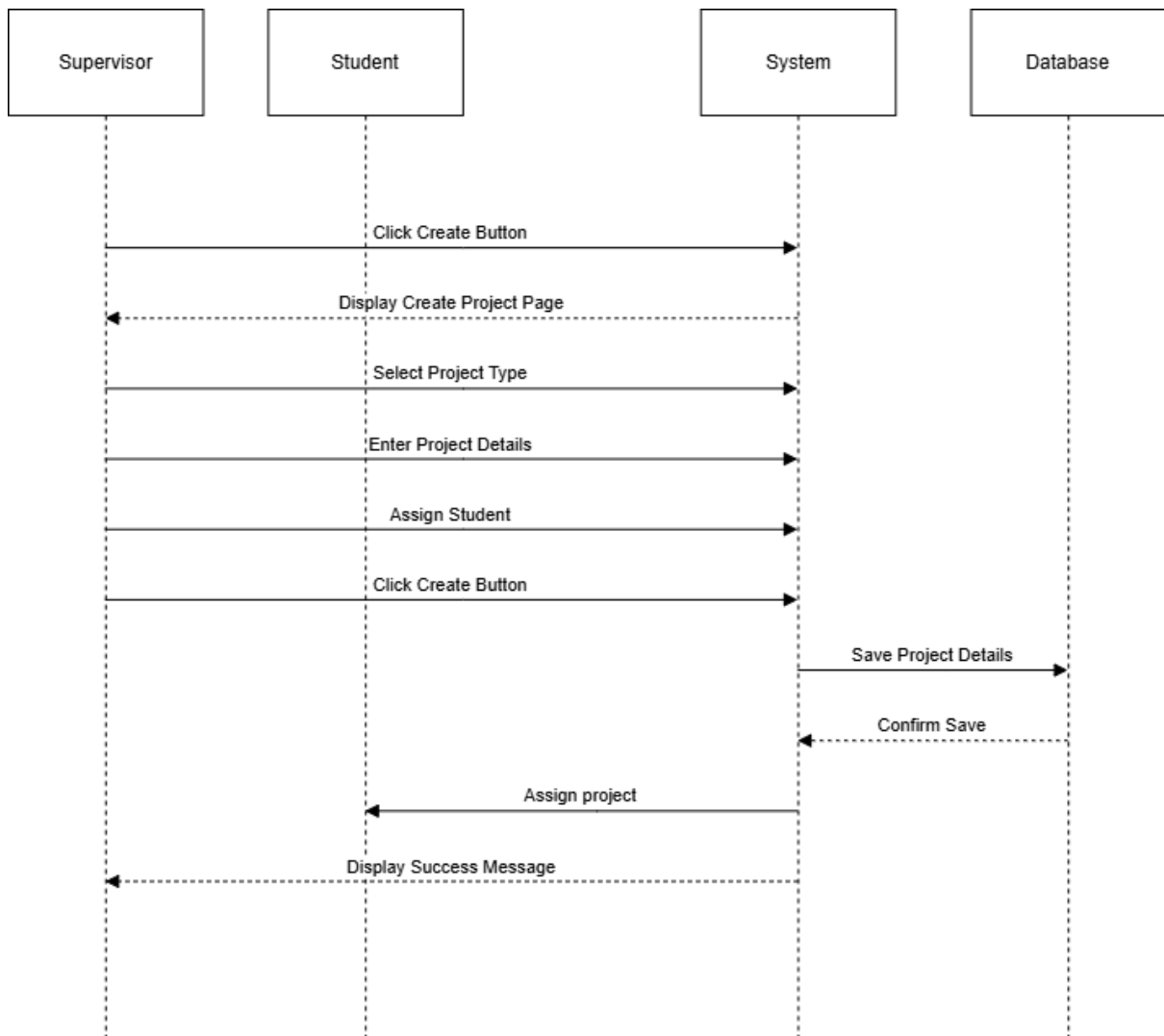


Fig: 3.5.4 create project/thesis

## UC-5: View thesis/project list

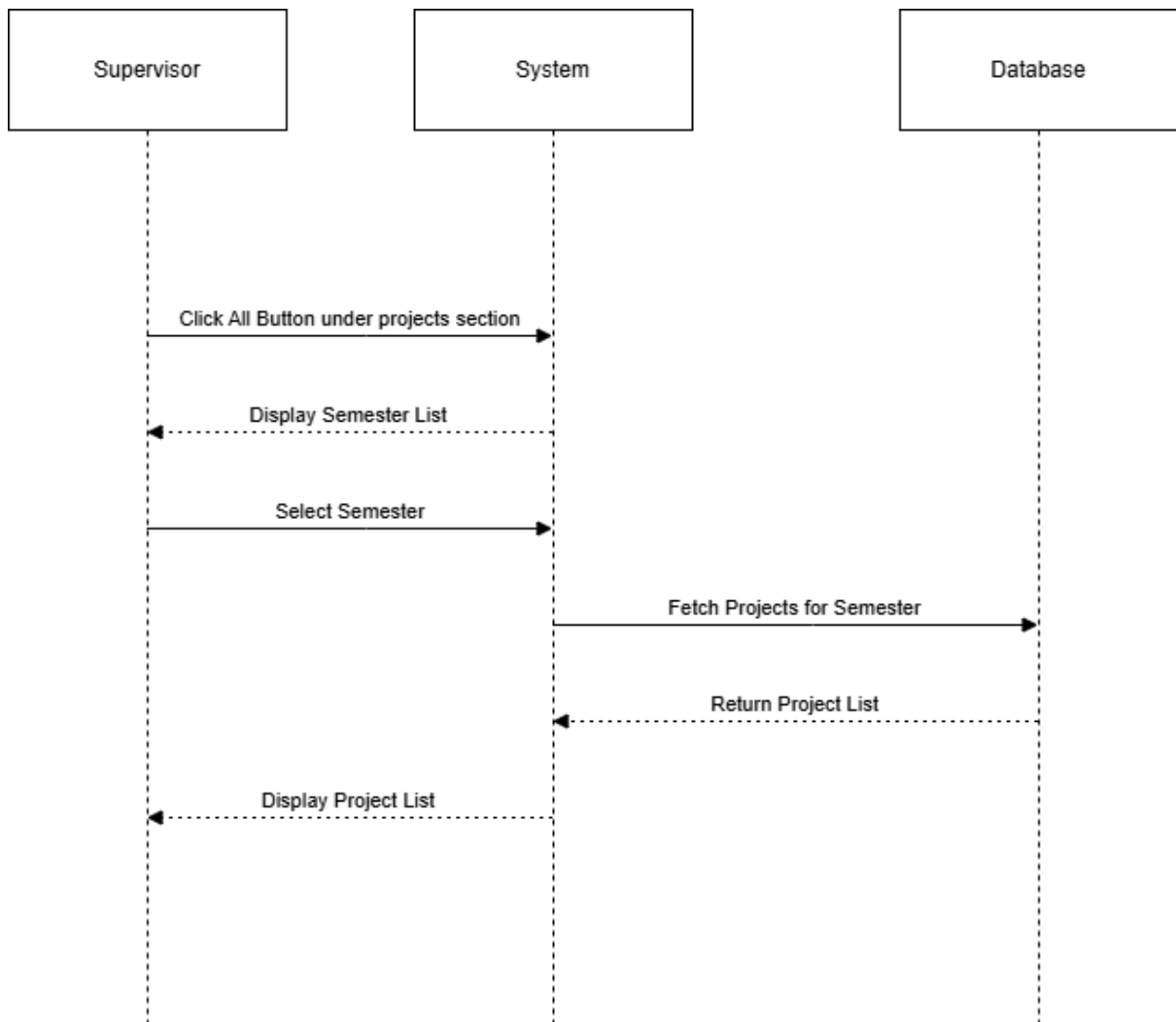


Fig: 3.5.5 view project/thesis list

## UC-6: Edit project/thesis details from project list

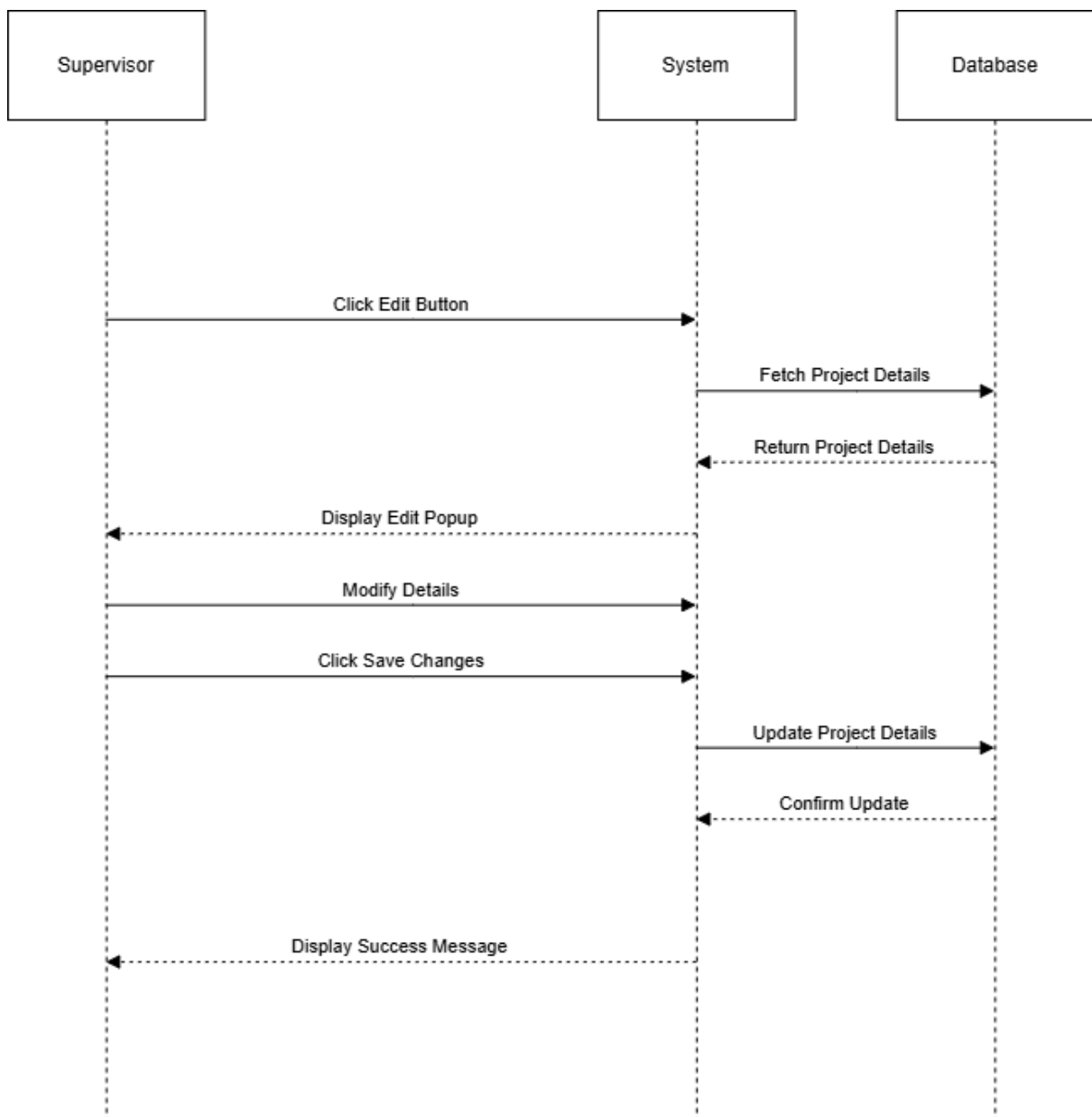


Fig: 3.5.6 edit project/thesis details from project list

## UC-7: Update project/thesis status

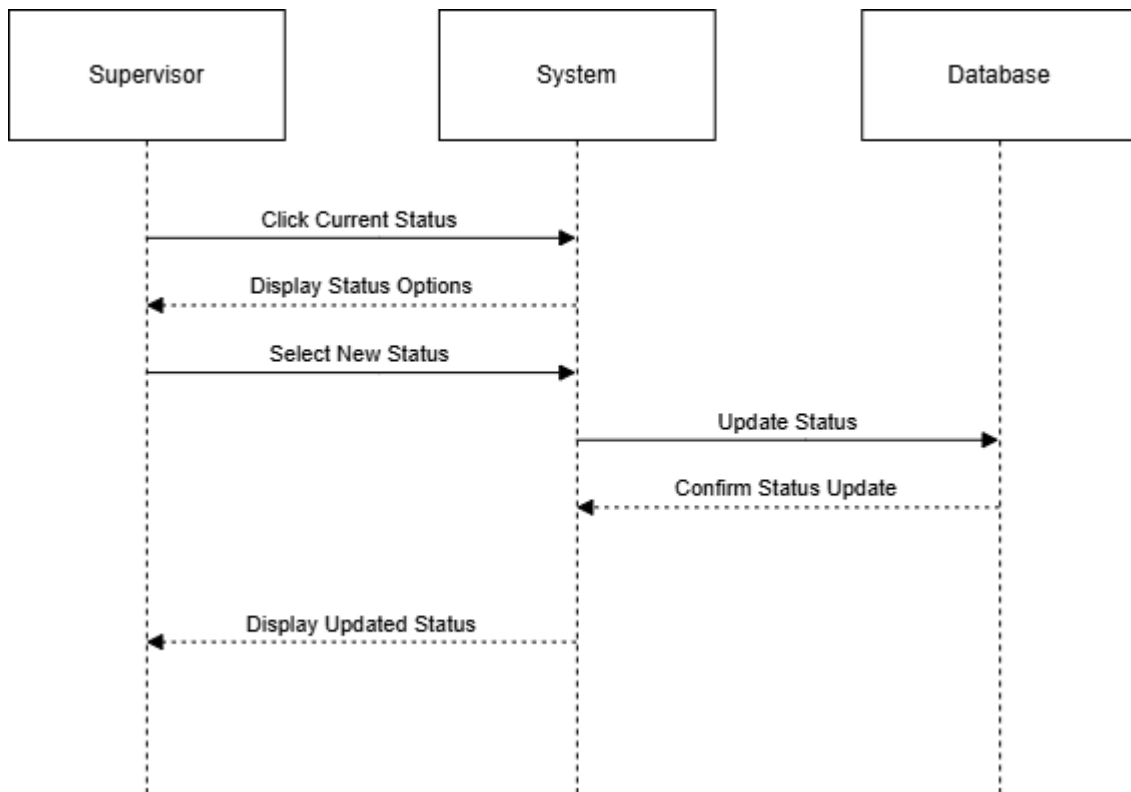


Fig: 3.5.7 update project/thesis status

## UC-8: Search and filter specific project/thesis

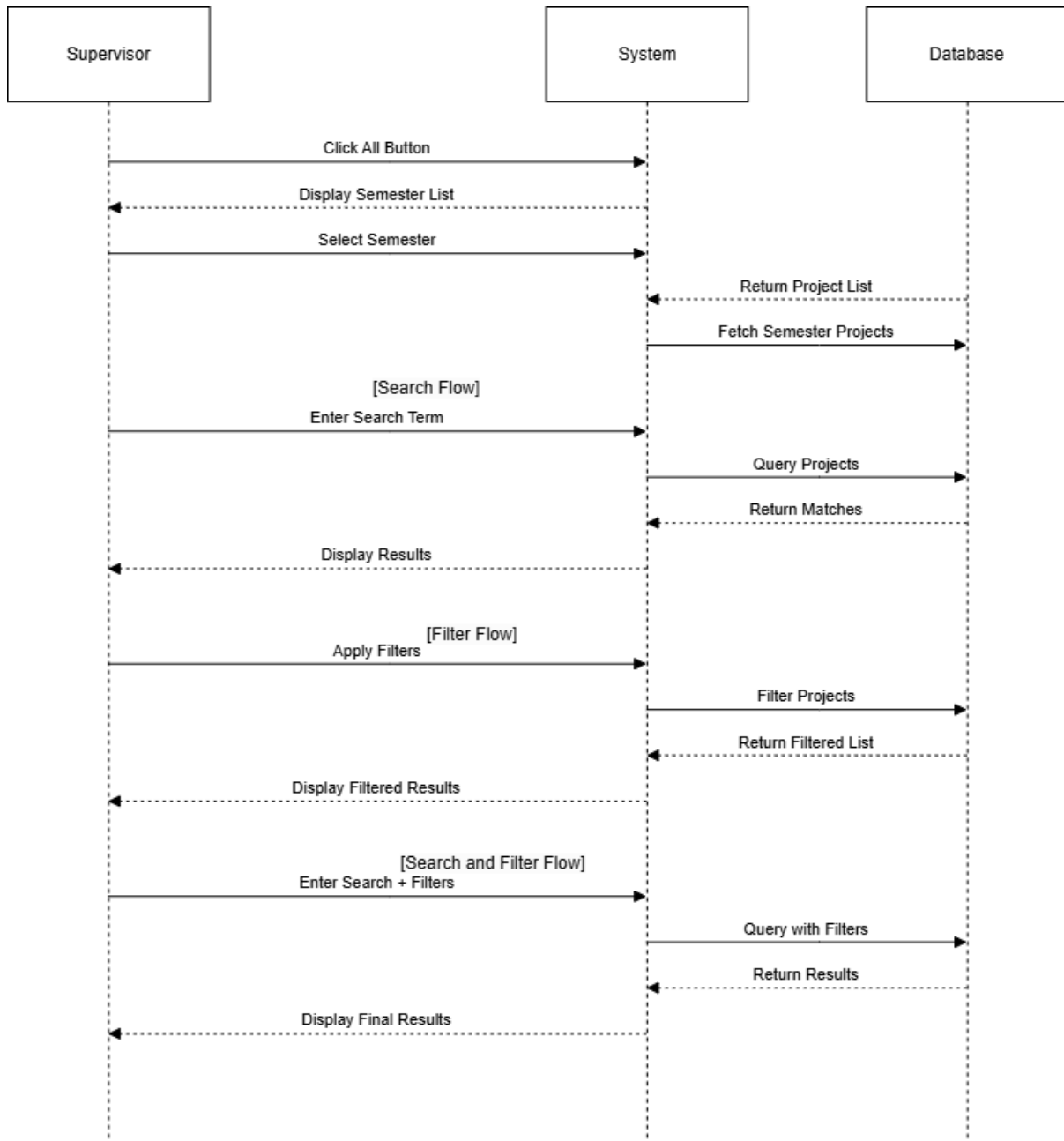


Fig: 3.5.8 Search and filter specific project/thesis

## UC-9: Provide feedback

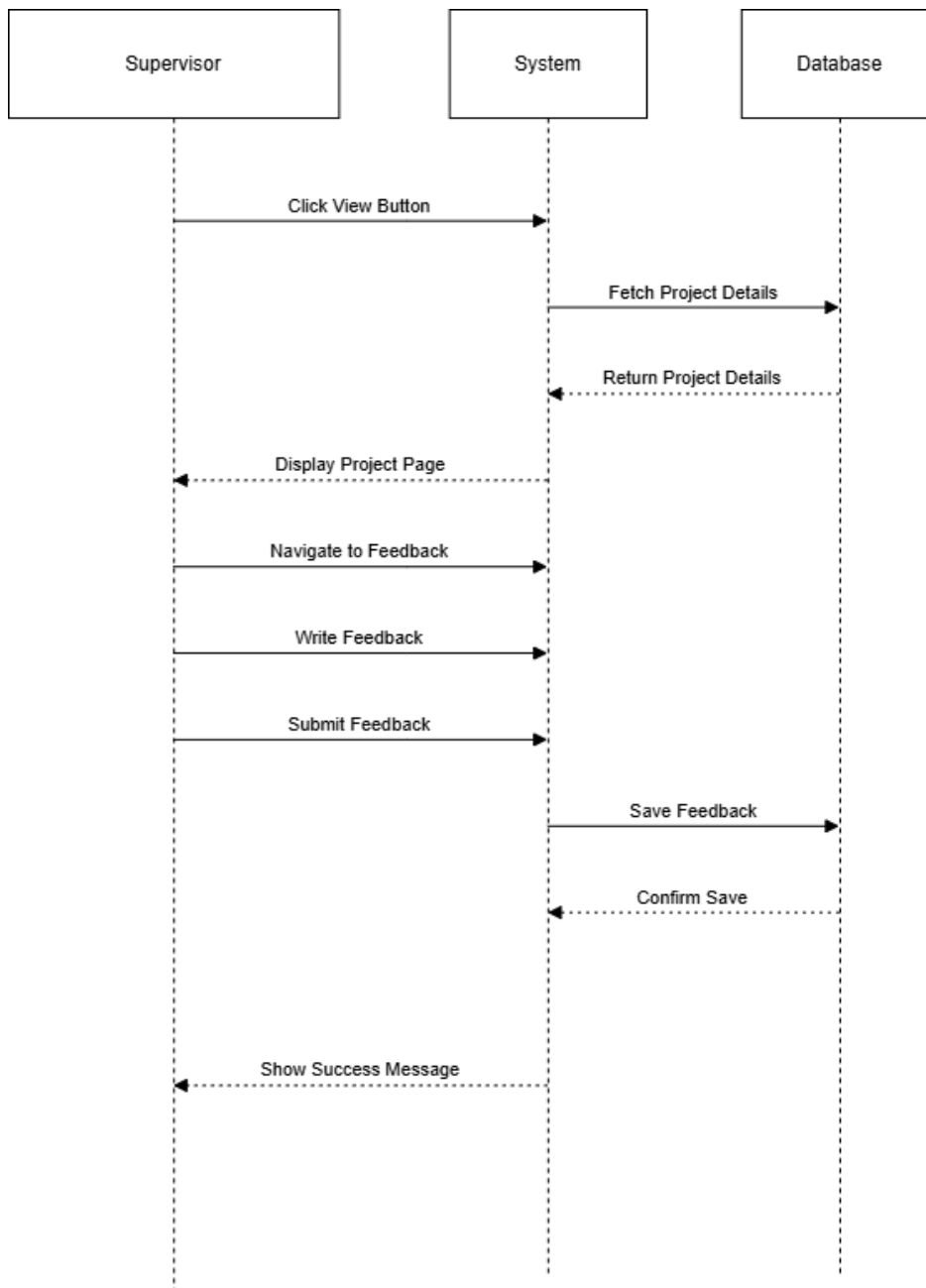


Fig: 3.5.9 provide feedback

## UC-10: View total students

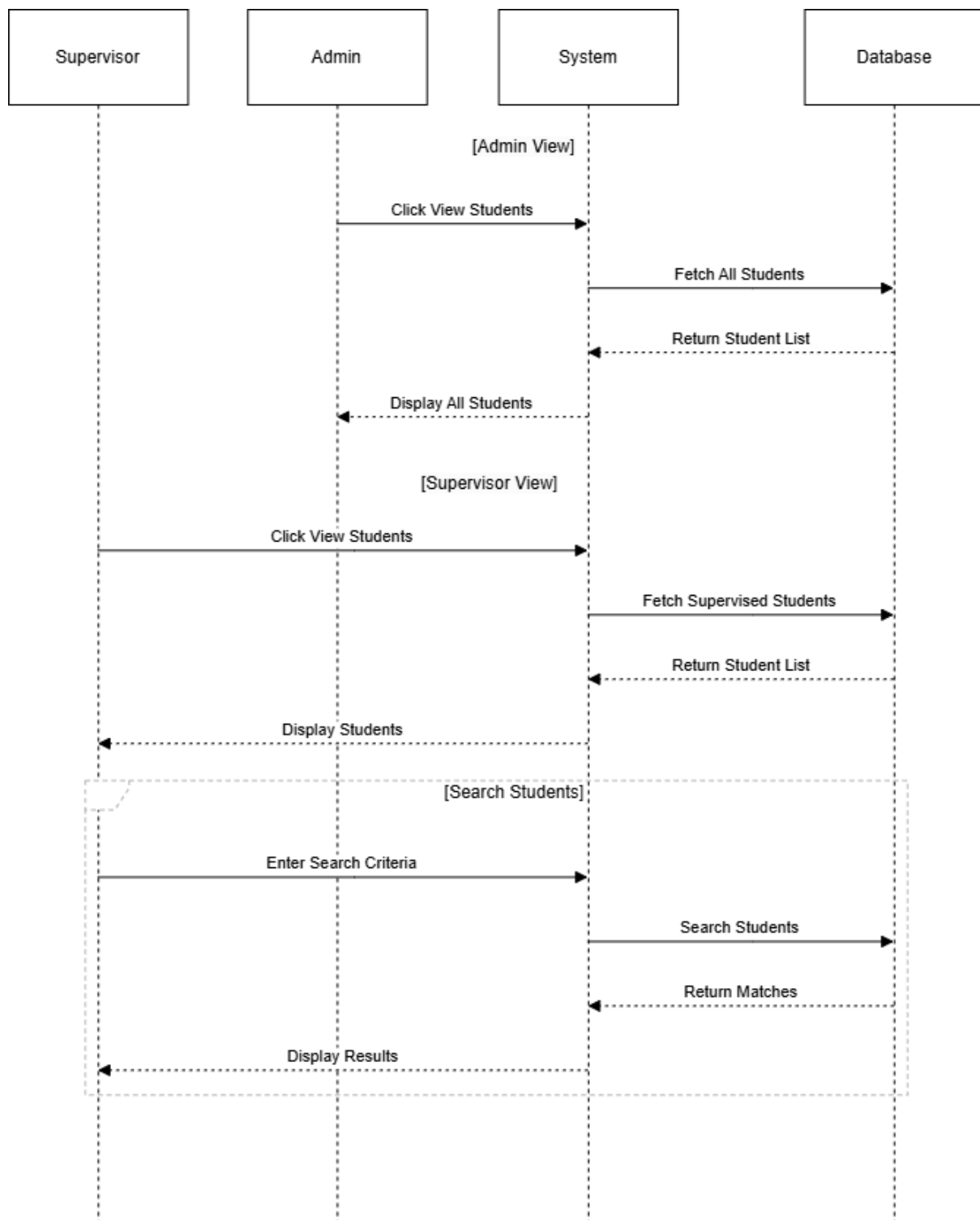


Fig: 3.5.10 view total students

## UC-11: Delete project/thesis

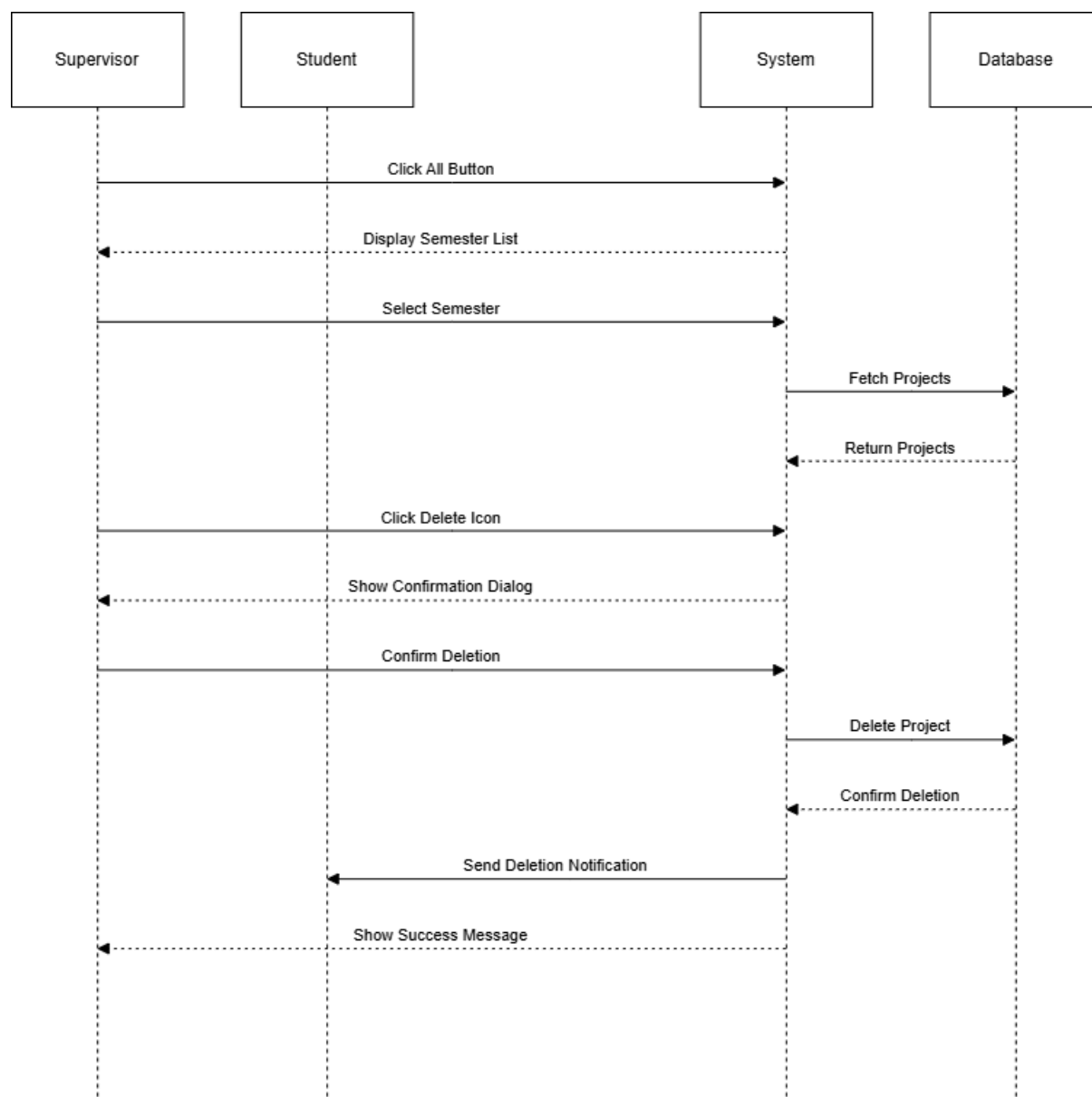


Fig: 3.5.11 delete project/thesis

## UC-12: Export project/thesis details

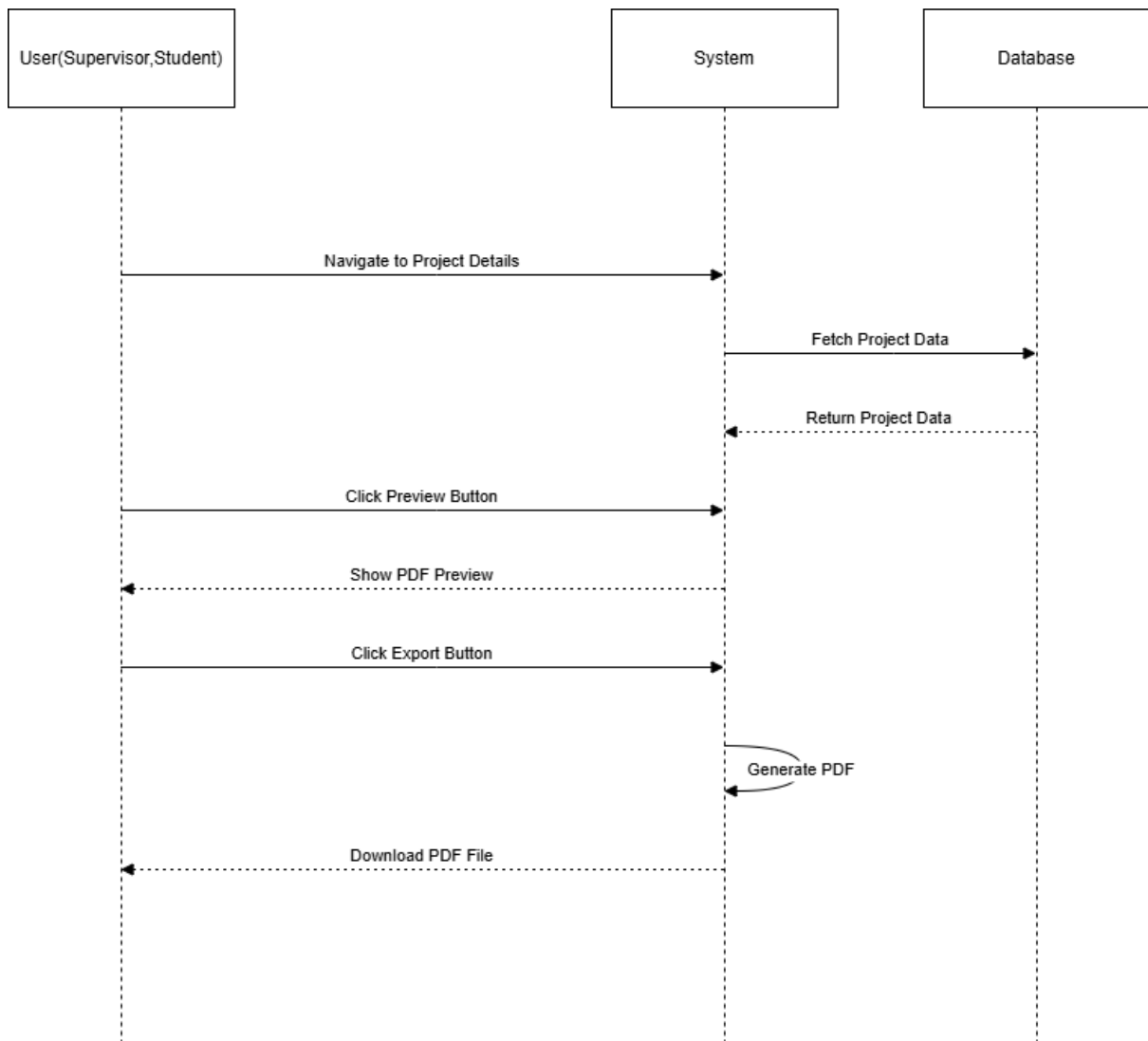


Fig: 3.5.12 export project/thesis details

## UC-13: View assigned project/thesis

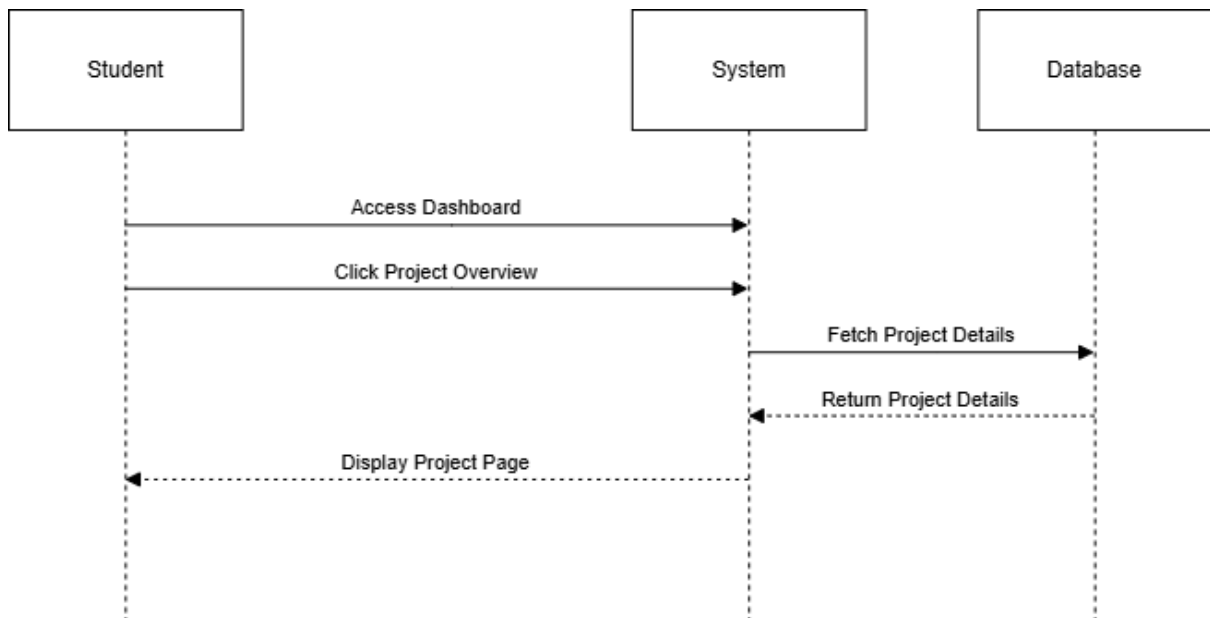


