



**CSE 6124 - SOFTWARE ENGINEERING
FUNDAMENTALS**

**LECTURE :TC3L
TUTORIAL SECTION : T11L
GROUP NUMBER : G6**

ASSIGNMENT TOPIC :

Digital Scholarship Application and Tracking System

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Revisions

Version	Primary Author(s)	Description of Version	Date Completed
1.0.0	Nur Athirah binti Ishak Law Chin Xuan Amalina Saffieya binti Hamdan Nelson Ng Yaohan	Documentation part one about Digital Scholarship Application and Tracking System for Group 6. Added all the actors and use cases with the necessary diagrams such as activity diagram, class diagram and use case diagram.	14/12/25

1 Project Introduction

1.1 Team Members

Name	Actor/Processes
NUR ATHIRAH BINTI ISHAK	Student
NELSON NG YAOHAN	Scholarship Committee
LAW CHIN XUAN	Reviewer
AMALINA SAFFIEYA BINTI HAMDAN	Admin

1.2 Problem statement

The current scholarship application and tracking system is mostly done manually and spread across different tools such as paper forms, emails, and spreadsheets. This makes it hard for the administrator to manage the information properly and keeps everything organized in one place. As the process depends heavily on manual work, there is a higher chance of mistakes, missing data, or loss of information, which can affect the overall efficiency of managing scholarship applications.

Also, students often feel confused during the application process because there is no proper system to guide them clearly. Information about eligibility requirements, documents needed, and important deadlines is sometimes unclear or difficult to access. As a result, many students submit incomplete applications, miss deadlines, or are unsure about the status of their application. This situation can be frustrating and time-consuming for applicants.

For administrators and reviewers, handling applications manually takes a lot of time and effort, especially when applications are submitted in different formats and through different channels. It becomes difficult to track applications, check eligibility, and make fair decisions quickly. The lack of a proper digital system slows down the evaluation process and creates unnecessary delays. Therefore, there is a strong need for a centralized digital scholarship application and tracking system to make the whole process more organised, efficient, and fair for everyone involved.

1.3 Project Schedule

WEEK/ PROGRESS	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14
PLANNING 1.Define project objectives and scope 2.Assign team roles 3.Research similar systems or references 4.Identify project objectives and scope														
ANALYSIS 1.Gather use cases for all actors 2.Document assumptions and dependencies														
DESIGN 1.Design Diagrams (activity, use case, class)														
IMPLEMENTATION 1.Consult with lecturer 2.Fix issues, get feedback, and adjust design														
TESTING 1.Prepare final documentation 2.Collect team feedback for improvements														

2 System Overview

2.1 Description

Digital Scholarship Application and Tracking System is an online platform created to make it easier for students to apply for, evaluate, and manage scholarships. From submission to approval, the entire scholarship process is streamlined, guaranteeing efficiency, openness, and good communication between all parties involved. User identification, application submission, eligibility verification, document management, review workflows, and notification management are all integrated into the system.

The system supports four key user roles:

- **Students** can register accounts, update their personal profiles, browse available scholarships, review scholarship criteria, use eligibility tools, complete application forms, upload required documents, submit applications, and track the status of their submissions.
- **Scholarship Committees** log into the system to oversee applications, filter or search submissions, review applicant information and documents, assign applications to reviewers, monitor reviewer scores and comments, discuss candidate qualifications, finalize scholarship decisions, and send acceptance or rejection notifications to applicants.
- **Reviewers** access the system to view their assigned applications, examine applicant details and submitted documents, verify eligibility and qualifications, approve or reject application recommendations, and finalize their review submissions.
- **Administrators** manage user accounts, create scholarship listings, set eligibility criteria, assign reviewers, monitor the workflow of applications, handle system issues, manage deadlines, access reporting dashboards, and generate reports to ensure the smooth operation of the system.

This system offers a complete solution that is suited to the particular requirements of every user position, guaranteeing a smooth, safe, and effective experience during the scholarship application and evaluation process. The parts that follow will go into specific needs, user interactions, and procedures in the system.

2.2 Actors

Actor	Use Cases
Student	<ul style="list-style-type: none">● Register Account● Login to System● Update Personal Profile● Browse Available Scholarship● Read Scholarship Criteria and Requirements● Use Eligibility Check Tool● Upload Required Documents● Submit Application● Track Application Status
Scholarship Committee	<ul style="list-style-type: none">● Committee members log into the system.● See all submitted applications.● Open an application to read the info and documents.● Check scores and comments from reviewers.● Send acceptance or rejection notifications.
Reviewer	<ul style="list-style-type: none">● Reviewer Login● Access Personal Dashboard● View Assigned Application List● Filter and Sort Applications● Finalize and Submit Review
Admin	<ul style="list-style-type: none">● Admin logs into the system● Admin manages user accounts● Admin creates scholarship listings● Admin sets eligibility criteria● Admin assigns reviewers● Admin manage application processing stages● Admin accesses dashboard● Admin handles system issues● Admin generates reports

2.3 Assumptions and Dependencies

2.3.1 Assumptions

1) Users Have Basic Computer Skills

The system assumes users know how to register, log in, upload documents, and navigate an online platform.

2) Stable Internet Connection

It is assumed that all users have a stable internet connection to access the scholarship system. Slow or unreliable internet may affect form submission, document upload, and review processes.

3) File Format Compatibility

The system assumes all uploaded documents will be in supported formats such as PDF, JPG, or PNG. Unsupported file types may cause errors in document viewing or verification.

4) User Behaviour

Users will input accurate and valid data such as parents income, certificates, academic achievements during interaction with the system.

5) Data Privacy

Users trust that the system will protect their personal data according to standard privacy and security practices.

2.3.2 Dependencies

1) Email Services

The system depends on external email service providers to send account verifications, password reset links, and scholarship result notifications. Any downtime or delays in the email service will affect user communication.

2) Database Management System

Depends on a stable and secure DBMS to store user profiles, scholarship details, and application data. Any DBMS failure may cause data loss or access issues.

3) File Storage Service

The system depends on a secure file storage module to store uploaded documents such as transcripts, certificates, and identification files. If the storage service fails or becomes corrupted, users may be unable to upload or retrieve required documents.

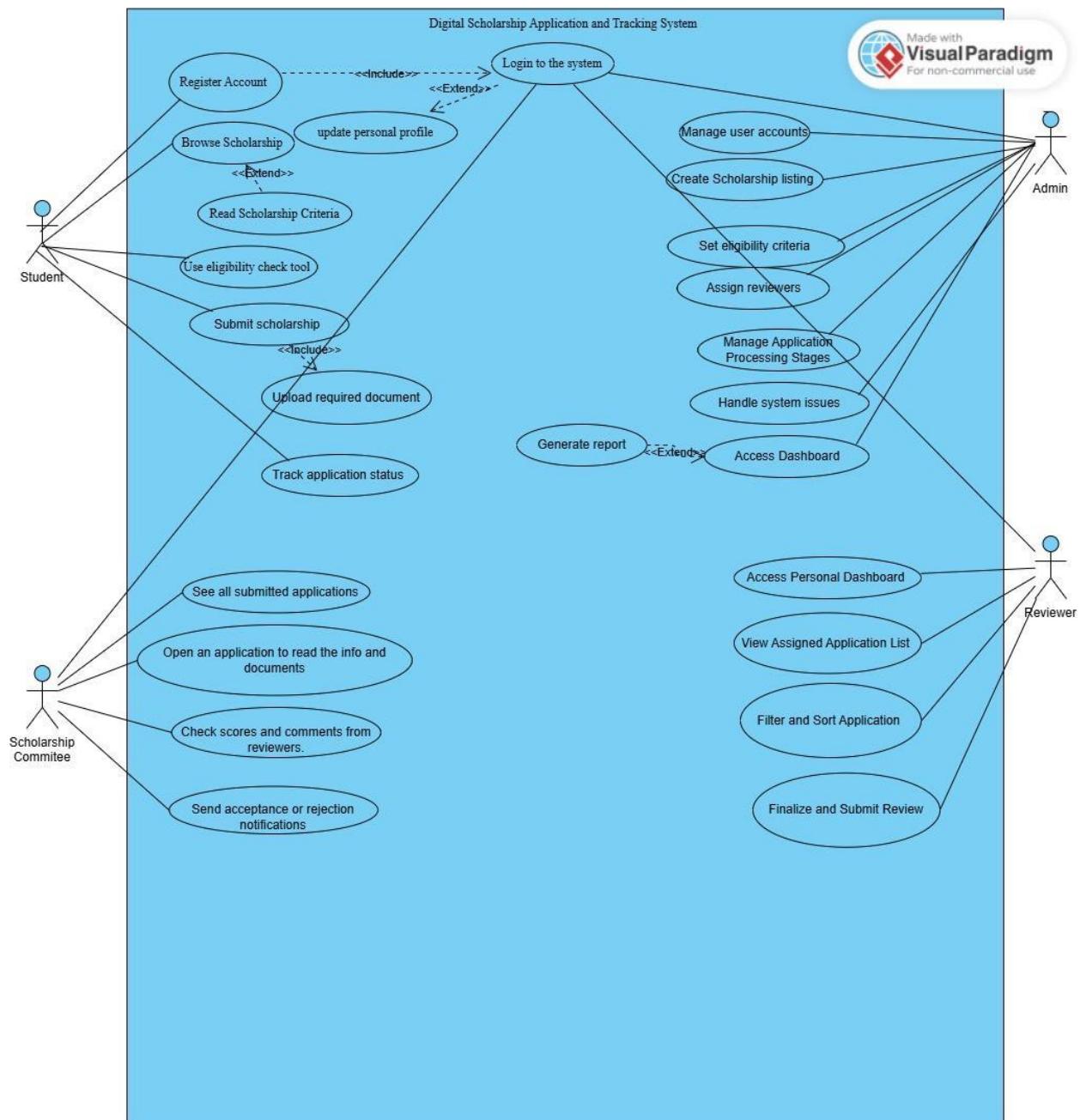
4) Internet Connectivity

Users must have a stable internet connection to access the scholarship system, submit applications, and upload documents. Poor or unstable connectivity may disrupt form submission or cause incomplete uploads.

5) Cloud Hosting

The system relies on a cloud hosting provider or server infrastructure to run the application and store data. Any server downtime, maintenance, or network failure may make the system temporarily inaccessible to users.

2.1 Use Case Diagram



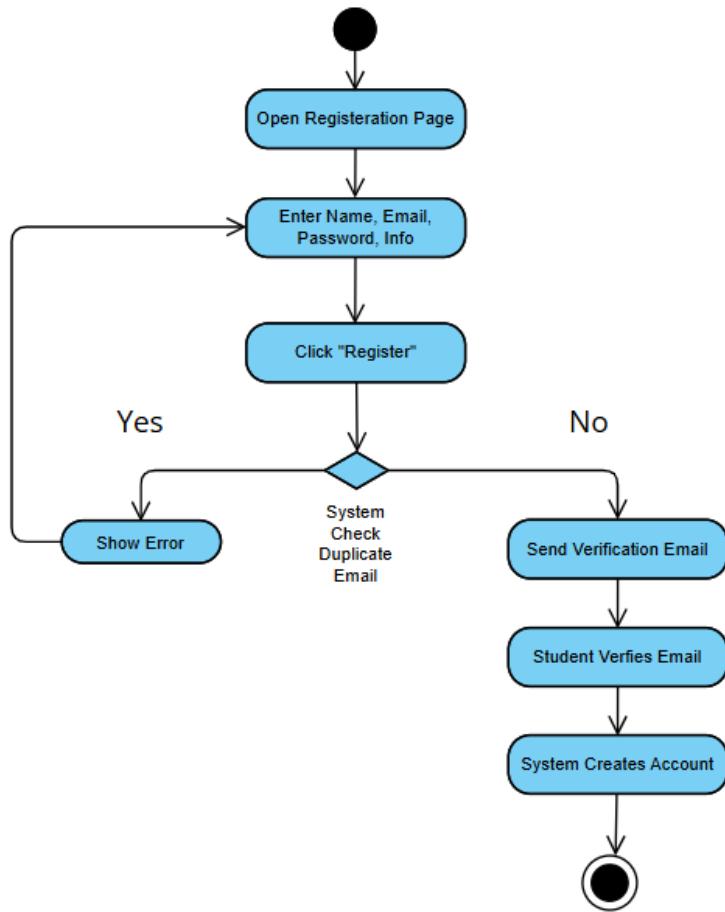
3 Functional Requirements

3.1 Student

3.1.1 Register Account

Use Case Name		Register Account
<i>Actors</i>		Student
<i>Preconditions</i>		Student has access to the registration page and a valid email.
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. Student enters personal details and email. 2. System validates the information. 3. System sends verification email. 4. Student confirms email.
	<i>Postconditions</i>	A new student account is created and activated.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> • <i>Email already registered.</i> • <i>Invalid email format.</i> • <i>Verification email not received.</i>
<i>Non functional requirements</i>		<ul style="list-style-type: none"> • System must send verification email within 10 seconds. • High reliability of email service. • Secure authentication (hashed passwords).

Students create an account by providing their name, email, password, and basic information. The system verifies the email and checks for duplicate accounts. Once completed, the account is saved and activated for login.

