

Software Design Specification

for

MMU Xplore

Version <2.0>

Group Number : 6

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Revisions

Version	Primary Author(s)	Description of Version	Date Completed
SRS in Part 1(as Ver 1.0) SDS in Part 2(as Ver 2.0.X) *System Documentation in Part 3 (as Ver 3.0) Draft Type and Number	RAZIQ DIN BIN MOHD TASRIRI SYED HAQEEM BIN SYED ISA CHAN CHUAN MENG YUVENDAR A/L MARAN	Reduced the admin workload while streamlining system workflows to improve efficiency and usability for all users.	25/01/2026

1 System Overview

1.1 Descriptions

MMU Xplore is a web-based application designed to facilitate an efficient publication tracking process between each faculty in Multimedia University. It involves actors such as Student, Researcher, Program Coordinator and Admin. The major function of the system includes uploading published papers, perform analytics on the published papers, verifying the published papers, exporting reports for published papers analysis for each month and verifying published papers submitted by researchers.

To access this website, each user must be registered under the system. They must provide their MMU ID and password to create an account, which will be used to access and perform any operations and features in this website.

1.2 Actors

Actor	Use Cases
Student	Sign up / Login
	Find / Browse Research Papers
	Download Research Papers
	Bookmark or Like interested Research Papers
	View bookmarked / liked / comments on Research Papers
	Share Interested Research Papers
	Comment on Research Papers (With Supervisor Supervision)
	Contribute to Sharing Research Papers (With Lecturer Collaboration) / Be a Co-Author
	Submit Final Year Project (FYP)
Admin	Login
	Post / Update Announcements
	Review Comment Section / Forum Sections
	Ban users if violating the Code of Conduct / T & C

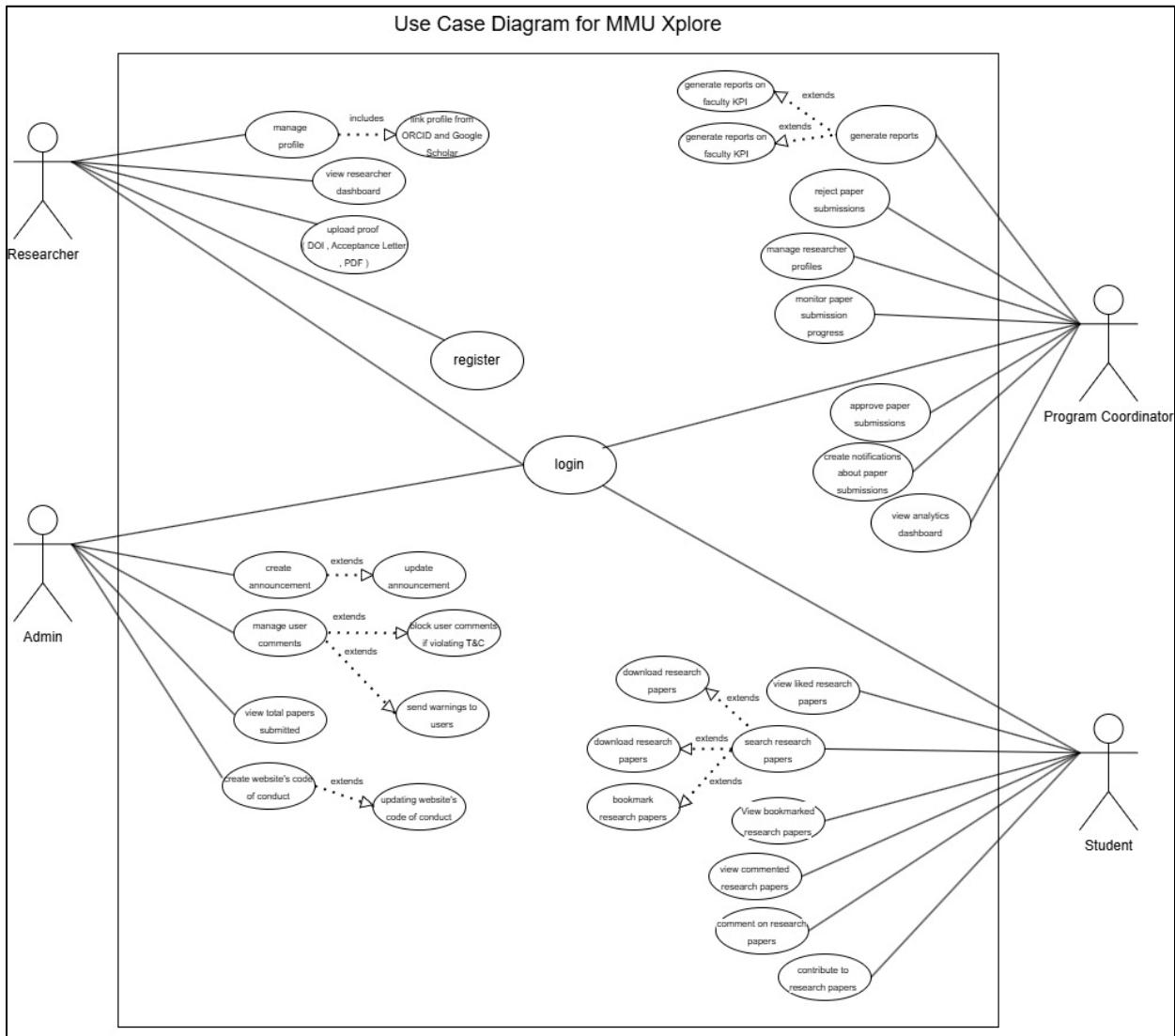
	Manage Terms and Conditions of Website
Lecturer/Researcher	Register And Login into the System
	Manage their user profiles (profile picture, biography, research profiles)
	Upload Paper for Submission
	Dashboard to track the status of their paper submission, notifications, publications
	Edit paper submission details from dashboard
	Link their research profiles from ORCID and Google Scholar
Programme Coordinator	Login
	View researcher profiles
	Monitor, approve or reject submissions
	Notify authors on submission status
	Generate reports on Faculty/Department KPI individual summaries
	Access Analytics Dashboard

1.3 Assumptions and Dependencies

1. Each Actors (Student, Admin, Researcher, Program Coordinator) are assigned a unique ID to register / login to the website
2. All Actors using the website has a stable internet connection to view, create, update and delete papers, comments and viewing announcements.
3. Students need to provide approval letters by the lecturer to become a researcher and submit papers on the website.
4. Researchers need to request the admin to make certain students as the contributor of the research paper.

1.4 Use Case Diagram

This Use Case Diagram is made to explain each Actor's use cases on the website.



1.4.1 Use Case Diagram for MMU Xplore

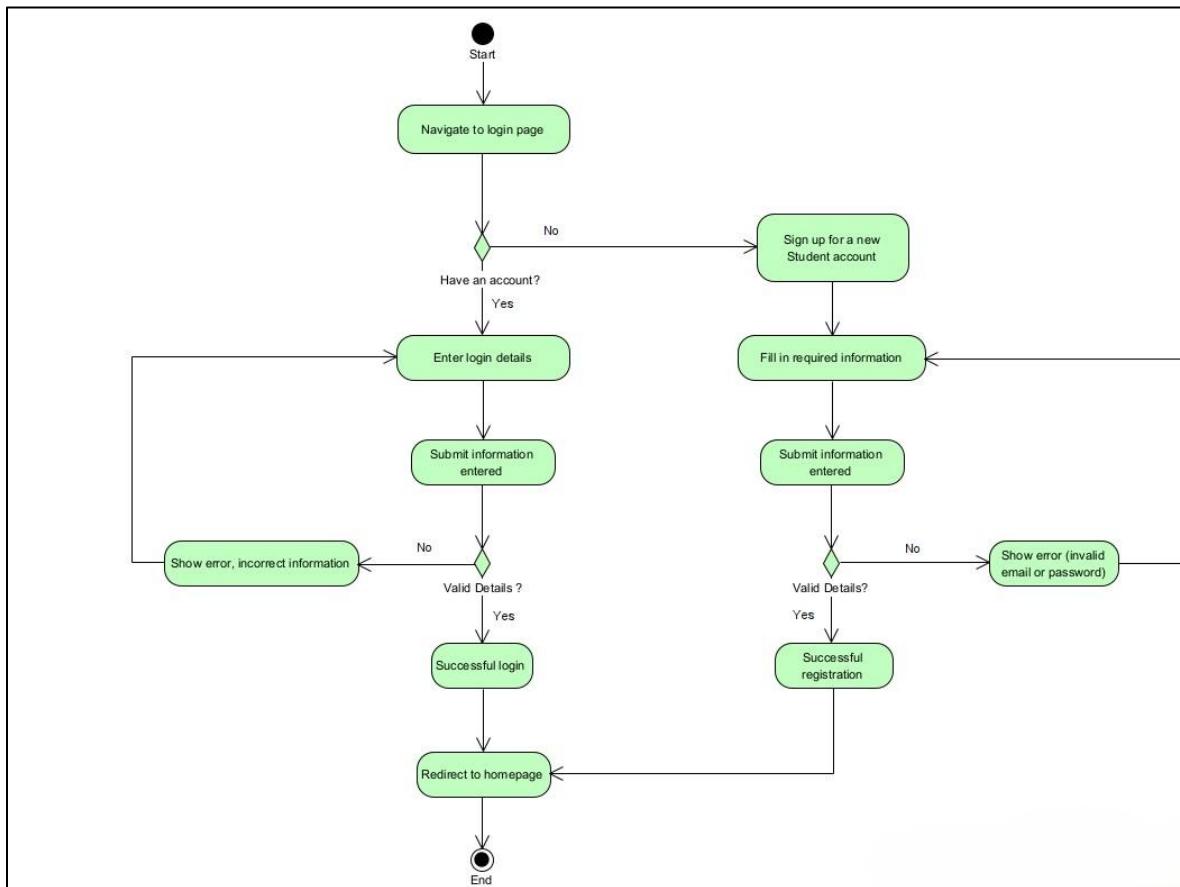
2 Activity Design

2.1 Activity Diagram

2.1.1 Student

2.1.1.1 Sign Up or Login as Student

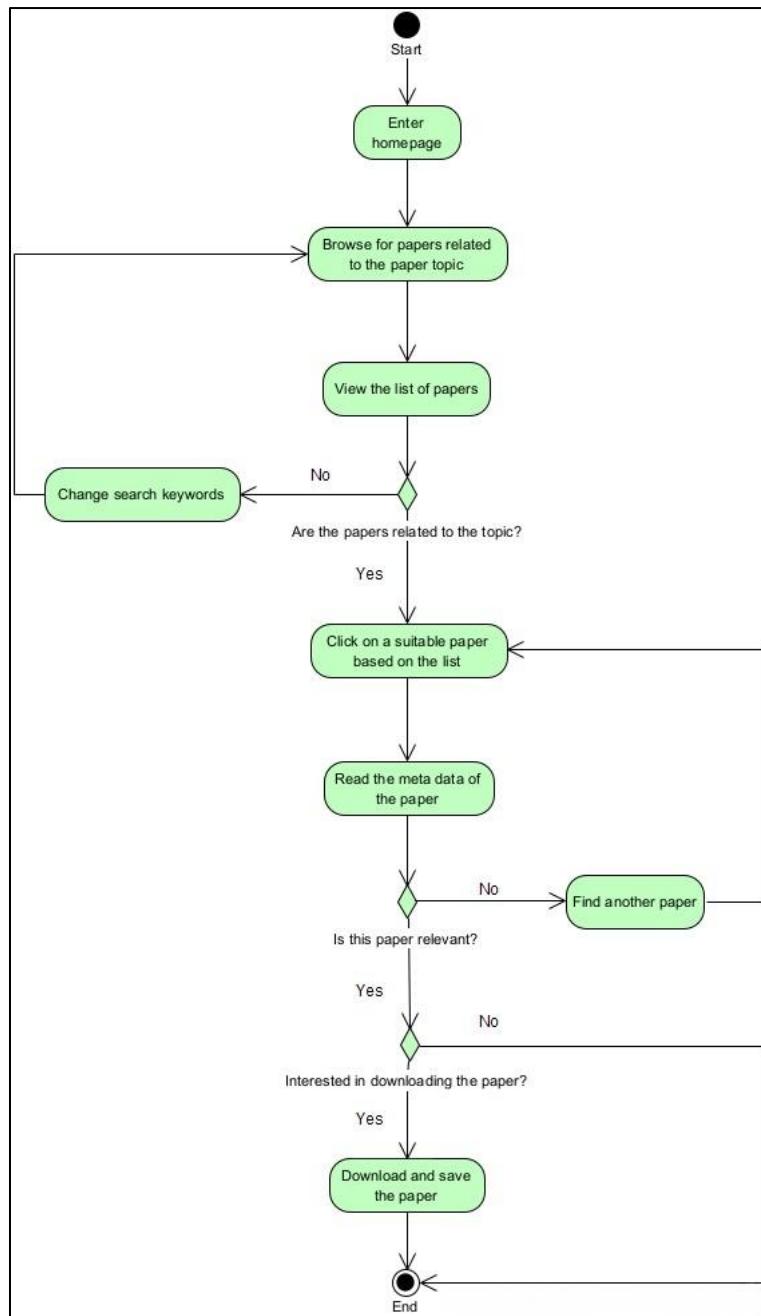
The Student Login and Registration activity diagram shows that students can either login with an existing account or create a new one. The system checks the information or details entered by students (for both Login and Registration). If any details are incorrect, an error message will be shown. Once, information is valid, the system will redirect students to the homepage.



2.1.1.1 Sign Up or Login as Student Activity Diagram

2.1.1.2 Find / Browse and Download Research Papers

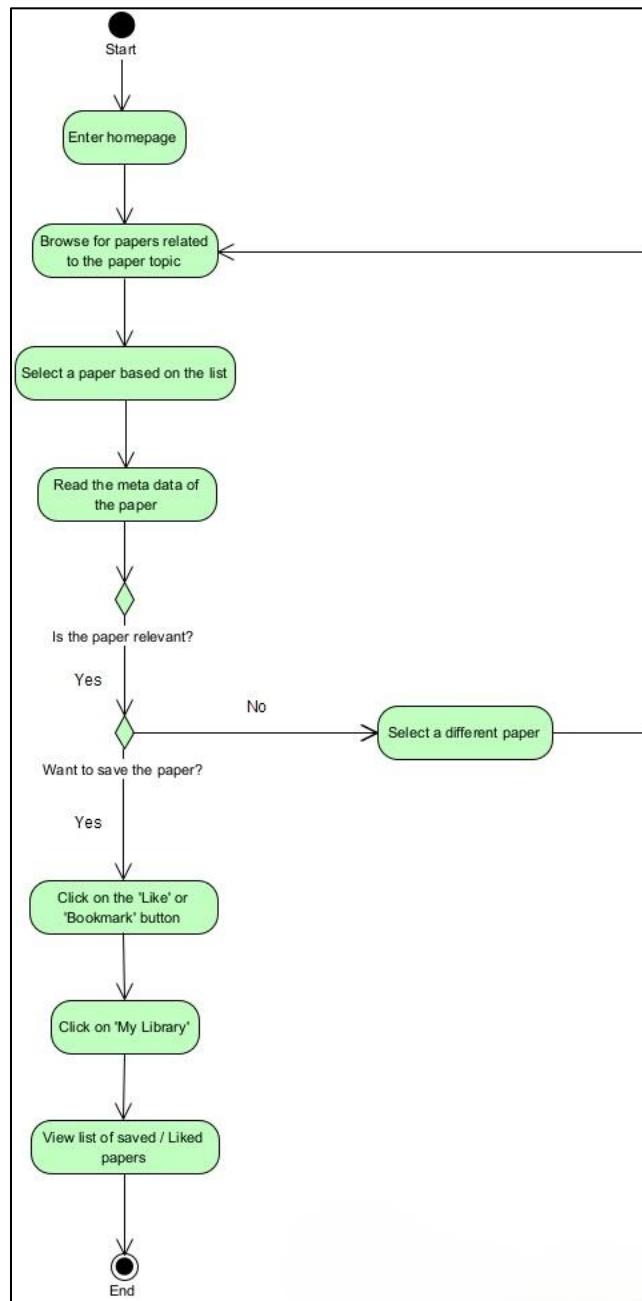
The Find / Browse and Download Research Papers activity diagram shows how students can browse for papers related to a specific topic. The system displays a list of papers. If the results are not related to the topic, students can change their keywords to refine the search. Once they've found a proper list, they can click on a paper they're interested in and read the metadata. If the specific paper is not relevant, students can find a different paper. Students can also download and save the paper afterwards.



2.1.1.2.1 Find / Browse and Download Research Papers Activity Diagram

2.1.1.3 Bookmark or Like and View Interested Research Papers

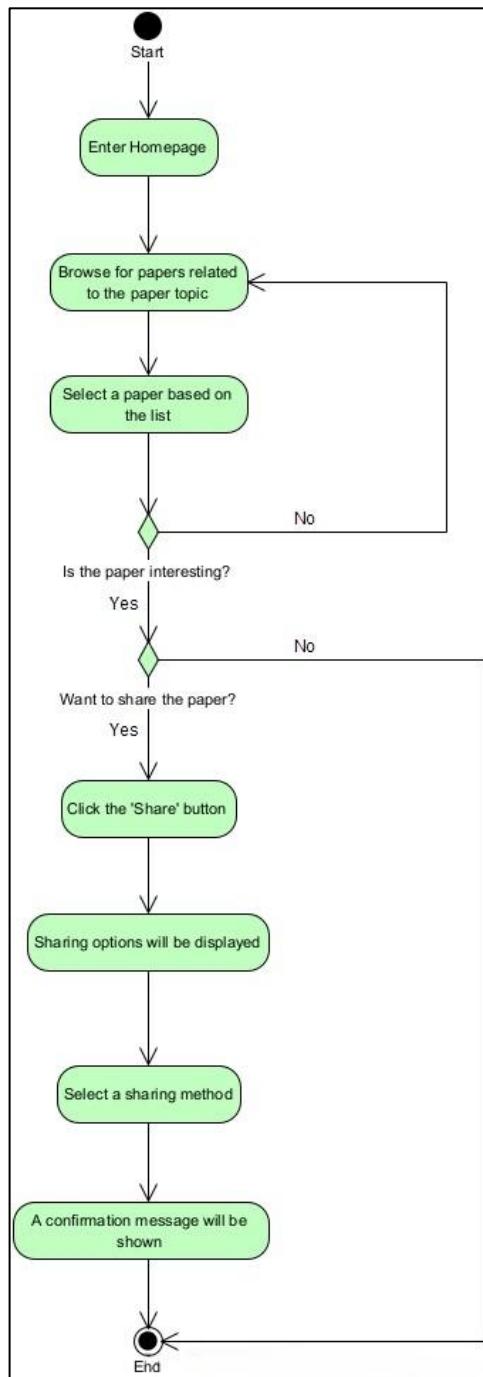
The Bookmark or Like and View Interested Research Papers activity diagram shows how students can ‘Like’ or ‘Bookmark’ a paper they are interested in. Once they’ve saved the paper, they can navigate to the ‘My Library’ section to view the list of papers they have bookmarked or liked. Conversely, if they are not interested in that specific paper, they can select another paper from the list.



2.1.1.3.1 Bookmark or Like and View Interested Research Papers Activity Diagram

2.1.1.4 Share Interested Research Papers

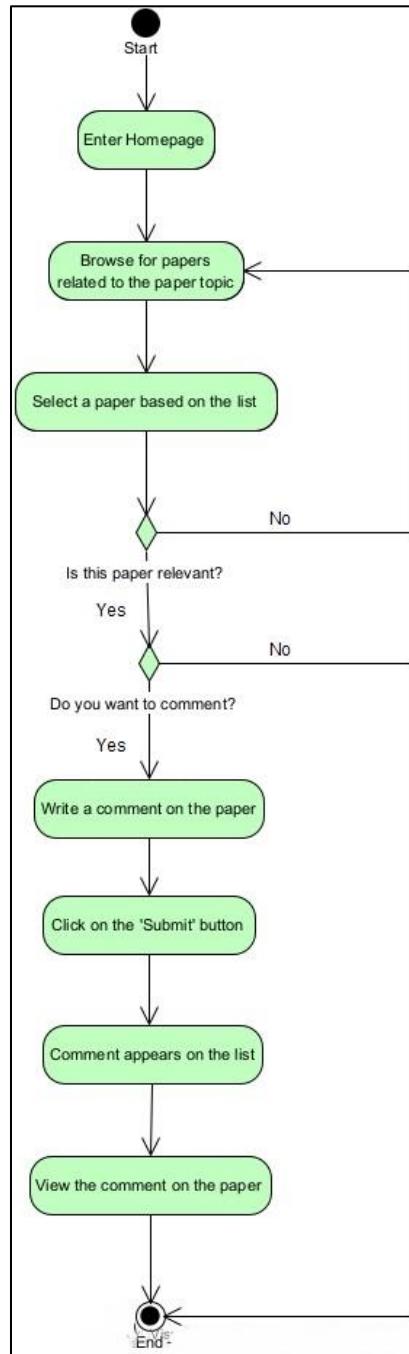
The Share Research Papers activity diagram shows how students can share a paper they find interesting. If they decide to share, they can simply click on the ‘Share’ button. After that, sharing options will be displayed, allowing students to select a specific sharing method. Finally, a confirmation message will be shown to verify the successful action.



2.1.1.4.1 Share Interested Research Papers Activity Diagram

2.1.1.5 Comment and View Comments on Research Papers

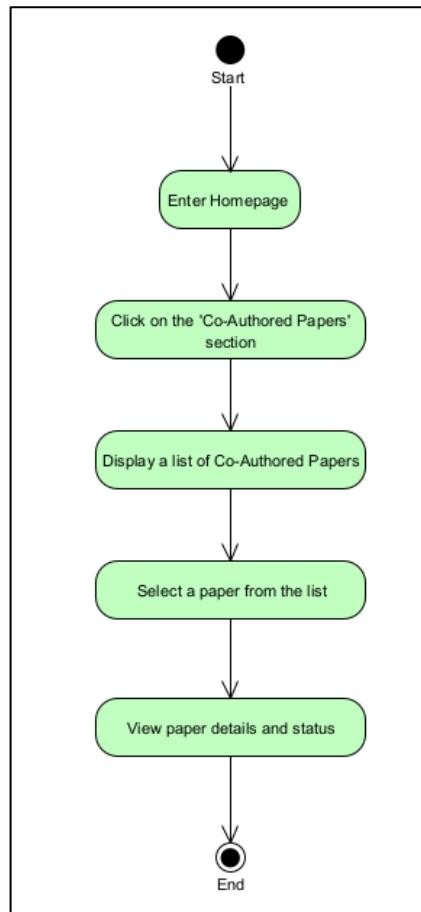
The Comment and View Comments activity diagram shows how students can leave a comment on papers they are interested in. If they choose to comment, they can write their feedback and click the submit button. They then, can view the comment on the paper's page. If the paper is not interesting, they can choose to skip it.



2.1.1.5.1 Comment and View Comments on Research Papers Activity Diagram

2.1.1.6 Contribute to Sharing Research Papers / Be a Co-Author

The Contribute to Sharing Research Papers / Be a Co-Author activity diagram shows how students can collaborate with lecturers to publish papers or in another words, be a co-author. Students can select the 'Co-Authored Papers' section to view the submissions where they have been tagged as co-author by a lecturer. By selecting a specific paper, the student can view its full details and current publication status, such as 'Pending Subject Coordinator Approval', 'Changes Required', or 'Published'.

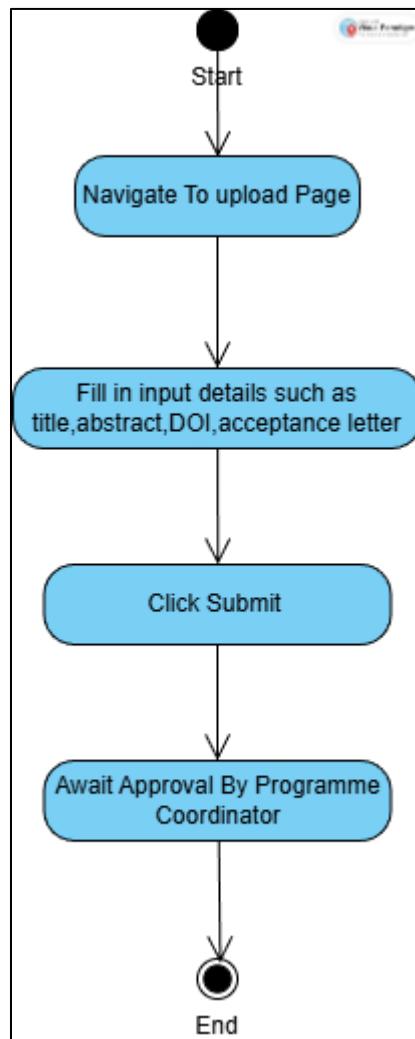


2.1.1.6.1 Contribute to Sharing Research Papers / Be a Co-Author Activity Diagram

2.1.2 Researcher

2.1.2.1 Upload Page

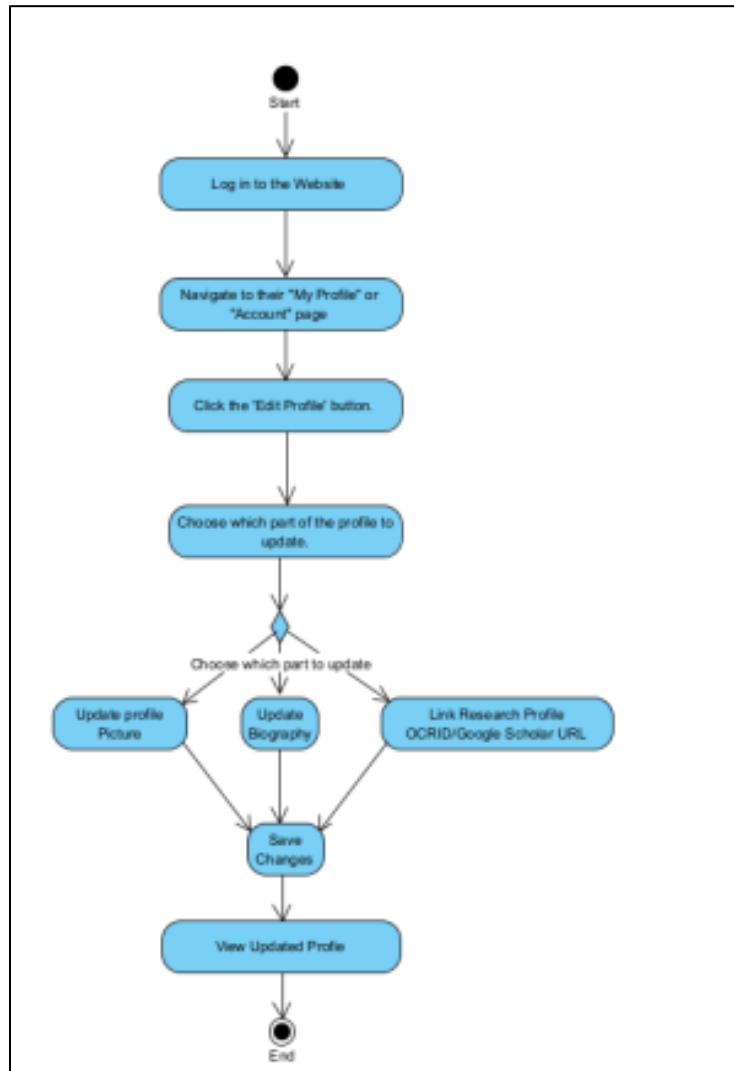
Researchers navigate to the upload page to submit their work by filling in details like the title, abstract, and DOI, and uploading their acceptance letter. Then, they confirm the submission and await approval from the Programme Coordinator to allow the paper to be published into the system.



2.1.2.1.1 Upload Page Activity Diagram

2.1.2.2 Update Researcher Profile

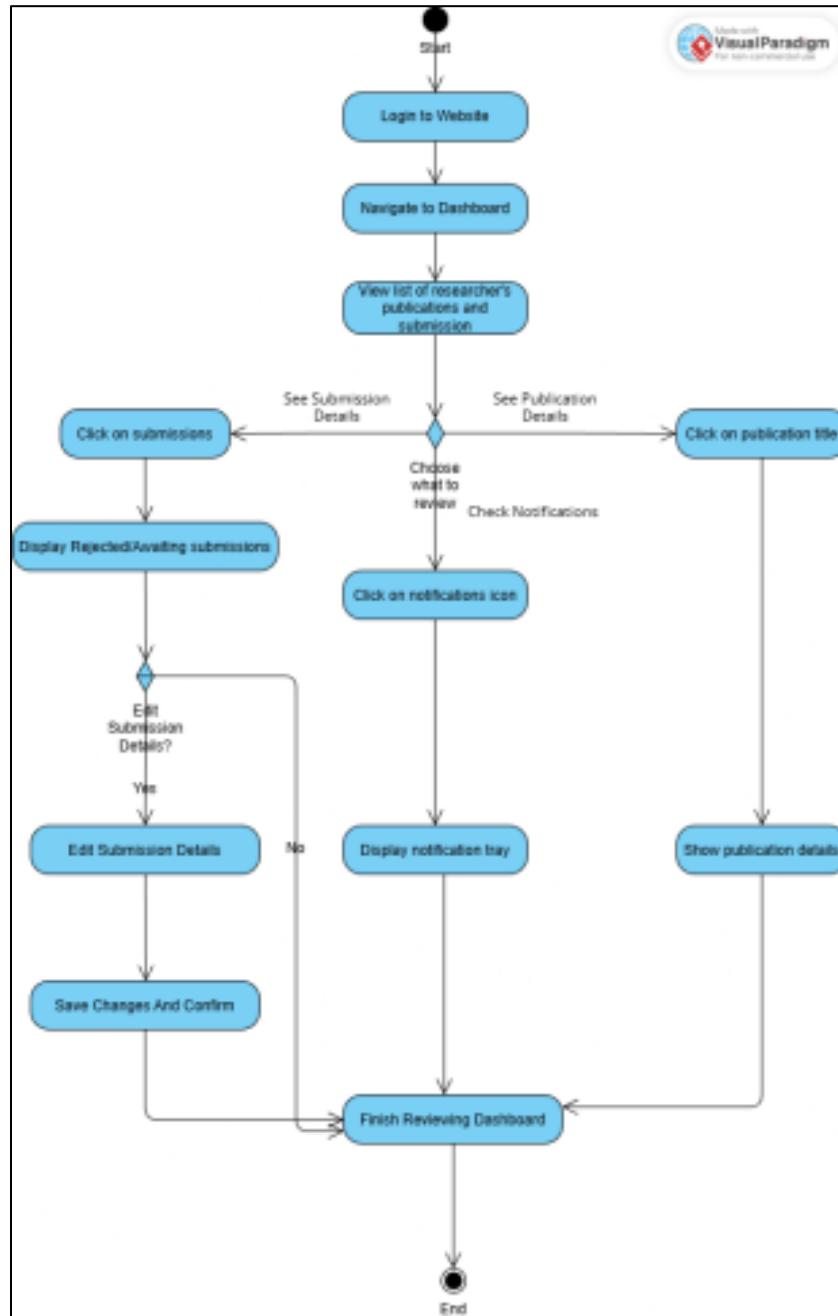
Researchers log in to the website and navigate to their profile page to make updates. They click the "Edit Profile" button and choose which specific section to modify, such as uploading a new profile picture, updating their biography, or linking an external research profile. Upon saving the changes, they can view the updated profile.