Fig: 3.5.13 view assigned project/thesis

## UC-14: Upload/attach documents

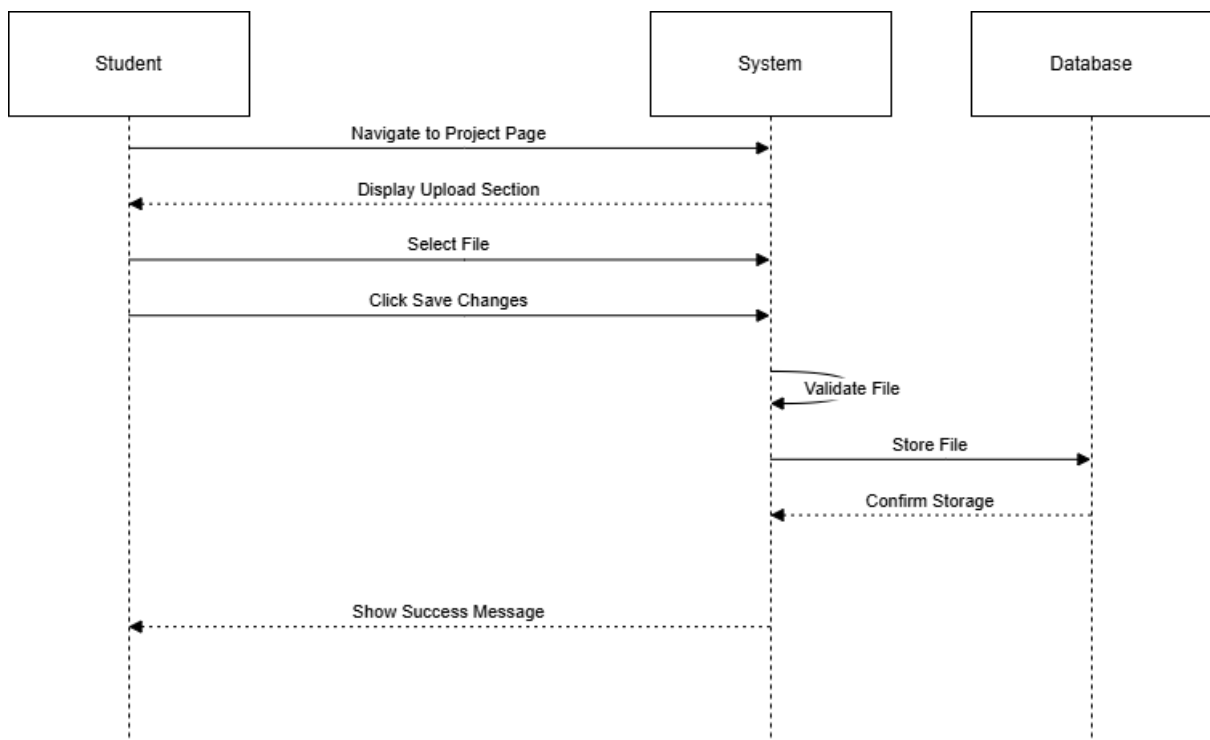


Fig: 3.5.14 upload/attach documents

## UC-15: Respond to comments/feedback

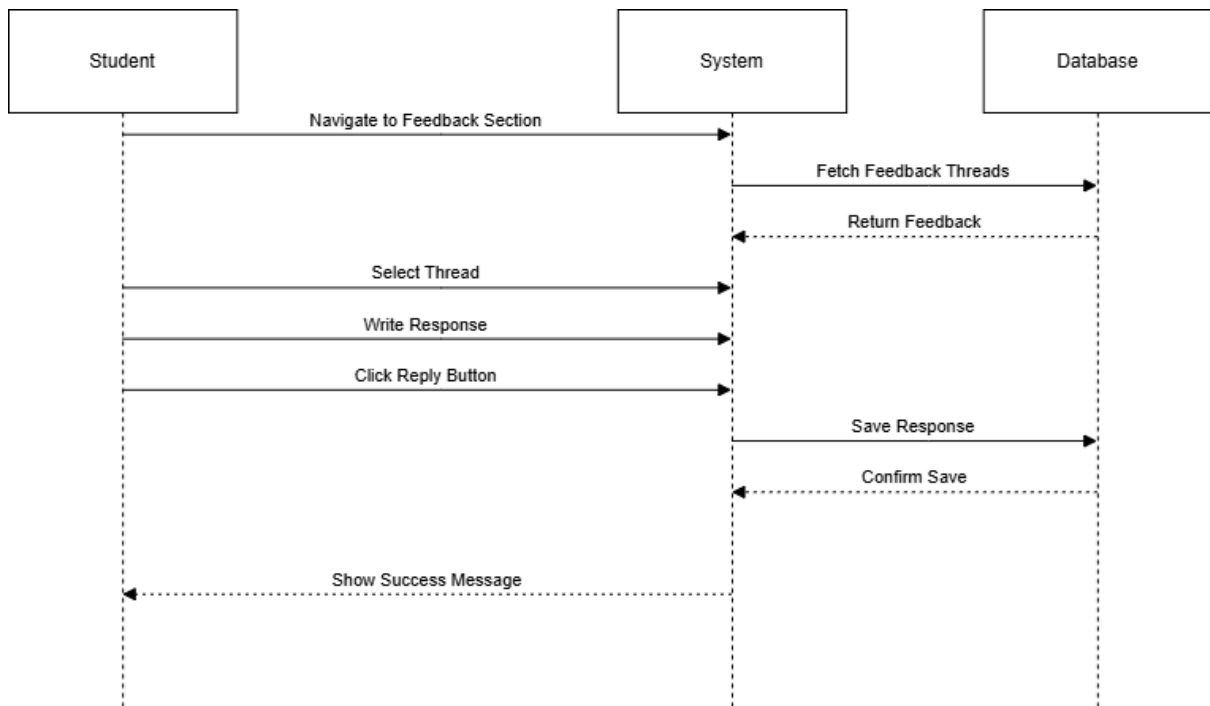


Fig: 3.5.15 respond to comments/feedback

## UC-16: Pre-register supervisor

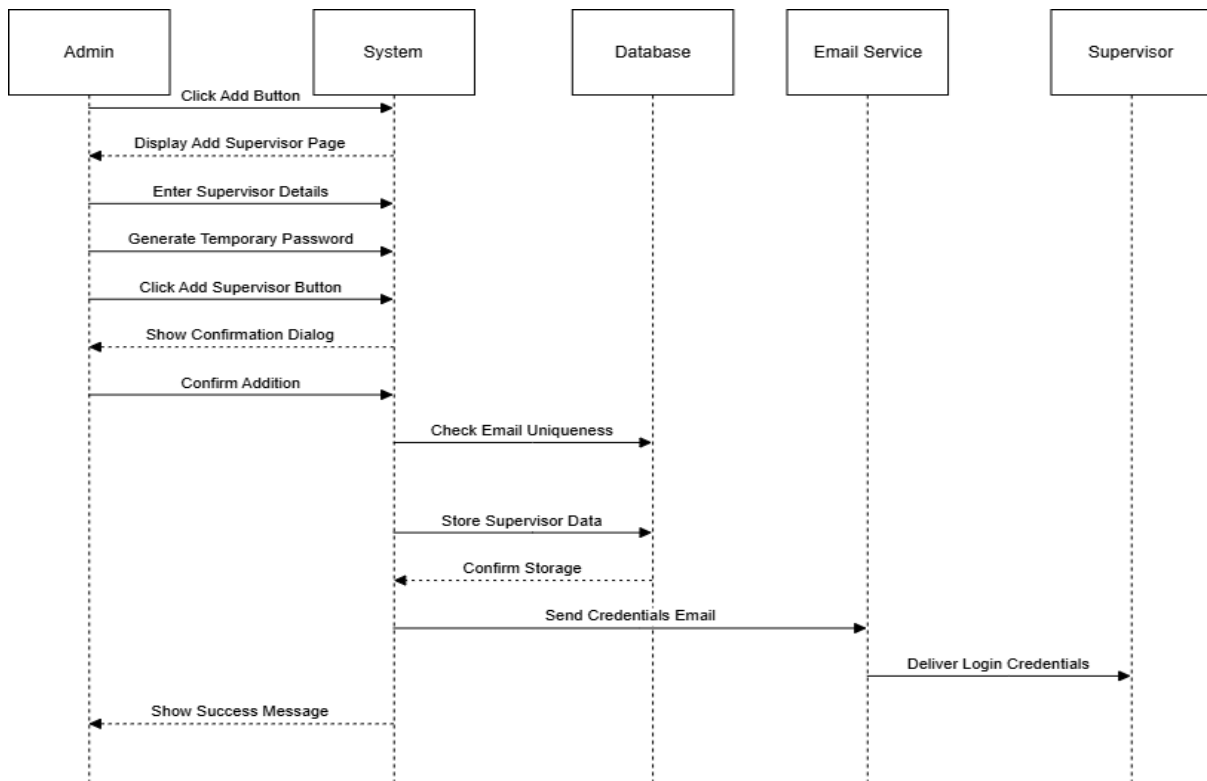


Fig: 3.5.16 pre-register supervisor

## UC-17: View all supervisors

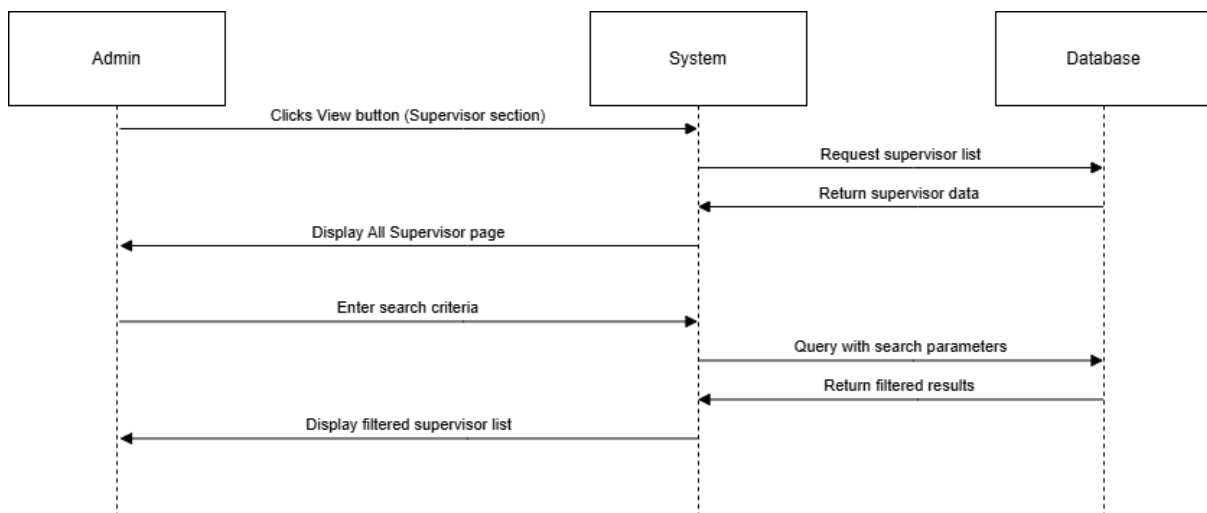


Fig: 3.5.17 view all supervisors

## UC-18: Update and delete supervisor and student accounts

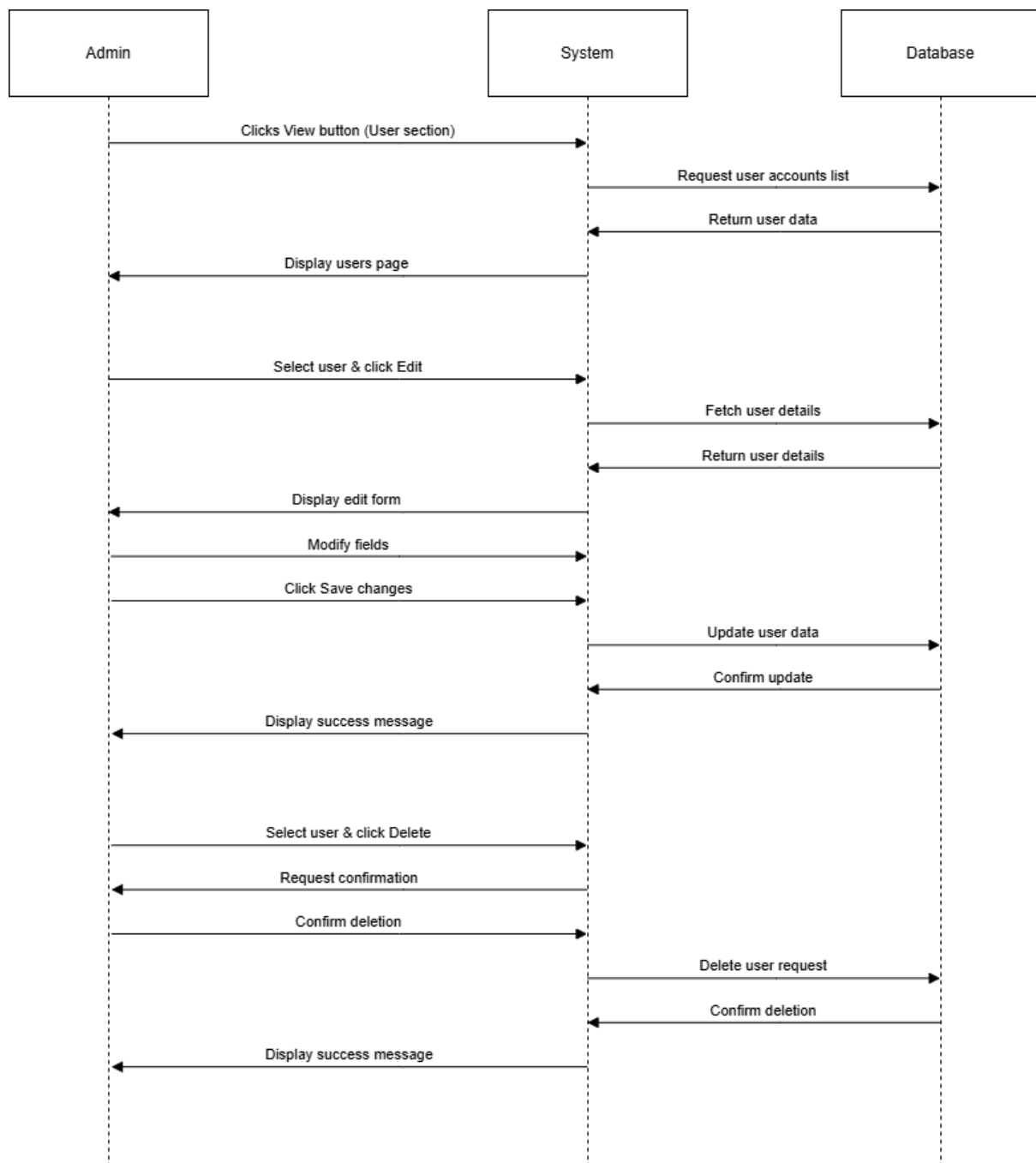


Fig: 3.5.18 Update and delete supervisor and student accounts

## UC-19: Receive student registration details

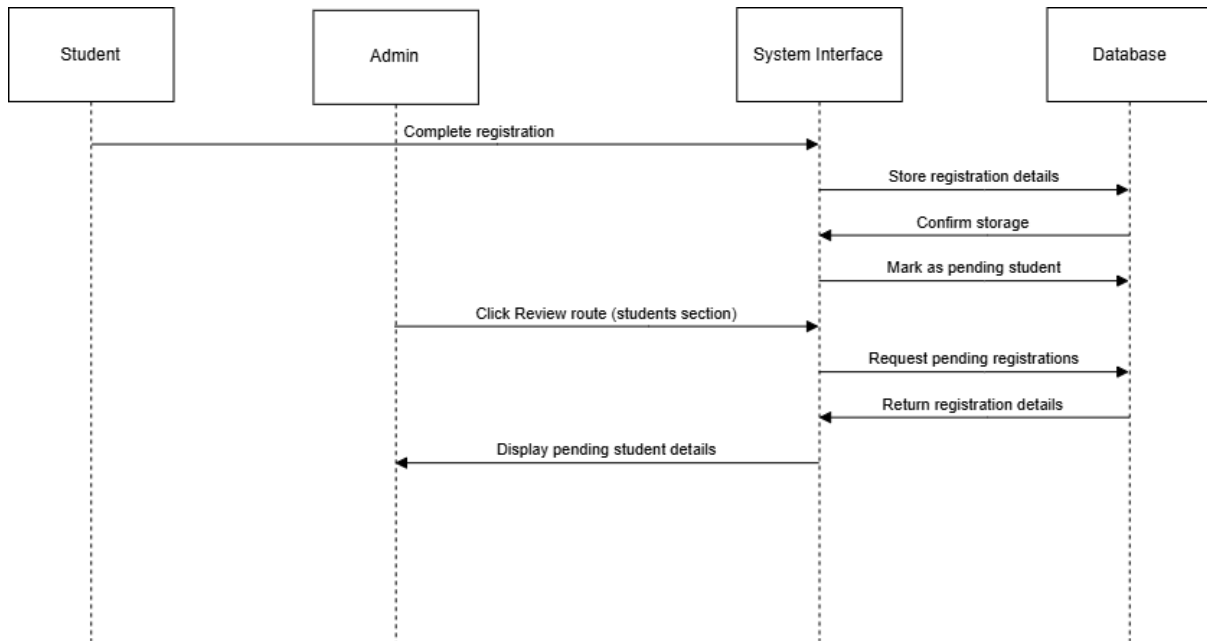


Fig: 3.5.19 receive student registration details

## UC-20: Update student status

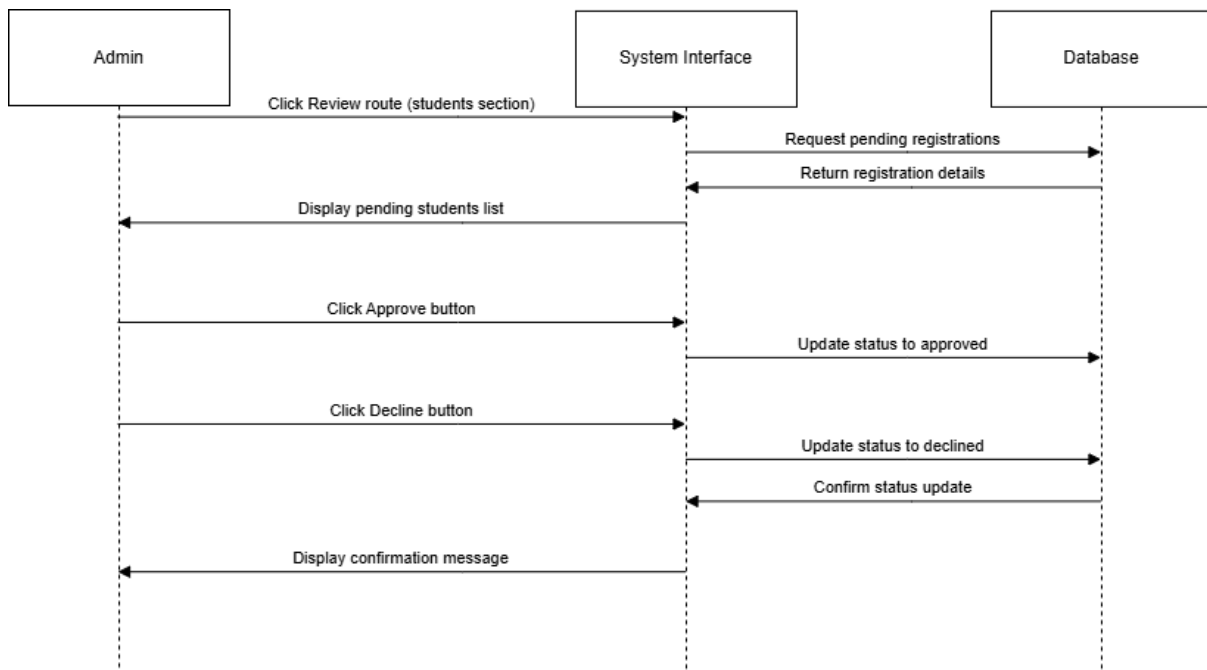


Fig: 3.5.20 update student status

## CHAPTER 4: SYSTEM DESIGN SPECIFICATION

### 4.1 Entity Relation Diagram

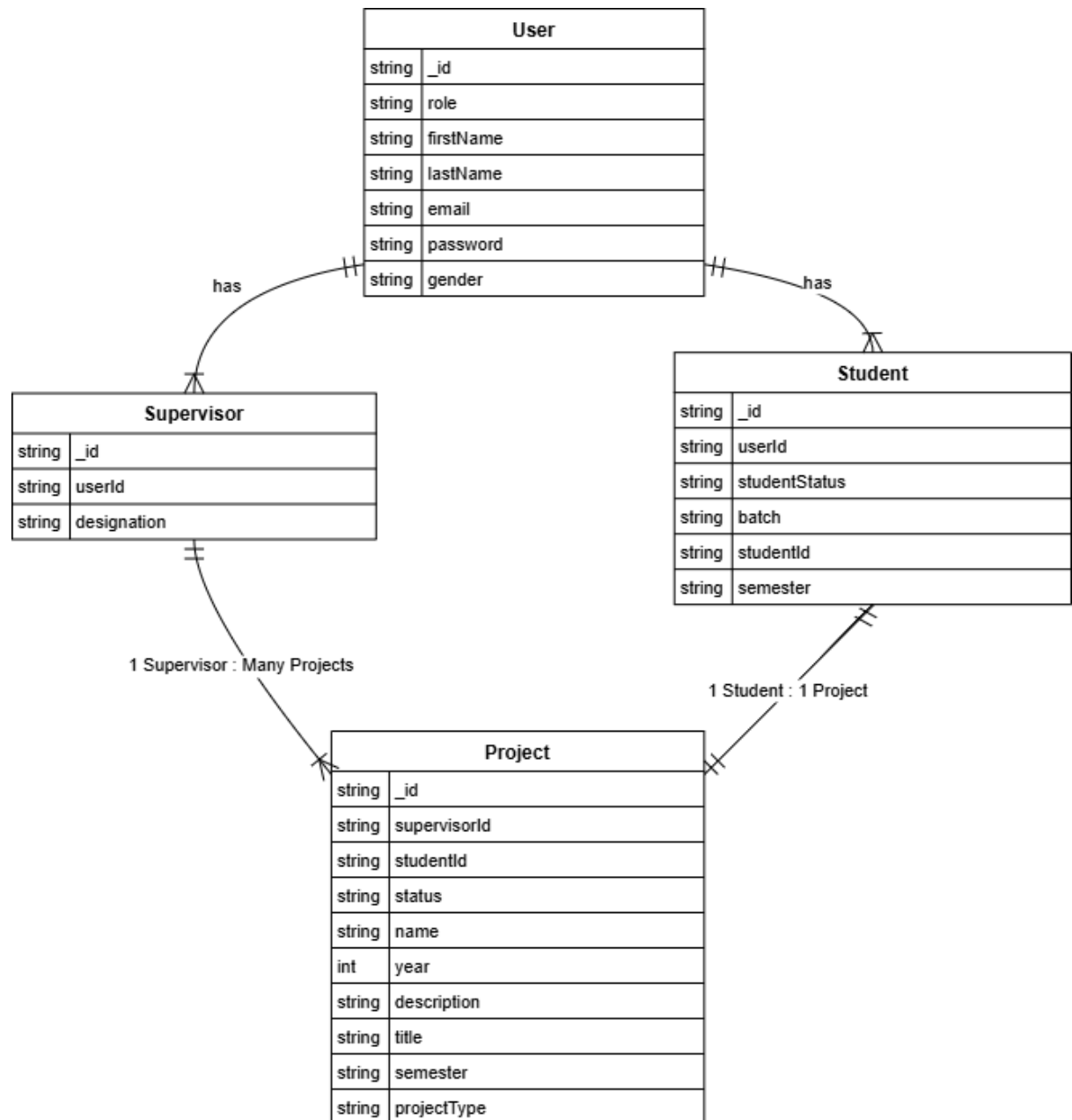


Fig: 4.1 ER Diagram

## **4.2 Development Tools and Technology**

### **4.2.1 Frontend Technology**

- 1. HTML**