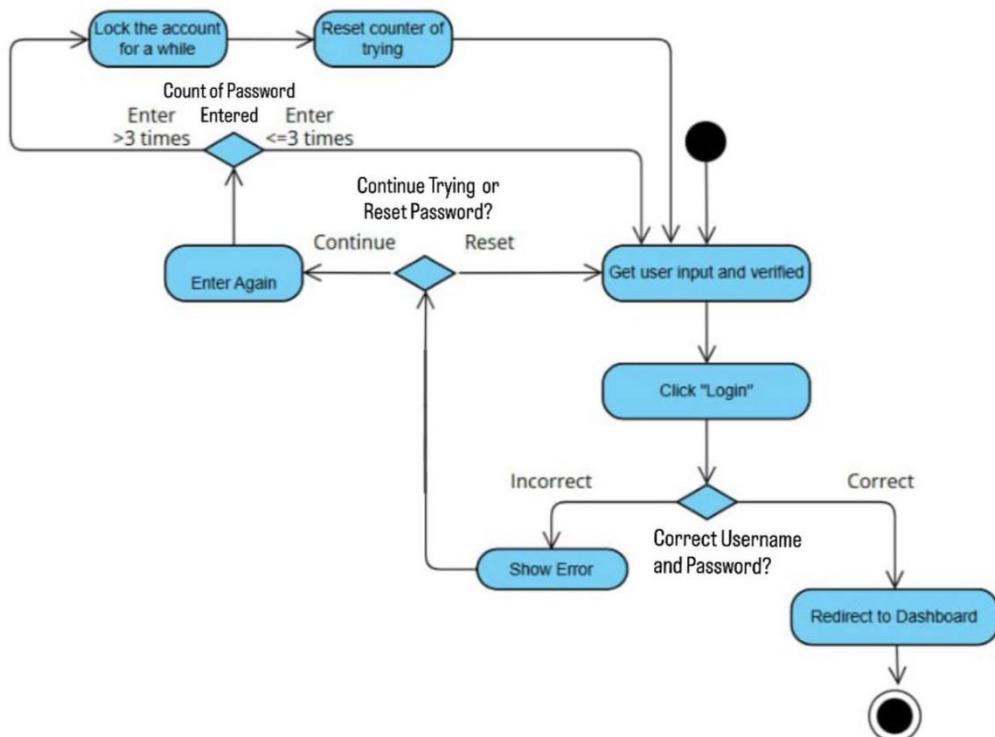


3.1.2 Login to System

Use Case Name		Login to System
Actors		Student
Preconditions		Student account must already be registered and activated.
Normal Flow	Description	1. Student enters email and password. 2. System authenticates credentials. 3. Student is redirected to dashboard.
	Postconditions	Student is logged into the system.

<i>Alternative flows and exceptions</i>	<ul style="list-style-type: none"> • Incorrect password. • Account not verified. • Account locked after multiple failed attempts.
<i>Non functional requirements</i>	<ul style="list-style-type: none"> • User -friendly

Students log in using their registered email and password. The system authenticates the credentials and redirects them to the student dashboard. Failed login attempts trigger an error message for correction.

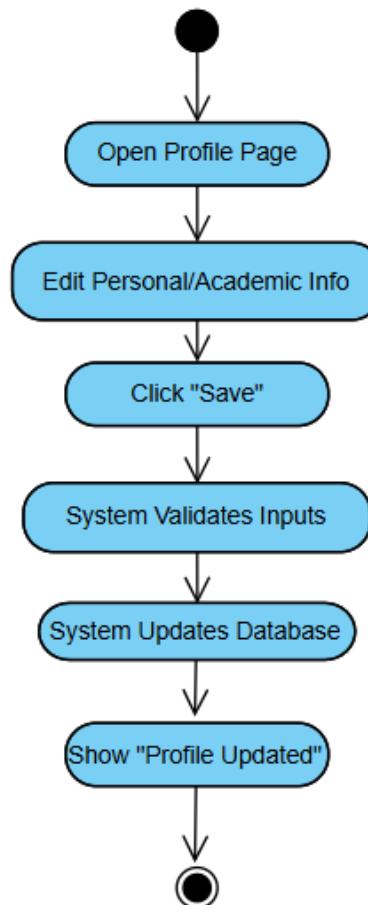


3.1.3 Update Personal Profile

Use Case Name	Update Personal Profile
<i>Actors</i>	Student
<i>Preconditions</i>	Student is logged in.

<i>Normal Flow</i>	<i>Description</i>	1.Student opens profile page. 2.Student edits personal information. 3.System validates and saves updates.
	<i>Postconditions</i>	Profile information is updated in the database.
<i>Alternative flows and exceptions</i>		-
<i>Non functional requirements</i>		<ul style="list-style-type: none"> • Data must be saved without errors. • Interface must be easy to navigate.

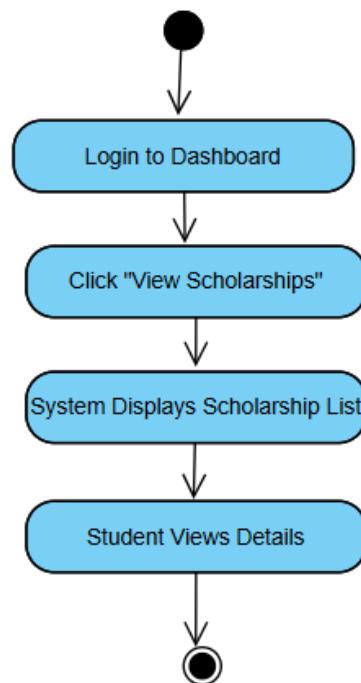
Students can update personal and academic information such as address, phone number, CGPA, and program. The system saves changes immediately after confirmation. Accurate profile details ensure correct data is used in scholarship applications.



3.1.4 Browse Available Scholarships

Use Case Name		Browse Available Scholarships
<i>Actors</i>		Student
<i>Preconditions</i>		Student is logged in.
<i>Normal Flow</i>	<i>Description</i>	1.Student navigates to scholarship list. 2.System displays available scholarships.
	<i>Postconditions</i>	Scholarships are shown to the student.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> ● No scholarships available. ● Server delay in loading list.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● Search and load results under 3 seconds.

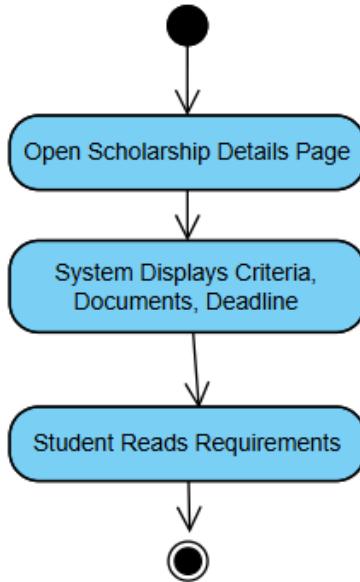
Students view a list of all open scholarships in the system. Each scholarship displays its details like benefits, deadline, and scholarship title. Sorting or filtering may be used to find suitable opportunities quickly.



3.1.5 Read Scholarship Criteria & Requirements

Use Case Name		Read Scholarship Criteria & Requirements
<i>Actors</i>		Student
<i>Preconditions</i>		Student must have selected a scholarship.
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. Student opens scholarship details. 2. System displays criteria, requirements, and deadlines.
	<i>Postconditions</i>	Detailed information is presented to the student.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> • Outdated scholarship details.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> • Information must be clearly structured and readable.

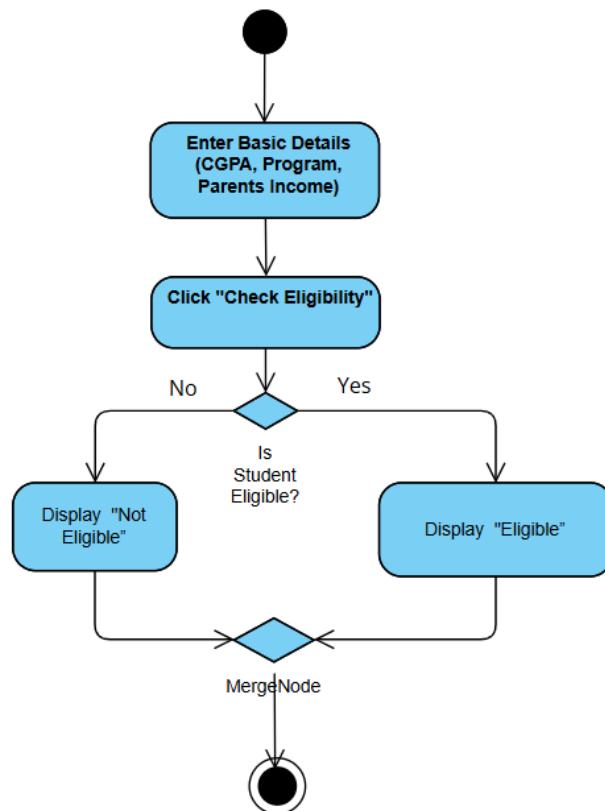
Students can open any scholarship to read the full eligibility criteria, document list, and deadlines. This helps them understand whether they qualify. It also prepares them for the documents needed before applying.



3.1.6 Use Eligibility Check Tool

Use Case Name		Use Eligibility Check Tool
<i>Actors</i>		Student
<i>Preconditions</i>		Scholarship criteria exist.
<i>Normal Flow</i>	Description	1.Student inputs academic and financial info. 2.System evaluates data. 3.System displays “eligible” or “not eligible”.
	Postconditions	Student receives eligibility status.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> • Student enters incomplete or invalid data.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> • Fast processing under 3 seconds. • High accuracy of eligibility rules.

Students enter basic details such as CGPA, program, and household income to check their eligibility. The system compares their data with the scholarship criteria. It provides instant feedback to help students decide whether to proceed with applying.

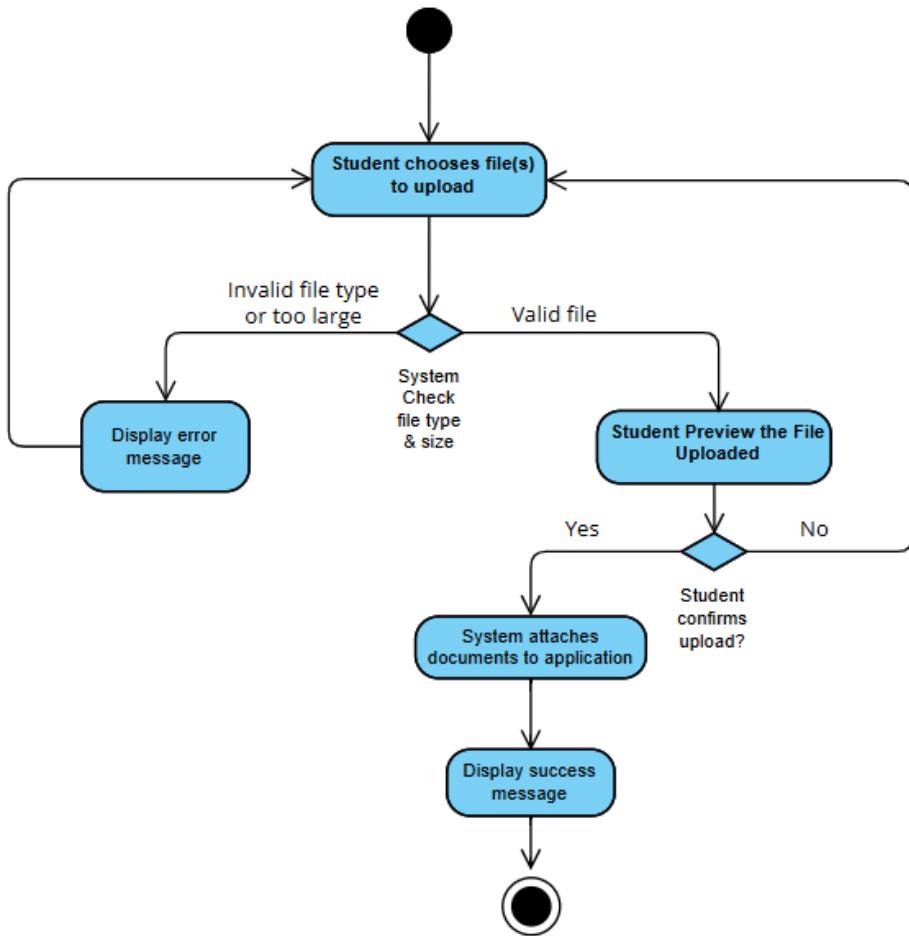


3.1.7 Upload Required Documents

Use Case Name	Upload Required Documents
Actors	Student
Preconditions	Application form must be in progress.

<i>Normal Flow</i>	<i>Description</i>	1.Student uploads documents (IC, transcript, income proof). 2.System checks file type and size.
	<i>Postconditions</i>	Uploaded documents are attached to application.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> ● Unsupported file format. ● File too large. ● Upload failed due to internet issues.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● Maximum file size limit must be enforced. ● Upload must be secure (HTTPS).

Students upload documents such as transcripts, ID, and income statements. The system verifies file format and size to ensure documents meet requirements. Students can preview or replace any uploaded file.