2.1.2.2.1 Update Researcher Profile Activity Diagram

2.1.2.3 Dashboard

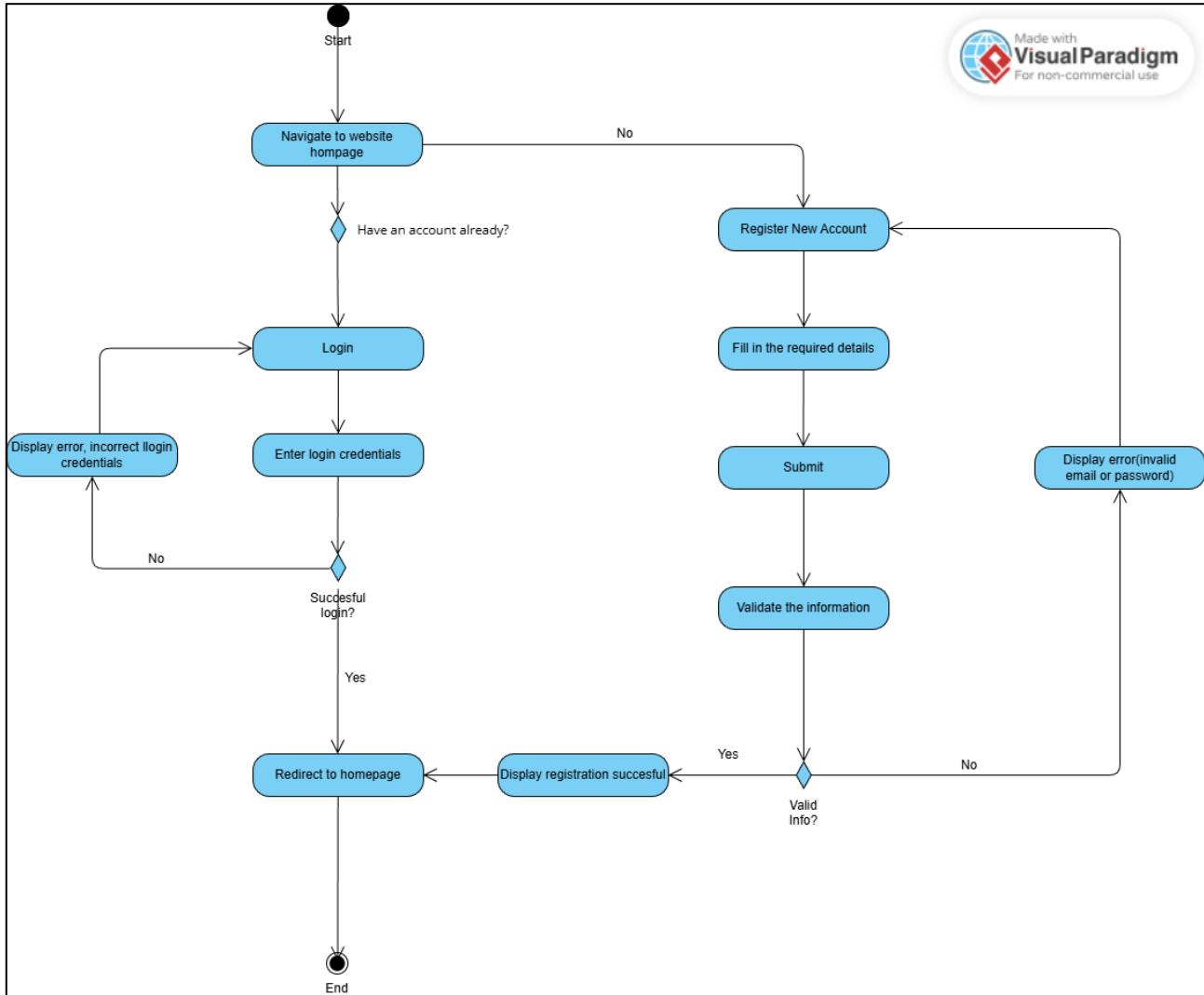
After logging in, researchers navigate to the dashboard to view a list of their publications and pending submissions. They can choose to manage their work by clicking on submissions to view or edit details, check for updates by clicking the notifications icon, or select specific publication titles to view full details.



2.1.2.3.1 Dashboard Activity Diagram

2.1.2.4 Register And Login

Researchers start at the homepage and determine their path based on whether they have an account. If they already have one, they enter their credentials, correcting them if authentication fails, until they successfully log in. If they don't have an account, they navigate to the registration page to fill in the required details, correcting any invalid information if necessary, and are redirected to the homepage upon successful registration.

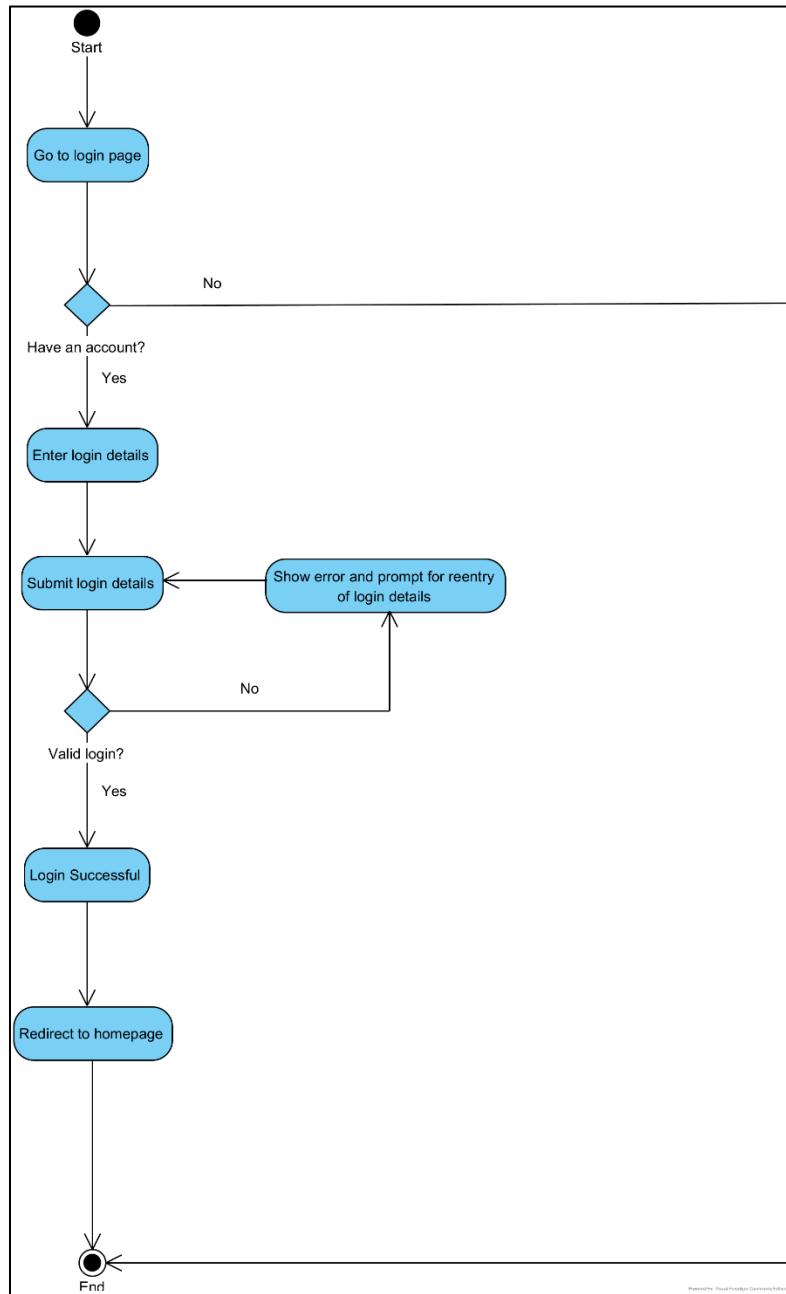


2.1.2.4.1 Register and Login Activity Diagram

2.1.3 Program Coordinator

2.1.3.1 Login

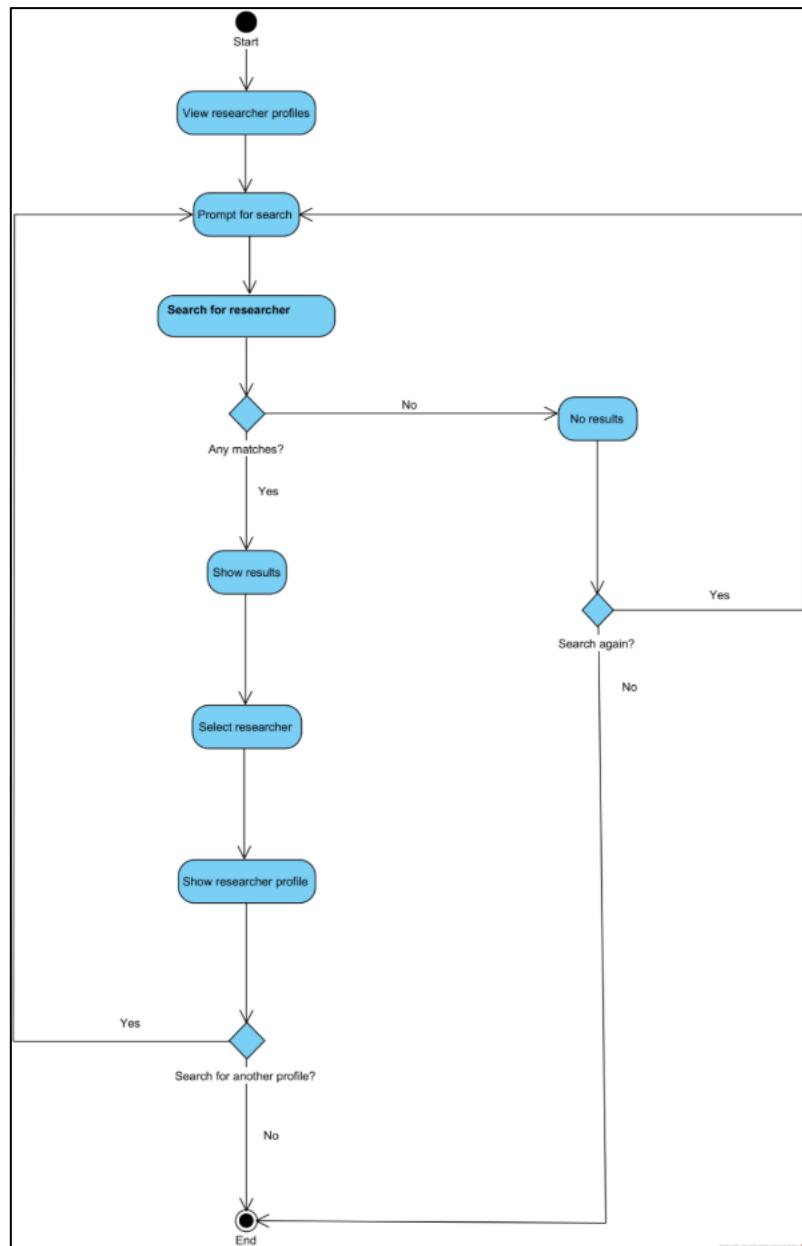
Programme Coordinator can login to the website using specific id and password, created by the administrator.



2.1.3.1.1 Login Activity Diagram

2.1.3.2 View researcher Profiles

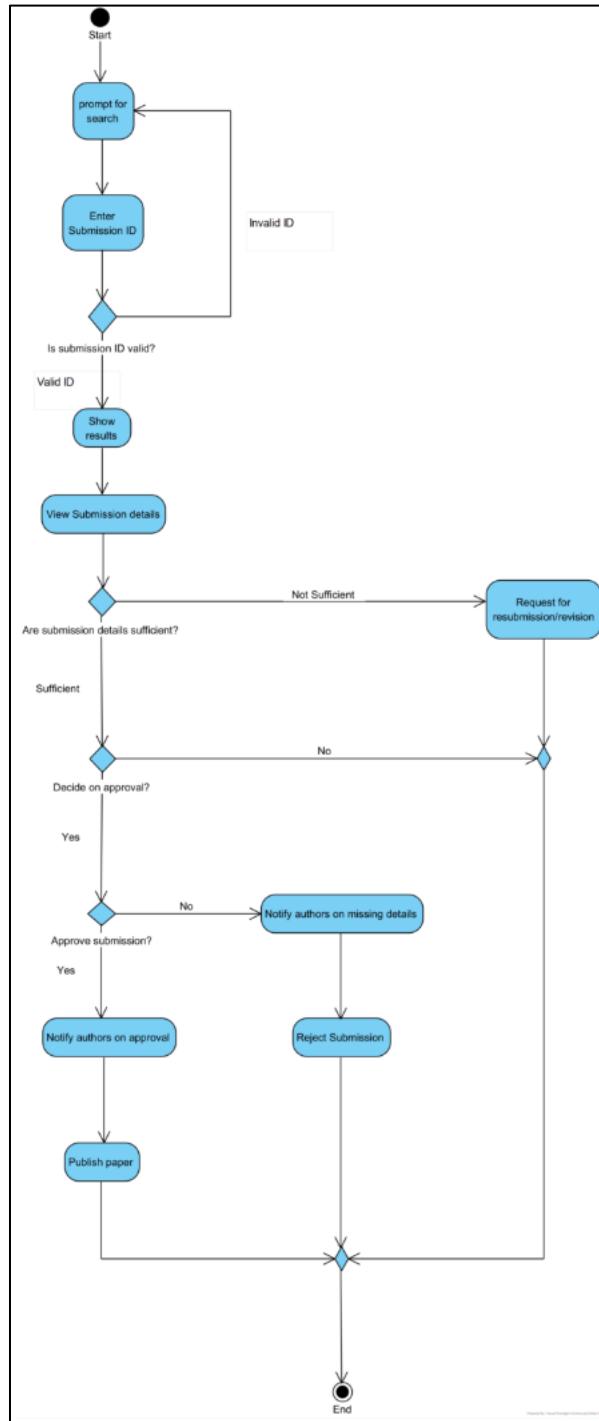
Programme coordinator can search for and view the profiles of existing researchers.



2.1.3.2.1 View Researcher Profiles Activity Diagram

2.1.3.3 Monitor, Approve or Reject Submissions

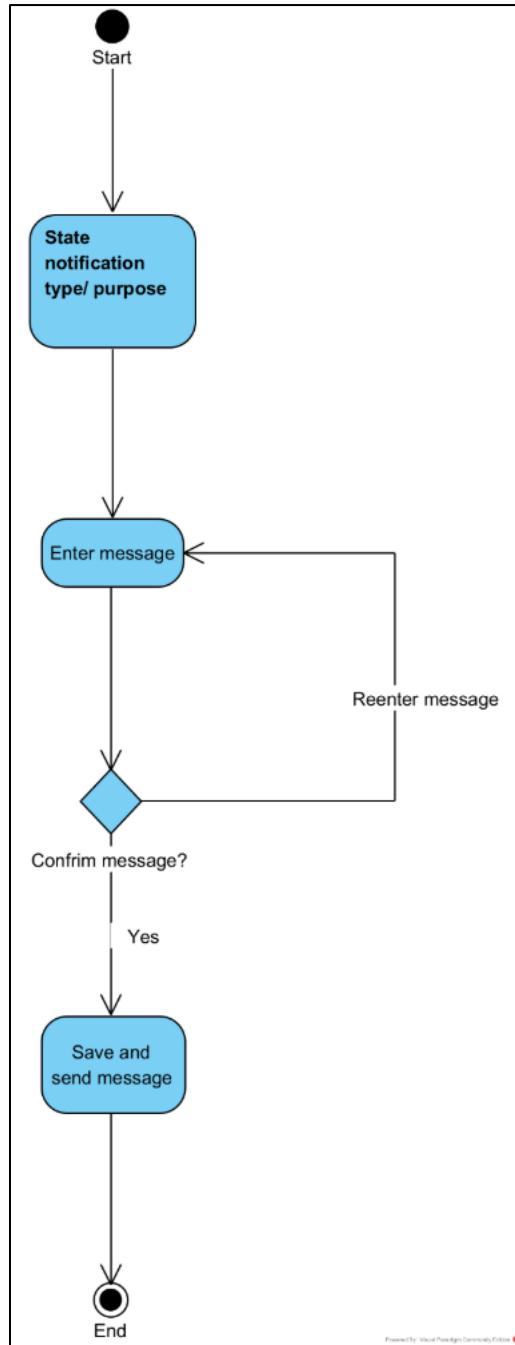
Programme coordinator can search for, and view submitted papers. Program coordinator then approves, reject, or asks for revision on the submission. Authors are notified on the status of their submission after review process ends.



2.1.3.3.1 Monitor, approve, or reject submissions Activity Diagram

2.1.3.4 Notifying Authors on Submission Status

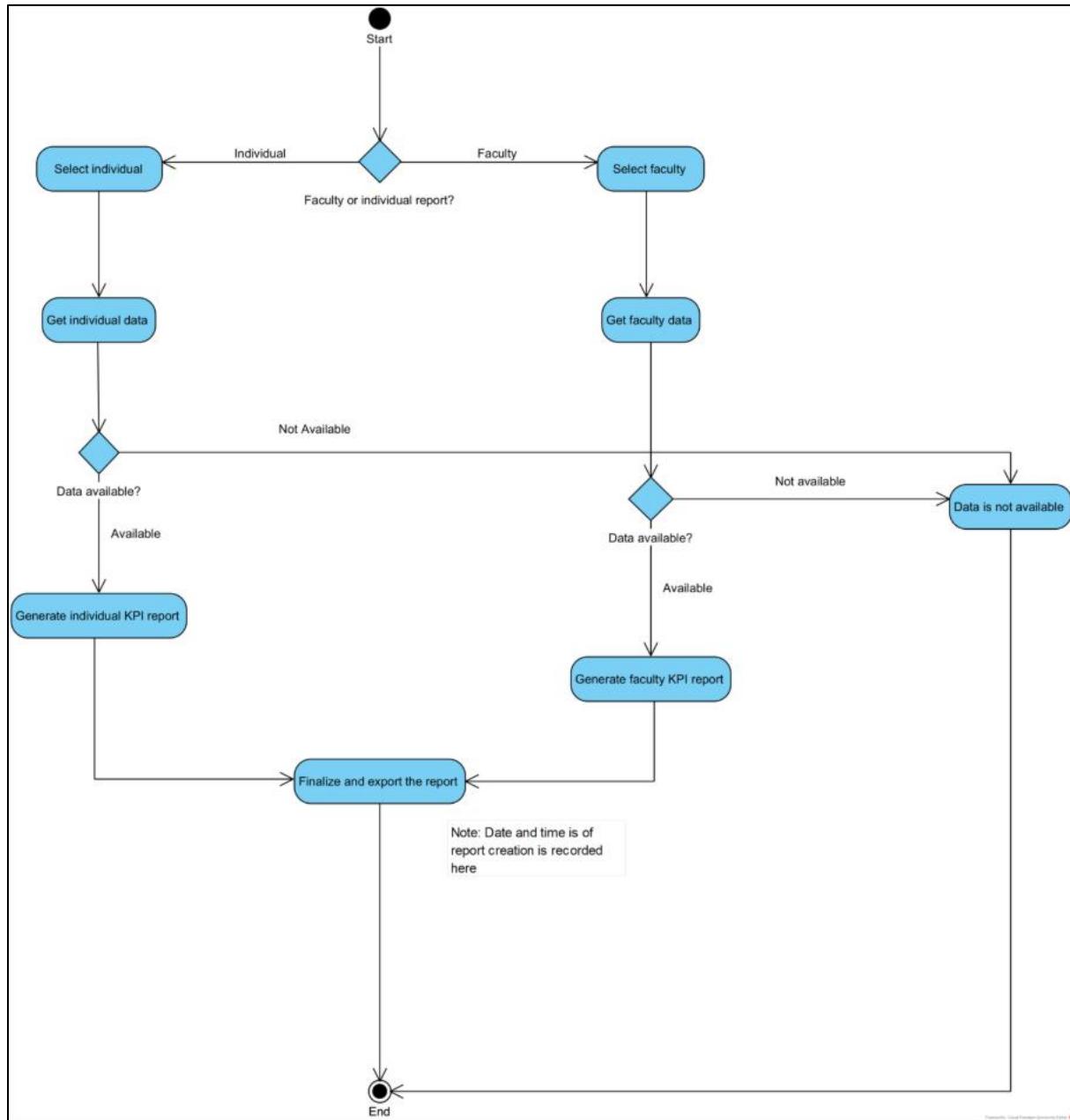
After submission result is decided, the program coordinator sends the submission status notification to the author.



2.1.3.4.1 Notifying Authors on Submission Status

2.1.3.5 Generating Reports

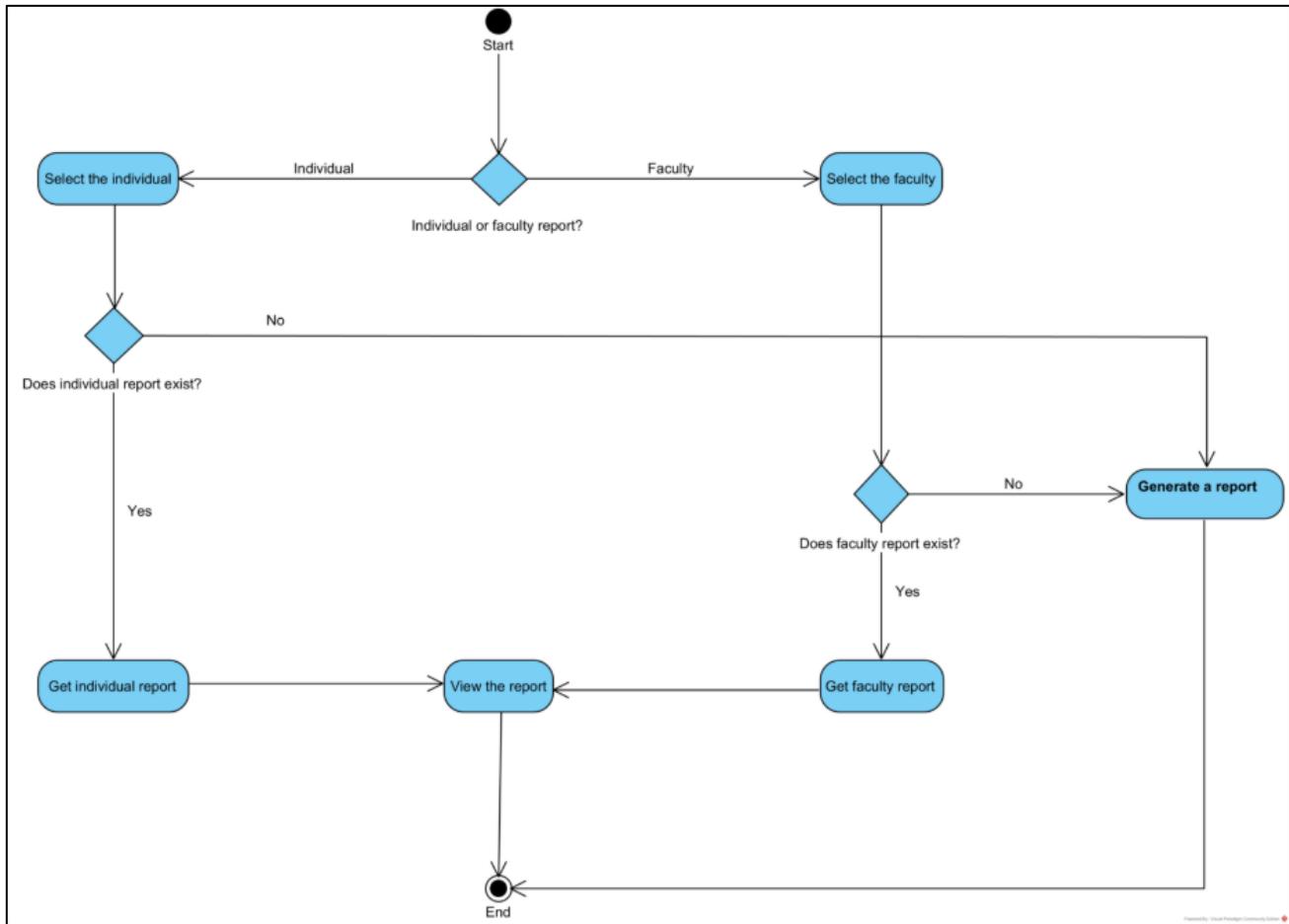
Reports on Faculty KPI and individual summaries are generated, can be reviewed by Programme Coordinators.



2.1.3.5.1 Generating Reports Activity Diagram

2.1.3.6 Access Analytics Dashboards

Programme Coordinator can view analytics on publication types, publication quantity, publication trend and researcher performance.

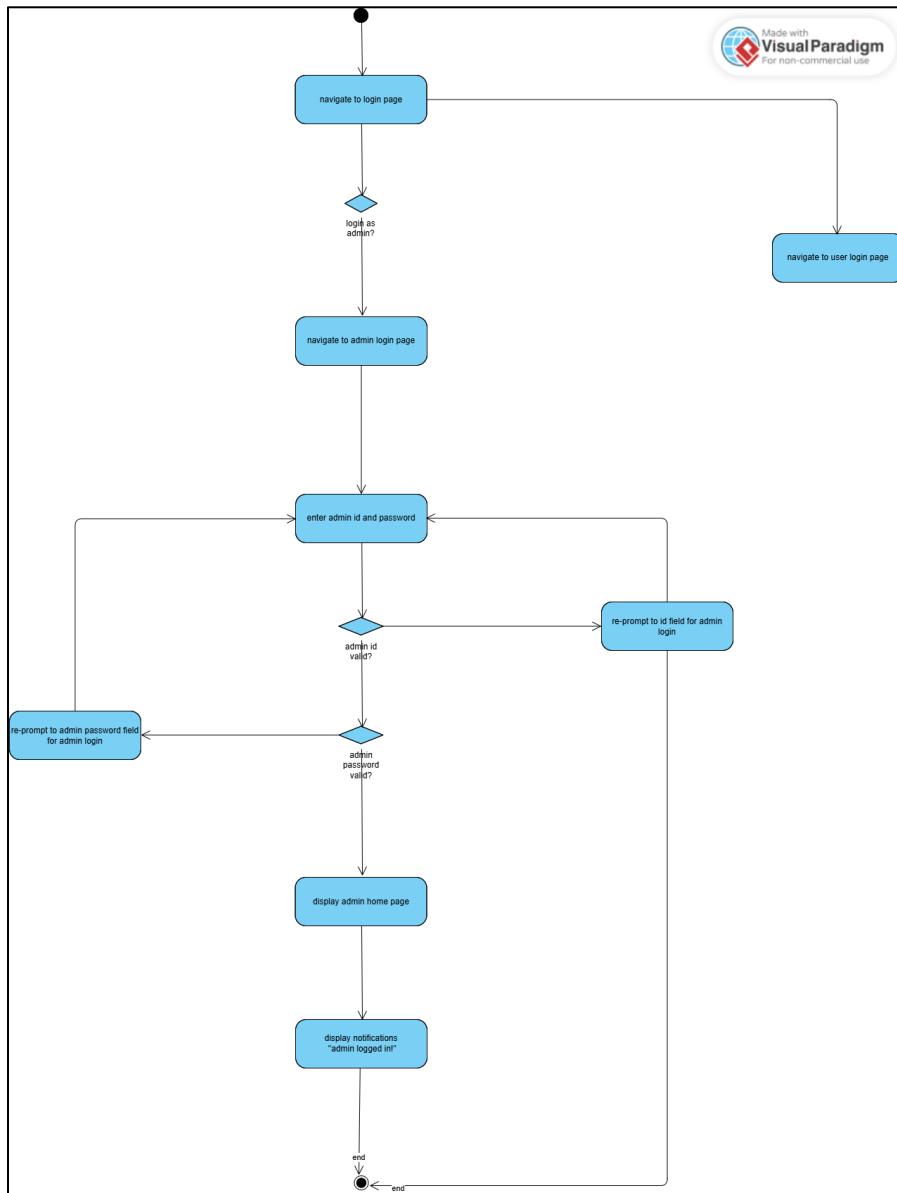


3.1.3.6.1 Access Analytics Dashboard Activity Diagram

2.1.4 Admin

2.1.4.1 Login as Admin

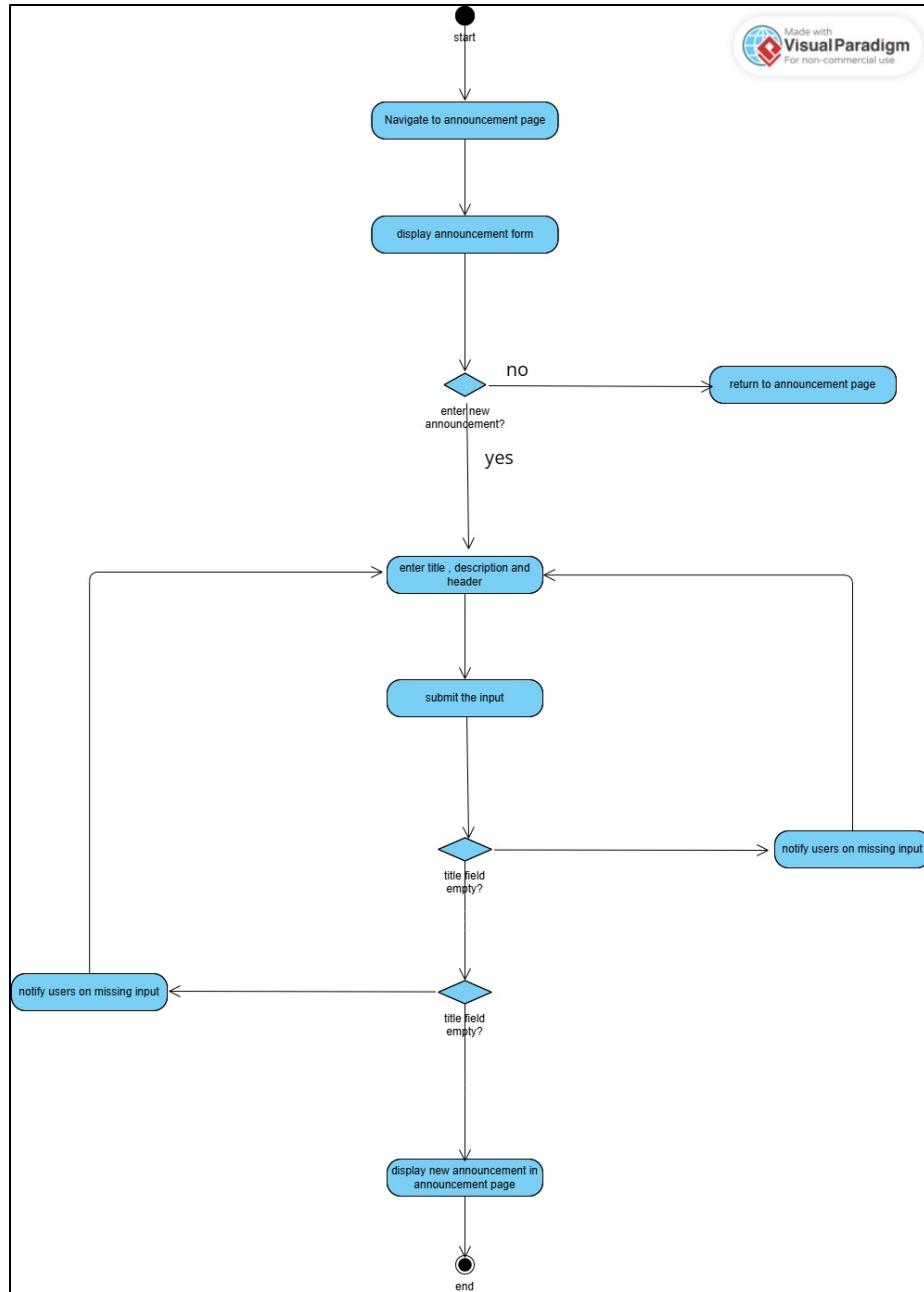
The system has a login as admin option where if the website admin wants to use the functionality of the website, they can login as an admin, they must provide special id and password to redirect to the admin homepage where they can use some features only admin can use such as managing comment sections and updating Term and Conditions to the website.



2.1.4.1.1 Login as Admin Activity Diagram

2.1.4.2 Post Announcements

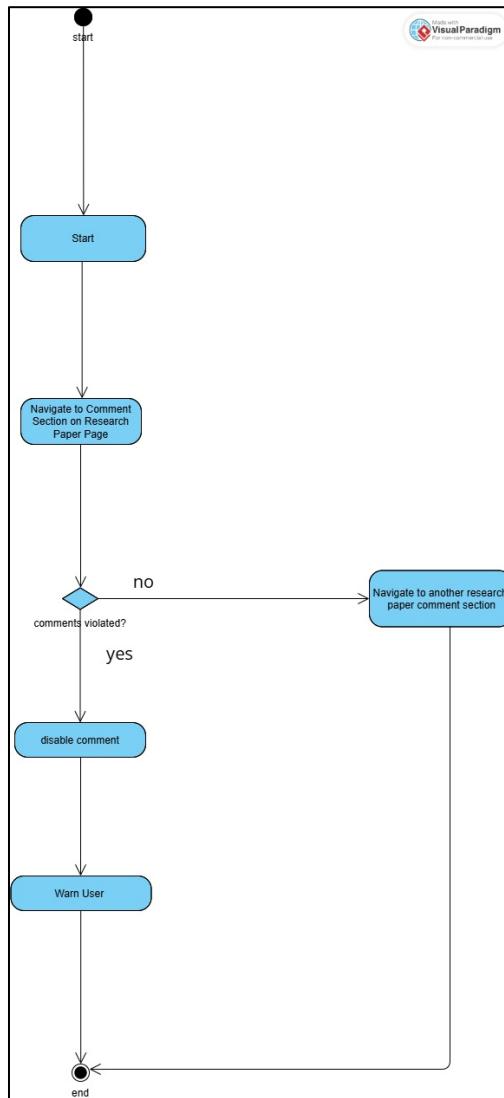
The system allows admin to create a new announcement for all users or actors to see in the website. This enables admin to share all new and latest news or programmes that are happening to the users in the website. It consists of announcement page management and creating a new announcement by submitting title , description and header image. Title and description is a requirement and header image is optional.