- 2. CSS**
- 3. TailwindCSS**
- 4. Shadcn**
- 5. JavaScript**
- 6. React**

### **4.2.2 Backend Technology**

- 1. Node.Js**
- 2. Express.Js**
- 3. MongoDB**
- 4. Mongoose**

### **4.2.3 Implemented Tools & Platforms**

- 1. Redux Toolkit**
- 2. VS Code**
- 3. Git & GitHub**
- 4. Chrome Browser**

## CHAPTER 5: SYSTEM TESTING

### 5.1 Testing Features

#### 5.1.1 Features to be tested

- 1) User Login
- 2) User Register/Create account

#### 5.1.2 Features not to be tested

- 1) View all supervisors
- 2) Export project/thesis details
- 3) Search and filter specific project/thesis
- 4) View total students

### 5.2 Testing strategies

#### 5.2.1 Test Approach

1. Manual approach will be checked for each feature.
2. API endpoints for all CRUD operations will be checked.

#### 5.2.2 Testing Schedule

Test Phase	Time
Test plan creation	3 days
Test specification creation	4 days
Component testing	1 week
Integration testing	2 week
System testing	1 week

Table: testing schedule

### 5.3 Test cases

#### Test Case - Login

Test case: 01	Test name: Login
System: User login	Subsystem: N/A