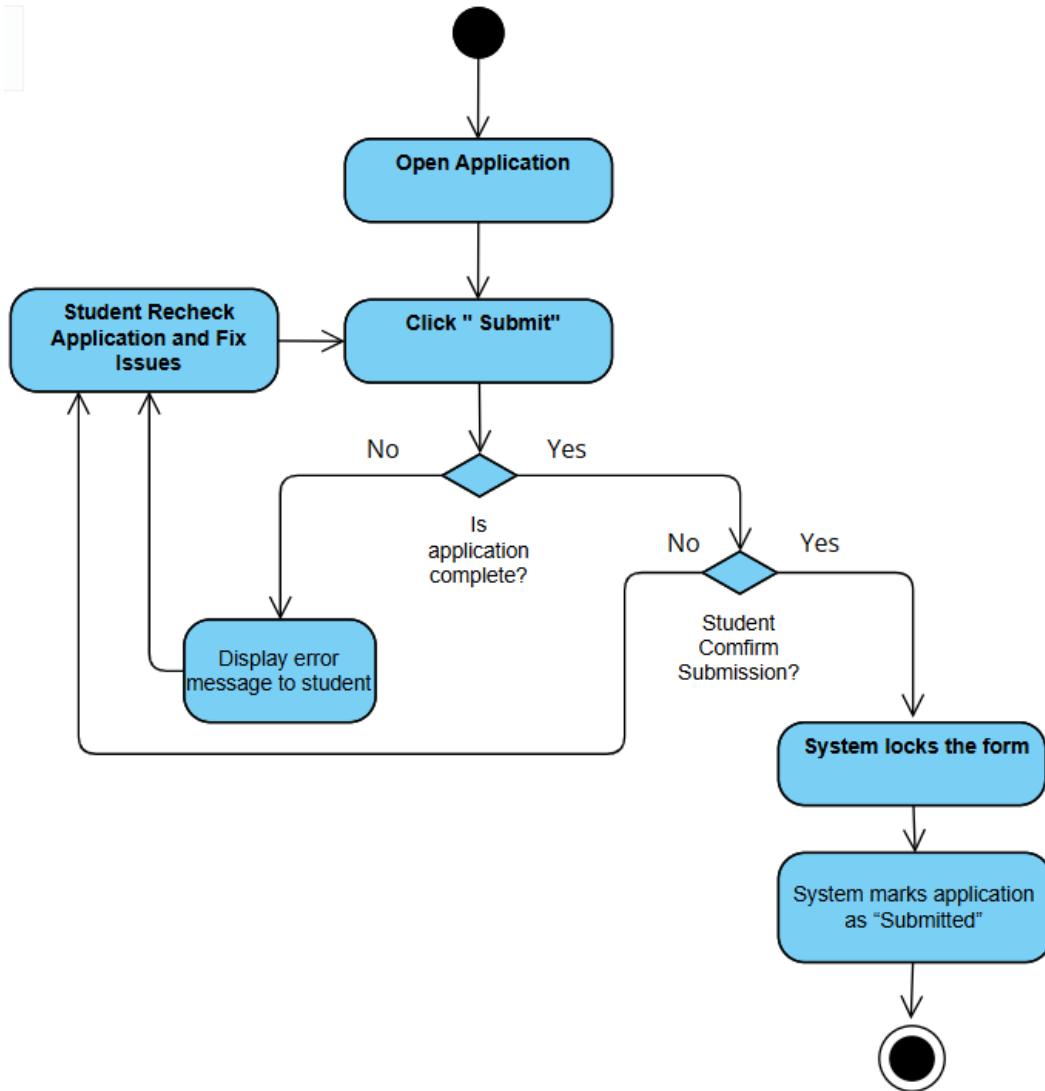


3.1.8 Submit Application

Use Case Name		Submit Application
Actors		Student
Preconditions		Application form is complete and documents uploaded.
Normal Flow	Description	1. Student clicks "Submit". 2. System validates completeness.

		3.System locks the form and marks as “Submitted”.
	Postconditions	Application is officially sent for review.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> ● Missing documents. ● System error preventing submission.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● Submission confirmation within 5 seconds. ● High reliability, no data loss.

Students submit their completed scholarship application through the system. A final validation check ensures no fields or documents are missing. After submission, the application becomes read-only and is sent for review.

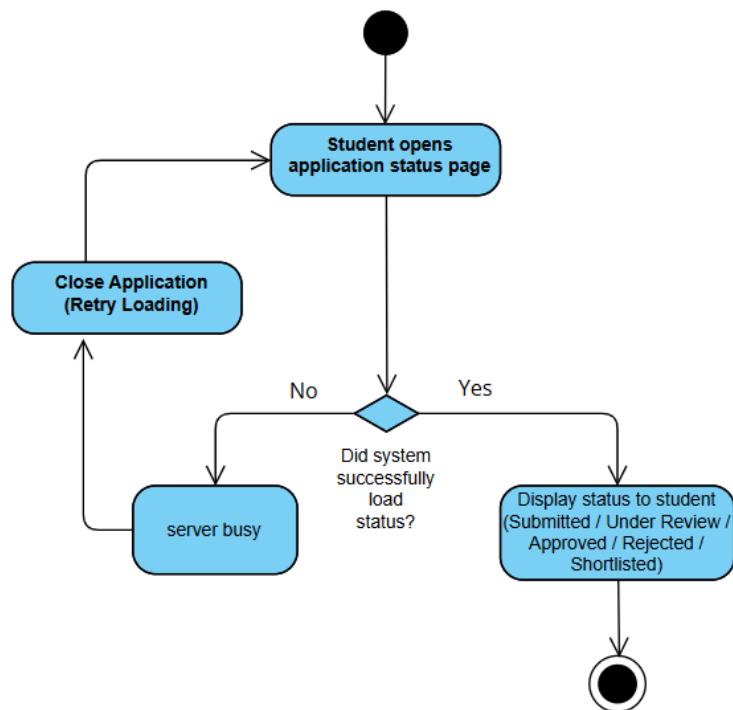


3.1.9 Track Application Status

Use Case Name		Track Application Status
Actors		Student
Preconditions		Student has submitted an application.
Normal Flow	Description	1. Student opens status page. 2. System displays status (submitted, under review, approved, rejected).

	Postconditions	Student is informed of current progress.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> • Status fails to load if server busy..
<i>Non functional requirements</i>		<ul style="list-style-type: none"> • Real-time updates. • Easy-to-understand status labels.

Students can monitor the progress of their application through status labels like “Submitted,” “Under Review,” or “Shortlisted.” Any updates made by reviewers or committee will appear on their dashboard. This keeps students informed throughout the process.



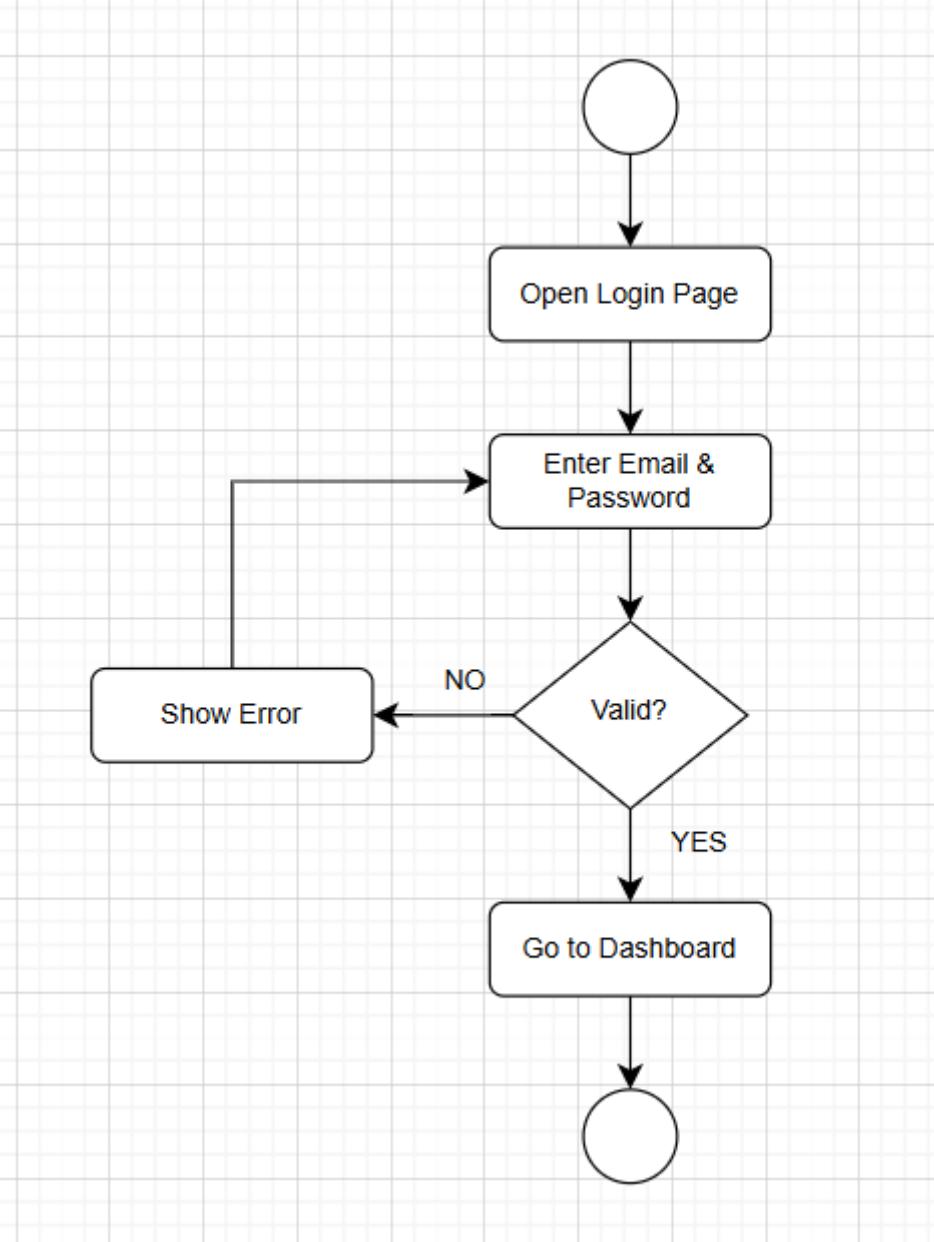
3.2 Scholarship Committee

3.2.1 Scholarship Committee Login

<i>Use Case Name</i>	Login to System
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<i>Actors</i>		Scholarship Committee
<i>Preconditions</i>		<ul style="list-style-type: none"> • The committee member has a registered account. • The system is online.
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. The committee member opens the login page. 2. The committee member enters email and password. 3. The system checks if the password is correct. 4. The system opens the dashboard.
	<i>Postconditions</i>	The committee member is logged in.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> • Wrong Password: System shows an error and asks to try again. • Account Locked: Account gets locked if they fail too many times.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> • The system must authenticate the user within 3 seconds. • Passwords must be safe.

Committee members log in using their registered email and password to access the system. The system checks their details to ensure only authorized people can enter the dashboard to view sensitive student data.

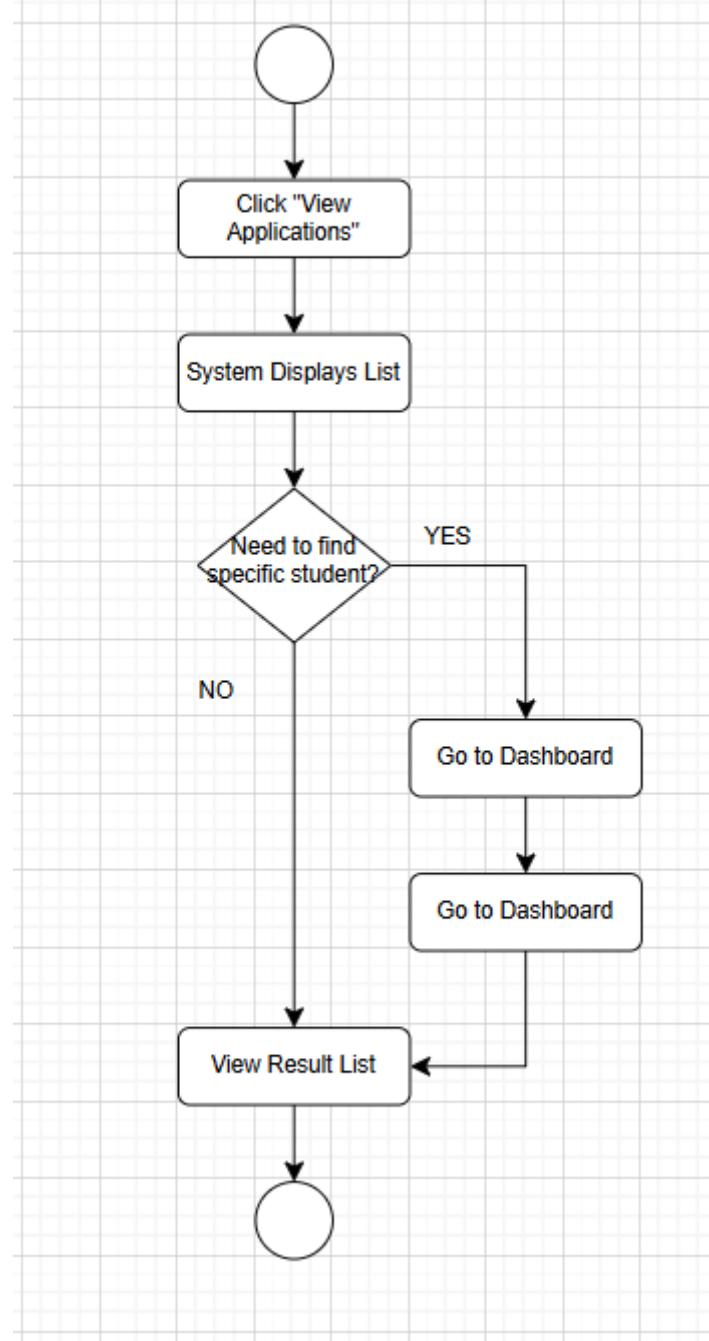


3.2.2 See All Submitted Applications

Use Case Name	See All Submitted Applications
<i>Actors</i>	Scholarship Committee
<i>Preconditions</i>	<ul style="list-style-type: none"> • The committee member is logged in. • Students have sent their applications.

<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. Committee members click to view applications. 2. The system shows a list of all students who applied. 3. Committee members can filter or search for specific applications using a name or status. 4. The system updates the list to show the results.
	<i>Postconditions</i>	The committee member sees the list of applications they need.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> ● No Applications: The system says "No applications found."
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● The list should load quickly.

The committee can view a full list of all students who have applied for the scholarship. If the list is too long, they can use the search or filter options to find specific applications quickly.