2.1.4.2.1 Post Announcements Activity Diagram

2.1.4.3 Review Comment Section / Forum Sections

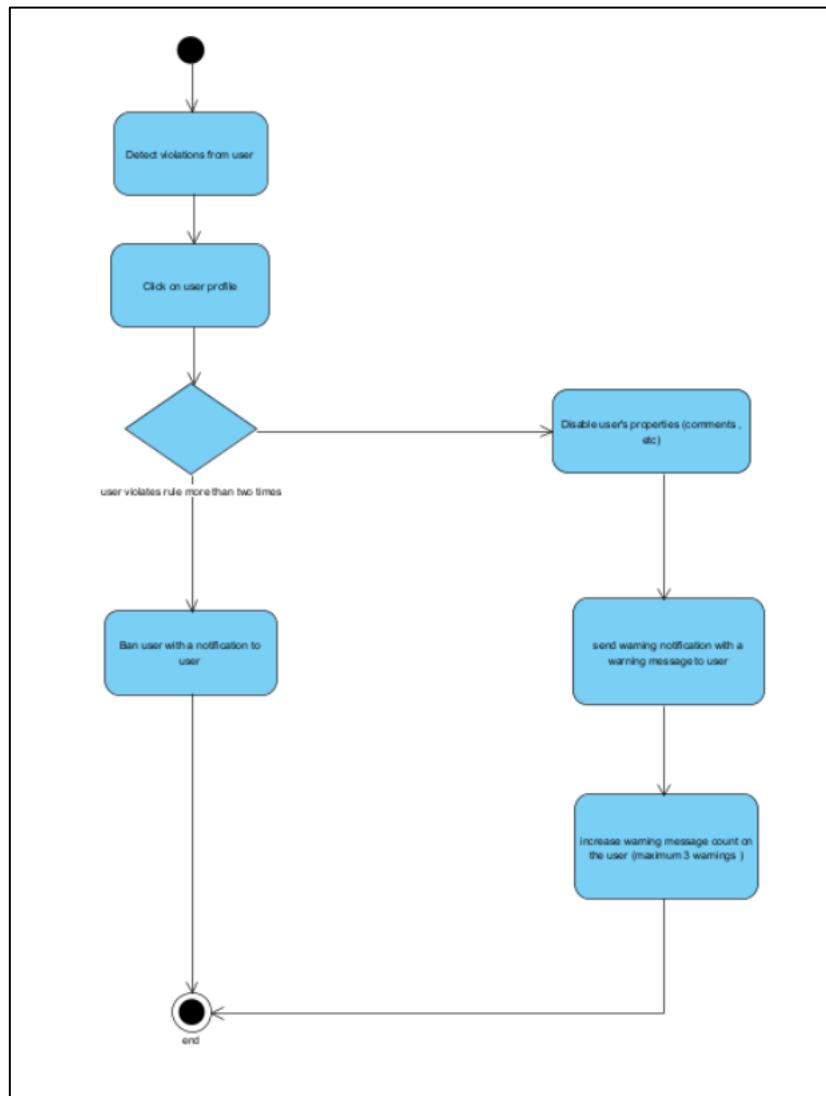
This feature allows admin to review any comment sections and disable if there is any information or content that violates the T&C in the website.



2.1.4.3.1 Review Comment Section / Forum Sections

2.1.4.4 Ban Users for Violating Code of Conduct of the Website

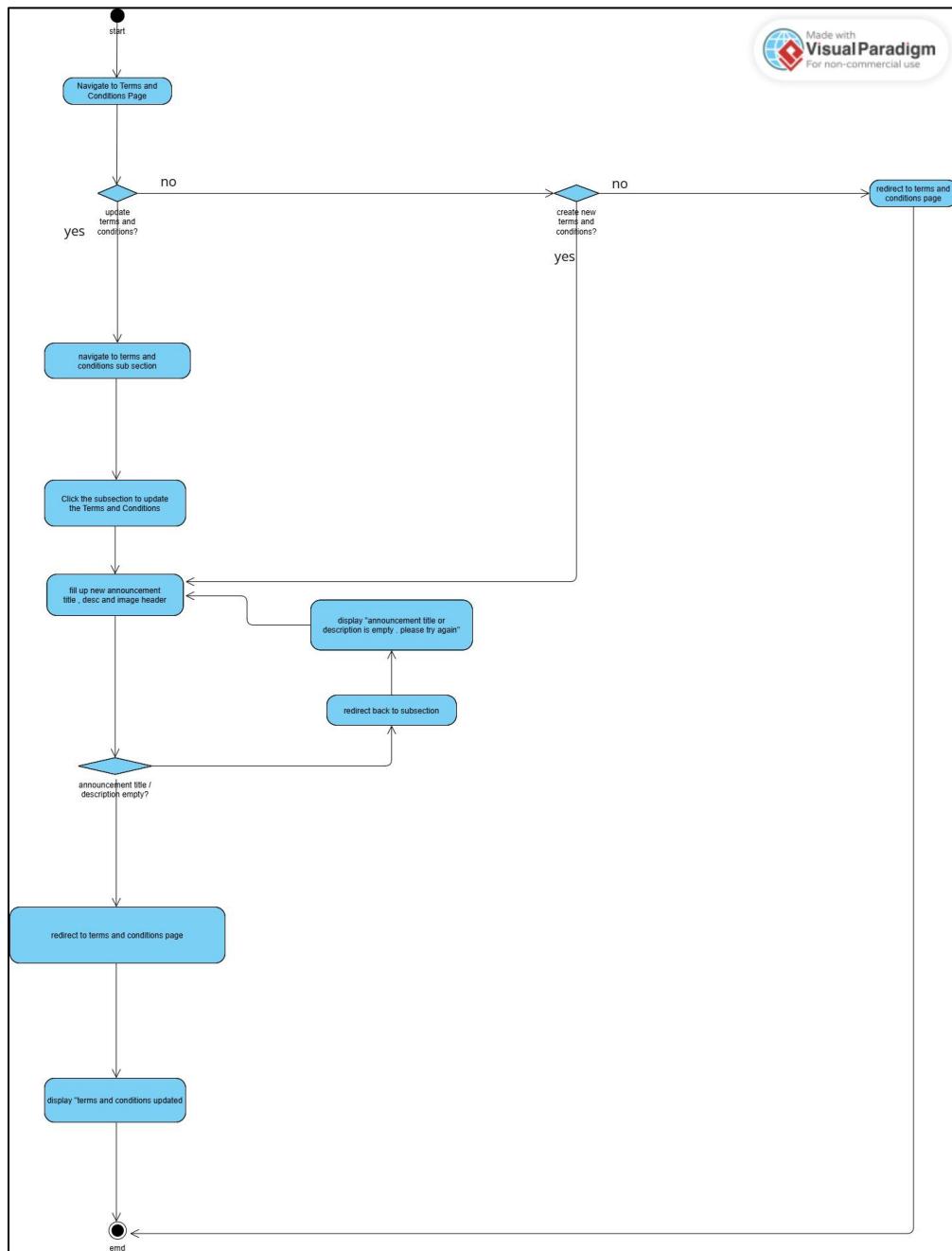
This system will allow admin to have some moderation privilege to maintain the integrity of the website users. Admin can send warnings and ban users if a certain number of warnings have been exceeded by a user. Admin are allowed to inspect user's comments or any properties that causes the report to be notified to the admin.



2.1.4.4.1 Ban Users for Violating Code of Conduct of the Website Activity Diagram

2.1.4.5 Creating / Updating Code of Conduct

This feature allows admin to create or update Code of Conduct or Terms and Condition of the website. This is to ensure that the website is updated across new threats or new violation cases from time to time. Once the Term and Conditions rules is updated or created , it will display a successful message saying the Terms and Conditions is updated.

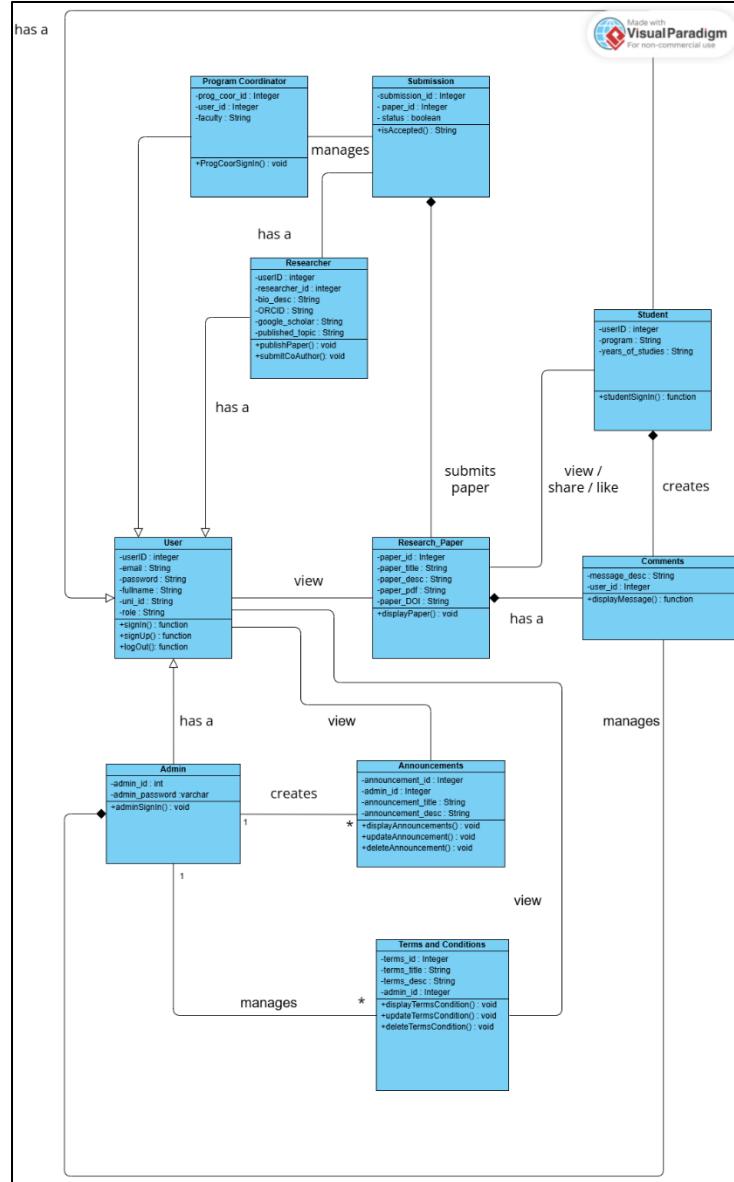


2.1.4.5.1 Creating / Updating Code of Conduct Activity Diagram

3 Data Design

3.1 Design Class Diagram

This class diagram describes the classes , attributes and operations that will be used for the web application. It consists of Users , Research Papers , Submission , Comments , Announcements , Terms and Conditions.



3.1.1 Design Class Diagram

3.2 Data Dictionary

Our data dictionary describes the structure of the database by listing each category, its attributes, data types, and key constraints.

<i>Category</i>	<i>Attribute Name</i>	<i>Description</i>	<i>Type</i>	<i>Required(Y/N)</i>	<i>PK/FK</i>	<i>FK Reference Table</i>
Admin	admin_id	Admin Identification key	int	Y	PK	-
	user_id	User identification key	int	Y	FK	User
	admin_password	Storing admin's password	varchar	Y	-	-
Co-Author	coauth_id	Co-author identification key	int	Y	PK	-
	user_id	User identification key	int	Y	FK	User
	paper_id	Paper identification key	int	Y	FK	Research Paper
Comments	comment_id	Actor's comments identification key	int	Y	PK	-
	paper_id	Researcher paper identification key	int	Y	FK	Research Paper
	user_id	User identification key	int	Y	FK	User
Notifications	admin_id	Admin identification key	int	Y	FK	Admin
	Message_desc	Message description under the research paper	varchar	Y	-	-
	notify_id	Notification identification key	int	Y	PK	-
Programme Coordinator	user_id	User identification key	int	Y	FK	User
	paper_id	Paper identification key	int	Y	FK	Paper Research
	notify_title	Notification header	text	Y	-	-
Researcher	notify_message	Notification message	text	Y	-	-
	prog_coor_id	Programme Coordinator Identification	int	Y	PK	-
Researcher	user_id	User identification key	int	Y	FK	User
	faculty_id	Faculty Identification	int	Y	-	-
	prog_name	Name of Programme Coordinator	varchar	Y	-	-
Researcher	faculty	Faculty name	varchar	Y	-	-
	researcher_id	Researcher identification key	int	Y	PK	-
	user_id	User identification key	int	Y	FK	User

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	OCRID	Open researcher and contributor identifier	varchar	Y	-	-
	bio_desc	Biography description on researcher profile	text	Y	-	-
	google_scholar	Google scholar profile url for researchers	varchar	Y	-	-
	published_topic	Saves list of published topics from the researcher	varchar	Y	-	-
Research Paper	paper_id	Paper Identification	int	Y	PK	-
	researcher_id	Researcher Identification	int	Y	FK	Researcher
	prog_coor_id	Programme Coordinator Identification	int	Y	FK	program_coordinator
	last_updated	Timestamp of time paper last updated	Date	Y	-	
	paper_category	Paper genre	varchar	Y	-	
	paper_DOI	Digital Object Identifier of paper	int	Y	-	
	paper_desc	Description of paper	varchar	Y	-	
	paper_pdf	Filepath of paper file	varchar	Y	-	
	paper_status	Publication status of paper	varchar	Y	-	
	paper_title	Title of paper	varchar	Y	-	
	published_date	Date paper is published	Date	Y	-	
	total_bookmarked	Number of times paper has been bookmarked	int	N	-	
	total_likes	Number of likes	int	N	-	
Student	student_id	student identification key	int	Y	PK	-
	user_id	User identification key	int	Y	FK	User
	Program_of_studies	Program studies of students	varchar	Y	-	-
	Year_of_studies	Year of studies of students	varchar	Y	-	-
User	User_id	Users identification key	int	Y	PK	-
	email	Email of users	varchar	Y	-	-
	password	Password for users to enter the website	varchar	Y	-	-
	full_name	Full name of each users	text	Y	-	-
	Uni_id	University id for all users	varchar	Y	-	-
	role	Roles for all users	varchar	Y	-	-

3.2.1 Data Dictionary Table

3.3 Data Structures

3.3.1 Admin

- admin_id : A unique identifier to be assigned to each admin.
- user_id : A unique identifier to be assigned to all users in the web application
- admin_password : An admin's password is stored in the database, it is unique.

Attribute	Data Type	Field Length
admin_id	int	-
user_id	int	-
admin_password	varchar	50

Example:

Admin_id	User_id	admin_password
001	001	1234@Bcsd

3.3.2 Co-author

- co_authid : A unique identifier to be assigned to each co-author
- user_id : A unique identifier to map the user being the co-author for a paper
- paper_id : A unique identifier to map the co-author to their respective papers

Attribute	Data Type	Field Length
co_authid	int	-
user_id	int	-
paper_id	int	-

Example :

co_authid	user_id	paper_id
001	025	123
002	045	254

3.3.3 Comments

- comment_id : Unique identifier of comments
- paper_id : Unique identifier for each research papers
- user_id : Unique identifier for each users in the website
- admin_id : Unique identifier for admin in the website
- message_desc : message description under each paper section

Attribute	Data Type	Field Length
comment_id	int	-
paper_id	int	-
user_id	int	-
admin_id	int	-
message_desc	text	-

Example:

comment_id	paper_id	user_id	admin_id	message_desc
1	2	45	1	This paper is very good!
2	453	32	1	I like to ask the researcher if i can get his number?

3.3.4 Programme Coordinator

- prog_coor_id : Unique identifier of programme coordinator
- user_id : Unique identifier for each users in the website
- faculty_id : Unique identifier of faculty
- prog_name : Name of programme coordinator
- faculty : Faculty of programme coordinator

Attribute	Data Type	Field Length
prog_coor_id	int	-
user_id	int	-
faculty_id	int	-
prog_name	varchar	50
Faculty	varchar	50

prog_coor_id	user_id	prog_name	faculty_id	faculty
001	22	Goh No Goh	1	Faculty of Computing and Informatic
002	34	Wee Tu Low	2	Faculty of Computing and Informatics
003	12	Ooi Jeng Yi	3	Faculty of Humanities

3.3.5 Researcher

- Researcher_id : unique identifier for each researcher
- Bio_desc : Biographic description that is created by the researcher
- ORCID: unique digital identifier for the researcher
- Google_scholar_link : link to the researcher's Google Scholar profile page
- Published_topic : comma separated list of published topics from the researcher

Attribute	Data Type
Researcher_id	int
Bio_desc	Text
ORCID	varchar
Google_scholar_link	varchar
Published_topic	varchar

3.3.6 Research Paper

- paper_id : unique identifier for each research paper
- researcher_id : unique identifier for the researcher associated with the paper
- prog_coor_id : unique identifier for the programme coordinator
- last_updated : timestamp indicating when the paper was last updated
- paper_category : genre or category classification of the paper
- paper_DOI : unique Digital Object Identifier (DOI) of the paper
- paper_desc : text description or summary of the paper
- paper_pdf : storage filepath of the paper's PDF file
- paper_status : current publication status of the paper

Attribute	Data Type
paper_id	int
researcher_id	int
prog_coor_id	int
last_updated	Date
paper_category	varchar
paper_DOI	varchar
paper_desc	varchar
paper_pdf	varchar
paper_status	varchar

3.3.7 Student

- student_id: A unique identifier assigned to each student.
- user_id: A unique identifier used to map the student to their general user account details.
- program: Stores specific academic course or program the student is enrolled in.
- year_of_studies: Shows the current academic year of the student.

Attribute	Data Type	Field Length
student_id	int	-
user_id	int	-
Program	varchar	50
year_of_studies	varchar	50

student_id	user_id	program	year_of_studies
201	1	Bachelor of Computer Science	Year 2
202	4	Bachelor of Economics	Year 1
203	6	Bachelor of Creative Multimedia	Year 3

3.3.8 User

- user_id : Unique identifier for each user in the website
- email : email address for each user in the website
- password : Unique passwords for each user in the website
- full_name : full name from each users in the website
- uni_id : unique university id from each users in the website
- role : storing different types of roles for every user in the website

Attribute	Data Type	Field Length
user_id	int	-
email	varchar	50
password	varchar	50
full_name	varchar	50
uni_id	varchar	50
role	varchar	50

Example:

user_id	email	password	full_name	uni_id	role
1	abc@gmail.com	2u4iwqofsancjf	Vinesh A/L Sivaanesh	242UC244Q1	Student
2	def@gmail.com	HjWh21u4r390nfasda	Ali bin Abu	262UC244SQ	Admin
3	ghi@gmail.com	ncxmveq320	Patrick Bateman	262UC244SJ	Reseacher
4	hello@gmail.com	jsakdjqwiruio2	Mas Rusdi	262UC244MQ	Student
5	varia@gmail.com	Jsaenc_shafsa	Kirkentually Man	262UC2445J	Program Coordinator
6	install@yahoo.com	2819403532	Woohoo Peepoo	262UC244S2	Student

3.3.9 Notification

- notify_id : unique identifier for each notification in the table
- user_id : unique identifier for each users in the website
- paper_id : unique identifier of paper if the paper needs revision
- notify_title : notification title for related user to see
- notify_desc : further explanation or description of the notification to related user
- notify_type : notification type for each notification , such as warning , revision paper
- created_at : timestamp of when the notification is created
- read_status : to display whether the paper is rejected , pending or approved

Attribute	Data Type	Field Length
notify_id	int	-
user_id	int	-
paper_id	int	-
notify_title	varchar	50
notify_desc	varchar	50
notify_type	varchar	50
created_at	timestamp	-
read_status	bool	-

Example:

notify_id	user_id	paper_id	notify_title	notify_desc	notify_type	created_at	read_status
1	9	246	Paper need resubmit	Need revision	revision	20:05 2025/12/05	rejected
2	5	245	Paper accepted	Paper is good	accepted	20:05 2025/12/18	approved

3.3.10 Announcements

- announce_id : Unique identifier for each announcement made by admin
- admin_id : Unique identifier for each admin making the announcement
- announce_title : Announcement title when an announcement is made for all users in the website
- Announce_desc : Announcement description to provide more context when an announcement being made
- Announce_pic : Announcement picture section to store any headers to be shown to all users in the website

Attribute	Data Type	Field Length
announce_id	int	-
admin_id	int	-
announce_title	int	-
announce_desc	varchar	50
announce_pic	varchar	50

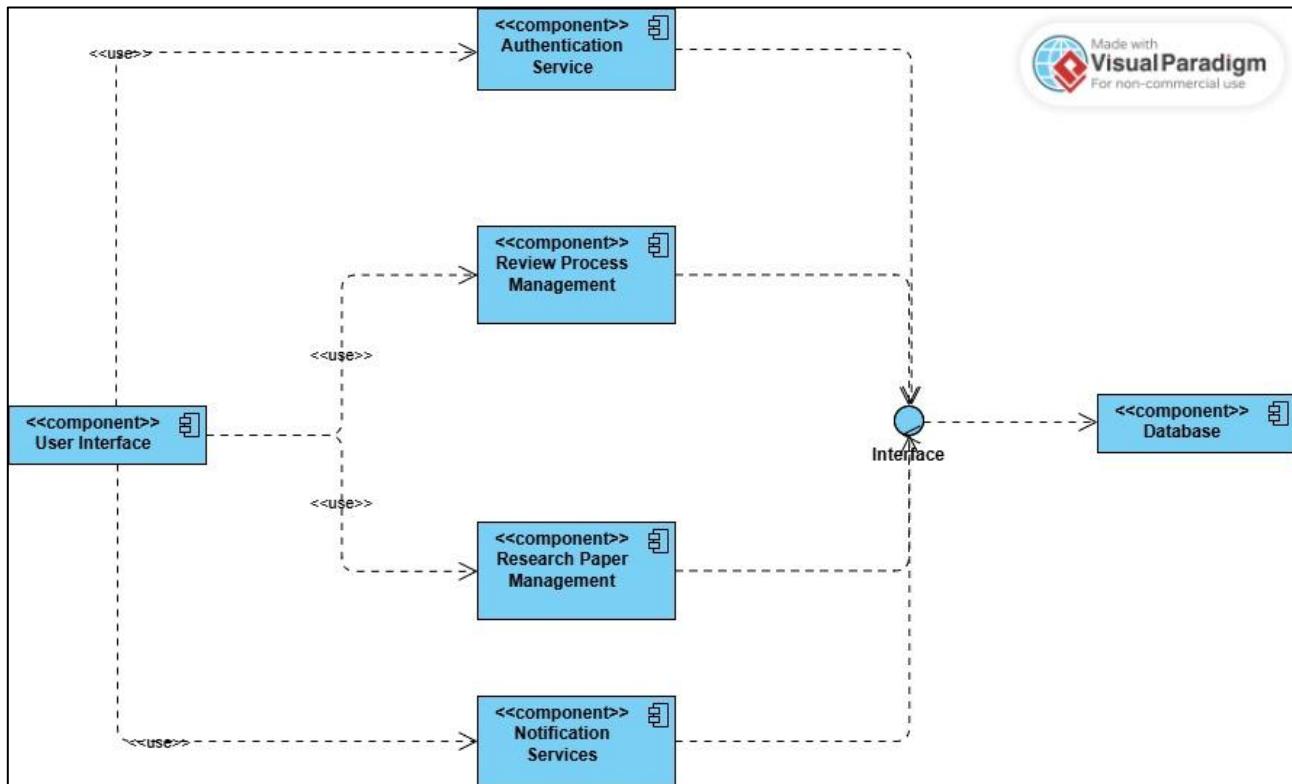
Example:

announce_id	admin_id	announce_title	announce_desc	announce_pic
1	1	Symposium Conference 2025	Users are encouraged to join	Image.png
2	2	Research Competition 2025	Paper accepted	Image2.png

4 Component Design

4.1 High Level Component Design

This component design of MMU Xplore utilizes a modular , component based architecture designed to decouple the user interface from the core business logic and data persistent layers. The web browser serves as the client side interface for different types of users such as Student , Researcher , Admin and Program Coordinator , which are directly involved in the web application functionalities , are all included in the Authentication Service. There are many other components being used such as Review Process Management for facilitating direct paper reviews between actors , Research Paper Management for managing research papers being submitted on the web application and Notification services , to enable latest updates to be sent to users through notifications. All backend services communicate through a centralized interface to Database , a design choice that ensures data integrity and allows for seamless scalability of the underlying storage system without disrupting the primary application workflows.



4.1.1 Component Design Diagram

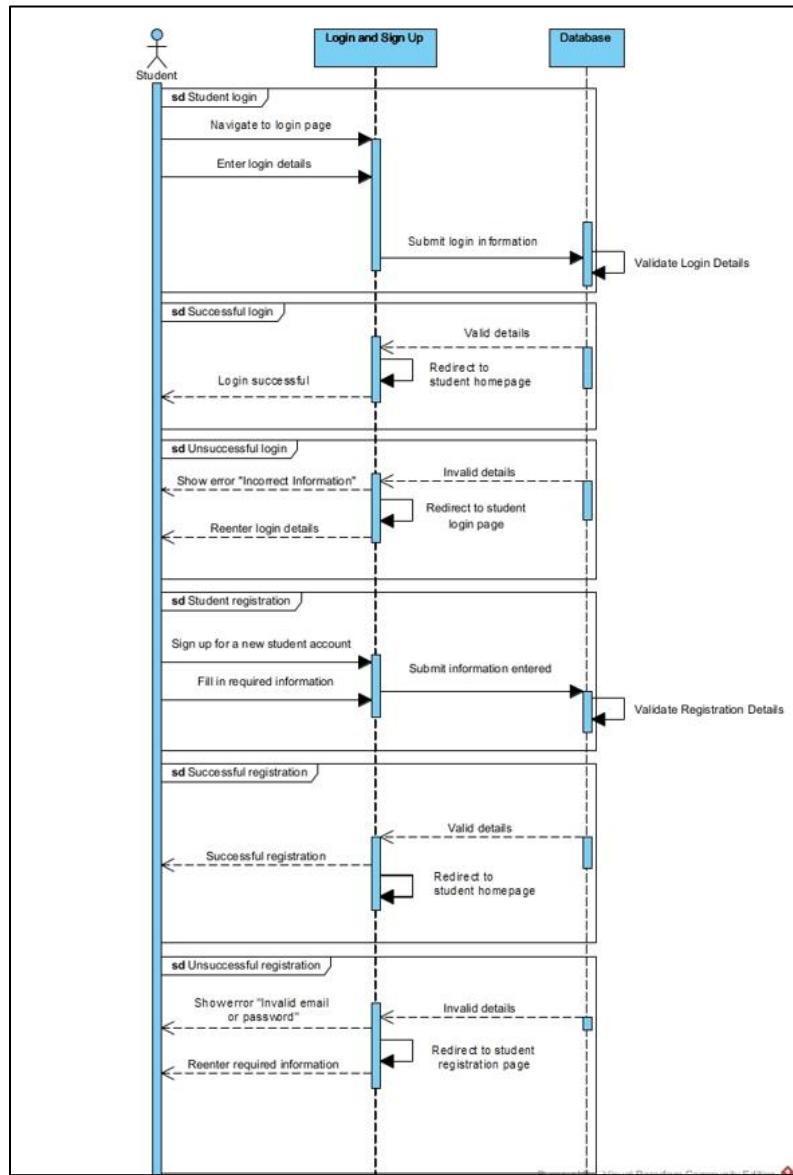
5 Behavioral Modeling

5.1 Sequence Diagram

5.1.1 Student

5.1.1.1 Sign Up or Login as Student

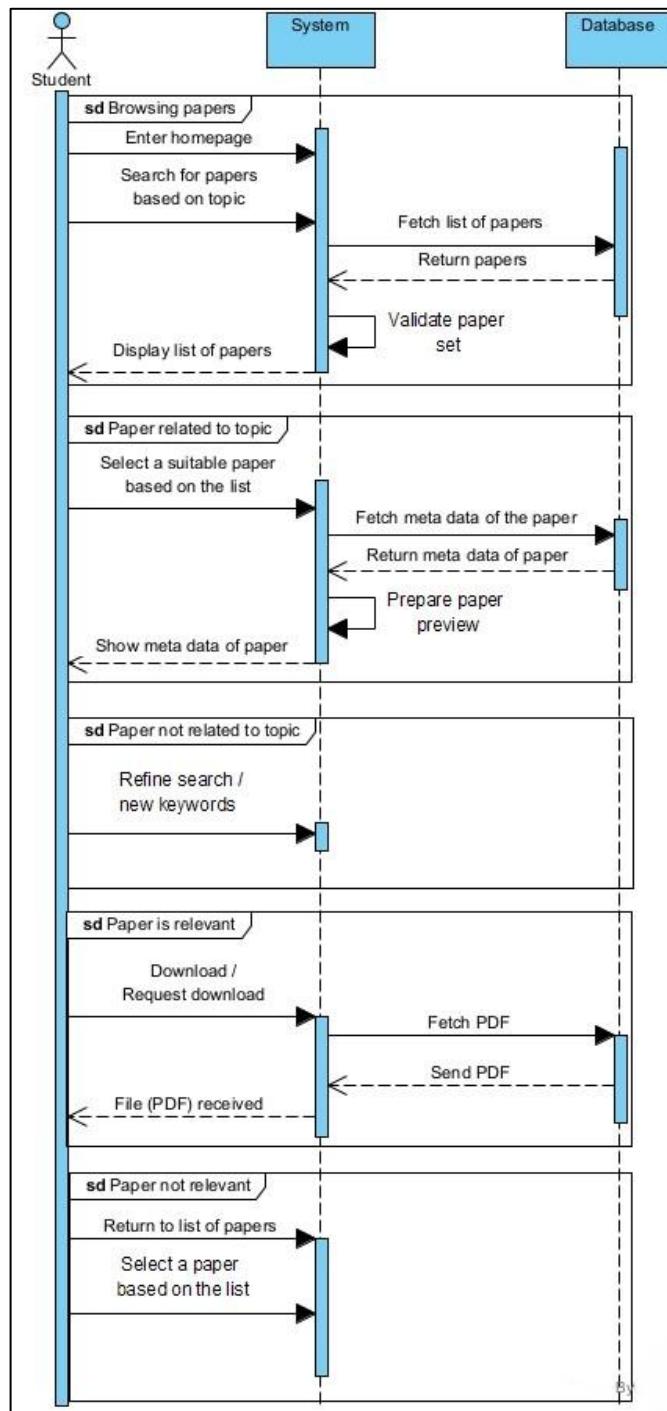
Students without an account navigate to the registration form, while existing users enter credentials for database validation. If validation fails, the system prompts for reentry. If successful, the user is redirected to the homepage.



5.1.1.1 Sign Up or Login as Student Sequence Diagram

5.1.1.2 Find / Browse and Download Research Papers

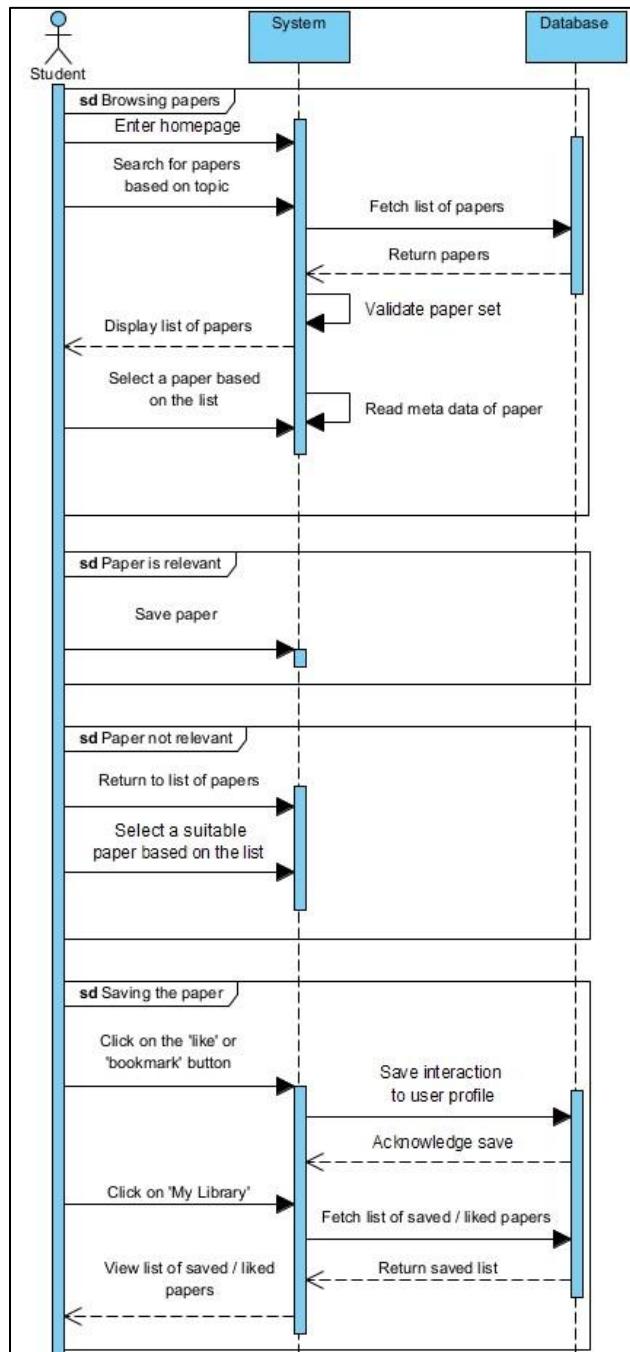
Students can save work by browsing topics, where the database fetch for related papers. The student reviews meta data to determine relevance. Once a relevant paper is identified, the system retrieves the PDF from file storage for the student to download.