Design by: Nusrat Zaman(201-51-021)	Execute by: Nusrat Zaman

Steps	Actions	Results(Pass/Fail)	Observation
1	When user fills no fields and clicks login	pass	Error message for each field has been displayed.
2	When user only fills email, and clicks login button	pass	Password field is required for login.
3	When user enters wrong email or password, and clicks login.	pass	Wrong credentials. Try again.

Table: 5.3.1 Login test case

#### Test case – Register/Create Account

Test case: 02	Test name: Register/create account
System: User registration	Subsystem: N/A
Design by: Nusrat Zaman(201-51-021)	Execute by: Nusrat Zaman

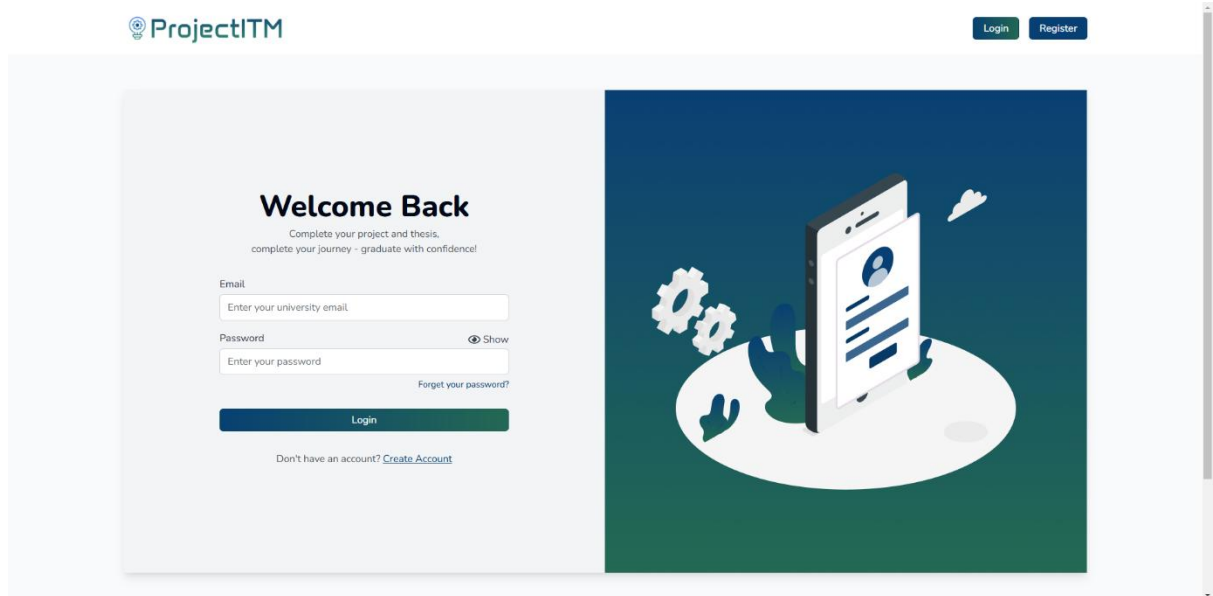
Steps	Actions	Results(Pass/Fail)	Observation
1	When user fills no fields and clicks register button.	pass	Error message for each field has been displayed.
2	When user enters a invalid DIU student email and clicks register button	pass	Valid DIU email is required.
3	If user enters a mismatch student id and clicks register button	pass	Provide a valid student ID

Table: 5.3.2 Register/Create account test case

## CHAPTER 6: USER MANUAL

### 6.1 User Manual (user)

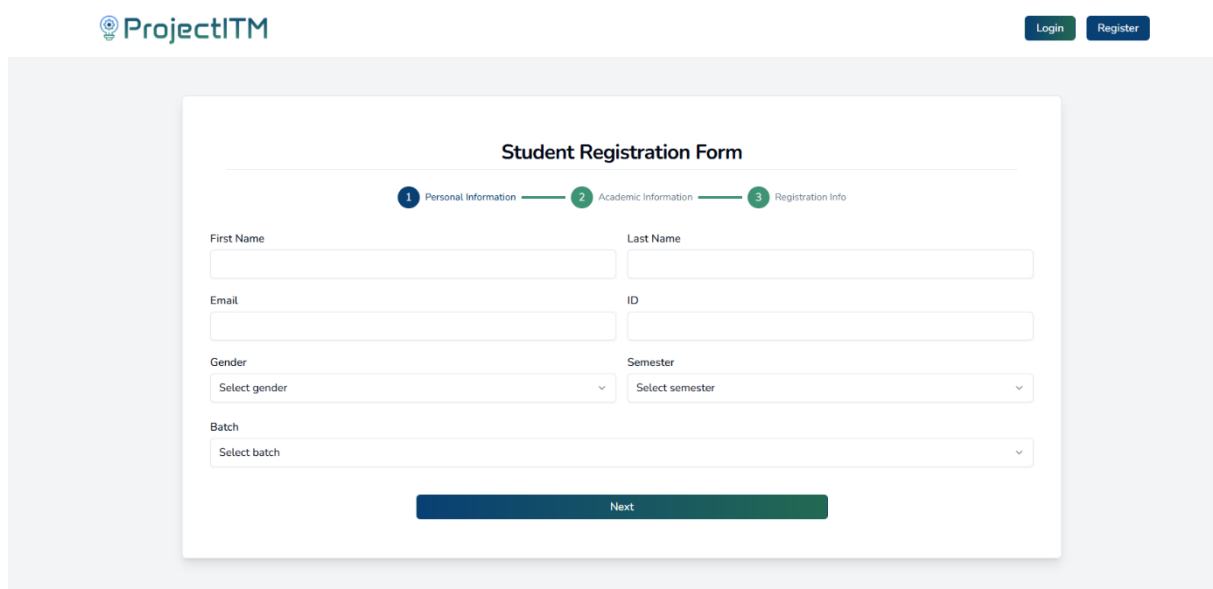