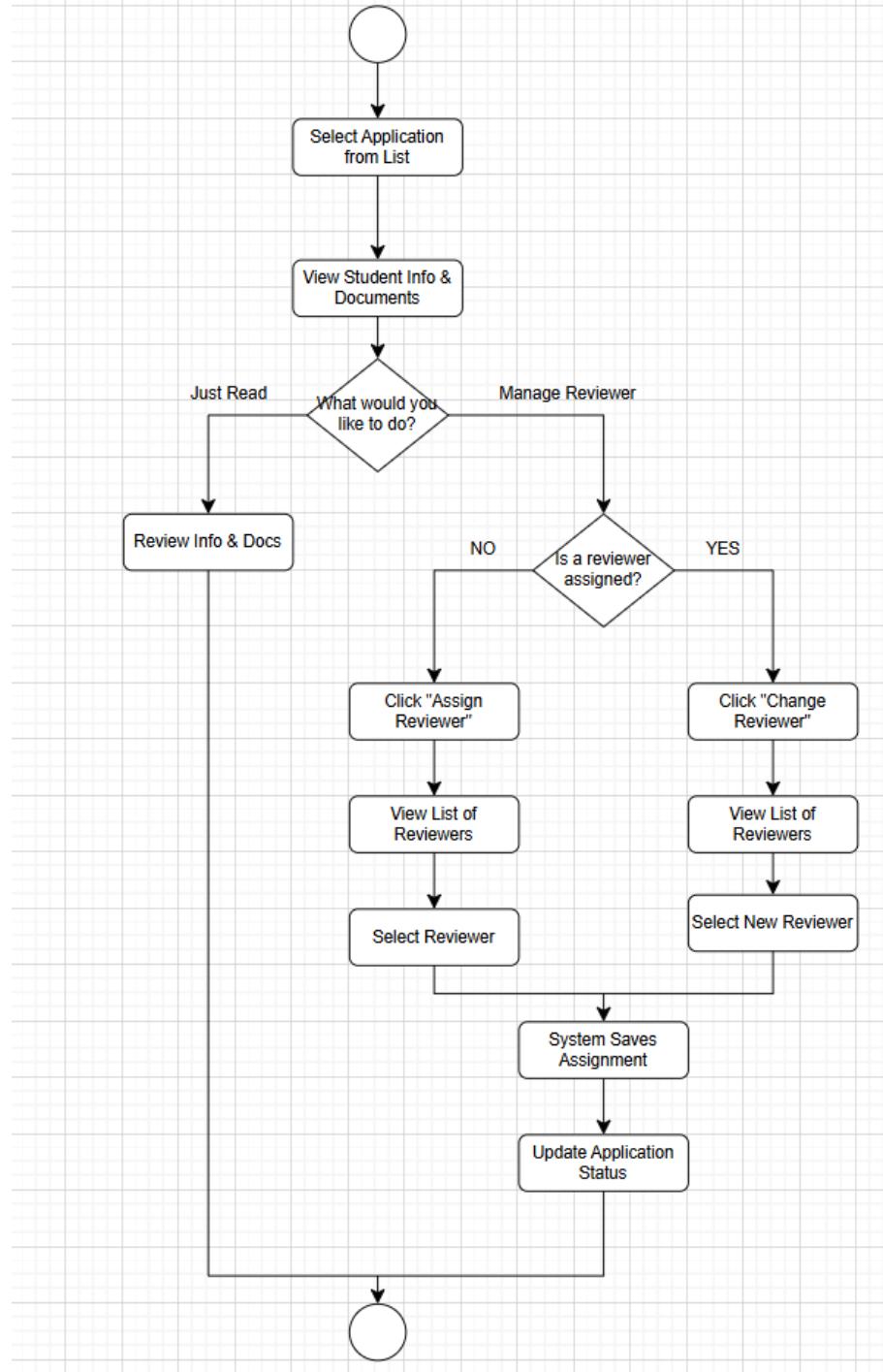


3.2.3 Open an application to read the info and documents

Use Case Name	Open an application to read the info and documents
Actors	Scholarship Committee

<i>Preconditions</i>		<ul style="list-style-type: none"> The committee member sees the list of students.
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> The committee member clicks on a student's name to open it. The system shows the student's info and documents. Committee members can assign applications to reviewers for evaluation. If needed, the Committee member can change to a different reviewer to review the application.
	<i>Postconditions</i>	The application is read and assigned to a reviewer.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> Reviewer Busy: System warns if the reviewer has too much work.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> Documents must be clear to read.

By clicking on a student's name, the committee member can read their full details and check their uploaded documents. From this page, they can also assign the application to a reviewer or change the reviewer if necessary.

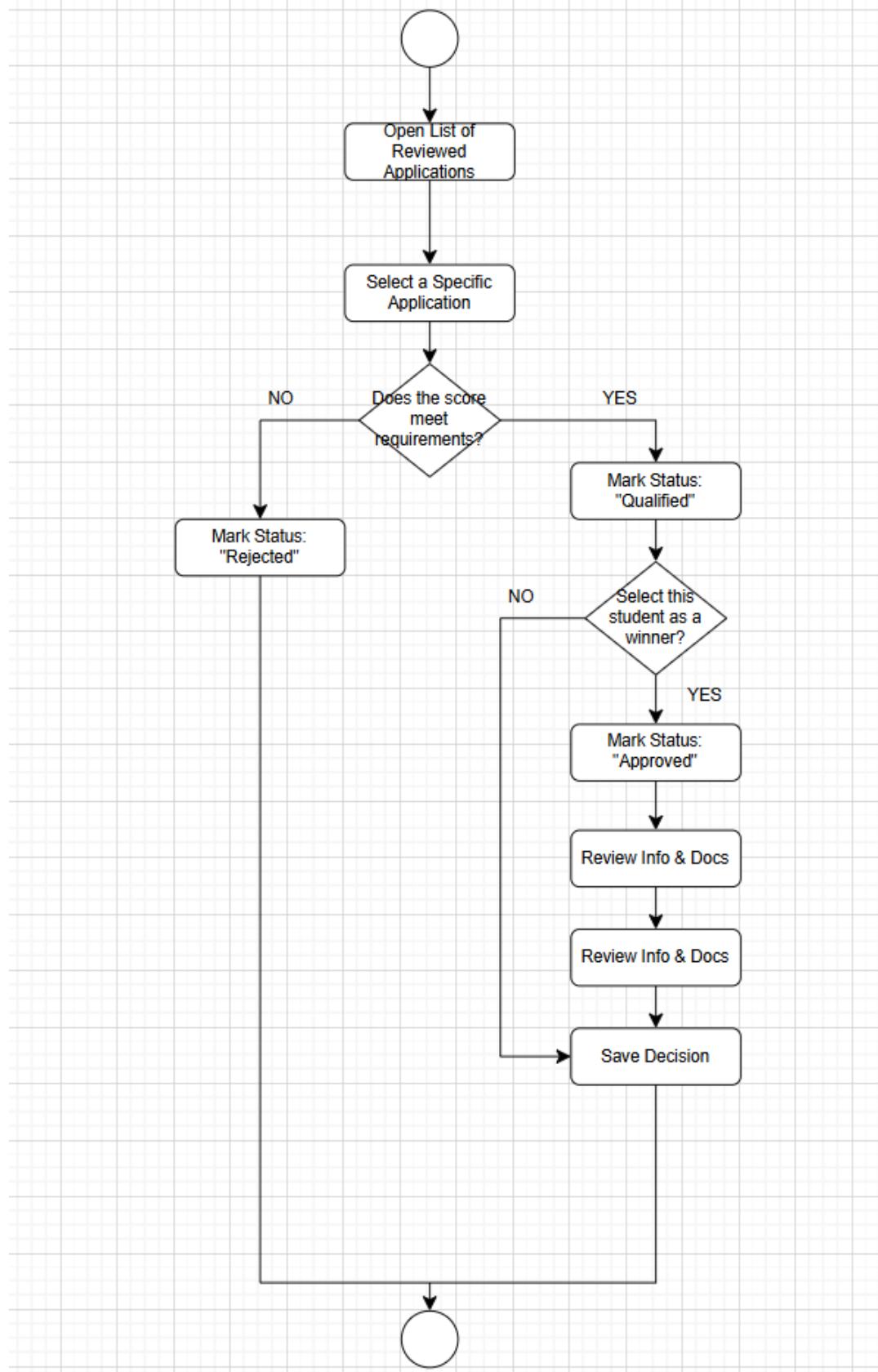


3.2.4 Check scores and comments from reviewers

Use Case Name	Check scores and comments from reviewers
Actors	Scholarship Committee

<i>Preconditions</i>		<ul style="list-style-type: none"> • Reviewers have finished grading the applications.
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. Committee members view the reviewed applications. 2. The system shows the scores and comments from the reviewers. 3. Committee members will review which applicants qualify based on the score. 4. Committee members will choose the final scholarship winners.
	<i>Postconditions</i>	The winners for the scholarship are decided.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> • Tie Score: Committee members discuss breaking the tie.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> • Scores must be accurate and easy to see.

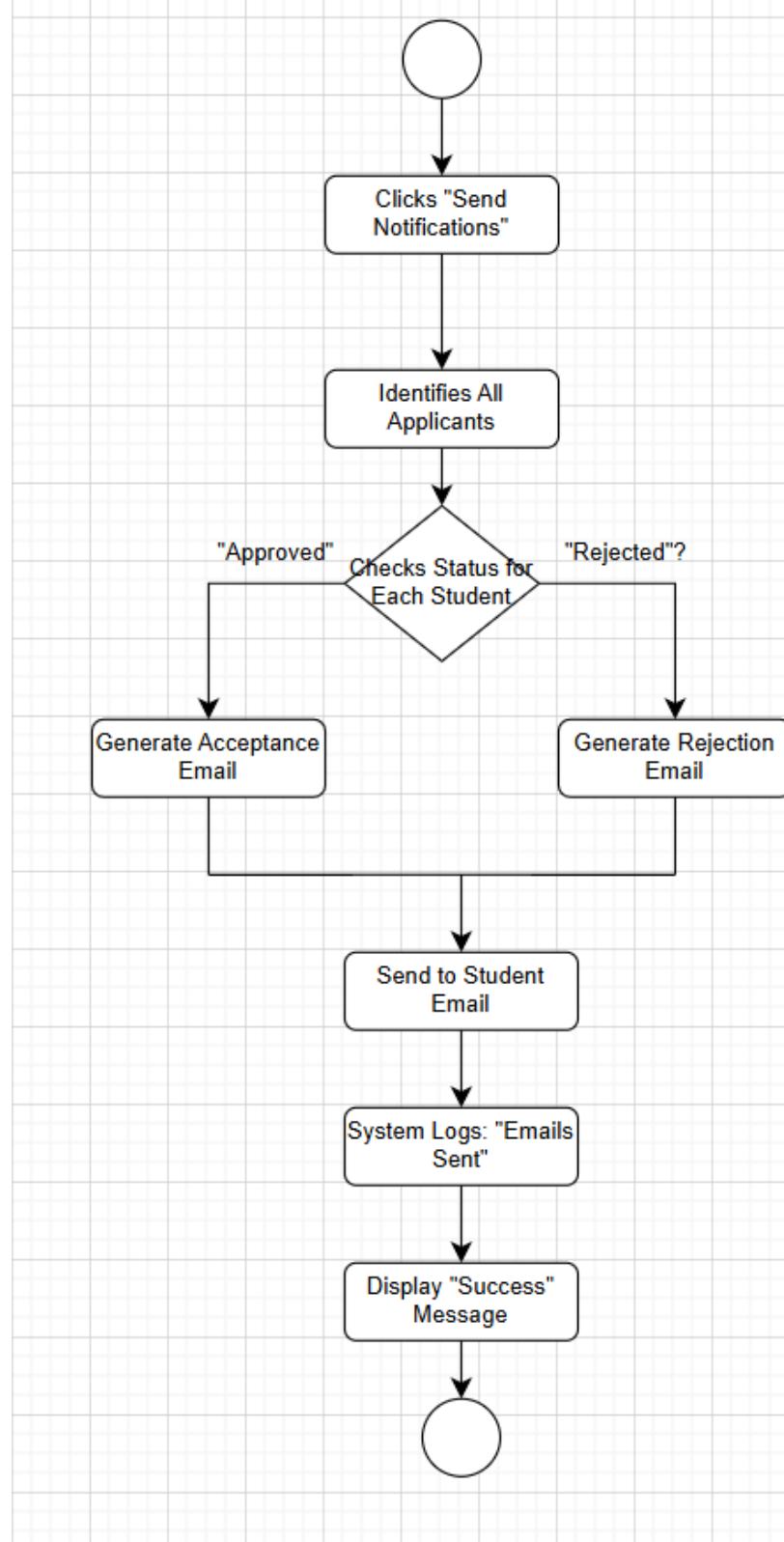
The committee members look at the scores and feedback given by the reviewers to see how well a student performed. Based on this information, they discuss who qualifies and select the final winners for the scholarship.



3.2.5 Send acceptance or rejection notifications

Use Case Name		Send acceptance or rejection notifications
<i>Actors</i>		Scholarship Committee
<i>Preconditions</i>		<ul style="list-style-type: none"> The final winners have been chosen.
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> Committee members click the button to send notifications. The system creates the emails for winners (Acceptance) and others (Rejection). The system sends the emails to all students.
	<i>Postconditions</i>	Students receive an email about their result.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> Email Fail: System notifies if an email did not send.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> Emails must be sent immediately.

After the final decisions are made, the committee sends out email notifications to all applicants. The system automatically sends an acceptance email to the winners and a rejection email to those who were not successful.