5.1.1.2.1 Find / Browse and Download Research Paper Sequence Diagram

5.1.1.3 Bookmark or Like and View Interested Research Papers

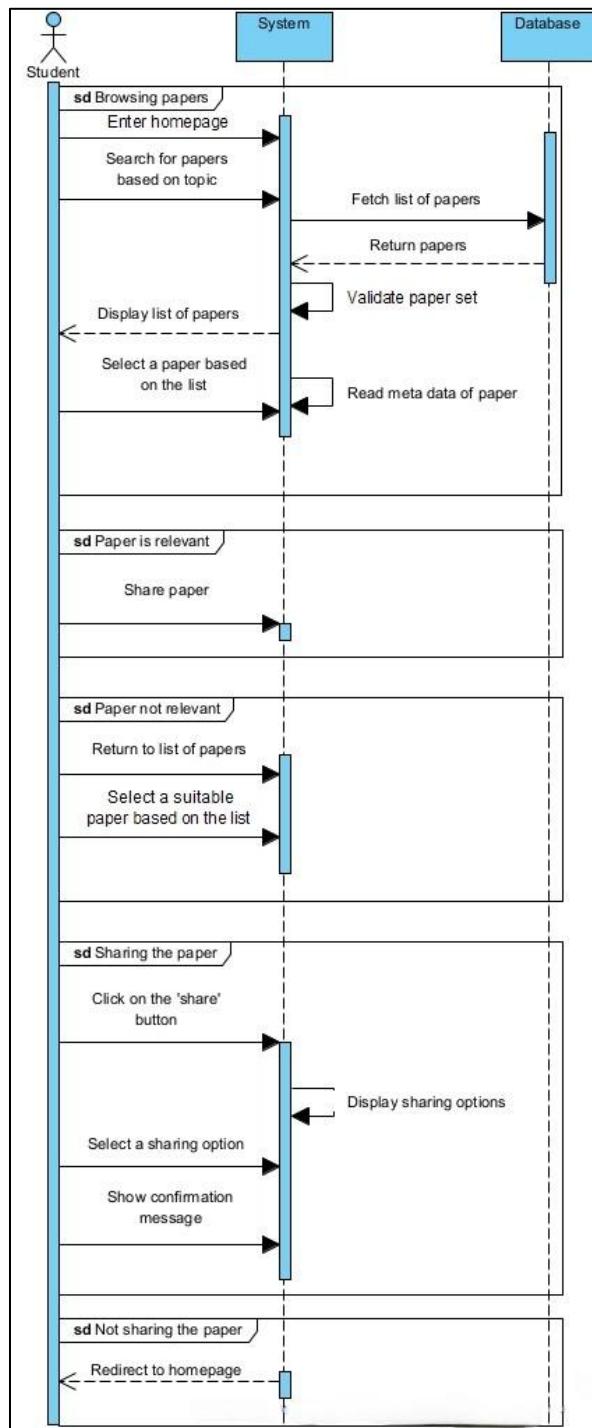
Students can save papers in the system itself. After identifying a relevant paper, the student clicks "Like" or "Bookmark," sending an update to the database. Navigating to "My Library" fetches this personalized list from the database for viewing.



5.1.1.3.1 Bookmark or Like and View Interested Research Paper Sequence Diagram

5.1.1.4 Share Interested Research Papers

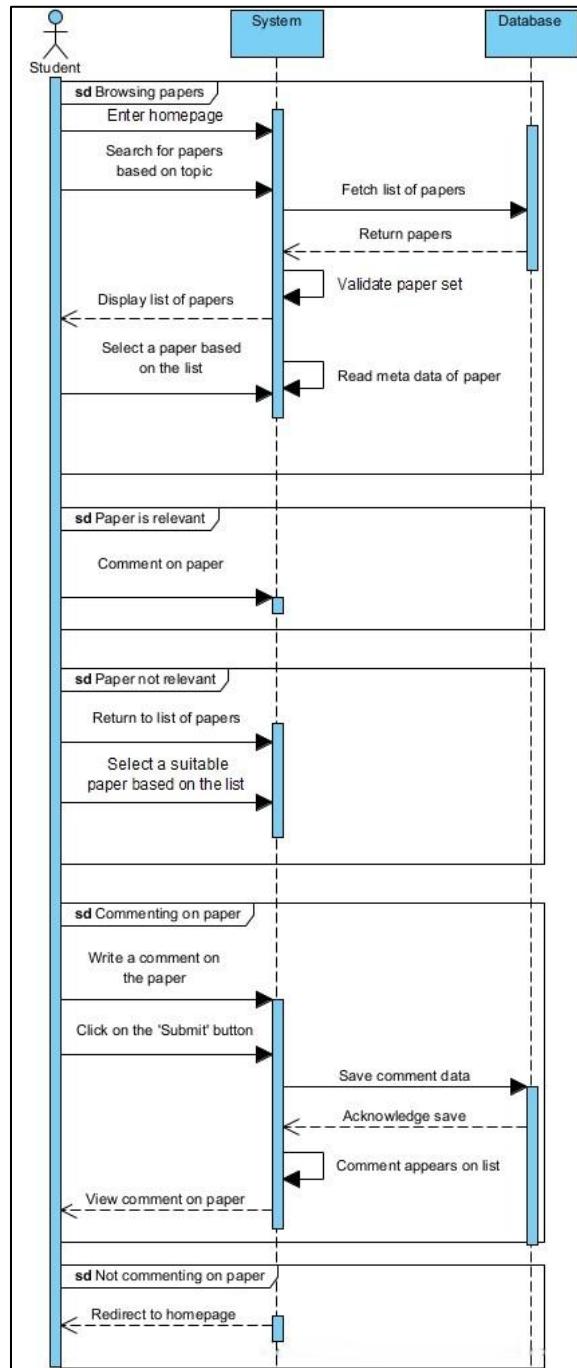
Students can share papers they find interesting. Upon clicking the "Share" button, the homepage displays various sharing methods. After a method is selected, the system provides a confirmation message.



5.1.1.4.1 Share Interested Research Papers Sequence Diagram

5.1.1.5 Comment and View Comments on Research Papers

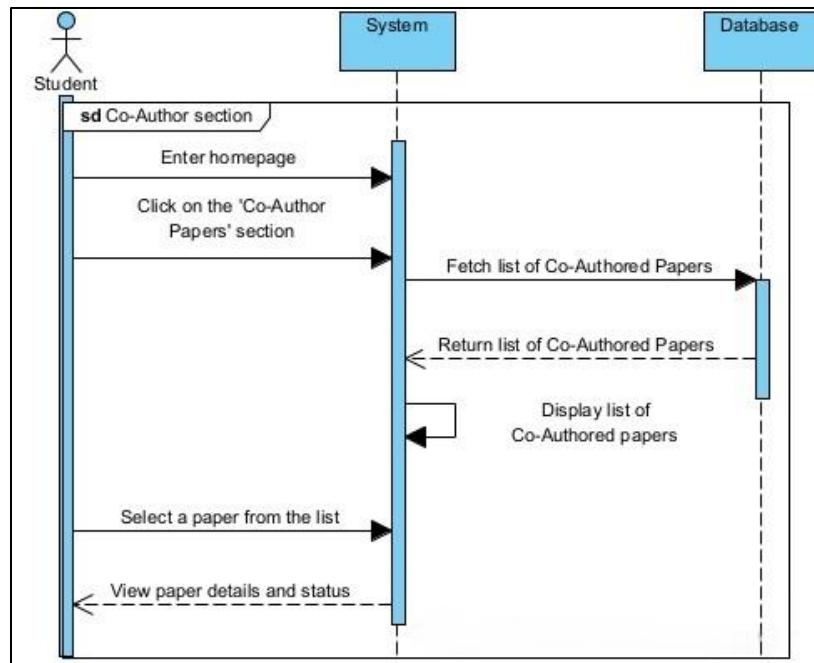
When a student decides to comment on a relevant paper, they submit their message, which is then saved to the database. The new comment is immediately added to the paper's comment list for viewing.



5.1.1.5.1 Comment and View Comments on Research Papers Sequence Diagram

5.1.1.6 Contribute to Sharing Research Papers / Be a Co-Author

Students can view their collaborations by navigating to the "Co-Authored Papers" section. The system queries the database for papers where student is listed as a co-author and displays the results. Students can then select a paper to see its full details and current status.

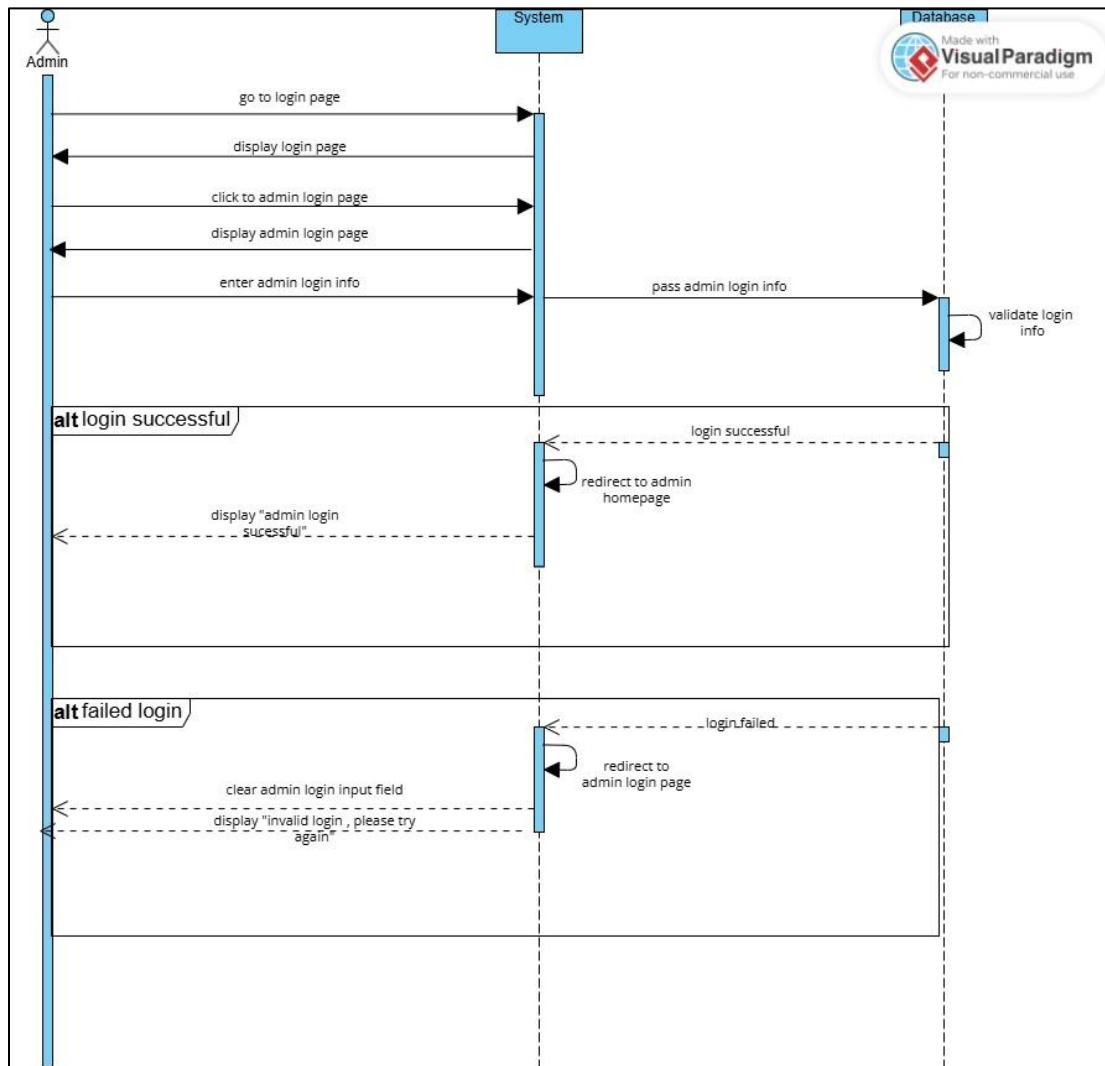


5.1.1.6.1 Contribute to Sharing Research Papers / Be a Co – Author Sequence Diagram

5.1.2 Admin

5.1.2.1 Admin Login

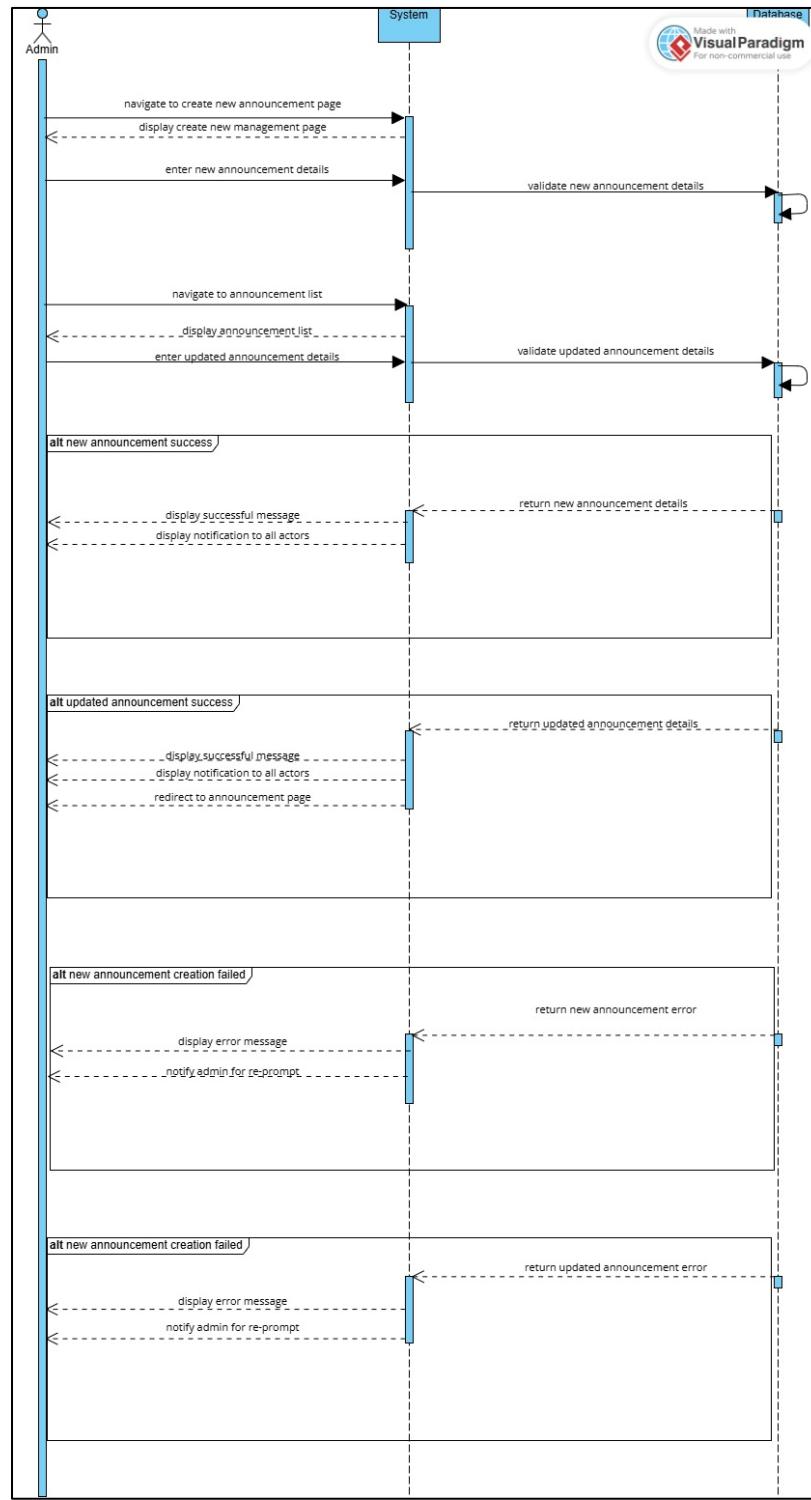
This sequence diagram shows the walkthrough of admin login page and its process including verification of login info given by admin and error handling if the info is incorrect or invalid.



5.1.2.1.1 Admin Login Sequence Diagram

5.1.2.2 Post Announcements

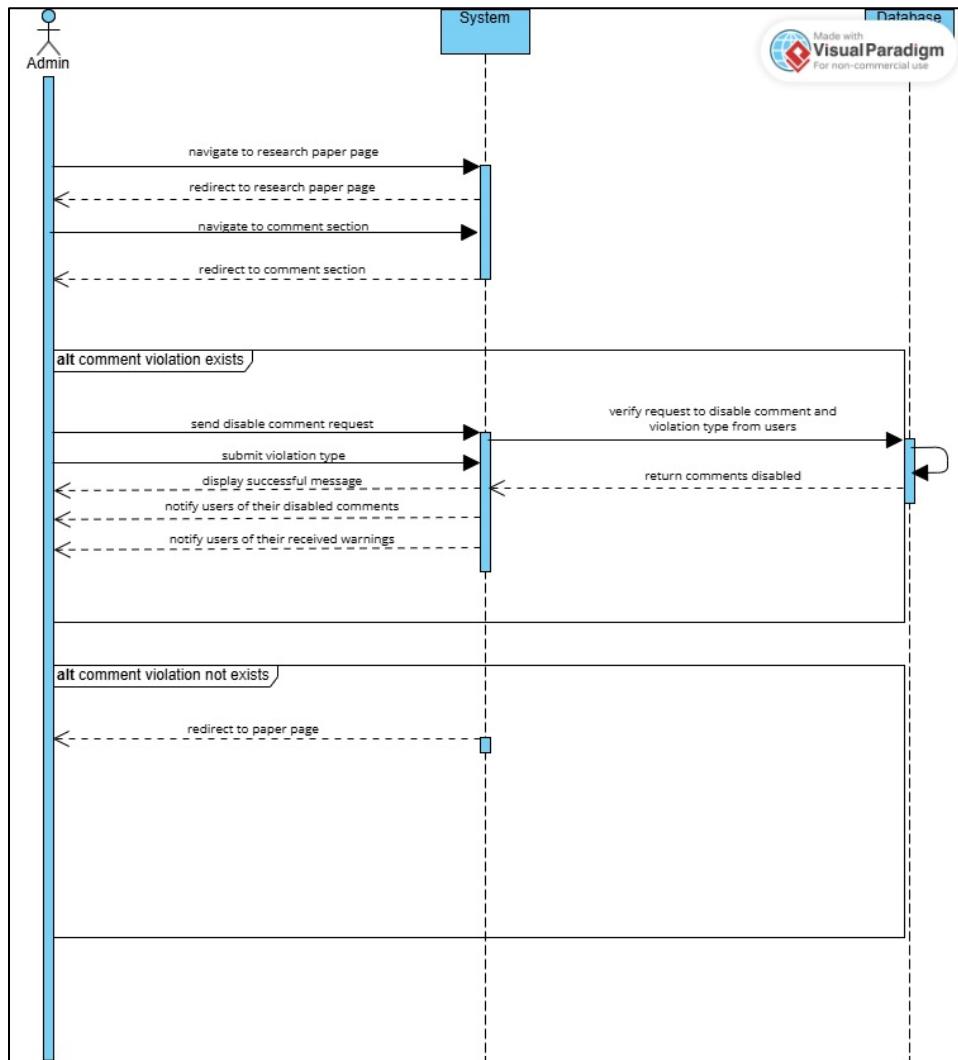
This sequence diagram shows the walkthrough of creating new announcements and its process including creating new announcements and updating announcements.



5.1.2.2.1 Post Announcements Sequence Diagram

5.1.2.3 Review Comment Sections For Each Papers

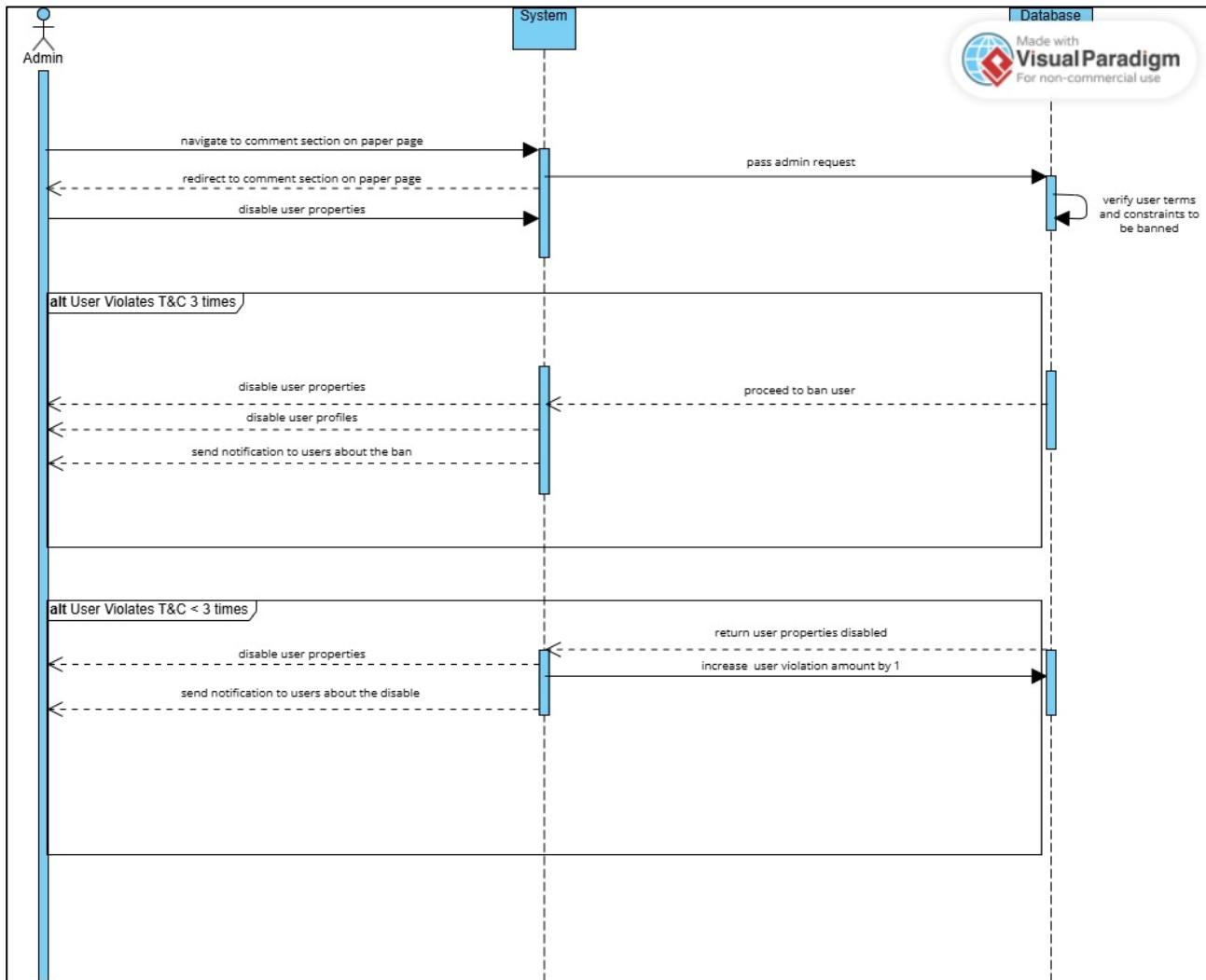
This feature allows admin to skim through the papers' comment sections and analyze if there's any messages or comments from users that violate the Terms and Conditions of the website. Admin are allowed to disable the comment and send warning messages to related users.



5.1.2.3.1 Review Comment Sections For Each Papers

5.1.2.4 Ban Users If Violating Terms of Conditions

This feature allows admin to ban users if a user has received three warnings maximum. This is aimed to maintain the integrity of each users.

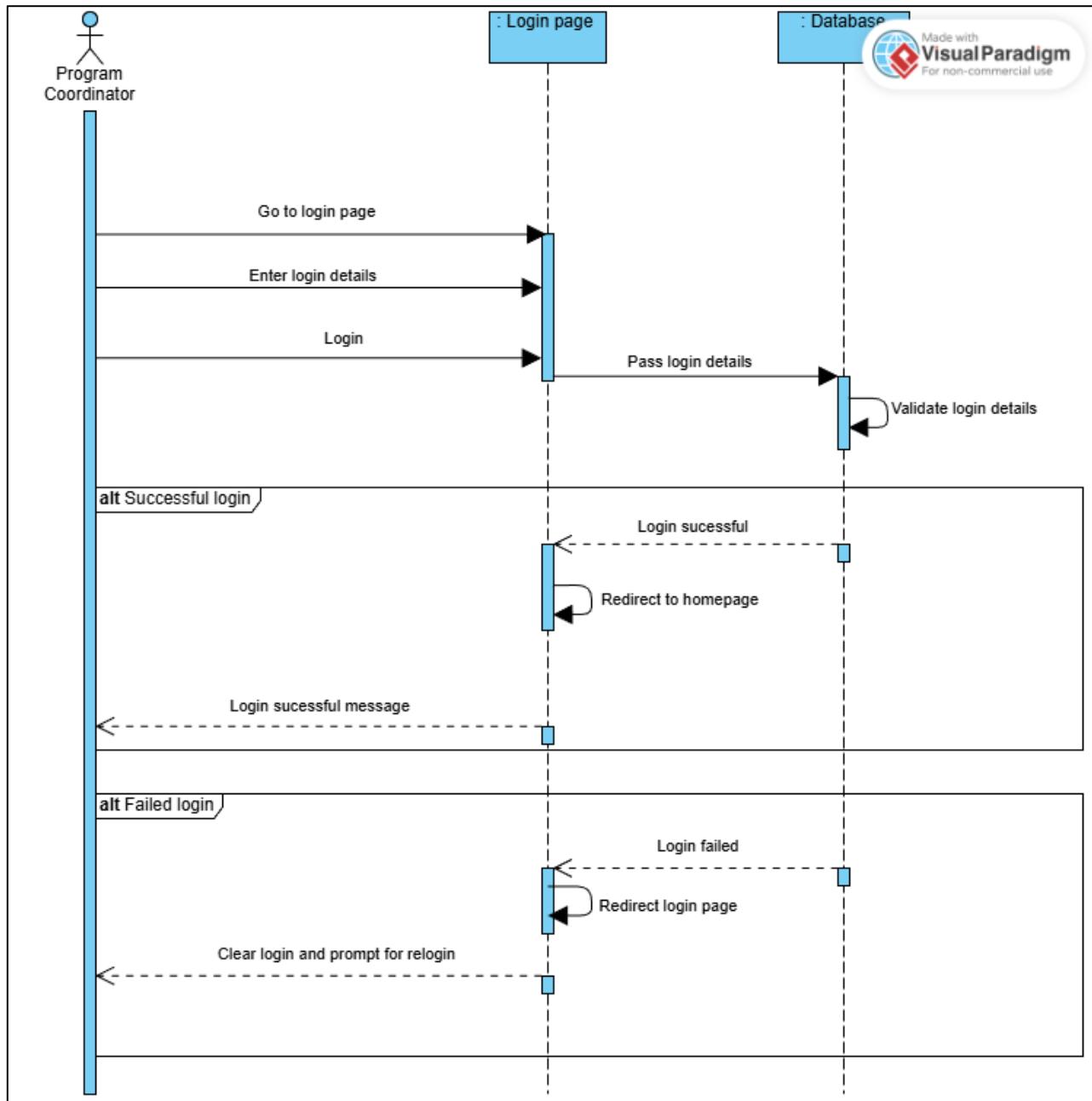


5.1.2.4.1 Ban Users If Violating Terms of Condition Sequence Diagram

5.1.3 Program Coordinator

5.1.3.1 Login Page

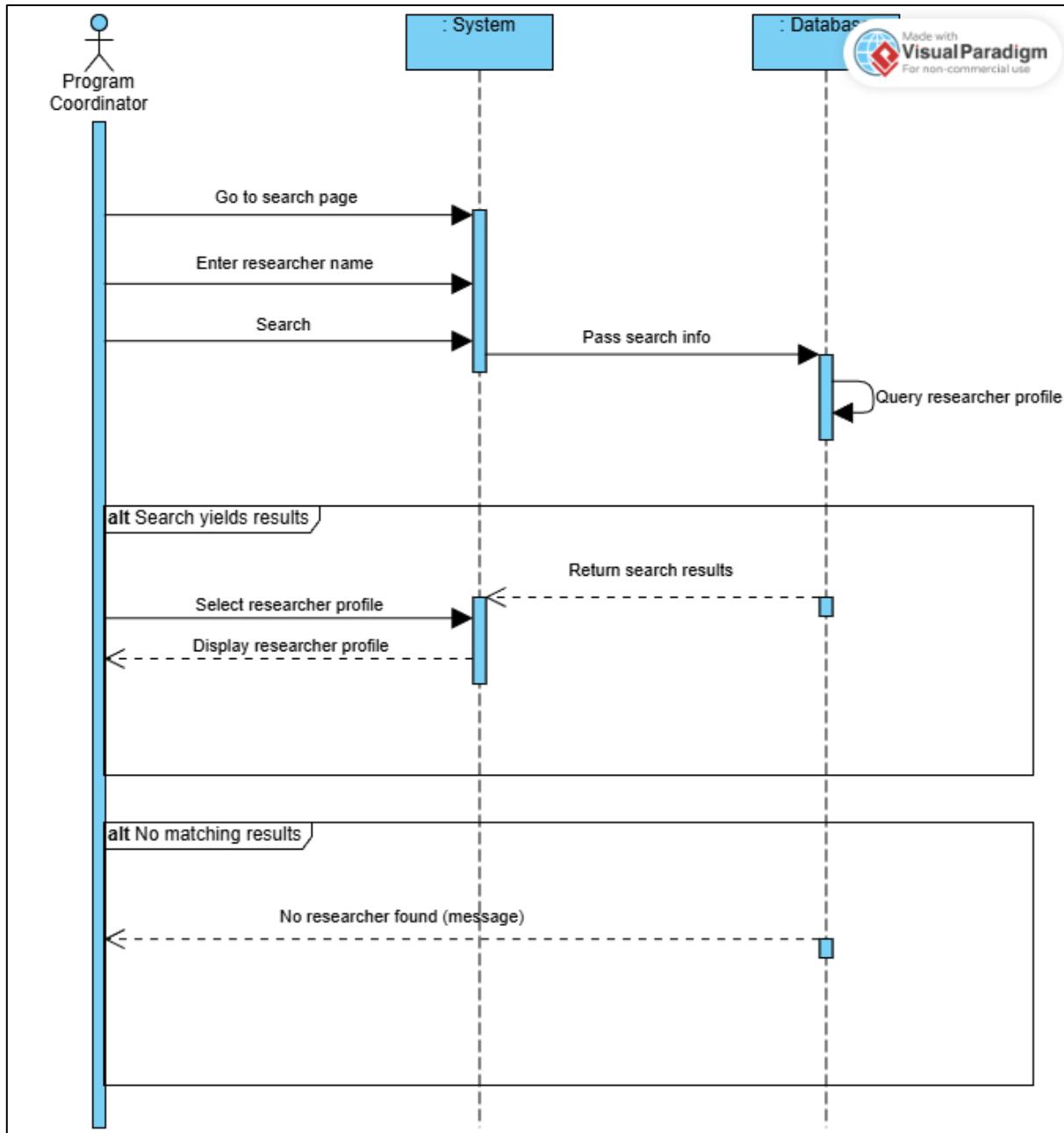
This diagram illustrates the order in which a Program Coordinator can login into their respective homepage, while handling login errors, only redirecting Program Coordinator if the login details are correct.