#### UC-2: Login



The screenshot shows the ProjectITM login interface. At the top left is the ProjectITM logo, and at the top right are 'Login' and 'Register' buttons. The main content area is split into two sections. The left section is titled 'Welcome Back' and includes the text 'Complete your project and thesis, complete your journey - graduate with confidence!'. Below this is a form with fields for 'Email' (with the placeholder 'Enter your university email') and 'Password' (with a 'Show' toggle and the placeholder 'Enter your password'). A 'Login' button is positioned below the password field, and a 'Forgot your password?' link is to its right. At the bottom of the form is a 'Create Account' link. The right section features a 3D isometric illustration of a smartphone displaying a user profile, with gears and a hand icon around it, set against a dark blue background.

### 6.2 User Manual (student)

#### UC-1: Register/Create account



The screenshot displays the 'Student Registration Form' on the ProjectITM website. At the top left is the ProjectITM logo, and at the top right are 'Login' and 'Register' buttons. The form is titled 'Student Registration Form' and has a progress indicator with three steps: '1 Personal Information', '2 Academic Information', and '3 Registration Info'. The form contains several input fields: 'First Name', 'Last Name', 'Email', and 'ID' are text inputs; 'Gender' is a dropdown menu with 'Select gender' as the selected option; 'Semester' is a dropdown menu with 'Select semester' as the selected option; and 'Batch' is a dropdown menu with 'Select batch' as the selected option. A 'Next' button is located at the bottom center of the form.

## Student Registration Form

1 Personal Information — 2 Academic Information — 3 Registration Info

Have you registered for thesis/project?

- Yes  
 No

Is your proposal accepted?

- Yes  
 No

Supervisor

Select supervisor v

Previous

Next

## Student Registration Form

1 Personal Information — 2 Academic Information — 3 Registration Info

Email

nusrat51-021@diu.edu.bd

Password

Show

\*\*\*Password must contain 8-12 characters, including one uppercase letter, one number, and one special character

Confirm Password

Show

Previous

Loading...