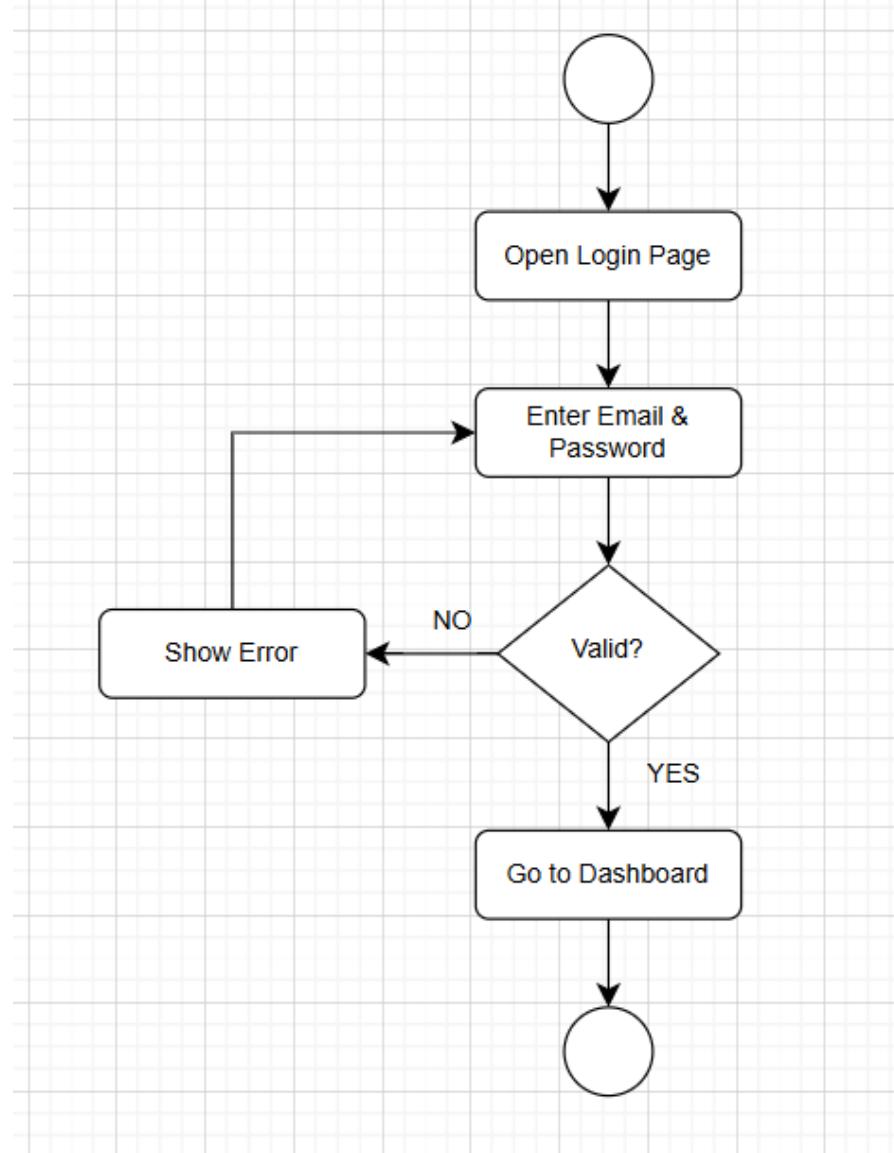


3.3 Reviewer

3.3.1 Reviewer Login

Use Case Name		Reviewer Login
<i>Actors</i>		Reviewer
<i>Preconditions</i>		Reviewer register account to login
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. The reviewer opens the login page. 2. The reviewer enters their email and password. 3. The system checks if the login info is correct. 4. The system opens the Reviewer Dashboard.
	<i>Postconditions</i>	Reviewer is logged in.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> ● Wrong Password: System shows an error and asks to try again. ● System Error: Login page does not load.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● Login must happen fast. ● Passwords must be secure.

Reviewers must log into the system using their registered email and password to start their work. The system authenticates their credentials to ensure that only authorized reviewers can access the student applications assigned to them.

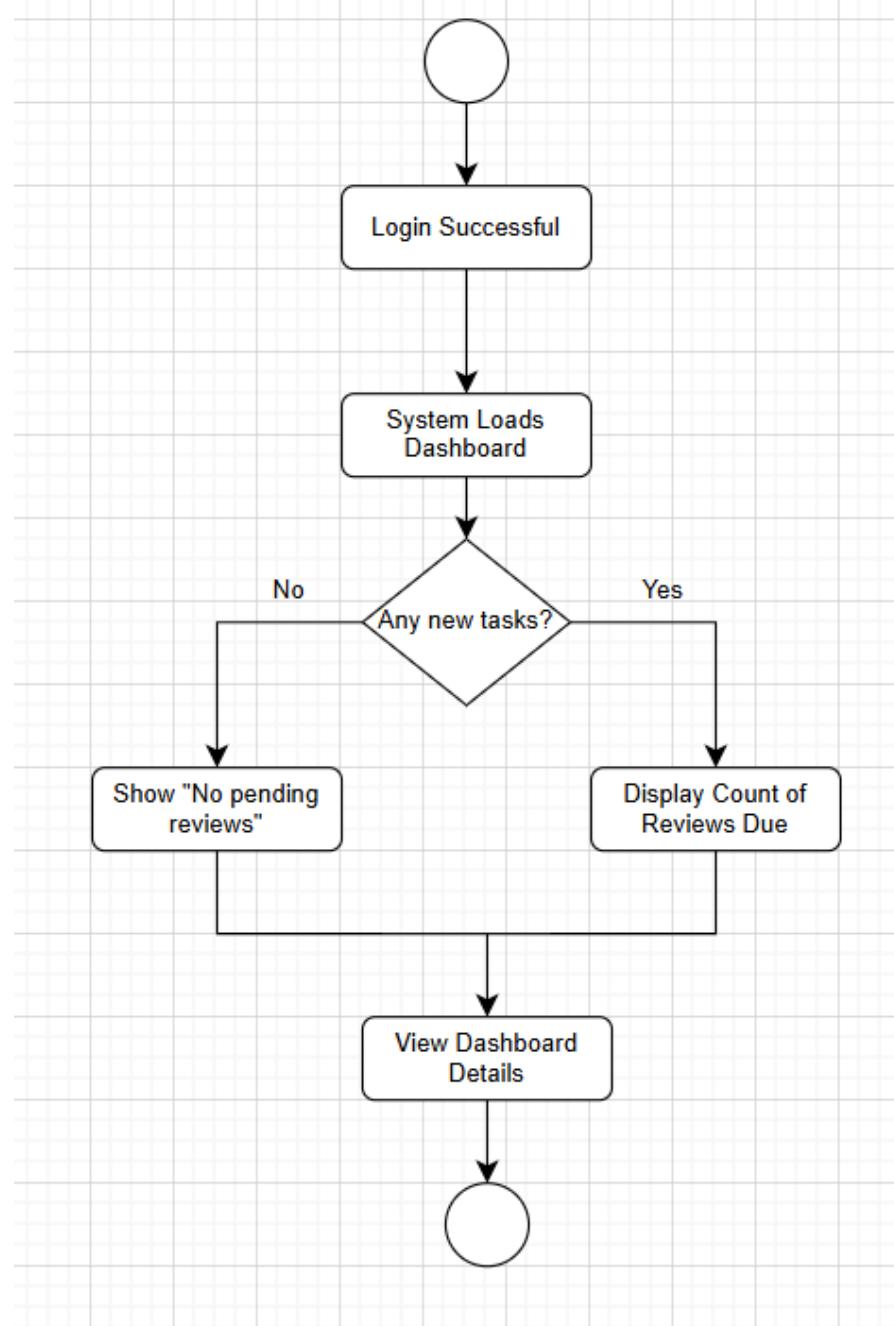


3.3.2 Access Personal Dashboard

Use Case Name		Access Personal Dashboard
Actors		Reviewer
Preconditions		Reviewer is logged in.
Normal Flow	Description	1. The reviewer clicks on the Dashboard button.

		2. The system shows the dashboard. 3. The system displays a summary of tasks and pending reviews.
	<i>Postconditions</i>	The reviewer sees their tasks and progress.
	<i>Alternative flows and exceptions</i>	<ul style="list-style-type: none"> ● Data Error: Dashboard shows zero tasks when there are some.
	<i>Non functional requirements</i>	<ul style="list-style-type: none"> ● The dashboard must look clean and easy to read.

After logging in, reviewers access their personal dashboard to see an overview of their tasks. The dashboard displays a summary of pending reviews and completed work, helping them track their progress and stay organized.



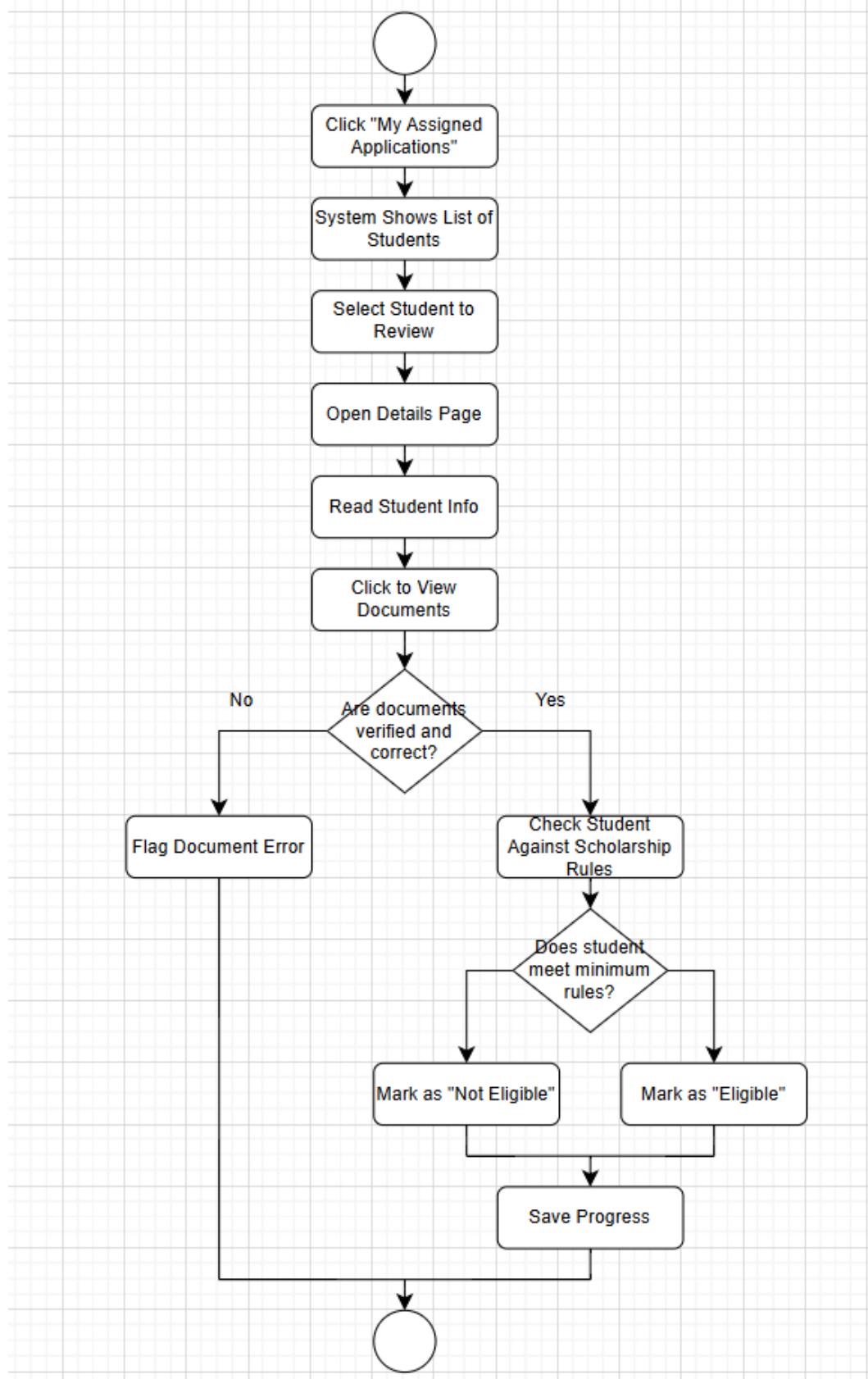
3.3.3 View Assigned Application List

Use Case Name	View Assigned Application List
<i>Actors</i>	Reviewer

Software Requirements Specification for Digital Scholarship Application and Tracking System

<i>Preconditions</i>		Admin or Committee has assigned applications to the reviewer.
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. The reviewer opens the list of assigned students. 2. Reviewer clicks to Access Application Details to read info. 3. The reviewer will View Uploaded Documents to see the files. 4. The reviewer will Check Student Qualification to ensure they are eligible. 5. The reviewer will Verify Submitted Documents to make sure they are real.
	<i>Postconditions</i>	The reviewer has all the info to grade the student.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> • Empty List: System says "No applications assigned."
<i>Non functional requirements</i>		<ul style="list-style-type: none"> • Documents must open quickly.

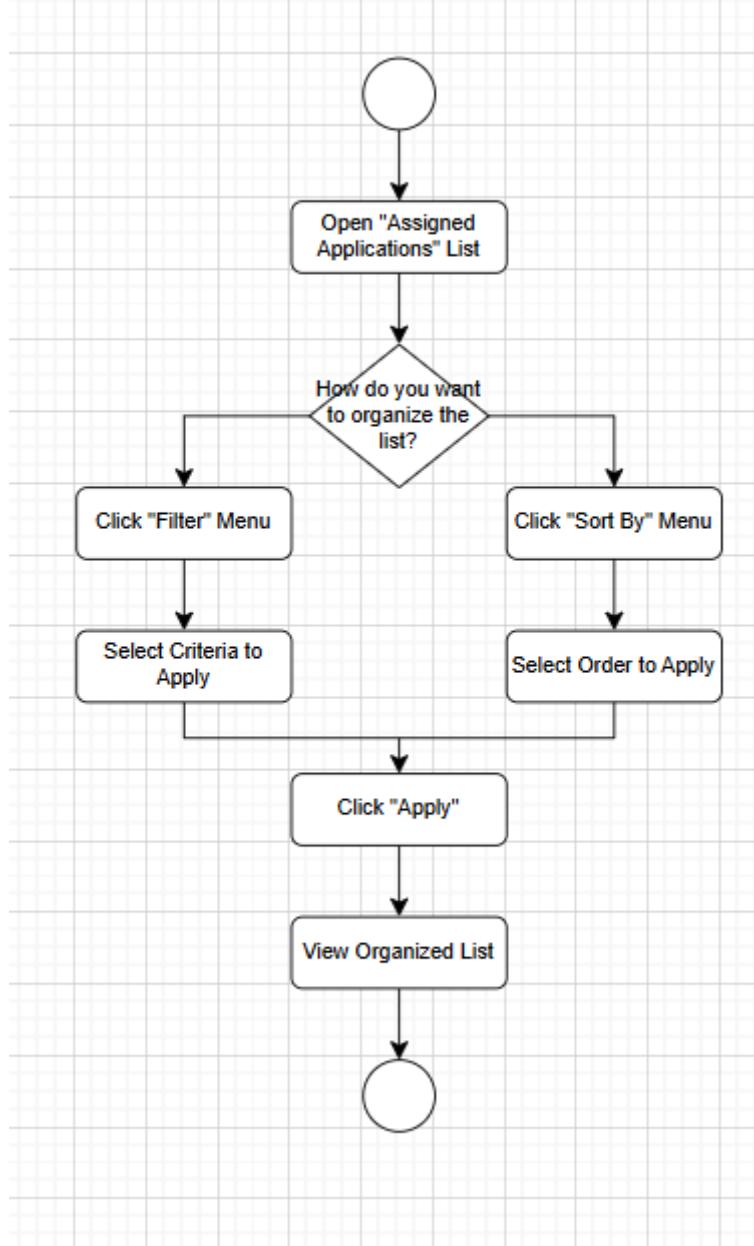
Reviewers view a list of all applications assigned to them by the committee. From this list, they can open each application to read the details, view uploaded documents, check if the student is qualified, and verify that the documents are real.