5.1.3.1.1 Login Page Sequence Diagram

5.1.3.2 View Researcher Profile

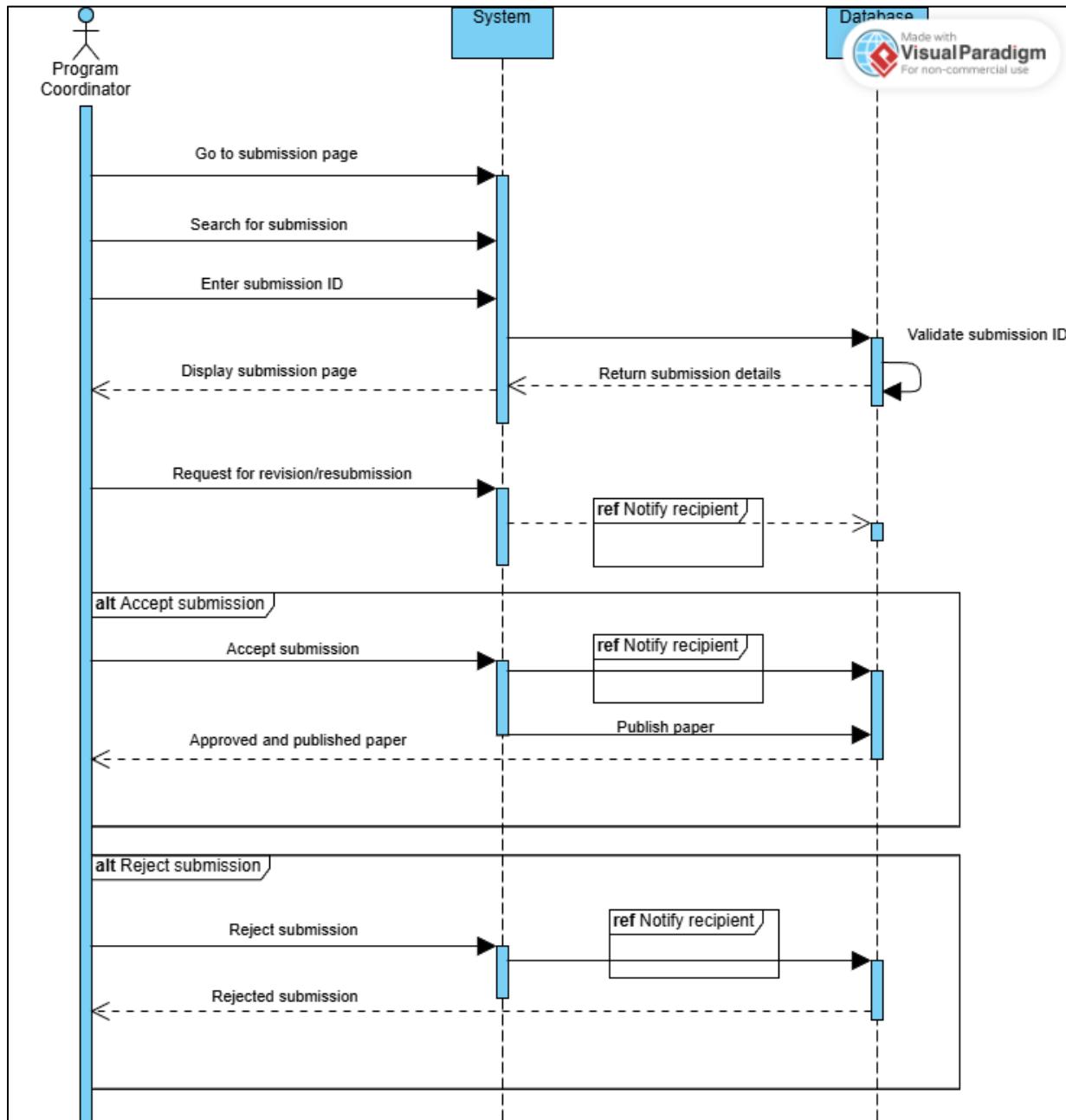
The following diagram shows the flow of in which a Program Coordinator can look up researcher profiles, including when no results come up. The Program Coordinator starts by navigating to the search page, entering the name of a profile they want to look at, then accessing whatever results that come up from searching the database. Only then can Program Coordinator view the profile of the researcher they searched for.



5.1.3.2.1 View Researcher Profile Sequence Diagram

5.1.3.3 Monitor, Accept and Reject Submission

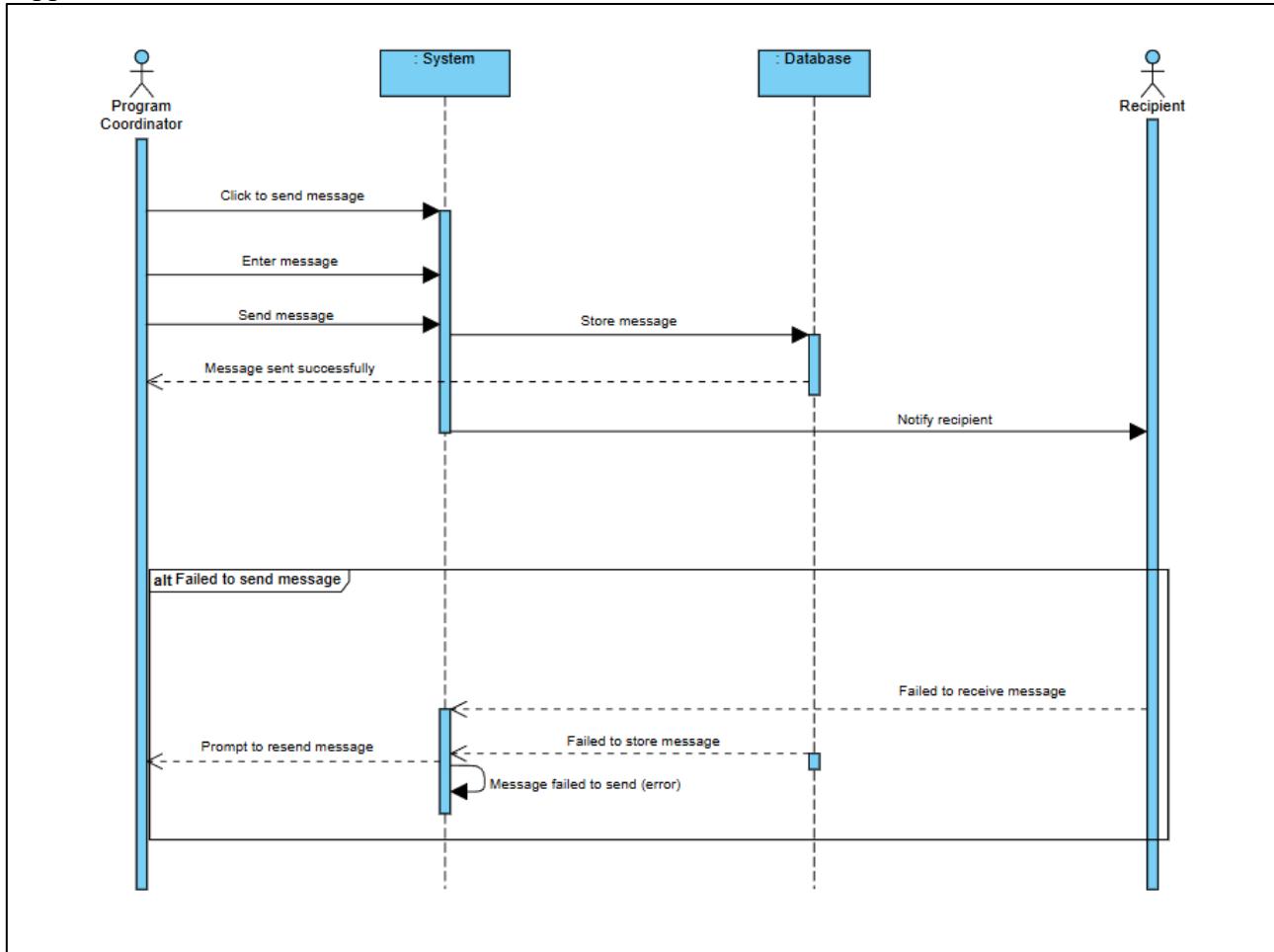
This diagram shows the flow for Program Coordinator in managing submissions. On the submission page, Program Coordinator can search for submissions via their IDs, viewing submission page with the details of the submission they searched for, then deciding to accept, or reject the submission, should the Program Coordinator decide to make a decision.



5.1.3.3.1 Monitor, Accept and Reject Submission

5.1.3.4 Send notification to recipient

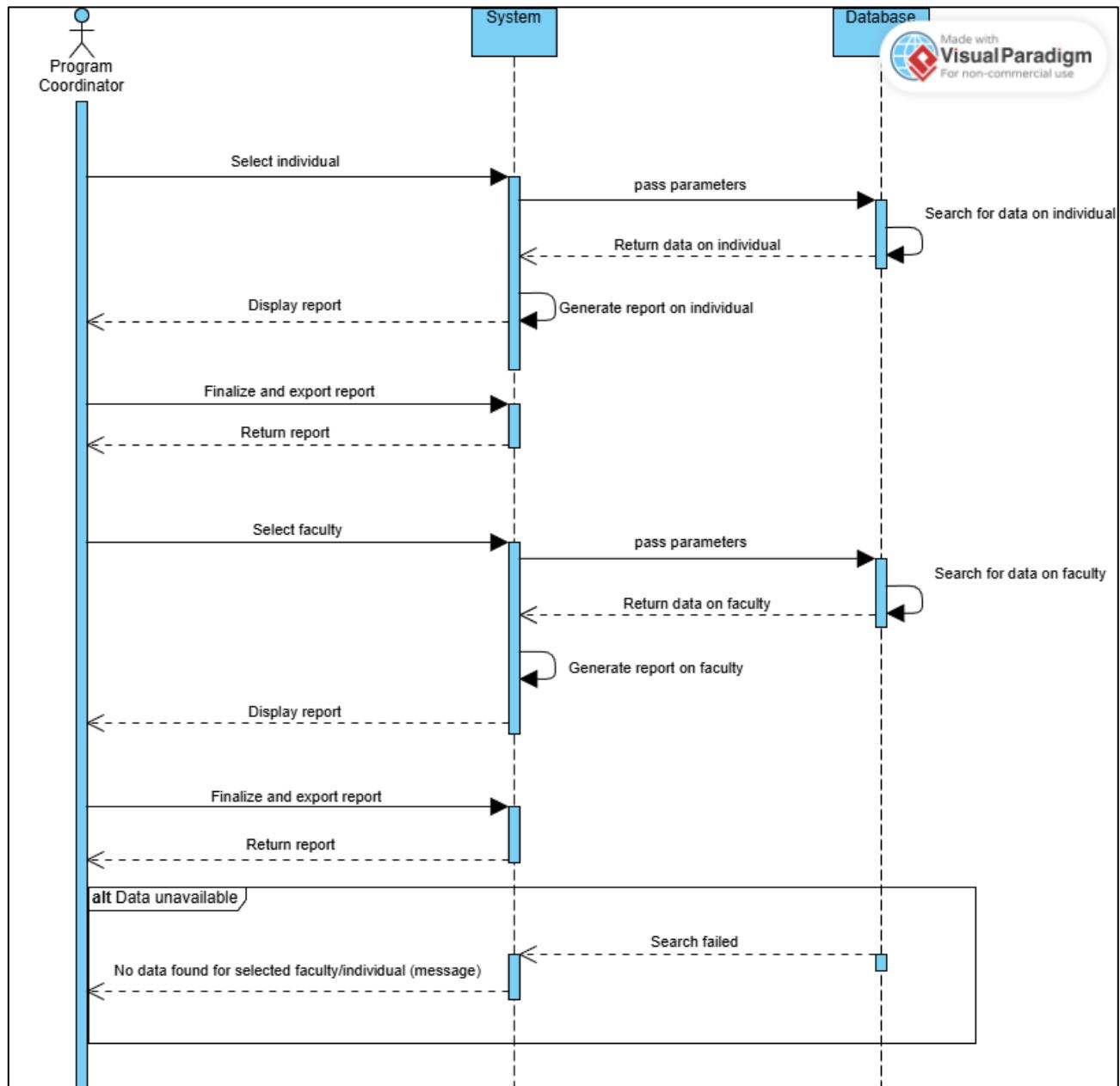
In this diagram Program Coordinators writes a message and sends the message to the recipient while notifying recipients. Program Coordinator can also retype the message should any errors happen.



5.1.3.4.1 Send notification to recipient

5.1.3.5 Generate Report

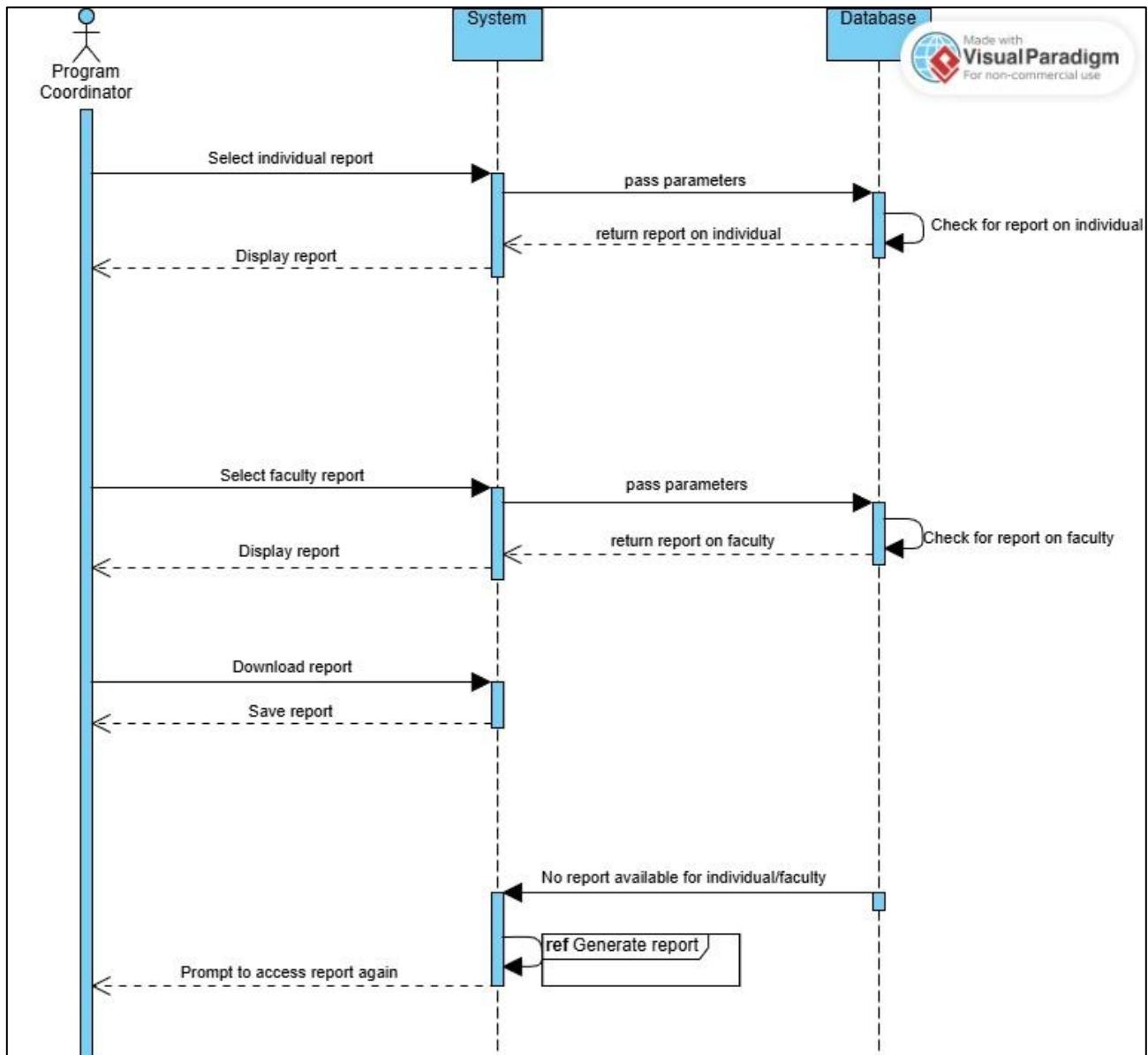
This diagram illustrates the workflow when Program Coordinator wants to generate a report. First, the type of report (Individual/faculty) must be decided, then the identifier of the individual or faculty is searched, data is fetched, and finally a report is generated from those data on the relevant subject. Should any data be missing or do not match the query, an error prompt will be shown to the Program Coordinator.



5.1.3.5.1 Generate Report

5.1.3.6 Access Analytics Report

Program Coordinators can also access past reports that are generated. Like generating reports, Program Coordinators first start by selecting the type of report they want to access, then they must search for the individual or faculty report they want, viewing the report should they exist, if not, Program Coordinators are given the choice to generate a current report on the subject they are looking for.

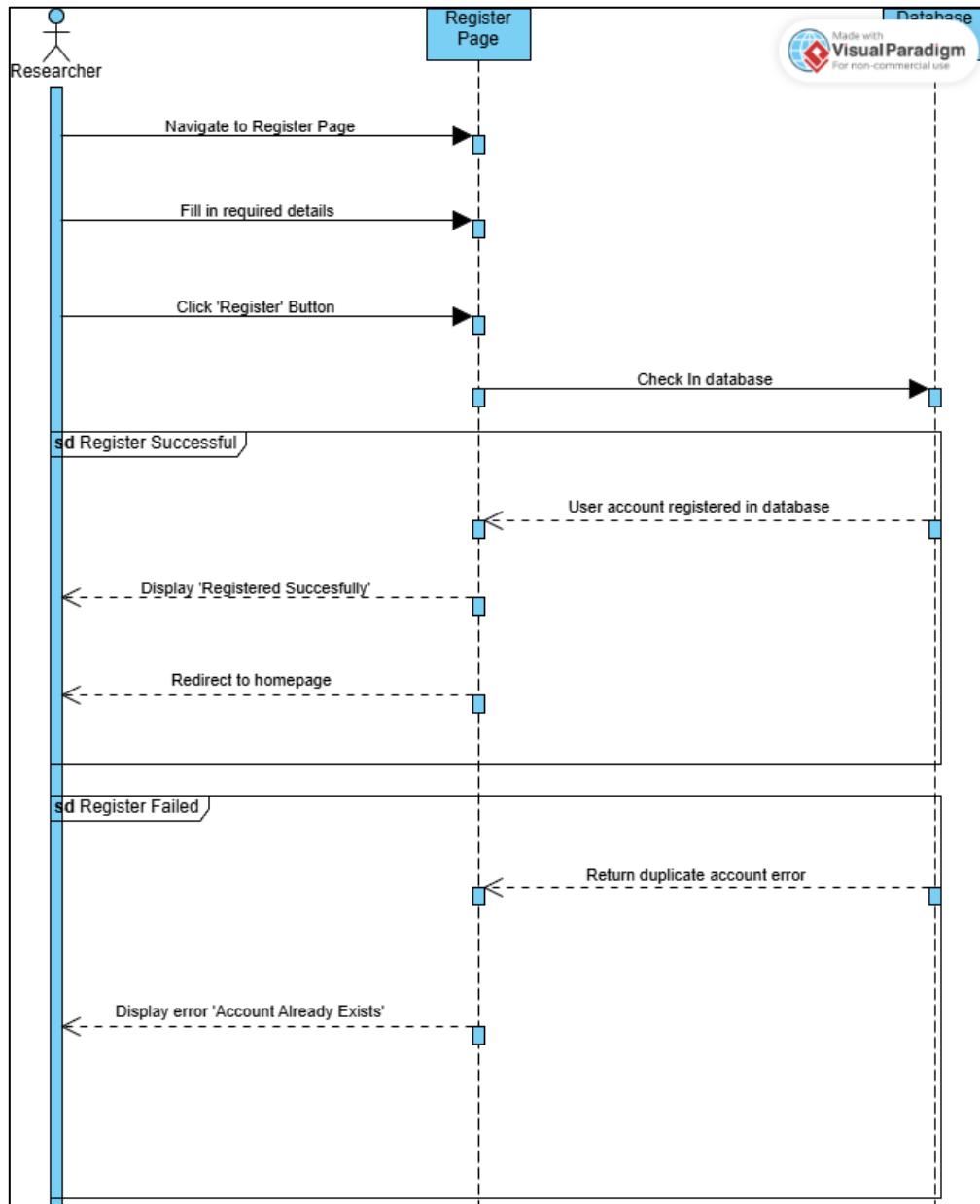


5.1.3.6.1 Access Analytics Report

5.1.4 Researcher

5.1.4.1 Register Researcher Sequence Diagram

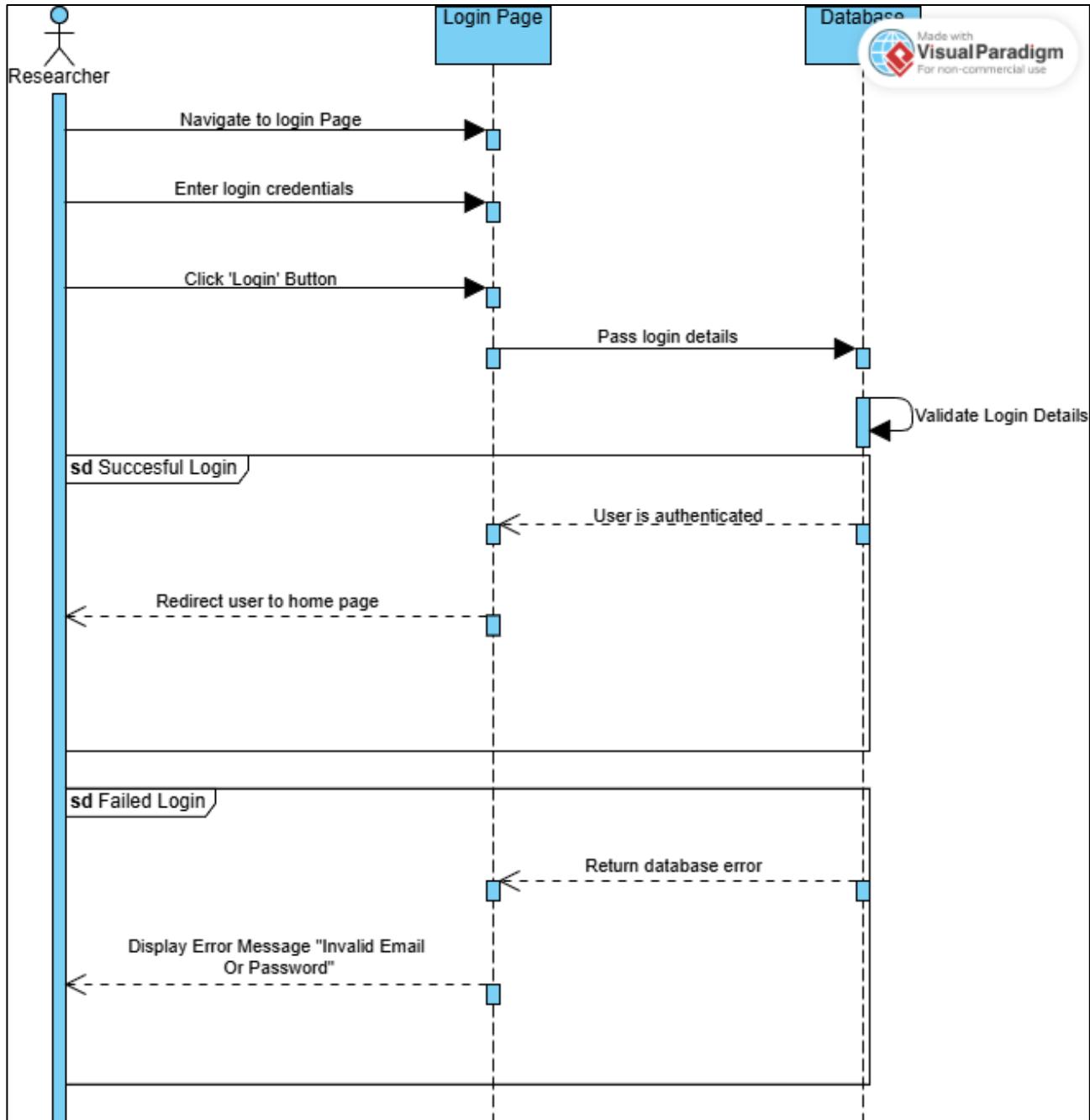
This diagram illustrates the new user registration flow. The Researcher fills in required details and submits the form. The system queries the Database to check for existing accounts. If the check passes, the account is registered, and the user is redirected to the homepage. If the check fails (duplicate account), the system returns an error and displays an "Account Already Exists" message.



5.1.4.1.1 Register Researcher Sequence Diagram

5.1.4.2 Login Sequence Diagram

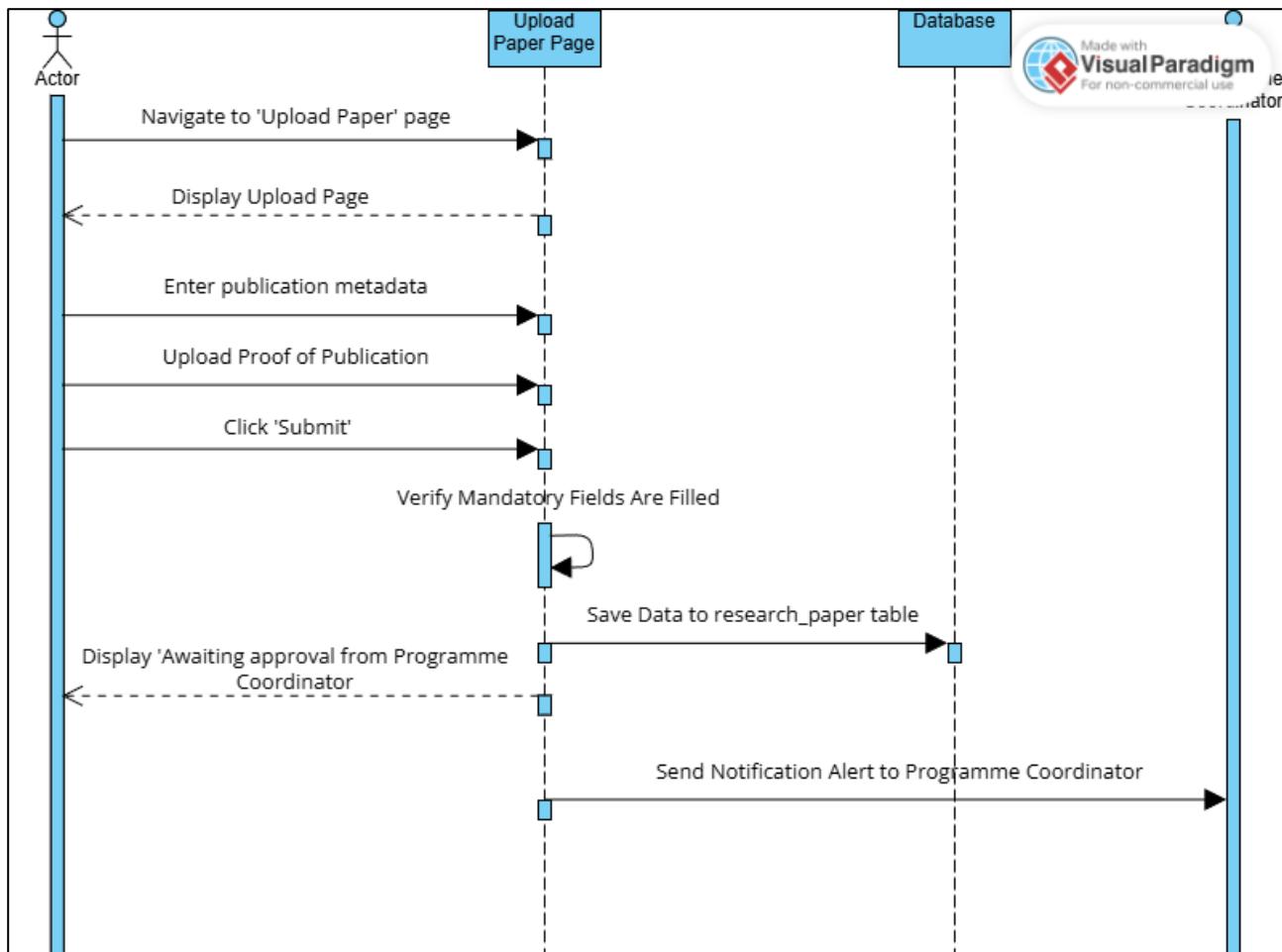
This diagram depicts the user authentication process. The Researcher enters credentials on the Login Page, which are passed to the Database for validation. The flow splits into two alternative scenarios: a Successful Login, which redirects the user to the homepage, and a Failed Login, which returns a database error and displays an "Invalid Email or Password" message.



5.1.4.2.1 Login Sequence Diagram

5.1.4.3 Upload Paper

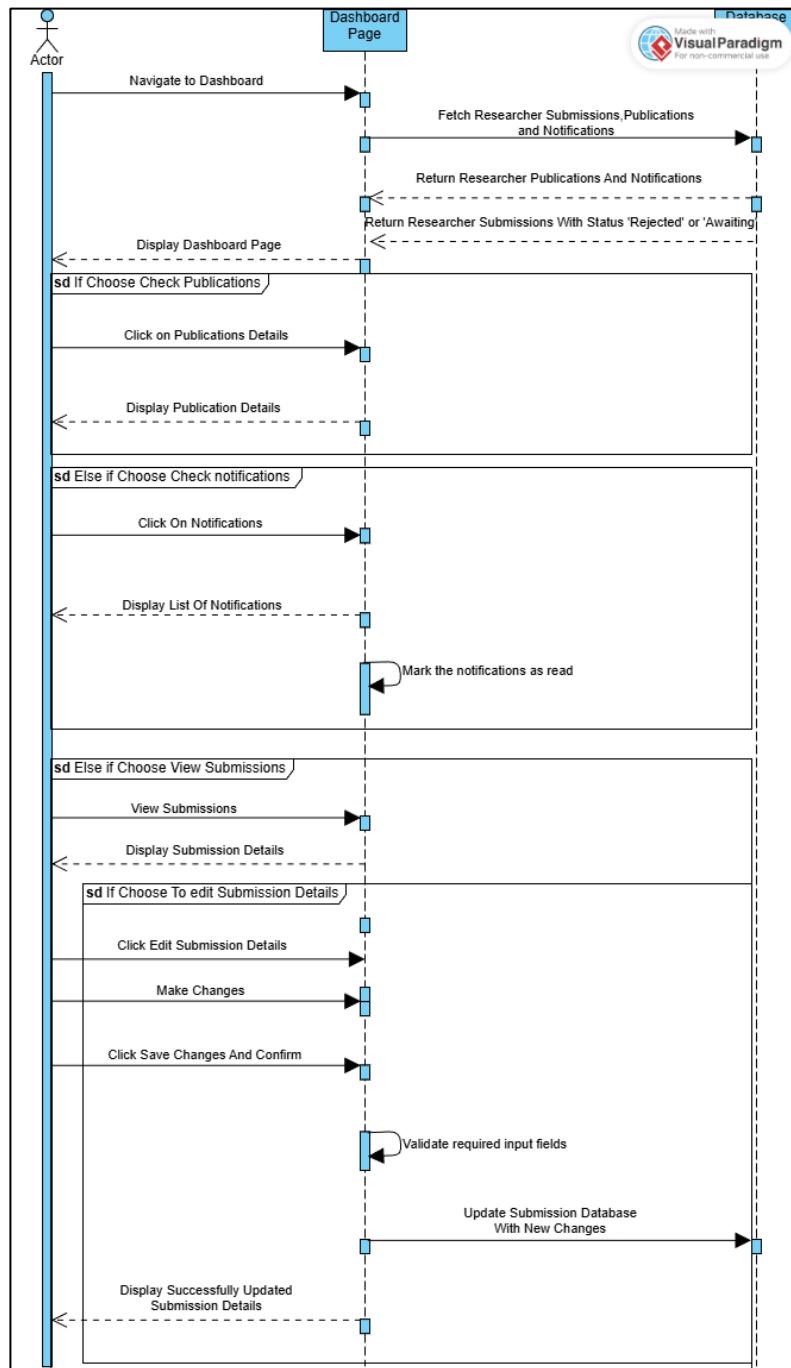
This diagram outlines the workflow for submitting a new research paper. The user navigates to the upload page, inputs publication metadata, and uploads proof of publication. Upon submission, the page verifies mandatory fields, saves the data to the research_paper table in the database, displays an "Awaiting Approval" status to the user, and sends a notification alert to the Programme Coordinator.