## UC-13: View assigned project/thesis

The screenshot displays the ProjectITM interface for viewing an assigned project. The left sidebar contains navigation options: Dashboard, Project Overview, Task List, Todo List, Resources, Notifications, Guidelines, Supervisor, Reports, and Activity. The main content area is titled 'ProjectITM Project and Thesis Management System' and includes the following sections:

- Project Status:** In progress (indicated by a blue dot).
- Project Start Date:** December 1, 2024
- Project End Date:** June 1, 2025
- Final Year Semester:** Fall 2024
- Project Type:** Project (indicated by a blue bar)
- Project Progress:** 29% completion rate based on student work, shown with a progress bar.
- Project Completion Work:**
  - Project Title:** Project and Thesis Management System (Status: Completed)
  - Project Description/Overview:** (Status: Mark as Complete)

Buttons for 'Preview PDF' and 'Export Project' are located in the top right corner.

## UC-14: Upload/attach documents

The screenshot displays the ProjectITM interface for uploading documents. The left sidebar is identical to the previous screenshot. The main content area features an Entity Relation Diagram (ERD) and two document upload sections:

- Entity Relation Diagram:** A diagram showing relationships between 'Delete project thesis', 'Export project details', 'Create project thesis', 'View assigned project thesis', 'Upload attach files', 'Provide feedback', and 'Respond to comments'. A 'Remove' button is located below the diagram.
- Entity Relation Diagram Upload:** A dashed box with an upload icon and the text 'Choose Entity Relation Diagram to upload (Max 1MB)'. A 'Mark as Complete' link is on the right.
- Documentation Upload:** A dashed box with an upload icon and the text 'Choose Documentation to upload (Max 2MB)'. A 'Mark as Complete' link is on the right.

At the bottom of the main content area, there are 'Cancel' and 'Save All Changes' buttons.

## UC-15: Respond to comments/Feedback (Student)

**Feedback**

Provide feedback here...

Submit Feedback

Reply to this feedback...

Reply

Nusrat Zaman:  
good

## 6.3 User Manual (supervisor)

## UC-4: Create project/thesis

ProjectITM

Search...

ITM Nusrat Zaman nusrat@itmi@gmail.com

**Create Project**

Select Type

Project  Thesis

Project Name

Project Title

Project Description

Semester

Select semester

Year

2025

Start Date

Pick a date

End Date

Pick a date

Status

Not started

Assign Student

Select student

Create Project

**Create Thesis**

Select Type

Project  Thesis

Thesis Name

Thesis Title

Thesis Description

Semester

Select semester

Year

2025

Start Date  Pick a date

End Date  Pick a date

Status

Not started

Assign Student

Select student

Create Thesis

### UC-6: Edit project/thesis details from project list

**Spring 2020 - Batch 01**

Search projects...

S.No	Name	Title
1	ProjectITM	Project and Thesis Management System

Show Projects: 5

**Edit Details**

Project Name: ProjectITM

Project Title: Project and Thesis Management System

Description: project description

Semester: [dropdown]

Start Date: 11/30/2024

End Date: 05/31/2025

Save changes Cancel

Project Batch	Status	Final Year Semester	View Project	Actions
1-021	In progress	Fall 2024	View	[edit] [delete]

< Previous 1 Next >

## UC-7: Update project/thesis status

The screenshot shows the ProjectITM web application interface. The left sidebar contains navigation links: Home, Projects (Create, All), Student (View), Resources, Notifications, Calendar, Guidelines, and Reporting. The main content area is titled "Spring 2020 - Batch 01" and features a search bar for projects. Below the search bar is a table with the following data:

S.No	Name	Title	Project Type	Student ID	Student Email	Student Batch	Status	Final Year Semester	View Project	Actions
1	ProjectITM	Project and Thesis Management System	Project	201-51-021	nusrat51-021@du.edu.bd	201-51-021	In progress	Fall 2024	<a href="#">View</a>	<a href="#">Edit</a> <a href="#">Delete</a>

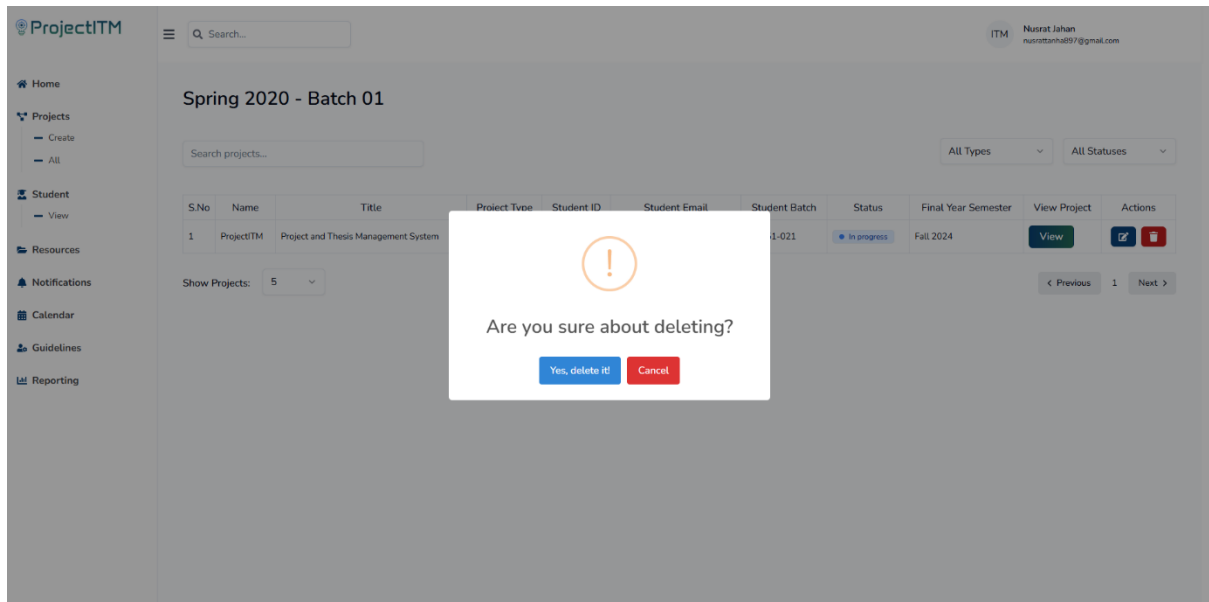
Below the table, there is a "Show Projects:" dropdown set to 5. A status dropdown menu is open, showing three options: "Not started", "In progress" (selected), and "Completed". The "In progress" status is highlighted in blue. The user's name "Nusrat Iahan" and email "nusrat51021@gmail.com" are visible in the top right corner.

## UC-9: Provide Feedback

The screenshot shows the Feedback form in the ProjectITM application. The form consists of the following elements:

- A text input field with the placeholder text "Provide feedback here...".
- A "Submit Feedback" button.
- A "Reply" button.
- A text input field for the reply, with the placeholder text "Reply to this feedback...".
- A sample reply is shown: "Nusrat Zaman: good".

## UC-11: Delete project/thesis

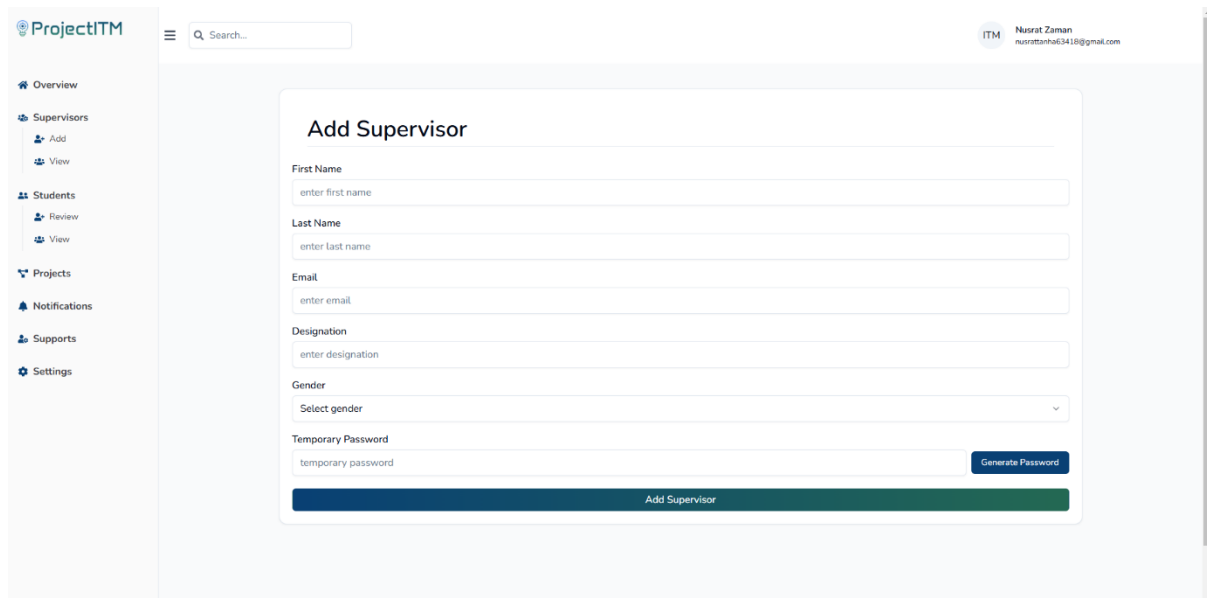


The screenshot shows the ProjectITM web application interface. The user is logged in as Nusrat Jahan. The main content area displays a table of projects for 'Spring 2020 - Batch 01'. A modal dialog is open, asking 'Are you sure about deleting?' with 'Yes, delete it!' and 'Cancel' buttons.

S.No	Name	Title	Project Type	Student ID	Student Email	Student Batch	Status	Final Year Semester	View Project	Actions
1	ProjectITM	Project and Thesis Management System				1-021	In progress	Fall 2024	<a href="#">View</a>	<a href="#">Edit</a> <a href="#">Delete</a>

## 6.4 User Manual (admin)

### UC-16: Pre-register supervisor



The screenshot shows the 'Add Supervisor' form in the ProjectITM web application. The form includes fields for First Name, Last Name, Email, Designation, Gender, and Temporary Password. A 'Generate Password' button is located next to the Temporary Password field. The 'Add Supervisor' button is at the bottom of the form.

## UC-17: View all supervisors

The screenshot shows the 'All Supervisors' page in the ProjectITM application. The page features a search bar at the top, a table listing supervisors, and an 'Add Supervisor' button. The table has the following data:

S.No	Name	Email	Designation	Actions
1	Nusrat Jahan	nusrattanha897@gmail.com	Assistant Professor and Head	
2	Dr. Ashkur Rahman	tanutanha12349876@gmail.com	Lecturer(Senior Scale)	

Below the table, there is a 'Show Supervisor:' dropdown menu set to '5' and pagination controls showing '1' of 1 page.

## UC-18: Update and delete supervisor and student accounts

**Update supervisor:**

The screenshot shows the 'All Supervisors' page with an 'Edit Details' modal open for the first supervisor, Nusrat Jahan. The modal contains the following fields:

- First Name: Nusrat
- Last Name: Jahan
- Email: nusrattanha897@gmail.com
- Designation: Assistant Professor and Head

At the bottom of the modal are 'Save changes' and 'Cancel' buttons. The background shows the same table as in the previous screenshot.

## Delete supervisor:

The screenshot shows the 'All Supervisors' page in the ProjectITM system. A confirmation dialog is displayed in the center, asking 'Are you sure about deleting?' with 'Yes, delete it!' and 'Cancel' buttons. The background shows a table of supervisors and a sidebar with navigation options.

S.No	Name	Email	Designation	Actions
1	Nusrat Jahhan		Assistant Professor and Head	
2	Dr. Ashkur Rahman		Lecturer (Senior Scale)	

## Update student:

The screenshot shows the 'All Students' page in the ProjectITM system. An 'Edit Details' dialog is open, allowing the user to update a student's information. The dialog includes fields for First Name, Last Name, Email, and Designation, along with 'Save changes' and 'Cancel' buttons. The background shows a table of students and a sidebar with navigation options.