3.3.4 Filter and Sort Application

<i>Use Case Name</i>		Filter and Sort Application
<i>Actors</i>		Reviewer
<i>Preconditions</i>		The reviewer is looking at the application list.
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. The reviewer selects a filter (like "Pending" or "Date"). 2. The reviewer chooses to sort by name or time. 3. The system rearranges the list based on the choice. 4. The reviewer sees the organized list.
	<i>Postconditions</i>	The list is organized for easier work.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> ● No Match: Filtering hides all applications.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● Sorting must happen instantly.

To manage their workload efficiently, reviewers can filter the application list to see specific groups or sort them by submission date. This helps them prioritize their tasks and find specific applications quickly.

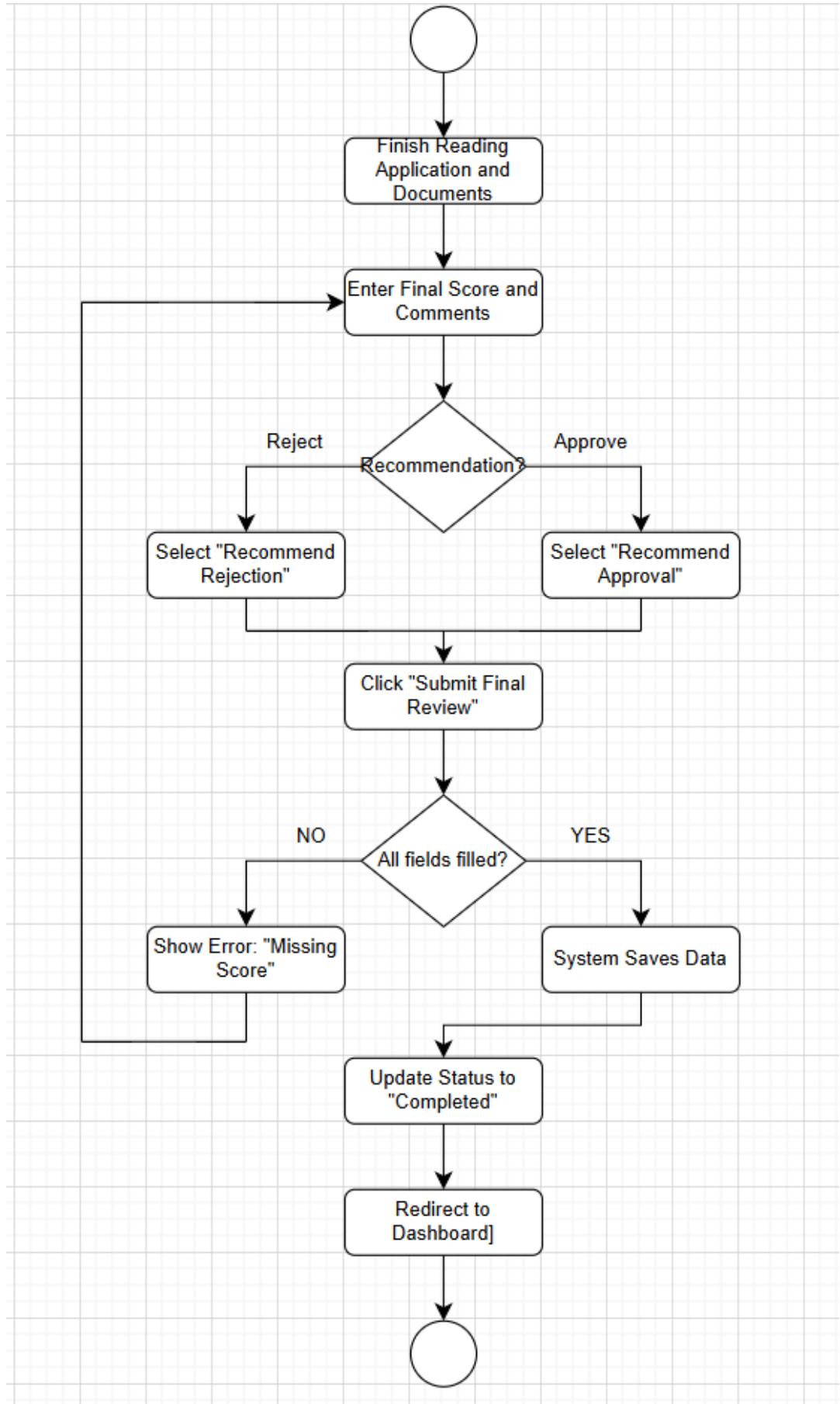


3.3.5 Finalize and Submit Review

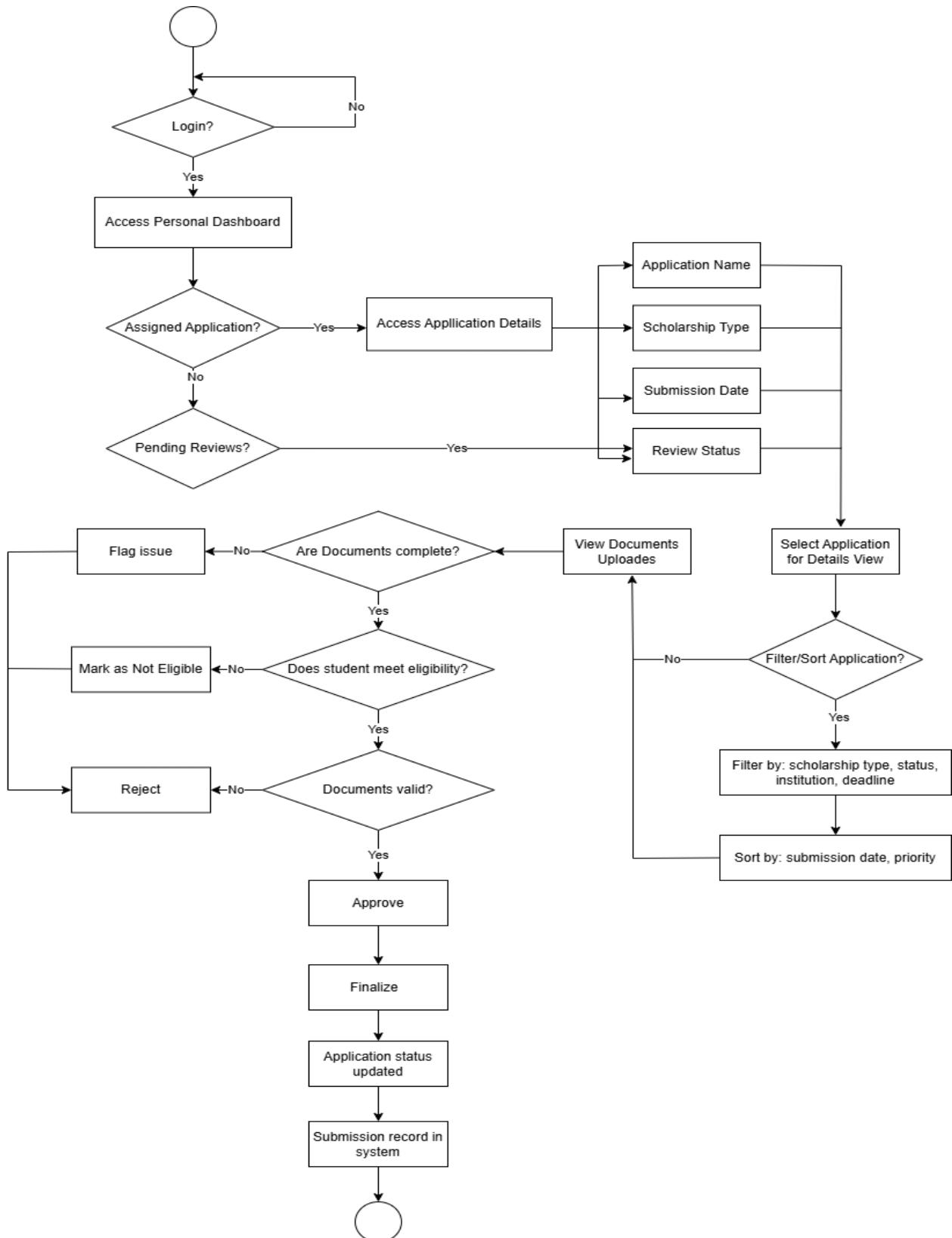
Use Case Name	Finalize and Submit Review
<i>Actors</i>	Reviewer
<i>Preconditions</i>	The reviewer has checked the details and documents.

<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. The reviewer finishes checking the student. 2 Reviewer will Approve or Reject Application Recommendation based on their findings. 3. The reviewer clicks "Submit Review." 4. The system saves the review and updates the status.
	<i>Postconditions</i>	The review is done and sent to the committee.
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> ● Incomplete: System warns if a score or comment is missing.
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● Submission must be saved securely.

Once the reviewer has finished checking the documents and details, they make a recommendation to approve or reject the application. When they click submit, the review is finalized and the results are sent to the scholarship committee.



3.3.6 Activity Diagram Reviewer

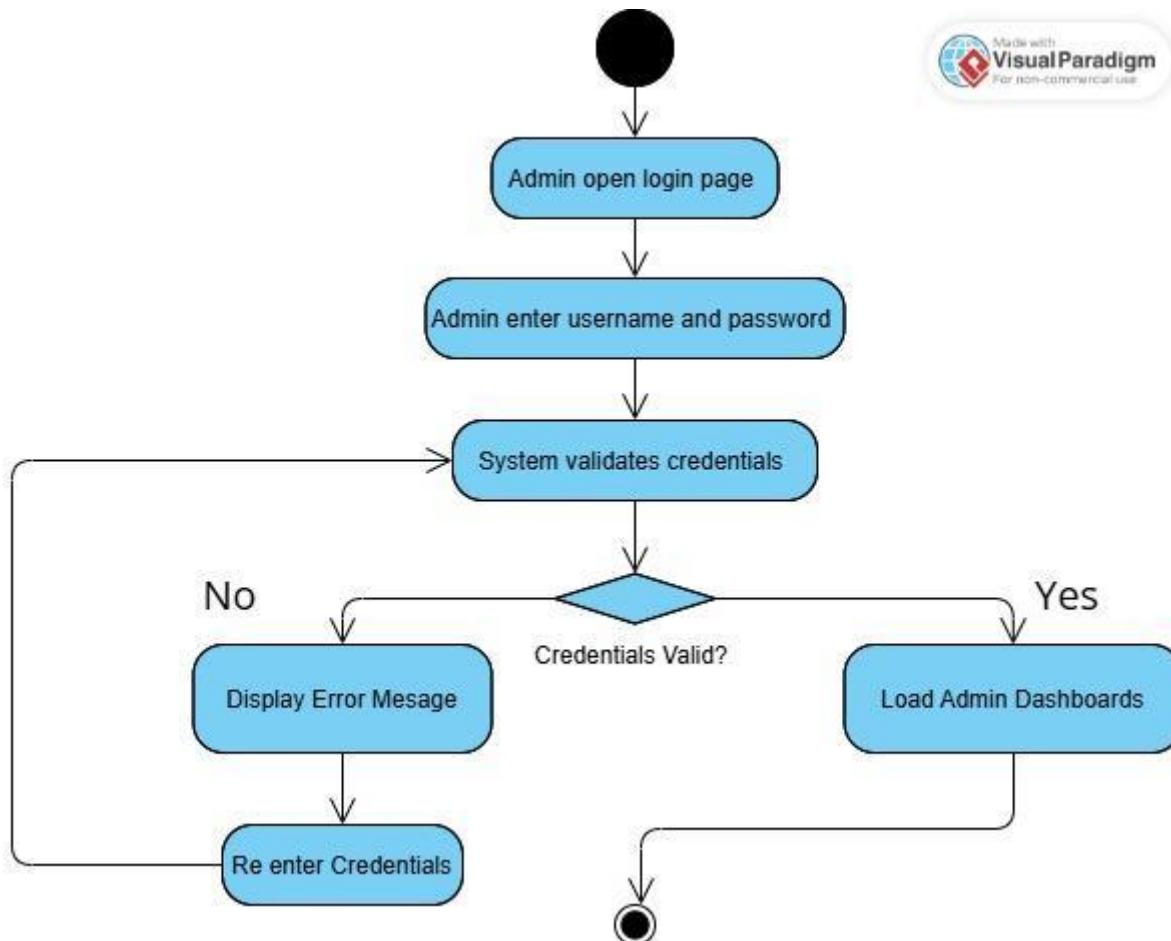


3.4 Admin

3.4.1 Logs into the system

Use Case Name		Logs into the system
Actors		Admin
Preconditions		<ul style="list-style-type: none"> ● Admin must have a registered admin account ● System is connected to database
Normal Flow	Description	<ol style="list-style-type: none"> 1. Admin opens the login page 2. Admin enters the username and password that are already registered 3. System validates the credentials 4. System grant access
	Postconditions	<ul style="list-style-type: none"> ● Admin is authenticated and logged in
Alternative flows and exceptions		<ul style="list-style-type: none"> ● Admin forgot the password and cannot log in ● Account got locked
Non functional requirements		<ul style="list-style-type: none"> ● System must authenticate user within 3 seconds ● Password has a secure encryption

The system should authenticate the admin using secure credentials, verify access permissions, and provide protected access to all administrative modules. It should prevent unauthorized access and ensure only valid admins can reach the dashboard.