5.1.4.3.1 Upload Paper Sequence Diagram

5.1.4.4 Dashboard

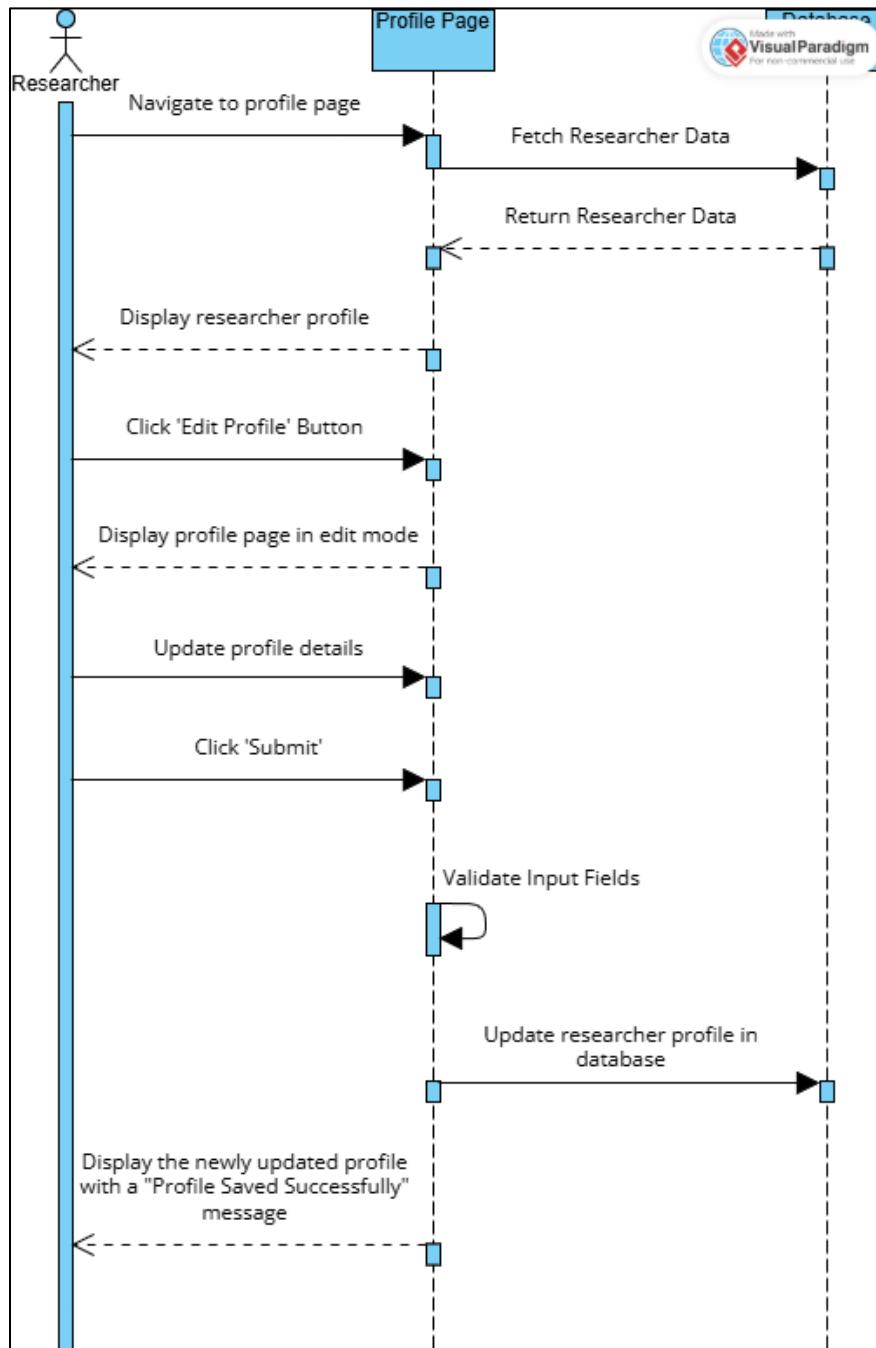
This diagram details the interactions available on the main Dashboard. Upon loading, the system retrieves and displays publications, notifications, and submission statuses. It features alternative paths (alt fragments) for specific user actions: viewing publication details, managing notifications (marking them as read), and viewing or editing submission details, which includes a nested validation and database update process.



5.1.4.4.1 Dashboard Sequence Diagram

5.1.4.5 Manage Researcher User Profile

This diagram illustrates the process of a researcher viewing and updating their profile. The flow begins with the system fetching and displaying existing data from the database. The researcher can then enter an "Edit Mode," modify their details, and submit changes. The system validates the input, updates the database record, and confirms the successful save to the user.

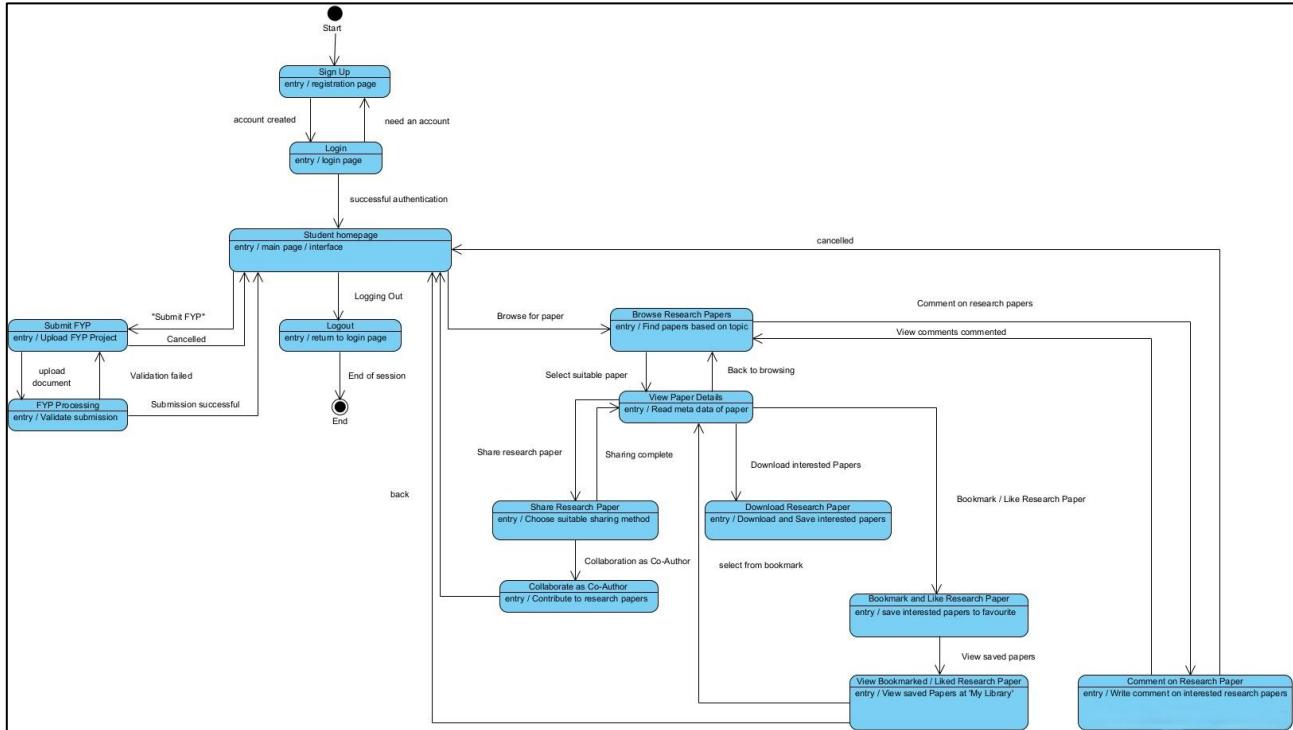


5.1.4.5.1 Manage Researcher User Profile Sequence Diagram

5.2 State Diagram

5.2.1 Student Subsystem State Diagram

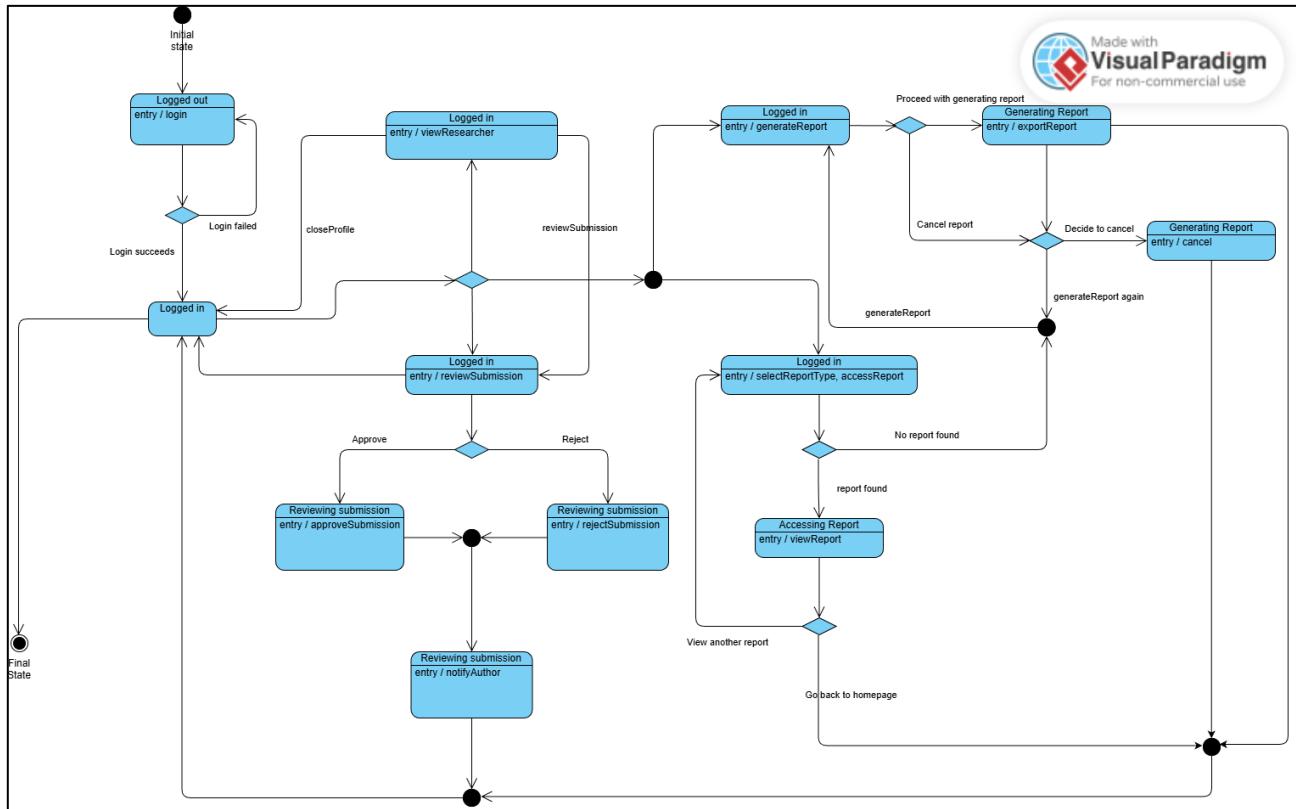
Students start by signing up or logging in, then entering the student homepage. From there, they can browse research papers, view paper details, download papers, bookmark/like papers, comment on papers, share papers, or collaborate as a co-author. Users can also submit their FYP project. The process ends when the user logs out, terminating the session.



5.2.1.1 Student Subsystem State Diagram

5.2.2 Program Coordinator Subsystem State Diagram

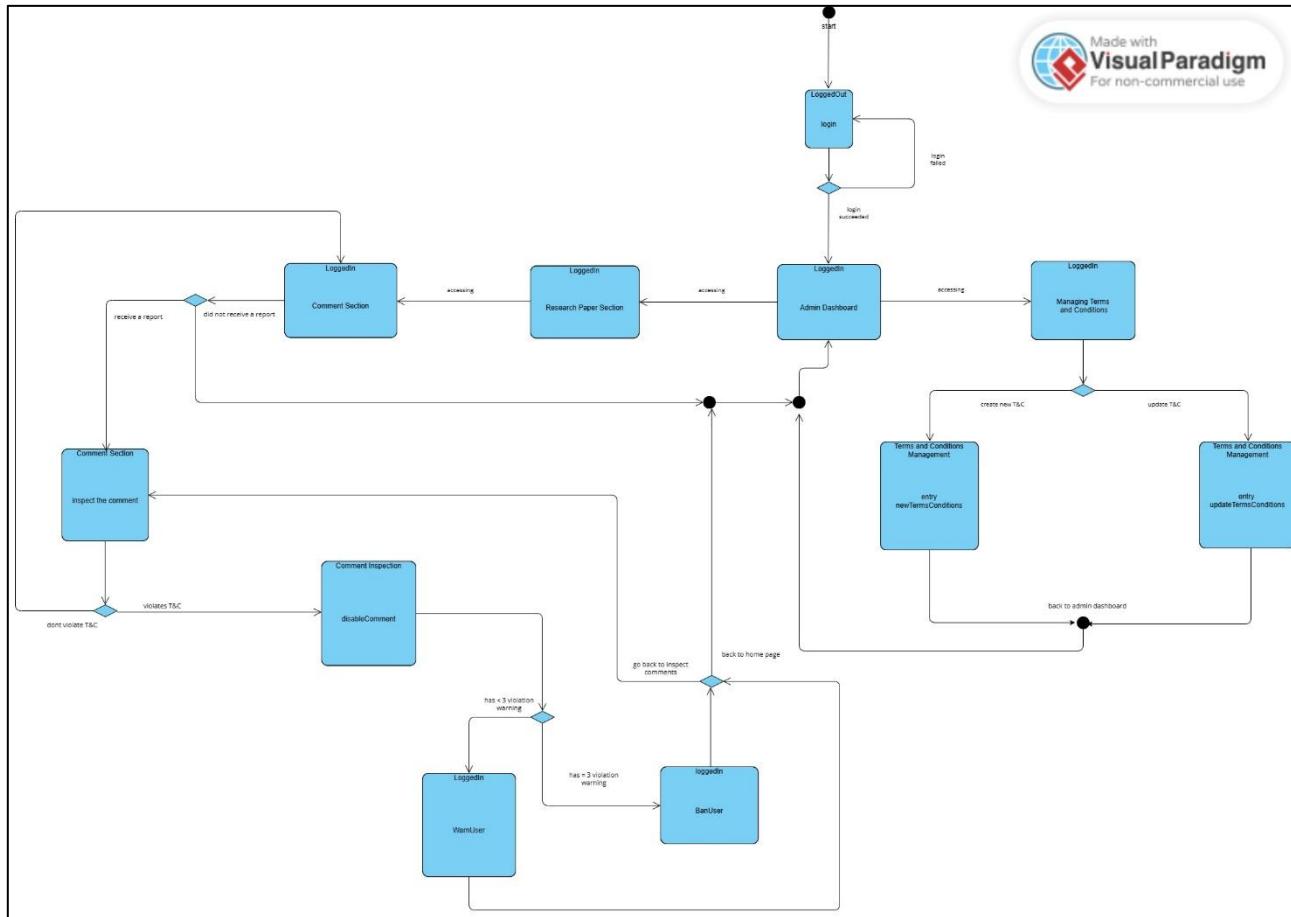
In this diagram, the full activity states possible for a Program Coordinator is shown. First, they login, then they can choose to view researcher profiles, manage submissions, view reports, generate reports and so on. Once the activities are done, Program Coordinator can log out of the system.



5.2.2.1 Program Coordinator Subsystem State Diagram

5.2.3 Admin Subsystem State Diagram

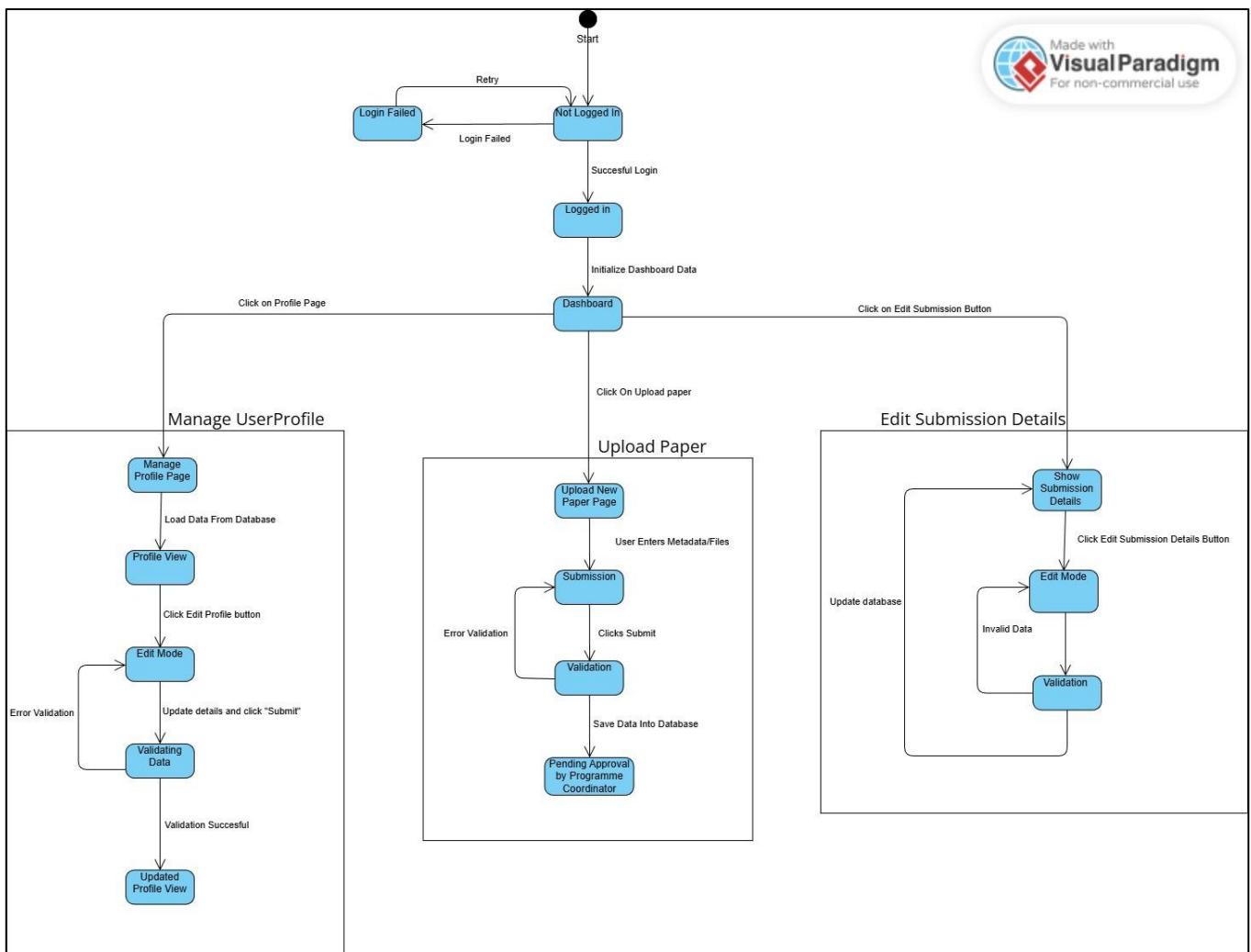
This state diagram explains about the modules and components being used in an admin subsystem and the states that are involved alongside the interactions between these components. This state diagram is following an event based diagram where different events will occur in the web application and directly changing the states of the Admin in the web application.



5.2.3.1 Admin Subsystem State Diagram

5.2.4 Researcher Subsystem State Diagram

This state diagram shows the workflow and user interface navigation for a document submission system, originating from a login sequence that leads to a central Dashboard. From the Dashboard, the system branches into three distinct functional modules: "Manage UserProfile," which handles viewing and validating profile updates; "Upload Paper," which guides the user through metadata entry, submission, validation, and final approval pending; and "Edit Submission Details," which allows for the modification and database update of existing entries. Each track incorporates specific state transitions for data validation and error handling to ensure successful processing.



5.2.4.1 Researcher Subsystem State Diagram

6 Architecture Design

6.1 Software Architecture

MMU Xplore features an architecture that is similar to that of a web application. The system architecture consists of frontend (which is the client side), backend (which is the server-side) and data layers (which is the database layer). The breakdown of these layers is shown below:

Higher Level Architecture

This diagram offers a high-level overview of MMU Xplore's architecture. It visually displays the system's structure and the key components involved. Detail descriptions of the main system architecture are displayed below. The system is divided into four components, which are client-side, frontend, server-side and data layer. The client-side consists of user devices that interact with the web application itself. The frontend consists of this project's software which servers the main functionalities and solving the problem statements from the stakeholders. The server-side, also known as backend, consists of Web API, Services, Controllers, Models, which communicates with the data layer of the application. The data layer consists of databases and folders that will store the data and user's files on the server. This diagram shows a clear explanation of how the architecture is broken down in visuals.

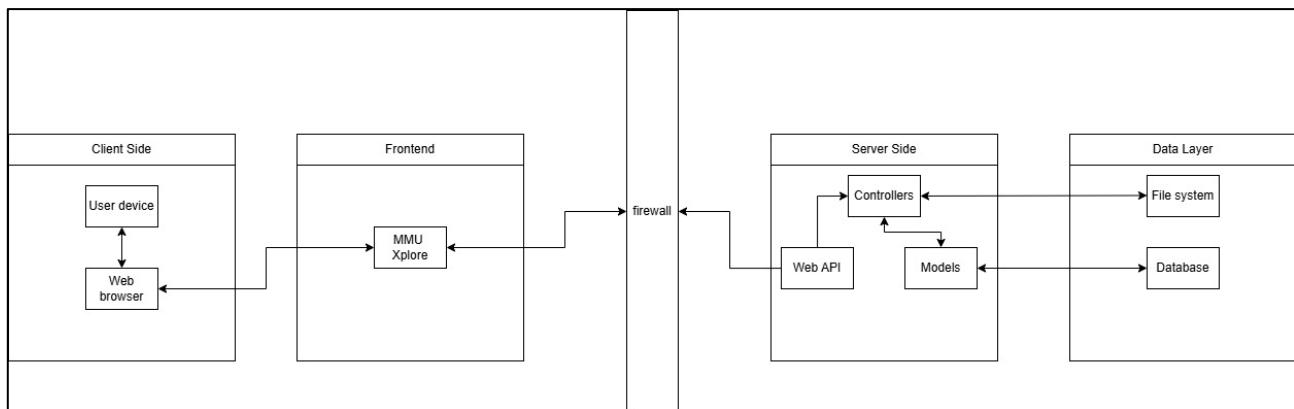


Figure 6.1.1: Higher-Level Architecture Diagram

Frontend Architecture

The frontend architecture consists of a single client-side section, both user device and web browser is included in the client-side section and the frontend, which includes the components required to build the interface of the website and enhancing user experience of the website. On the user device, various user roles such as Student, Researcher, Program Coordinator and Admin access the system through a web browser, sending http requests and receiving webpages as components back to their device. The web browser which has the website, consists of a presentation layer, user interface and container, which includes essential components like navigation bar, cards , forms, buttons, file upload and text area. These components are interactable with the pages, catering smooth communication with the backend to ensure a cohesive and efficient user experiences to the user of different actors.

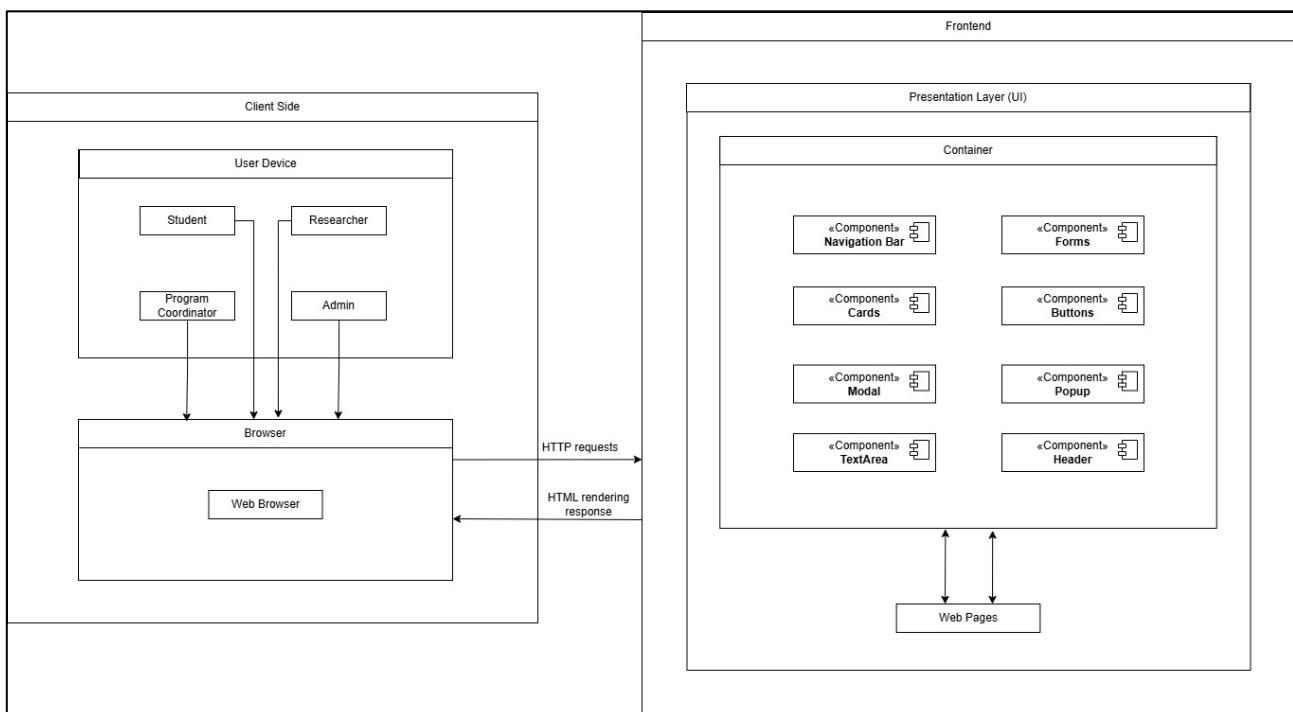


Figure 6.1.2: Front-End Architecture Diagram

Backend Architecture

The backend, which is called server side from the architecture diagram, is divided into several layers and components, ensuring a structured and modular approach to manage different actors and features on the website. At the primary requirements, the system consists of business layers, which consists of Models and Controller components. The Controller handles different actors, such as Student, Researcher, Program Coordinator and Admin, handling interactions with the database of the project. Models correspond to these actors, ensuring a clean and clear data handling and processing. The system features a Web API section, that includes a backend API and Web Server, to enable communications between both frontend and backend applications. This architecture effectively manages data flow and interactions in the system, providing a flexible and robust framework for the website's entire operations and features.

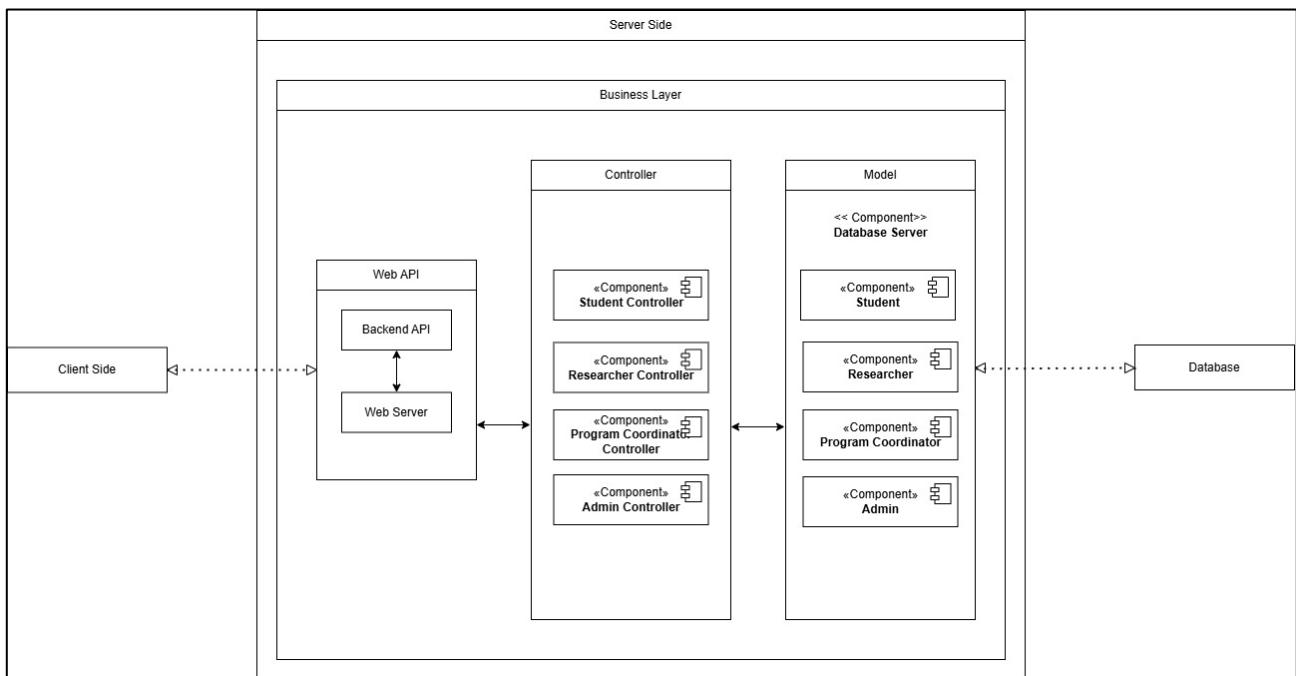


Figure 6.1.3: Backend Architecture Diagram

Data Layer Architecture

The data layer architecture is created to efficiently manage and handle data storage. It consists of two primary containers. The first container contains SQLite and a dedicated web server to handle database operations and webserver-based data transactions. The second container contains File storage with another dedicated webserver, managing file storage, retrieval and insertion in a dedicated folder. Both containers are interactable with the server side (backend), ensuring smooth data operations and accessibility. This architecture highlights the system's robust and scalable approach to data management, providing a solid support for different actors and its functionalities on the client side.

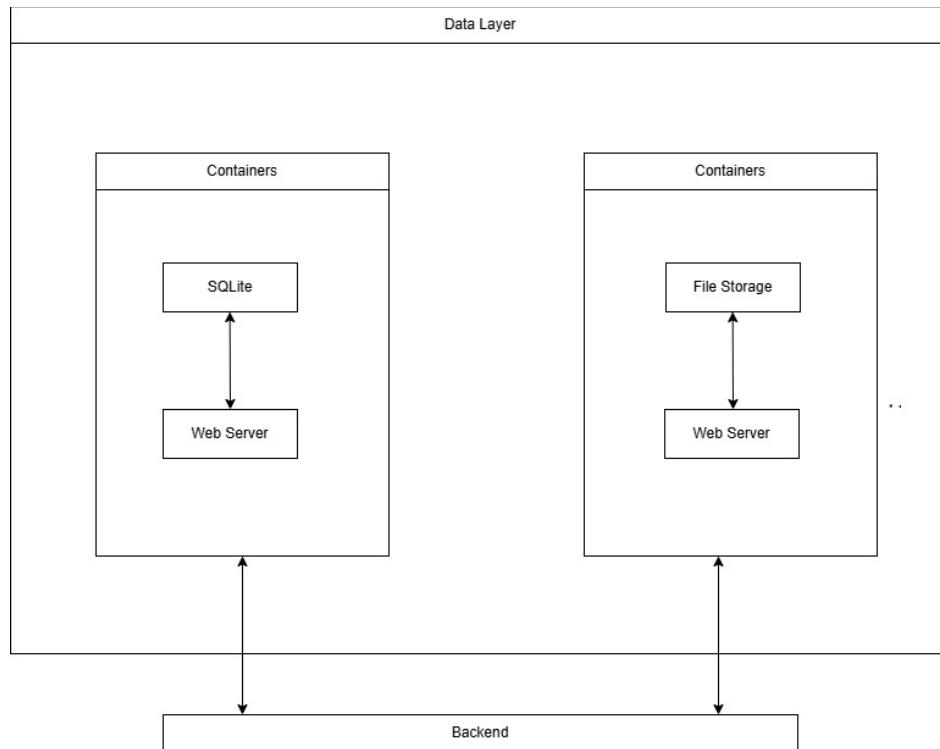
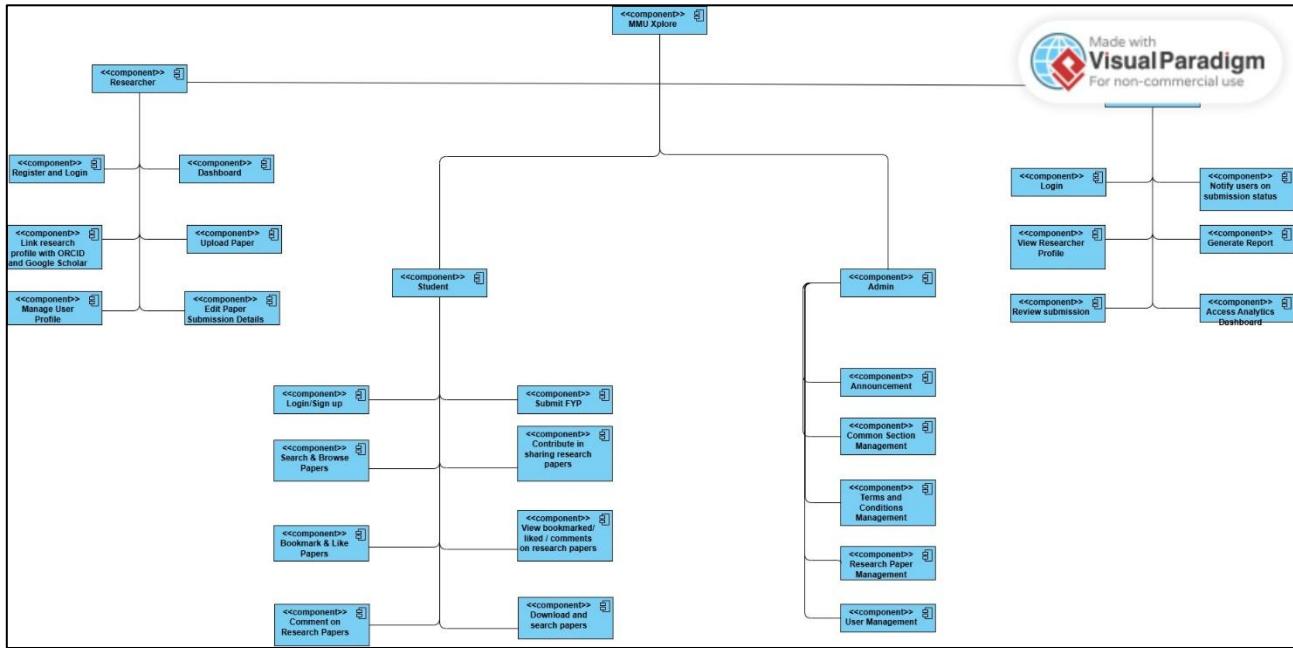


Figure 6.1.4: Data Layer Architecture Diagram

6.1.1 Architectural Diagram

Diagram 6.2.1.1 below illustrates the Architecture diagram on the component level for MMU Xplore. This system is designed to provide comprehensive support and management for actors across four main roles. Admin , Student , Researcher , Program Coordinator. Each of these actors has specific functions and responsibilities within the system.