S.No	Name	Email	Semester	Batch	Student Status	Actions
1	Nusrat Zaman	nusrat51-021@diu.edu.bd	Spring 2020	Batch 01	approved	
2	Rehnum Mehrub	rehnum51-015@diu.edu.bd	Spring 2020	Batch 01	approved	

## Delete student:

The screenshot shows the ProjectITM interface with a confirmation dialog box overlaid on the 'All Students' table. The dialog box contains an orange warning icon and the text 'Are you sure about deleting?'. Below the text are two buttons: 'Yes, delete it!' (blue) and 'Cancel' (red).

The background interface shows the 'All Students' table with the following data:

S.No	Name	Email	Student ID	Supervisor	Semester	Batch	Student Status	Actions
1	Nusrat Zaman	nusrat51-021@diu.edu			Spring 2020	Batch 01	approved	
2	Rehnum Mehrub	rehnum51-015@diu.edu			Spring 2020	Batch 01	approved	

## UC-19: Receive student registration details

The screenshot shows the ProjectITM interface with the 'Student Review' section. The section has three tabs: 'Pending Students', 'Approved Students', and 'Declined Students'. The 'Pending Students' tab is active, showing a table with the following data:

Name	Email	Student ID	Supervisor	Semester	Batch	Gender	Registration for Project/Thesis	Approved Proposal	Actions
Nusrat Zaman	nusrat51-021@diu.edu.bd	201-51-021		Spring 2020	Batch 01	female	Yes	Yes	

## UC-20: Update student status

ProjectITM

Search...

ITM Nusrat Zaman  
nusratshah63418@gmail.com

**Student Review**

Pending Students Approved Students Declined Students

**Pending Students**

Name	Email	Student ID	Supervisor	Semester	Batch	Gender	Registration for Project/Thesis	Approved Proposal	Actions
Nusrat Zaman	nusrat51-021@diu.edu.bd	201-						Yes	<a href="#">Approve</a> <a href="#">Decline</a>

?

Do you want to approve and send email to supervisor?

[Approved](#)
[Don't Approved](#)
[Cancel](#)

ProjectITM

Search...

ITM Nusrat Zaman  
nusratshah63418@gmail.com

**Student Review**

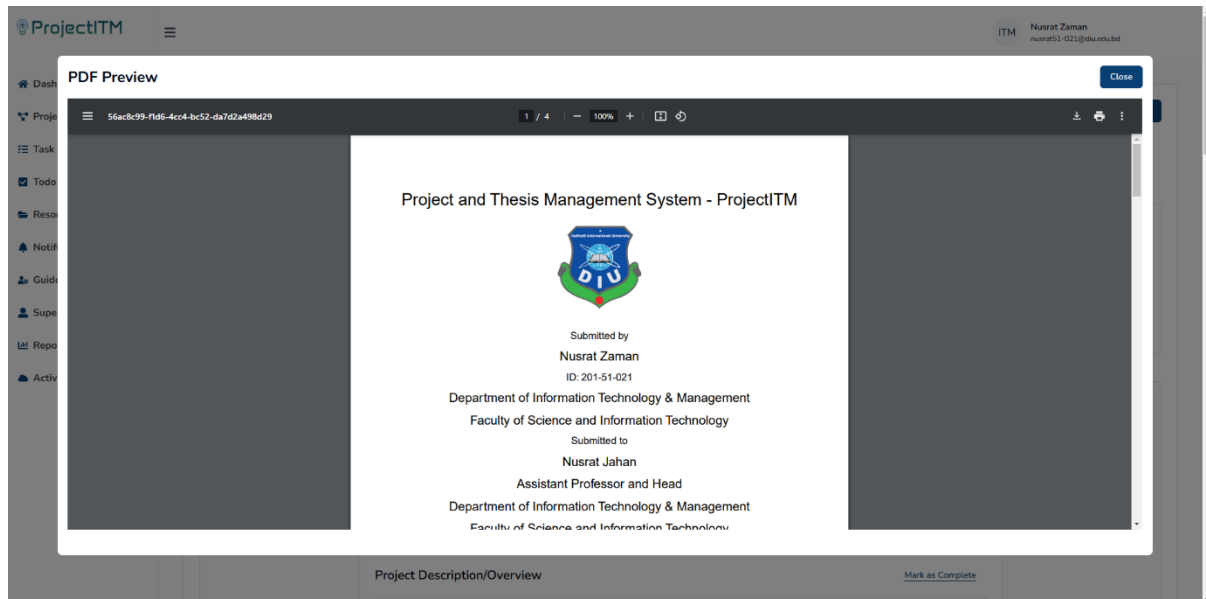
Pending Students Approved Students Declined Students

**Approved Students**

Name	Email	Student ID	Supervisor	Semester	Batch	Gender	Registration for Project/Thesis	Approved Proposal	Actions
Nusrat Zaman	nusrat51-021@diu.edu.bd	201-51-021		Spring 2020	Batch 01	female	Yes	Yes	<a href="#">Pending</a> <a href="#">Decline</a>
Rehnum Mehrub	rehnum51-015@diu.edu.bd	201-51-015		Spring 2020	Batch 01	male	Yes	Yes	<a href="#">Pending</a> <a href="#">Decline</a>

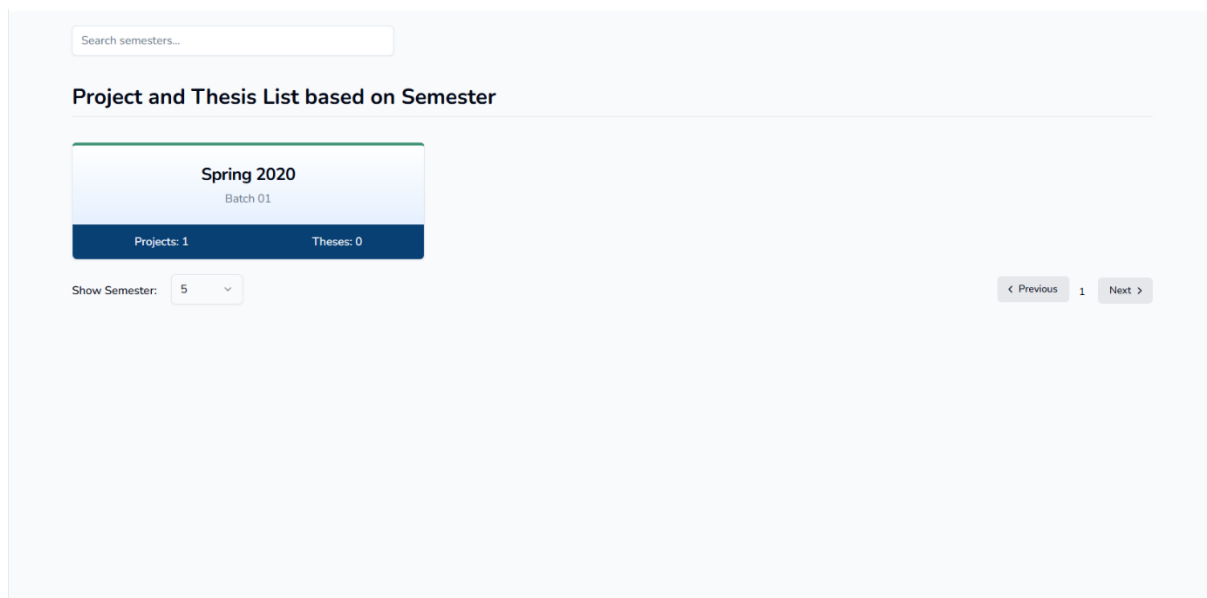
## 6.5 User Manual (supervisor, student)

UC-12: Export project/thesis details



## 6.6 User Manual (supervisor, admin)



UC-5: View project and thesis list



Spring 2020 - Batch 01

Search projects...

All Types ▾ All Statuses ▾

S.No	Name	Title	Project Type	Student ID	Student Email	Student Batch	Status	Final Year Semester	View Project	Actions
1	ProjectTM	Project and Thesis Management System	Project	201-51-021	nusrat51-021@diiu.edu.bd	201-51-021	In progress	Fall 2024	View	 

Show Projects: 5 ▾



< Previous 1 Next >

### UC-8: Search and filter specific project/thesis

Spring 2020 - Batch 01

Search projects...

Project ▾ In progress ▾

S.No	Name	Title	Project Type	Student ID	Student Email	Student Batch	Status	Final Year Semester	View Project	Actions
1	ProjectTM	Project and Thesis Management System	Project	201-51-021	nusrat51-021@diiu.edu.bd	201-51-021	In progress	Fall 2024	View	 





Show Projects: 5 ▾

< Previous 1 Next >

## UC-10: View total students

### All Students

Search...

S.No	Name	Email	Student ID	Supervisor	Semester	Batch	Student Status	Actions
1	Nusrat Zaman	nusrat51-021@diu.edu.bd	201-51-021	Nusrat Jahan	Spring 2020	Batch 01	approved	 
2	Rehnum Mehrub	rehum51-015@diu.edu.bd	201-51-015	Dr. Ashikur Rahman	Spring 2020	Batch 01	approved	 

Show Supervisor:

< Previous 1 Next >

## CHAPTER 7: PROJECT SUMMARY

**7.1 GitHub Link:** <https://github.com/Tanha-13/projectITM>

### 7.2 Limitations

- System does not have any proper notification route.
- Third-party services like google calendar, google meet.

### 7.3 Obstacles and Achievements

My minimal expertise in backend development, along with the extensive range of backend technologies, is a challenge. Integrating the frontend and backend with Node.js and MongoDB is an accomplishment I can acknowledge.

### 7.4 Future Scope

- The project can be migrated to Next JS for better performance
- Integrating third party tools can make the system centralized solution properly.
- Student and supervisor can directly communicate using email through this system.

## PLAGIARISM RESULT

201-51-021

### ORIGINALITY REPORT

<b>14%</b>	<b>12%</b>	<b>0%</b>	<b>10%</b>
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

### PRIMARY SOURCES

<b>1</b>	<b>dspace.daffodilvarsity.edu.bd:8080</b> Internet Source	<b>4%</b>
<b>2</b>	<b>Submitted to Daffodil International University</b> Student Paper	<b>4%</b>
<b>3</b>	<b>Submitted to Deptford Township High School</b> Student Paper	<b>1%</b>
<b>4</b>	<b>maazitsolutions.blogspot.com</b> Internet Source	<b>1%</b>
<b>5</b>	<b>Submitted to IIT Delhi</b> Student Paper	<b>&lt;1%</b>
<b>6</b>	<b>www.coursehero.com</b> Internet Source	<b>&lt;1%</b>
<b>7</b>	<b>www.dfhg-project.org</b> Internet Source	<b>&lt;1%</b>
<b>8</b>	<b>dlibrary.univ-boumerdes.dz:8080</b> Internet Source	<b>&lt;1%</b>
<b>9</b>	<b>Submitted to Asia Pacific Institute of Information Technology</b> Student Paper	<b>&lt;1%</b>

10	Submitted to Bogazici University Student Paper	<1 %
11	Submitted to Kingston University Student Paper	<1 %
12	Submitted to University of Trinidad and Tobago Student Paper	<1 %
13	Submitted to RMIT University Student Paper	<1 %
14	Submitted to University of Technology, Sydney Student Paper	<1 %
15	123dok.com Internet Source	<1 %
16	Submitted to De Montfort University Student Paper	<1 %
17	Submitted to University of Ghana Student Paper	<1 %
18	Submitted to National College of Ireland Student Paper	<1 %
19	cutshort.io Internet Source	<1 %
20	help.imdb.com Internet Source	<1 %

21 umpir.ump.edu.my  
Internet Source

<1 %

---

Exclude quotes Off

Exclude matches Off

Exclude bibliography Off