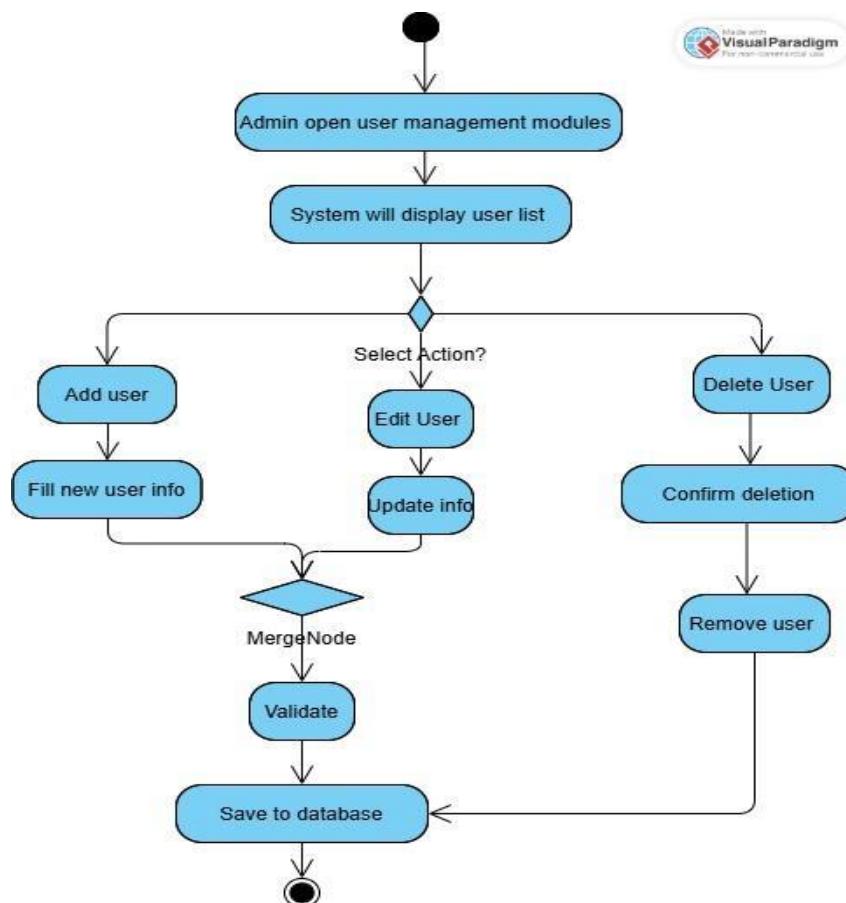


3.4.2 Manage User Accounts

Use Case Name		Manage User Accounts
<i>Actors</i>		Admin
<i>Preconditions</i>		<ul style="list-style-type: none"> • Admin must already logged into the system
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. Admin opens the user management module 2. System will display list of all users 3. Admin can do many actions such as create and update 4. Admin enters information in the system

		5. System updates the user account in database
	<i>Postconditions</i>	User account will be update and stored in the system
	<i>Alternative flows and exceptions</i>	<ul style="list-style-type: none"> System will shows warning when admin make a mistake during information entry
	<i>Non functional requirements</i>	<ul style="list-style-type: none"> Validates data entry Audit trails for changes

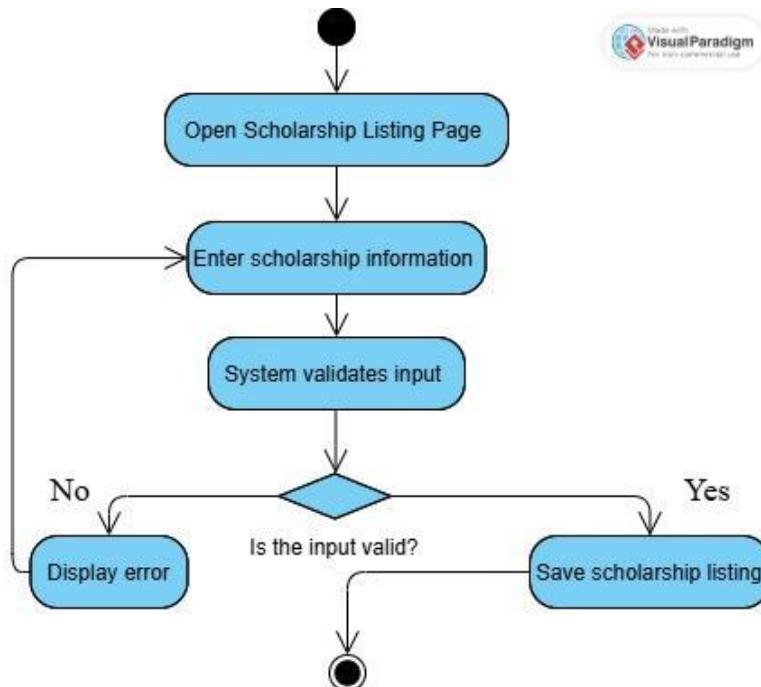
The system should allow the admin to create, update, deactivate, and manage all user accounts. It must ensure accurate validation, apply role settings, and securely update user information while maintaining system integrity.



3.4.3. Creates Scholarship Listings

Use Case Name		Creates Scholarship Listings
<i>Actors</i>		Admin
<i>Preconditions</i>		<ul style="list-style-type: none"> ● Admin must already logged in ● Database server of the system is connected
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. Admin clicks “Create Scholarship” 2. Admin enters the scholarship name and the description based on the scholarship committee requirement 3. System validates data entry 4. System saves scholarship listings
	<i>Postconditions</i>	Scholarship appears in student portal
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> ● Error will show when scholarship listings missing mandatory field ● Admin will get a warning when there is duplicated scholarship
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● Data entered must automatically and fast saved

The system should enable the admin to add new scholarship records with complete information. It must validate the input, store the scholarship data in the database, and make it accessible for students to view and apply.

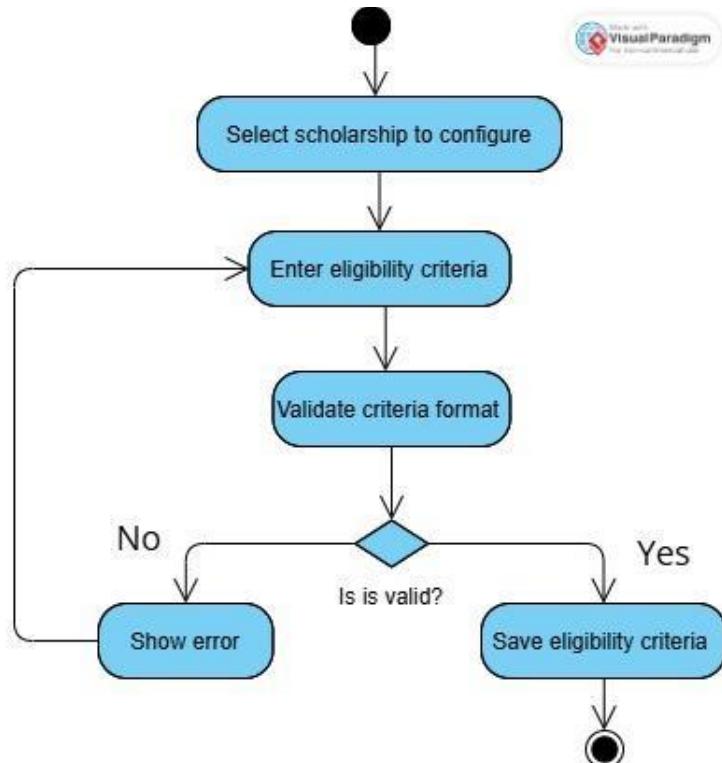


3.4.4 Sets Eligibility Criteria

Use Case Name		Sets Eligibility Criteria
Actors		Admin
Preconditions		<ul style="list-style-type: none"> • Admin must already logged in • Scholarship must already exist in the system
Normal Flow	Description	<ol style="list-style-type: none"> 1. Admin opens scholarship entry 2. Admin selects “Eligibility Criteria” 3. Admin enters academic and financial conditions for the scholarship 4. System saved criteria
	Postconditions	<ul style="list-style-type: none"> • Eligibility requirements will be applied to all students that apply.
Alternative flows and exceptions		<ul style="list-style-type: none"> • System will suggest correction if there is an invalid value or data

Non functional requirements	<ul style="list-style-type: none"> The interfaces should allow admin to update criteria without technical knowledge so all admin or the future admin can modify easily.
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The system should allow the admin to define and update eligibility rules for any scholarship. These rules must be applied automatically during student applications to determine who qualifies.

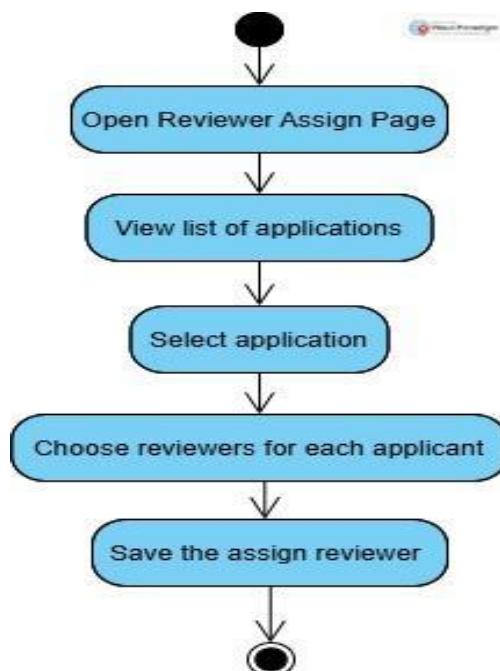


3.4.5 Admin Assigns Reviewers

Use Case Name	Assigns Reviewers
Actors	Admin
Preconditions	<ul style="list-style-type: none"> Reviewers must already exist Students applications must exist
Normal Flow	<p>Description</p> <ol style="list-style-type: none"> Admin opens "Reviewer Assignment" System displays list of applications Admin selects reviewer for each application

		4. System will assigns the reviewer
	<i>Postconditions</i>	<ul style="list-style-type: none"> • Reviewers receives assigned application list
	<i>Alternative flows and exceptions</i>	<ul style="list-style-type: none"> • System warns admin when reviewer overloaded
	<i>Non functional requirements</i>	<ul style="list-style-type: none"> • System prevent assigning the same reviewer twice to the same scholarship

The system should let the admin assign applications to specific reviewers based on workload and suitability. It must track reviewer assignments and ensure each reviewer can only access the applications assigned to them.

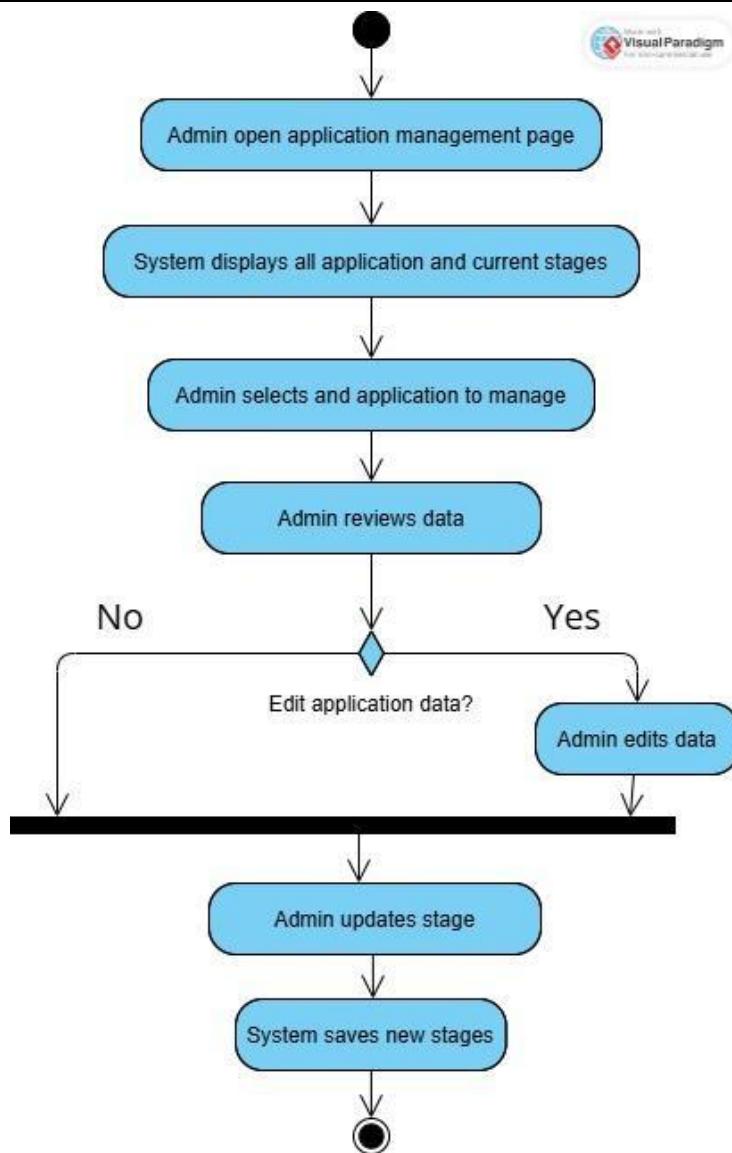


3.4.6. Manage Application Processing Stage

<i>Use Case Name</i>	Monitors Application Workflow
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<i>Actors</i>		Admin
<i>Preconditions</i>		<ul style="list-style-type: none"> ● Applications already submitted ● Reviewers assigned
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. Admin opens "Application Management" page 2. System displays all submitted applications with their current processing stage 3. System displays the application details 4. Admin updates the application data if needed 5. System saves updated information
	<i>Postconditions</i>	<ul style="list-style-type: none"> ● Application information and status are updated. ● System reflects latest processing stage
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> ● System will shows empty table when there is no applications
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● System must load application details within 3 seconds ● Interface must be easy to navigate

This use case allows the Admin to track and update progress of each scholarship application. The system should let the Admin to review application details and move the application to the next processing stage.