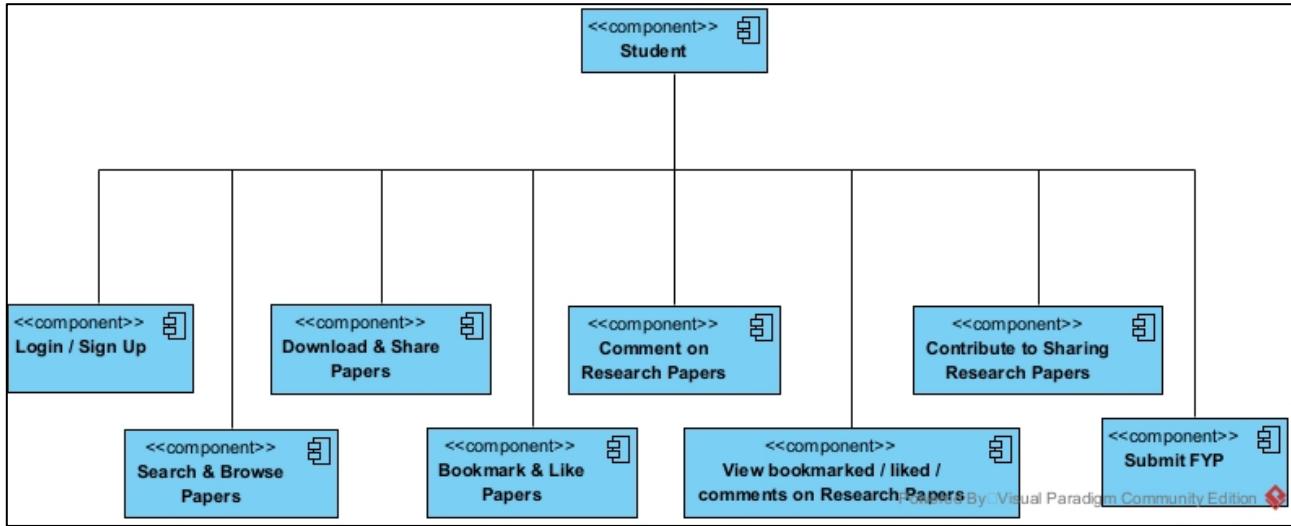


6.1.1.1 Architectural Diagram for MMU Xplore

6.1.2 Subsystems

6.1.2.1 Student Subsystem

The Student Subsystem shows how students can choose to **Login or Sign Up**, **Search and Browse** or **Download & Share Papers**. Students can also choose on **Commenting**, **Bookmarking**, and **Liking** papers, while allowing them to **view** their activity at the activity section. Additionally, students can be the **Co -Author** by **Contributing to Sharing Research Papers**. Finally, students can also **Submit their FYP**.

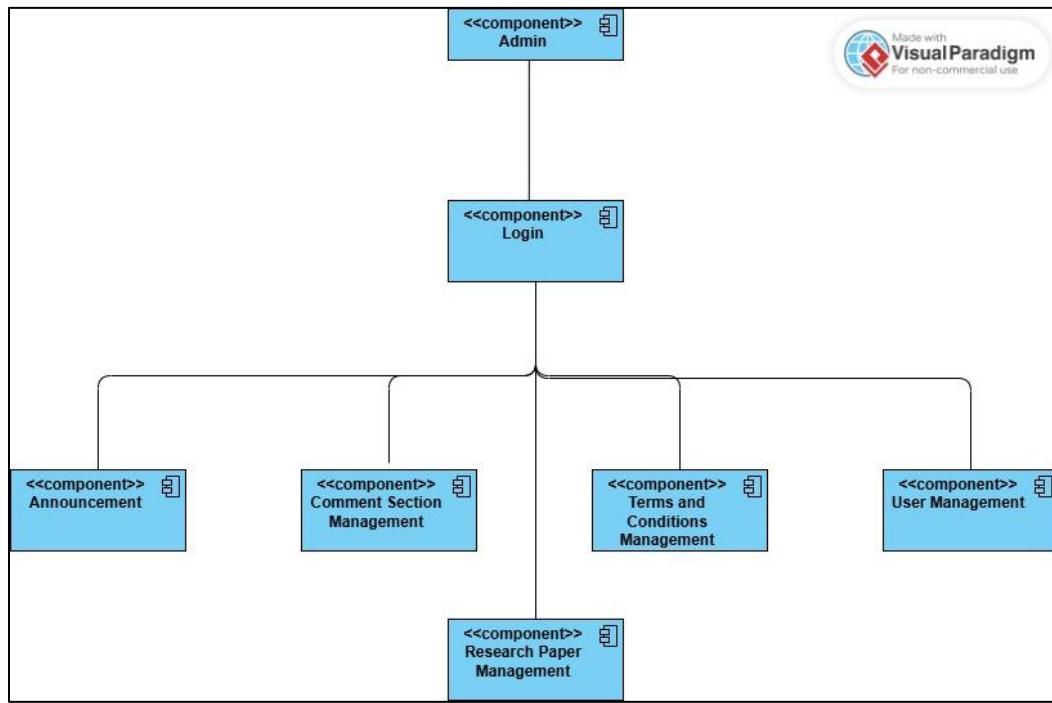


6.1.2.1.1 Student Subsystem Diagram

6.1.2.2 Admin Subsystem

The admin subsystem consists of 6 components, which is Login as Admin, Announcement, Comment Section Management, Research Paper Management, Terms and Conditions Management and User Management

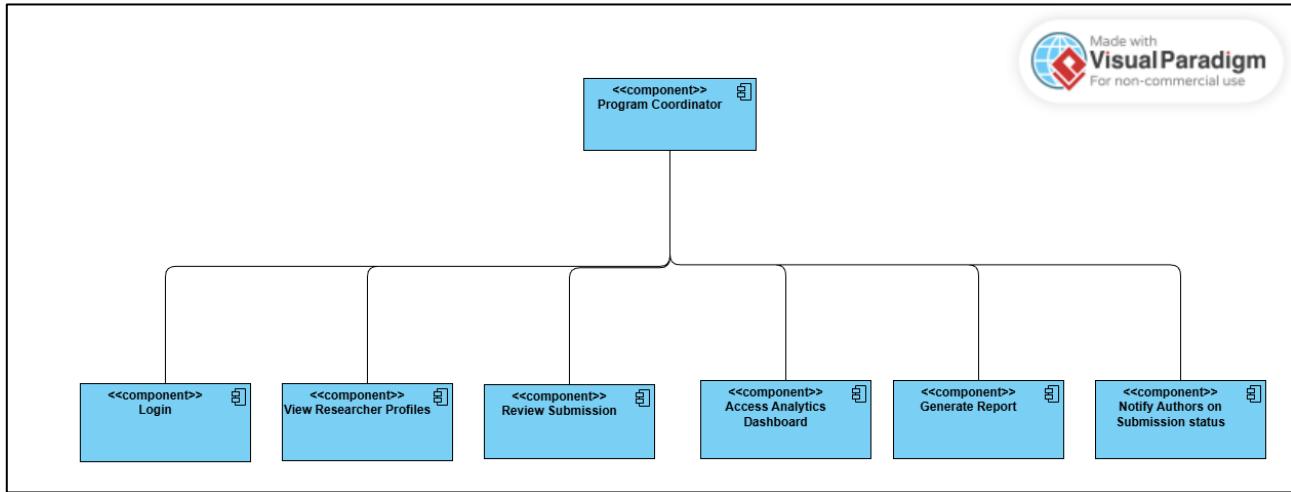
Component Name	Description
Login	This component allows admin to login as an admin the website
Announcement	This component allows admin to make announcements and updating announcements that will be viewed by all users in the website
Comment Section Management	This component enables Admin to supervise and manage comment sections on each paper section, usually being utilized by regular users in the website , such as Student
Terms and Conditions Management	This component enables admin to add and update Terms and Conditions of the website. It is an obligation for all actors in the website to follow the Terms and Conditions.
User Management	This component enables Admin to send warnings or ban users if they violate the rules in the website



6.1.2.2.1 Admin Subsystem

6.1.2.3 Program Coordinator Subsystem

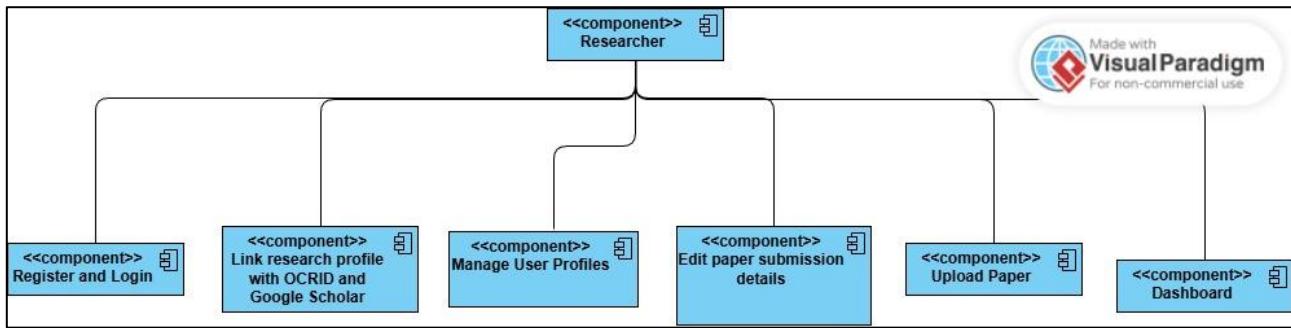
The Program Coordinator subsystem allows program coordinators to login to the website, search for or view profiles of researchers. Program coordinators also monitor, accept or reject researcher submissions, send notifications to researcher, generating reports, then program coordinators can view the analytics from the reports from the existing database.



6.1.2.3.1 Program Coordinator Subsystem

6.1.2.4 Researcher Subsystem

The Researcher subsystem allows researchers to login and register, link their research profile with ORCID and Google Scholar, manage their user profiles, edit paper submission details, upload paper and view their dashboard.



6.1.2.4.1 Researcher Subsystem

7 Interface Design

7.1 Main Page

7.1.1 Sign Up Page

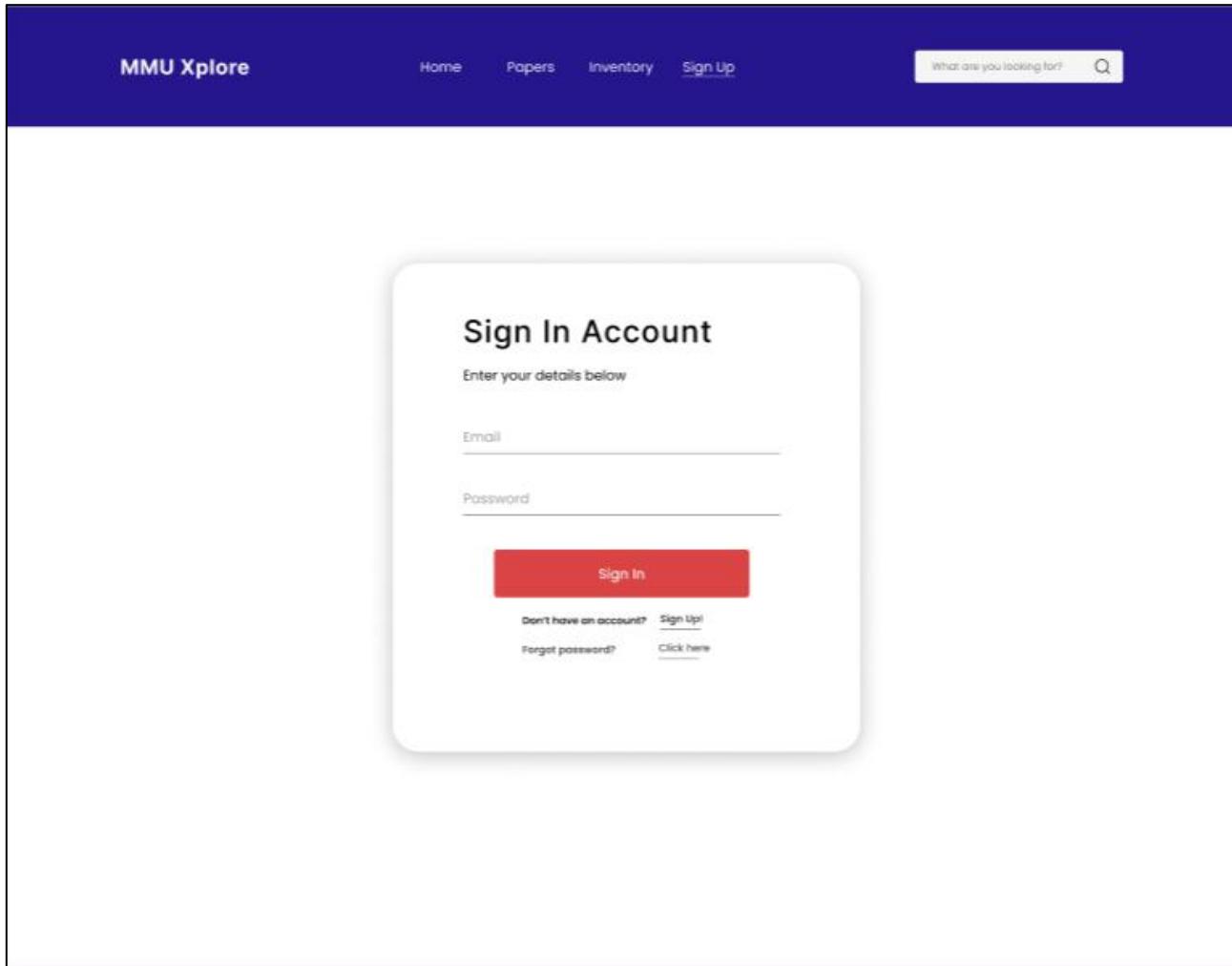
This page describes the user interface of a sign up page for users. Users will use this page to register as users to use the features of the website

The screenshot shows the 'Create an account' form on the MMU Xplore website. The form is contained within a white rounded rectangle with a shadow. At the top, it says 'Create an account' and 'Enter your details below'. Below this are four input fields: 'Name' (with placeholder 'John Doe'), 'Email or Phone Number' (with placeholder 'john.doe@example.com'), 'Password' (with placeholder 'password123'), and 'ID' (with placeholder 'MMU-XPLORE-ID'). A dropdown menu labeled 'Role' is shown with a downward arrow. At the bottom of the form is a red button labeled 'Create Account'. Below the button, a link says 'Already have account? Sign In'.

7.1.1.1 Sign Up Page

7.1.2 Sign In Page

This page will be used for users to sign in to the website to add , update , delete or read their data and their saved data in the website. Some of the features in the website can be used once the user is signed in , however , some features are restricted to certain types of actors such as submitting papers etc.



7.1.2.1 Sign In Page

7.1.3 Home Page

This page will be used to display the main items for the website , it consists of announcements and latest papers that was inserted in the website.

The screenshot shows the MMU Xplore homepage. At the top, there is a dark blue header bar with the "MMU Xplore" logo on the left, and "Home", "Papers", "Inventory", and "Sign Up" buttons. To the right is a search bar with the placeholder "What are you looking for?" and a magnifying glass icon. Below the header, the page is divided into two main sections: "Announcement" and "Latest Papers".

Announcement: This section features a large image of a woman wearing a wide-brimmed hat, with the text "Women's Collections" and "Featured women collections that give you another vibe." Below the image is a "Shop Now" button. To the right, there is a summary of a "Research Competition 2025 Liverpool Area" followed by a "View More" button. A horizontal navigation bar with five dots is positioned below the announcement image.

Latest Papers: This section displays four thumbnail cards for research papers, each with a "View More" button. The thumbnails are identical, showing a document with the title "Machine Learning Algorithm for Content Creating Research", the author "J. Doe", the journal "International Journal of Computer and Smart Technology", the volume "Volume 10", and the date "August 2021".

7.1.3.1 Home Page

7.1.4 Research Papers Page

This page will be used to display all research papers that are in the website. Users can search , sort the papers by categories provided.

The screenshot shows the 'View Research Papers' page with a dark blue header containing the 'MMU Xplore' logo, navigation links for 'Home', 'Papers', 'Inventory', and 'Sign Up', and a search bar. Below the header, the main content area is titled 'View Research Papers' and features a 'Sort By:' section with dropdown menus for 'category' and 'faculty'. The main area displays a grid of research paper cards, each consisting of a small thumbnail, the title 'Machine Learning Algorithm for Content Creating Research', the author 'Dr Shafiq', and two colored buttons ('Read' and 'Download'). The cards are arranged in three rows of four, with some cards partially visible at the bottom.

7.1.4.1 Research Paper Page

7.2 Admin

7.2.1 Terms & Conditions Management Page

This page will be used to edit and add new terms and condition of the website for users to oblige. This modification will be handled by Admin of the website.

The screenshot shows the 'T&C Management' page of the MMU Xplore platform. At the top, there is a navigation bar with links for Home, Papers, Requests, T&C Management, and Reports. A search bar and a user profile icon are also present. Below the navigation bar, the title 'T&C Management' is displayed. A large search bar with a red search button is centered above the content area. On the right side of the search bar is a blue 'add +' button. The main content area contains three sections, each enclosed in a light gray box:

- 1.0 Terms and Conditions of Service**
These Terms and Conditions constitute a legally binding agreement between you and the service provider regarding your access to and use of this platform. Your continued use of the service signifies your acceptance of these terms, including any future modifications made in accordance with applicable laws.
edit
- 2.0 Terms and Conditions of Service**
These Terms and Conditions constitute a legally binding agreement between you and the service provider regarding your access to and use of this platform. Your continued use of the service signifies your acceptance of these terms, including any future modifications made in accordance with applicable laws.
edit
- 3.0 Terms and Conditions of Service**
These Terms and Conditions constitute a legally binding agreement between you and the service provider regarding your access to and use of this platform. Your continued use of the service signifies your acceptance of these terms, including any future modifications made in accordance with applicable laws.
edit

7.2.1.1 Terms and Condition Management Page

7.2.2 Manage Announcement Page

This page will be used by admins to manage announcements in the website , they can create update , delete and view announcements being created in the website

The screenshot shows the 'Announcement Management' section of the MMU Xplore platform. At the top, there is a search bar with placeholder text 'What are you looking for?' and a magnifying glass icon. To the right of the search bar are three icons: a bell, a square, and a circle with the letter 'ng'. Below the search bar, the title 'Announcement Management' is centered. Underneath the title is a red search button with a magnifying glass icon. To the right of the search button is a blue 'add +' button. The main content area displays two announcements in a grid format. Each announcement card features a thumbnail image of the symposium, the title 'AUSTRALIAN FATHERHOOD RESEARCH SYMPOSIUM', the date '7 & 8 MAY 2020 MELBOURNE & ONLINE', and a brief description. The first announcement's description starts with 'Australian Fatherhood Research Symposium' followed by a paragraph of placeholder text. The second announcement has identical details. Each announcement card includes an 'edit' button in the bottom right corner.

7.2.2.1 Manage Announcement Page

7.2.3 Ban users if violating T&C Page

This page will be used by admins to manage violations made by users , if the users already have 3 violation counts , admin has the rights to ban them from the website

The screenshot shows the 'Reports Page' of the MMU Xplore system. At the top, there is a navigation bar with links for Home, Papers, Announcement, T&C Management, Reports, and a search bar. Below the navigation bar, the title 'Reports Page' is displayed. There are two user profiles listed:

- User 1:** User : Hakeem Haziq, Violation Count : 3, Violations: harassment in comment section. Buttons: send warning (orange), ban user (red).
- User 2:** User : Hakeem Haziq, Violation Count : 2, Violations: harassment in comment section. Buttons: send warning (orange).

7.2.3.1 Ban Users If Violating T&C Page

7.2.4 Review Comment Section Page

This feature enables admin to inspect comments available on each paper section and check if there's any violations held by users through their comments. The admin has the right to delete message , send warning to the user etc.

The screenshot shows a web application interface for 'MMU Xplore'. At the top, there is a navigation bar with links for 'Home', 'Papers', 'Inventory', and 'Shared Papers'. A search bar is also present. Below the navigation bar, the main content area displays a paper titled 'The AI Pocket Book' by Emmanuel Maggiori, published in 2023. The paper cover features a cartoon character. Below the title, there are buttons for 'FCI' and 'Research Paper', and statistics showing 420 views and 3.7k likes. Two large red buttons at the bottom right are labeled 'view' and 'download'. The page then transitions into a 'Comments' section. It starts with a heading 'Comments' and a blue 'add +' button. There are two comments listed:

- A comment from 'raziq din' dated 12 January 2025, which reads: "this is such a bad paper , who the hell does this kind of paper grrrr !". To the right of this comment are three buttons: 'delete comment', 'send warning', and a more options menu represented by three dots.
- A comment from 'skibidi toilet' dated 12 January 2025, which reads: "hi , this is such as good paper! May I know where can we get the author's number?". This comment also has a 'more' options menu icon to its right.

7.2.4.1 Review Comment Section Page

7.3 Student

7.3.1 View Liked and Bookmarked Research Paper Page

This page will be used to view user's liked and bookmarked research papers. Users are able to sort the papers via liked and bookmarked dropdown filtering button

Welcome to Inventory , Ng

liked ▾ bookmarked ▾

DIGITAL ENTHUSIASM: A SCIENTIFIC SPEECH CHARACTERISTICS OF NUMBER OF EXCERBATIONS IN COMPATENTS	DIGITAL ENTHUSIASM: A SCIENTIFIC SPEECH CHARACTERISTICS OF NUMBER OF EXCERBATIONS IN COMPATENTS	DIGITAL ENTHUSIASM: A SCIENTIFIC SPEECH CHARACTERISTICS OF NUMBER OF EXCERBATIONS IN COMPATENTS	DIGITAL ENTHUSIASM: A SCIENTIFIC SPEECH CHARACTERISTICS OF NUMBER OF EXCERBATIONS IN COMPATENTS
Dr Shafiq John Miller A. Muzni T. Ghani Submitted to the Department of Language and Speech Pathology Radford University In Fulfilment of the Requirements For a Master's Degree August 2009	Dr Shafiq John Miller A. Muzni T. Ghani Submitted to the Department of Language and Speech Pathology Radford University In Fulfilment of the Requirements For a Master's Degree August 2009	Dr Shafiq John Miller A. Muzni T. Ghani Submitted to the Department of Language and Speech Pathology Radford University In Fulfilment of the Requirements For a Master's Degree August 2009	Dr Shafiq John Miller A. Muzni T. Ghani Submitted to the Department of Language and Speech Pathology Radford University In Fulfilment of the Requirements For a Master's Degree August 2009
Machine Learning Algorithm for Content Creating Research Dr Shafiq FOM Ng	Machine Learning Algorithm for Content Creating Research Dr Shafiq FOM Ng	Machine Learning Algorithm for Content Creating Research Dr Shafiq FOM research paper	Machine Learning Algorithm for Content Creating Research Dr Shafiq FOM research paper
DIGITAL ENTHUSIASM: A SCIENTIFIC SPEECH CHARACTERISTICS OF NUMBER OF EXCERBATIONS IN COMPATENTS	DIGITAL ENTHUSIASM: A SCIENTIFIC SPEECH CHARACTERISTICS OF NUMBER OF EXCERBATIONS IN COMPATENTS	DIGITAL ENTHUSIASM: A SCIENTIFIC SPEECH CHARACTERISTICS OF NUMBER OF EXCERBATIONS IN COMPATENTS	DIGITAL ENTHUSIASM: A SCIENTIFIC SPEECH CHARACTERISTICS OF NUMBER OF EXCERBATIONS IN COMPATENTS
Dr Shafiq John Miller A. Muzni T. Ghani Submitted to the Department of Language and Speech Pathology Radford University In Fulfilment of the Requirements For a Master's Degree August 2009	Dr Shafiq John Miller A. Muzni T. Ghani Submitted to the Department of Language and Speech Pathology Radford University In Fulfilment of the Requirements For a Master's Degree August 2009	Dr Shafiq John Miller A. Muzni T. Ghani Submitted to the Department of Language and Speech Pathology Radford University In Fulfilment of the Requirements For a Master's Degree August 2009	Dr Shafiq John Miller A. Muzni T. Ghani Submitted to the Department of Language and Speech Pathology Radford University In Fulfilment of the Requirements For a Master's Degree August 2009
Machine Learning Algorithm for Content Creating Research Dr Shafiq FOM Ng	Machine Learning Algorithm for Content Creating Research Dr Shafiq FOM Ng	Machine Learning Algorithm for Content Creating Research Dr Shafiq FOM research paper	Machine Learning Algorithm for Content Creating Research Dr Shafiq FOM research paper

7.3.1.1 View Liked and Bookmarked Research Paper Page

7.3.2 Comment on Research Paper Page

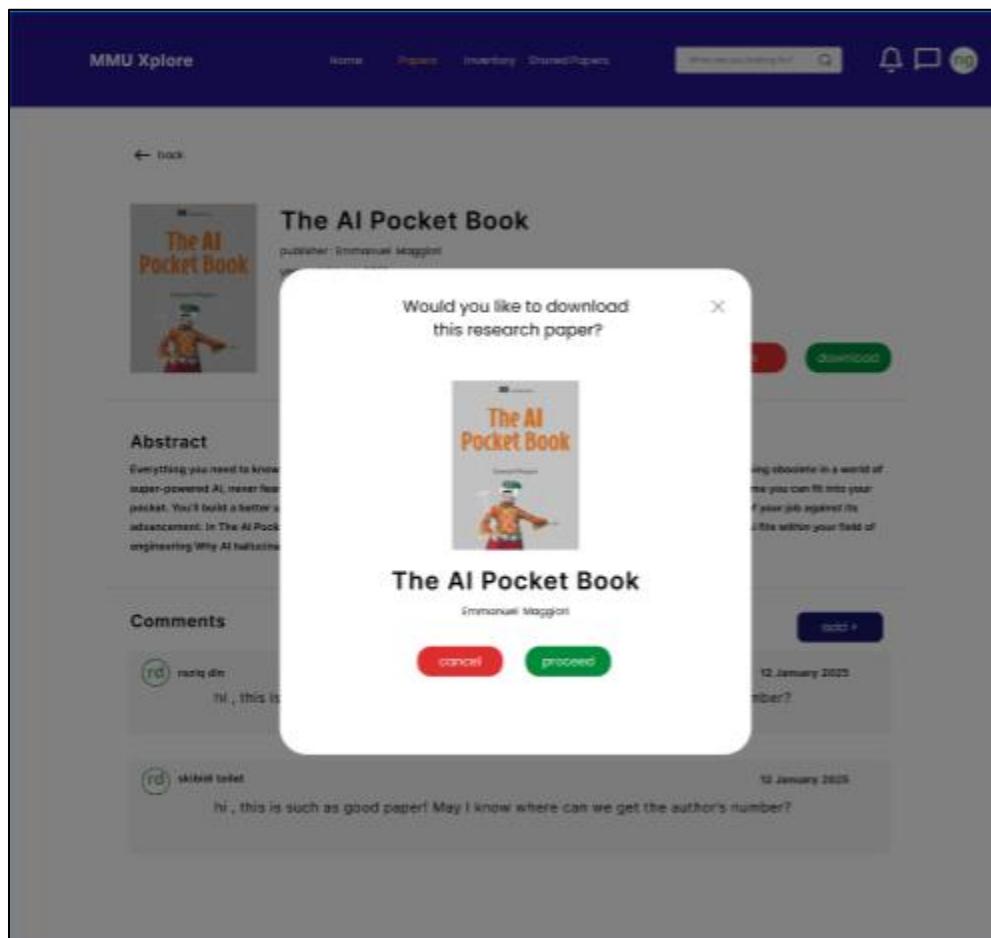
Users are also able to comment on all research paper pages.

The screenshot shows a research paper page on the MMU Xplore platform. At the top, there is a navigation bar with links for Home, Papers, Inventory, Shared Papers, and a search bar. Below the navigation bar, the title 'The AI Pocket Book' is displayed, along with the publisher (Emmanuel Maggiori) and year published (2023). The page includes a thumbnail image of the book cover, which features a cartoon character holding a wrench. Below the title, there are buttons for 'View' and 'download'. Under the title, there is a section titled 'Abstract' with a detailed description of the book's content and purpose. At the bottom, there is a 'Comments' section where two users have posted messages. The first comment is from 'raziq din' on January 12, 2025, asking if they can get the author's number. The second comment is from 'skibidi toilet' on the same date, also asking for the author's number. Both comments are displayed in a light gray box with a timestamp and user profile icon.

7.3.2.1 Comment on Research Paper Page

7.3.4 Download Research Paper Page

Users are also able to download research paper. A modal will appear to ask users to confirm their download and to double check if the paper is the paper they want to download. This further enhances the user experience to the users in the website.



7.3.4.1 Download Research Paper Page

7.3.5 Like or Bookmark Research Paper Page

Users are able to like or bookmark the research paper , when a user likes or bookmarks the paper , a notification will be given on the page to notify the users.

The screenshot shows a research paper titled "The AI Pocket Book" by Emmanuel Maggiori. The page includes a back button, a search bar, and a notification bar stating "saved to liked page!". It displays the book cover, publisher information, and metrics (420 views, 3.7k likes, 3.7k downloads). Below the abstract, there are two comments from users "raziq din" and "skibidi toilet".

Abstract

Everything you need to know about AI to survive—and thrive—as an engineer. If you're worried about your tech career going obsolete in a world of super-powered AI, never fear. The AI Pocket Book crams everything engineers need to know about AI into one short volume you can fit into your pocket. You'll build a better understanding of AI (and its limitations), learn how to use it more effectively, and future-proof your job against its advancement. In The AI Pocket Book you'll find no-nonsense advice on: Deciphering AI jargon (there's lots of it!) Where AI fits within your field of engineering Why AI hallucinates—and what to do about it What to do when AI comes for your job.