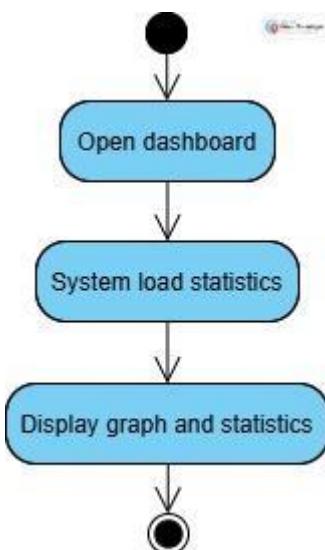


3.4.7. Accesses Dashboard

Use Case Name		Access Dashboard
Actors		Admin
Preconditions		<ul style="list-style-type: none"> • Admin must already logged in
Normal Flow	Description	<ol style="list-style-type: none"> 1. Admin opens dashboard 2. System will display graphs and statistics 3. Admin views all the applications

	<i>Postconditions</i>	Dashboard updates completed
<i>Alternative flows and exceptions</i>		-
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● The system must have real time data from the database server

The system should present a dashboard summarizing application volume, reviewer activity, scholarship usage, and overall progress. The dashboard should display important metrics clearly through charts or graphs.

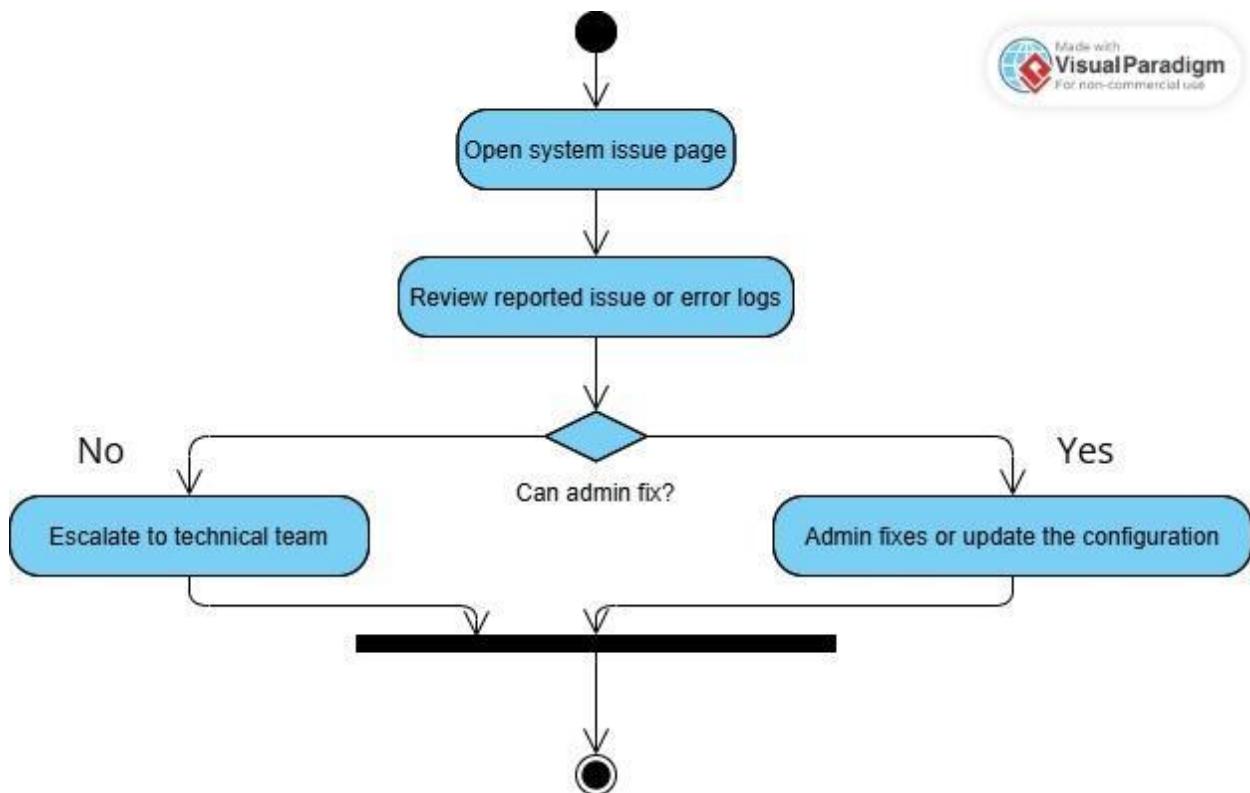


3.4.8. Handle System Issues

Use Case Name	Handle System Issues	
<i>Actors</i>	Admin	
<i>Preconditions</i>	<ul style="list-style-type: none"> ● Admin must already logged in ● There is error happen in the system 	
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. Admin opens “System Issues” 2. System displays errors or logs 3. Admin investigates the issues 4. Admin resolves or reports it to the technical team

	<i>Postconditions</i>	<ul style="list-style-type: none"> • System returns to normal state
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> • Error cannot be fixed
<i>Non functional requirements</i>		<ul style="list-style-type: none"> • System saves the issues and updates in database • System displays list of reported system issues

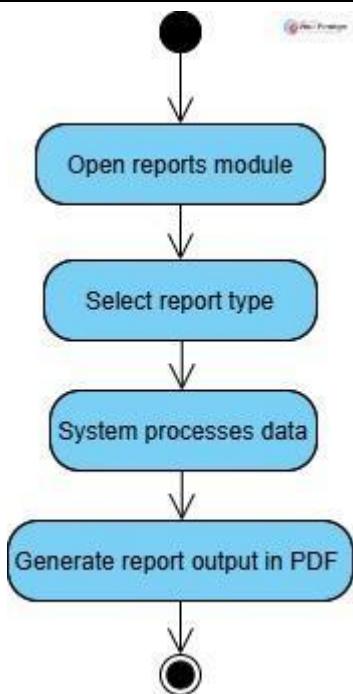
The system should allow the admin to view system logs, detect errors, and access troubleshooting tools. It should support issue resolution or escalation to technical support when needed.



3.4.10 Generates Reports

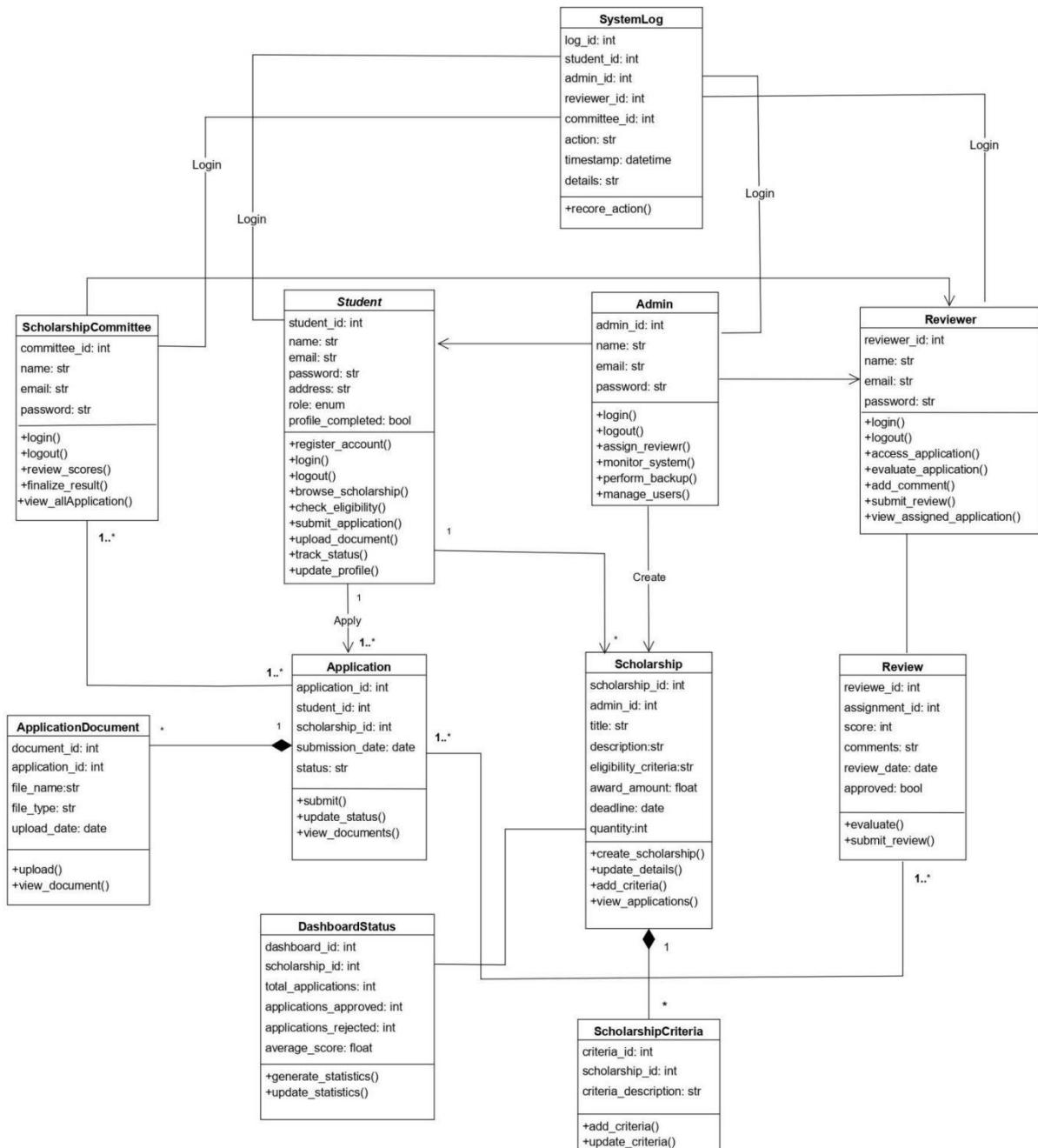
Use Case Name		Generates Reports
<i>Actors</i>		Admin
<i>Preconditions</i>		<ul style="list-style-type: none"> ● Applications and the students scores exist
<i>Normal Flow</i>	<i>Description</i>	<ol style="list-style-type: none"> 1. Admin selects “Generate Reports” 2. System will compiles application and performance data 3. System reports to PDF or Excel
	<i>Postconditions</i>	<ul style="list-style-type: none"> ● Reports will be generate in PDF or Excel
<i>Alternative flows and exceptions</i>		<ul style="list-style-type: none"> ● Report is empty because there is problem with data retrieve
<i>Non functional requirements</i>		<ul style="list-style-type: none"> ● System retrieve and compile data from database automatically

The system should allow the admin to generate structured reports containing application data, reviewer scores, and scholarship statistics. It must support exporting reports into PDF or spreadsheet formats.



4 System Models

4.1 Class Diagrams



4.2 Classes / Entities

Class / Entity	Description
Student	Student class represents applicants who register on the platform, manage their personal profile, submit scholarship applications, upload documents, and track their application status.
Admin	Admin class manages overall system operations, including creating scholarship listing, assigning reviewers, managing user and monitoring activities.
Reviewer	Reviewer class represents users responsible for evaluating applications. Reviewers receive assigned applications, review submitted documents, provide scores and leave comments or recommendations.
ScholarshipCommittee	ScholarshipCommittee class handles viewing all applications, assigning or reassigning reviewer, analyzing review results and selecting final scholarship recipients.
Scholarship	Scholarship class defines each scholarship opportunity including title, description, eligibility criteria, deadline and admin responsible for managing it.
Application	Application class represents a student's scholarship submission. It stores the submitted form, status updates, linked documents, reviews and committee decisions.
Application Document	The Application Document class stores files uploaded by students as part of their application, such as certificates, transcripts or personal statements.
Review	Review class contains reviewer evaluation of an assigned application including the score, comments, approval result and review date.
ScholarshipCriteria	ScholarshipCriteria class represents individual criteria associated with a scholarship. It stores criteria descriptions and supports operations for adding and updating scholarship eligibility requirements.
DashboardStatus	DashboardStats class displays aggregated scholarship data, such as total applications, approval counts, rejections, and average review scores.
SystemLog	SystemLog class tracks user activities within the system for auditing and monitoring, recording actions performed by students, reviewers, Scholarship Committee , and admins.

5 Non-Functional Requirements

6 References

GeeksforGeeks. (2025, August 29). UML class diagrams. GeeksforGeeks. Retrieved from <https://www.geeksforgeeks.org/unified-modeling-language-uml-class-diagrams/>

GeeksforGeeks. (2025, January 3). Unified Modeling Language (UML) activity diagrams. Retrieved from <https://www.geeksforgeeks.org/system-design/unified-modeling-language-uml-activity-diagrams/>

Tiger Scholarship Manager (2023) - University of Memphis. (n.d.). Tiger scholarship manager. Retrieved from <https://www.memphis.edu>

Lucid Software Inc. (2025). What is a UML use case diagram? Retrieved from <https://www.lucidchart.com/pages/uml-use-case-diagram>