Comments

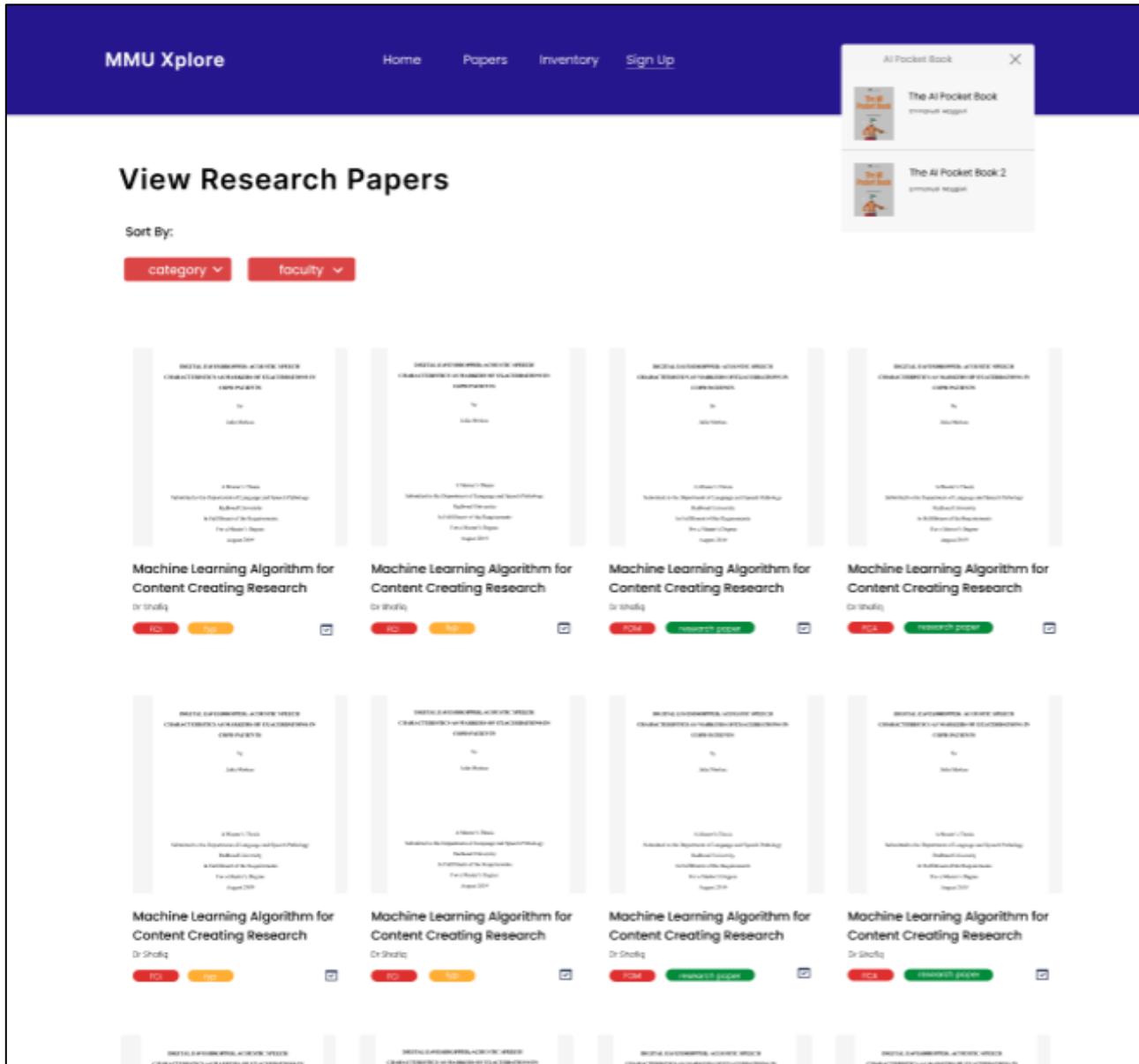
raziq din 12 January 2025
hi , this is such as good paper! May I know where can we get the author's number?

skibidi toilet 12 January 2025
hi , this is such as good paper! May I know where can we get the author's number?

7.3.5.1 Like or Bookmark Research Paper Page

7.3.6 Search Research Paper Page

Users are able to search for research papers on the search bar on the nav bar. It will display the papers based on keywords being typed by the user.



7.3.6.1 Search Research Paper Page

7.3.7 Submit Final Year Project Page

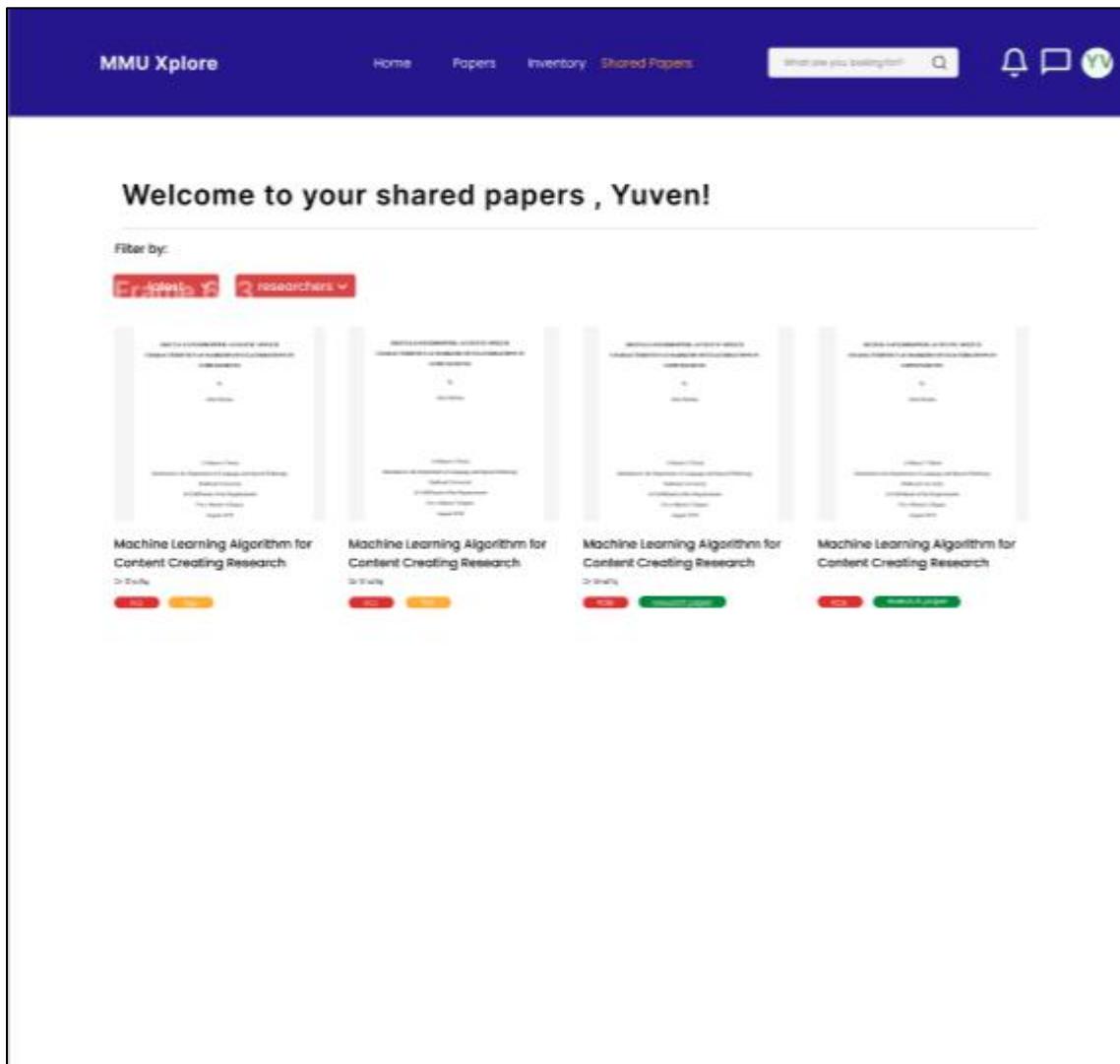
Users are able to submit their final year project paper in the inventory page , Users are required to enter title , abstract , paper attachment , contributor if any and ORCID.

The screenshot shows the 'Submit Final Year Project' page. At the top, there is a navigation bar with links for Home, Papers, Inventory (which is highlighted in orange), Shared Papers, and a search bar. Below the navigation bar, the main content area has a heading 'Submit Final Year Project'. There are four input fields: 'Title' (a text input field), 'Abstract' (a text input field), 'Paper Attachment' (a file input field with a 'select file' button and a note 'must be in pdf format'), and 'Contributor (if any)' (a text input field with a 'search' button). Below these fields is an 'ORCID' input field. At the bottom right of the form is a blue 'Submit' button.

7.3.7.1 Submit Final Year Project Page

7.3.8 Co-Authorship for Research Paper Page

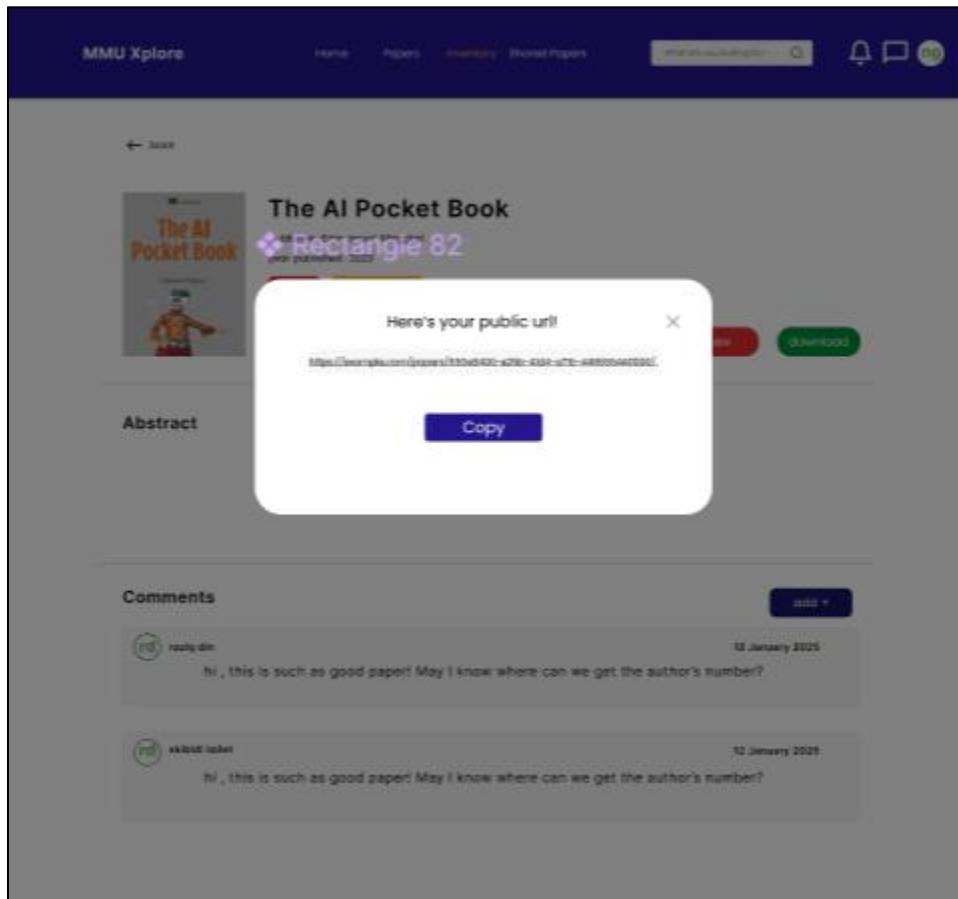
Users are able to become the co-author of a research paper made by a researcher on the website. Note that only researchers are able to grant the students or other researchers as their contributor.



7.3.8.1 Co-Authorship for Research Paper Page

7.3.9 Sharing Research Paper Page

Users are able to share the research paper through a public url that redirects to that particular research paper. The link can be used to be sent to any platform on the internet.

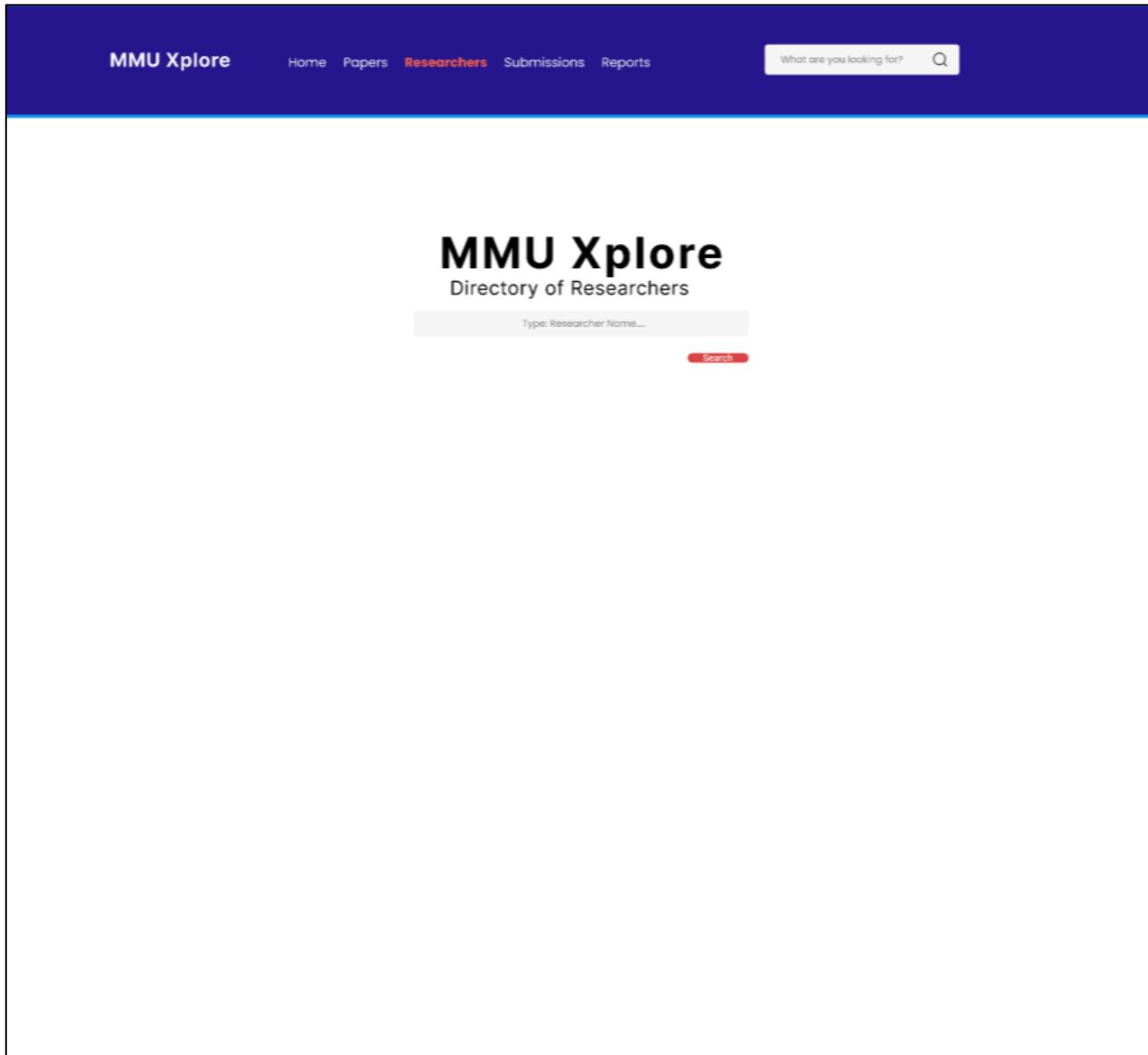


7.3.9.1 Sharing Research Paper Page

7.4 Program Coordinator

7.4.1 Search for Researchers Directory Page

This page allows user to search for any researchers in the website. It consists of researchers who have published the papers on the website.



7.4.1.1 Search for Researchers Directory Page

7.4.2 Search for Researcher Page

This page allows program coordinators to search for researcher profiles in the website. It contains of a list of researchers on the website.

The screenshot shows the MMU Xplore website's 'Researchers' section. At the top, there is a navigation bar with links for Home, Papers, Researchers (which is the active tab), Submissions, and Reports. A search bar with placeholder text 'What are you looking for?' and a magnifying glass icon is also present. To the right of the search bar are icons for notifications (with a red dot), a square, and a user profile (labeled KB).

The main content area is titled 'MMU Xplore' and 'Directory of Researchers'. Below this, it says 'Search results for: Wong (3 results)'. A table lists three researchers:

ID	Researcher Name	Faculty	Email	Phone number
501	Wong Kar Wai	Faculty of Informatics	wongkarwai@email.com	+60-123456789
502	Dr. Wong Jie Kit	Faculty of Informatics	wongjekit@email.com	+60-123456789
503	Prof. Wong Kar Wai	Faculty of Informatics	wongfeihong@email.com	+60-123456789

7.4.2.1 Search for Researchers Page

7.4.3 Reports Page

This page allows program coordinators to view reports that have been created and stored on the website. Only program coordinators are allowed to view these reports for any type of purposes.

The screenshot shows the 'Reports' section of the MMU Xplore website. At the top, there is a navigation bar with links for Home, Papers, Researchers, Submissions, and Reports. A search bar and a user icon are also present. Below the navigation bar, the title 'Reports' is displayed, followed by three buttons: 'Individual', 'faculty' (which is highlighted in red), and 'generate'. To the right of these buttons is another search bar labeled 'Search report...' with a magnifying glass icon.

The main content area is titled 'Faculty reports' and displays a grid of 16 items arranged in two rows of eight. Each item is represented by a small thumbnail image, a title, and some descriptive text. The titles include 'Q4 report on FCI research publications 2025', 'Q3 Report on FOE Research Publications 2025', 'Yearly KPI Report', 'Q3 Report on FAIE Research Publications 2025', 'Q4 report on FCI research publications 2025', 'Q3 Report on FOE Research Publications 2025', 'Yearly KPI Report', and 'Q3 Report on FCA Research Publications 2025'. Each item also includes a small red button with white text indicating its status, such as 'PDI' or 'PDI/25'.

7.4.3.1 Reports Page

7.4.4 Program Coordinator Page

This page is the program coordinator home page. It consists of submission tracking and reports list for program coordinators to see

The screenshot shows the MMU Xplore Program Coordinator Page. At the top, there is a navigation bar with links for Home, Papers, Researchers, Submissions (which is highlighted in orange), and Reports. There is also a search bar and some user icons.

The main content area starts with a welcome message: "Welcome, Kevin Brown Faculty of Computer Science". Below this is a section titled "Submissions" which contains a table of recent submissions:

ID	Title	Researcher	Status	Last updated
501	Machine Learning Algorithm for Content Creating Research	Abu Dhabi	Pending	1 days ago
502	Machine Learning Algorithm for Content Creating Research	Abu Dhabi	Approved	1 days ago
503	Machine Learning Algorithm for Content Creating Research	Abu Dhabi	Rejected	1 days ago
504	Machine Learning Algorithm for Content Creating Research	Abu Dhabi	Pending	1 days ago
505	Machine Learning Algorithm for Content Creating Research	Abu Dhabi	Rejected	1 days ago
506	Machine Learning Algorithm for Content Creating Research	Abu Dhabi	Approved	1 days ago

Below the submissions section is another section titled "Latest Reports" with three buttons: "individual", "faculty" (which is selected and highlighted in red), and "generate". There is also a search bar for reports.

The "Faculty reports" section displays four report cards, each with a title, author, and a small preview snippet. The reports are:

- Q4 report on FCI research publications 2025 by Dr. Sharq
- Q3 Report on FOE Research Publications 2025 by Dr. Khan
- Yearly KPI Report by Dr. Shafiq
- Q3 Report on FAIE Research Publications 2025 by Dr. Iman

Each report card has two small red buttons at the bottom labeled "PDF" and "View".

7.4.4.1 Program Coordinator Page

7.4.5 Manage Submission Page

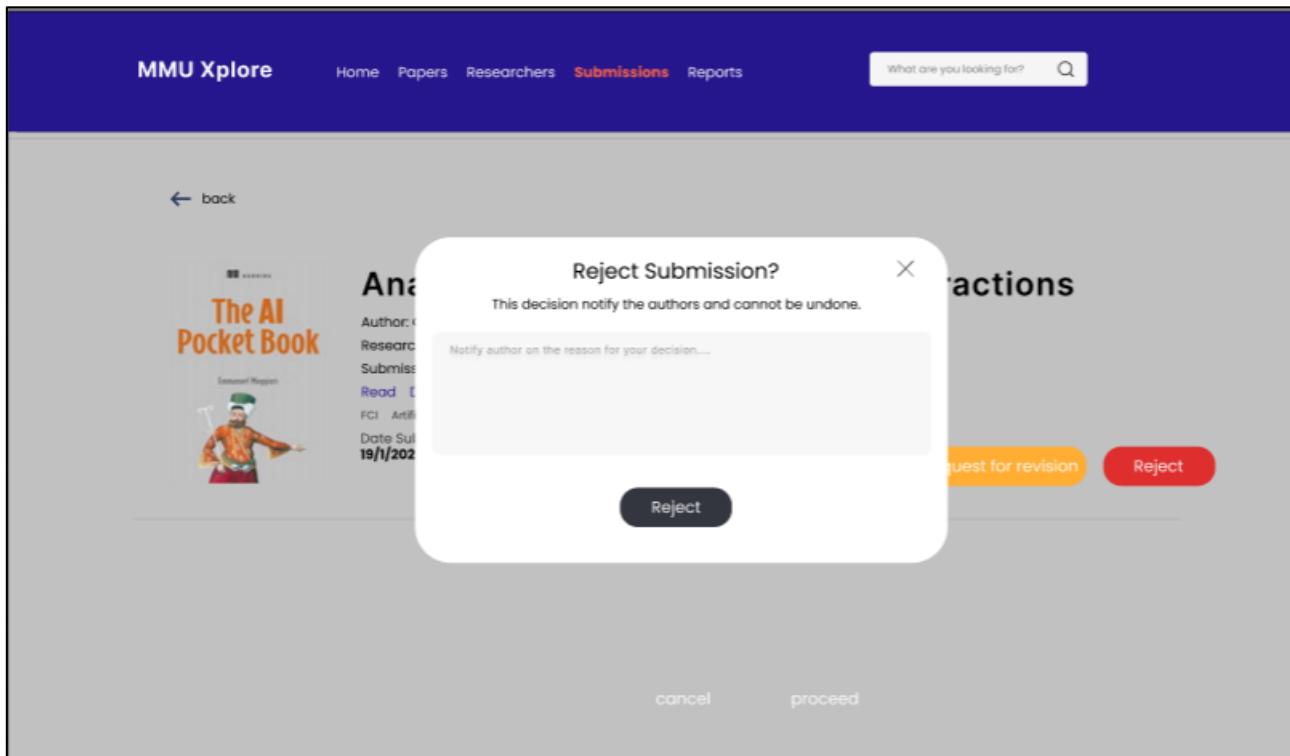
This page is used to manage submissions made by researchers. The program coordinator has the right to approve, request for revision or reject the papers.

The screenshot shows a submission page for a paper titled "Analysis on Human-Computer Interactions". At the top, there is a navigation bar with links for Home, Papers, Researchers, Submissions (which is highlighted in orange), and Reports. A search bar is also present. Below the navigation bar, there is a back button labeled "← back". On the left side, there is a thumbnail image of the paper cover titled "The AI Pocket Book" by Chan Chuan Meng, featuring a cartoon character. To the right of the image, the title "Analysis on Human-Computer Interactions" is displayed. Below the title, author information is listed: Author: Chan Chuan Meng, Researcher ID: 1127, Submission ID: 205. There are also links for "Read" and "Download paper". The paper is categorized under FCI Artificial Intelligence Conference Paper. The date submitted is 19/1/2026. At the bottom right, there are three buttons: "Approve" (green), "Request for revision" (orange), and "Reject" (red).

7.4.5.1 Manage Submission Page

7.4.6 Approve / Reject Submission Page

This page is used to approve or reject submissions made by researchers. If the program coordinator rejects the paper, they must state the reasoning and will notify the researchers.



7.4.6.1 Approve /Reject Submission Page

7.4.7 Generate Faculty Reports Page

This page is used to generate faculty reports for research papers analytics such as titles, submission count and acceptance rate.

The screenshot shows the 'Generate Faculty Reports' page of the MMU Xplore system. At the top, there is a dark blue header bar with the 'MMU Xplore' logo, navigation links for Home, Papers, Researchers, Submissions, and Reports, a search bar, and user icons for notifications, messages, and profile. Below the header, the main content area has a white background. It starts with a section titled 'Select Report Type' containing two radio buttons: 'Individual' (unchecked) and 'Faculty' (checked). The next section is 'Select Faculty', which includes a dropdown menu set to 'Faculty of Informatics'. Under 'Report parameters', there are three dropdown menus: 'Paper Type' (set to 'Journal'), 'Track topic' (set to 'Biology'), and 'Submission Status' (checkboxes for 'Accepted' and 'Rejected', both checked). The final section is 'Report Content', which contains three checkboxes: 'List of Titles' (checked), 'Submission Count' (checked), and 'Acceptance Rate (%)' (checked). A blue 'Generate Report' button is located at the bottom left of this section.

7.4.7.1 Generate Faculty Reports Page

7.4.8 Generate Individual Reports Page

This page is used to generate individual reports for each researchers in the website.

The screenshot shows the 'MMU Xplore' website interface. At the top, there is a dark blue header bar with the 'MMU Xplore' logo on the left and navigation links for 'Home', 'Papers', 'Researchers', 'Submissions', and 'Reports'. On the right side of the header, there is a search bar containing 'What are you looking for?' with a magnifying glass icon, a notification bell icon with a red dot, a document icon, and a user profile icon labeled 'KB'. Below the header, the main content area has a white background. It features a section titled 'Select Report Type' with two radio button options: 'Individual' (selected) and 'Faculty'. Underneath this, there is a heading 'Search by individual' followed by a search bar with placeholder text 'Search by Name or ID' and a magnifying glass icon. A table below the search bar lists three researcher entries:

ID	Researcher Name	Faculty	Select
501	Wong Kar Wai	Faculty of Informatics	Generate Report
502	Dr. Wong Jie Kit	Faculty of Informatics	Generate Report
503	Prof. Wong Kar Wai	Faculty of Informatics	Generate Report

7.4.8.1 Generate Individual Reports Page

7.5 Researcher

7.5.1 Researchers Dashboard Page

This page is the researcher dashboard page. This dashboard page is only viewable for program coordinators.

The screenshot shows the researchers dashboard page for Syed Hageem. The top navigation bar includes links for Home, Papers, Researchers, Submissions, and Reports, along with a search bar and user icons for notifications, profile, and KB. A welcome message 'Welcome back , Syed!' is displayed. The dashboard features two main sections: 'Your Profile' (purple card) and 'Your Submissions' (green card). The 'Your Profile' section shows a placeholder profile picture (SH), the name 'Syed Hageem', and the title 'Researcher at Monash University'. An 'update' button is present. The 'Your Submissions' section displays three categories: 'Revision' (1), 'Pending' (20), and 'Accepted' (30), each with a 'view more' button. Below these sections is a callout box titled 'Check out your paper engagements!' containing three cards for 'The AI Pocket Book' published on 20th January 2024. Each card shows engagement statistics: downloads (2000), likes (1000), and bookmarked (500), with an 'update paper' button.

7.5.1.1 Researchers Dashboard Page

7.5.2 Researchers Profile Management Page

This page is the researcher profile management page. Researchers are able to manage their own profile page on the website.

MMU Xplore

Home Papers Researchers Submissions Reports

What are you looking for?

Profile Page

Username

Biography

Field of Interest

Google Scholar Link

ORCID

Save

7.5.2.1 Researchers Profile Management Page

7.5.3 Researcher Upload Paper Page

This page is for researchers to upload their papers in the website. It includes Title , Abstract , Paper attachment , Co-Author , DOI

The screenshot shows the 'Upload Paper' form on the MMU Xplore website. The top navigation bar includes links for Home, Papers, Researchers (which is highlighted in red), Submissions, and Reports. A search bar with placeholder text 'What are you looking for?' and a magnifying glass icon is also present. The main form area has the following fields:

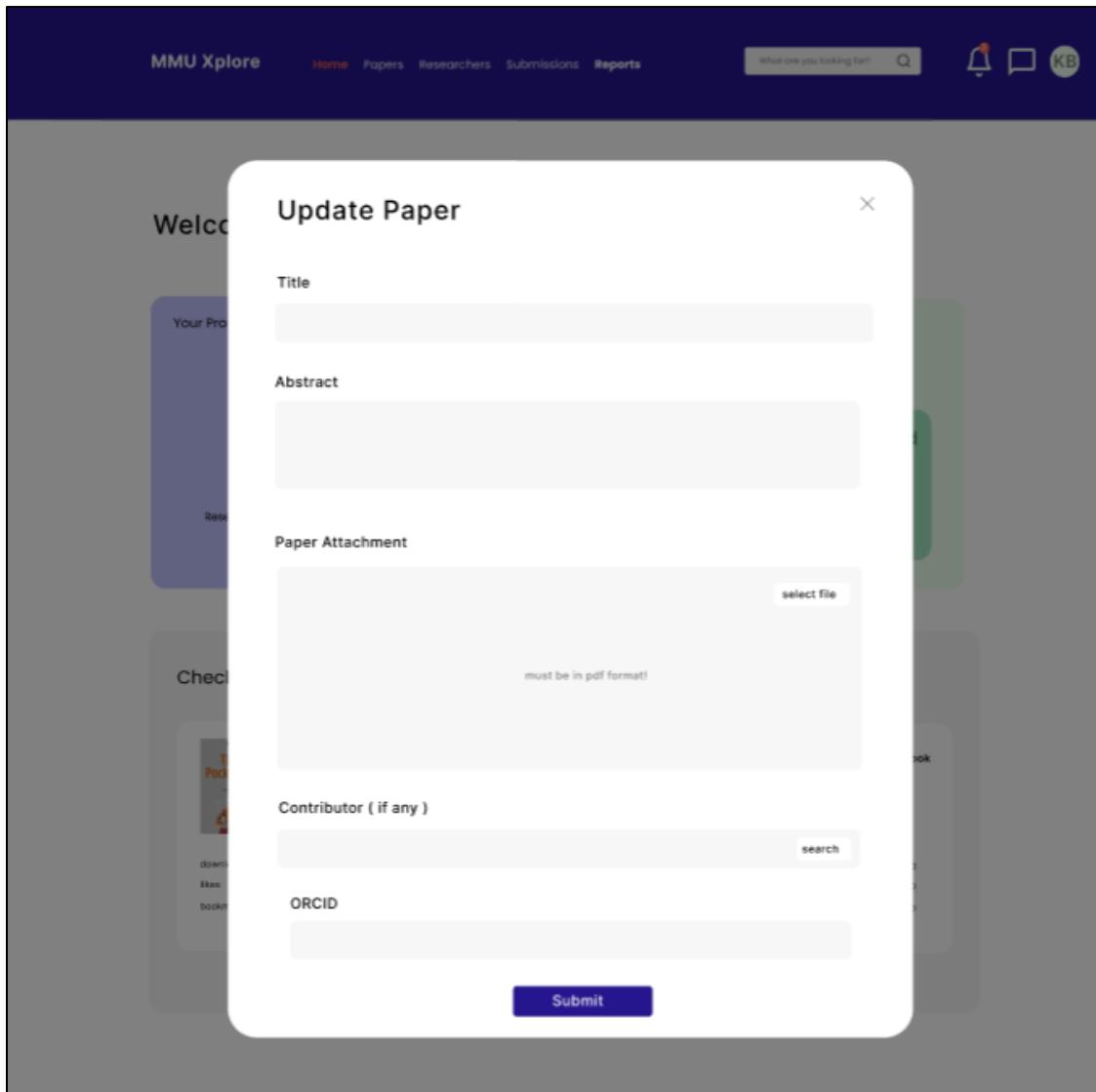
- Title:** An input field.
- Abstract:** An input field.
- Paper Attachment:** A file input field with a 'select file' button. Below it, a note says 'must be in pdf format!'
- Co-Author(if any):** An input field with a 'search' button to its right.
- DOI:** An input field.

A large blue 'Submit' button is located at the bottom center of the form.

7.5.3.1 Researcher Upload Paper Page

7.5.4 Update Research Paper from Dashboard Page

This page is for researchers to update their paper content from their Dashboard Page. It contains the same fields for their paper contents.



7.5.4.1 Update Research Paper from Dashboard Page

8 Component Design

8.1 Main Component

The system is made up of core components that handle user access, research paper submission, interaction, moderation, and reporting based on user roles.

Actor	Use Cases
Student	Sign up / Login
	Find / Browse Research Papers
	Download Research Papers
	Bookmark or Like interested Research Papers
	View bookmarked / liked / comments on Research Papers
	Share Interested Research Papers
	Comment on Research Papers (With Supervisor Supervision)
	Contribute to Sharing Research Papers (With Lecturer Collaboration) / Be a Co-Author
	Submit Final Year Project (FYP)
Admin	Login
	Post / Update Announcements
	Review Comment Section / Forum Sections
	Ban users if violating the Code of Conduct / T & C
	Create / Update Code of Conduct in the website
Lecturer/Researcher	Register And Login into the System
	Manage their user profiles (profile picture, biography, research profiles)
	Upload Paper for Submission
	Dashboard to track the status of their paper submission, notifications, publications
	Edit paper submission details from dashboard

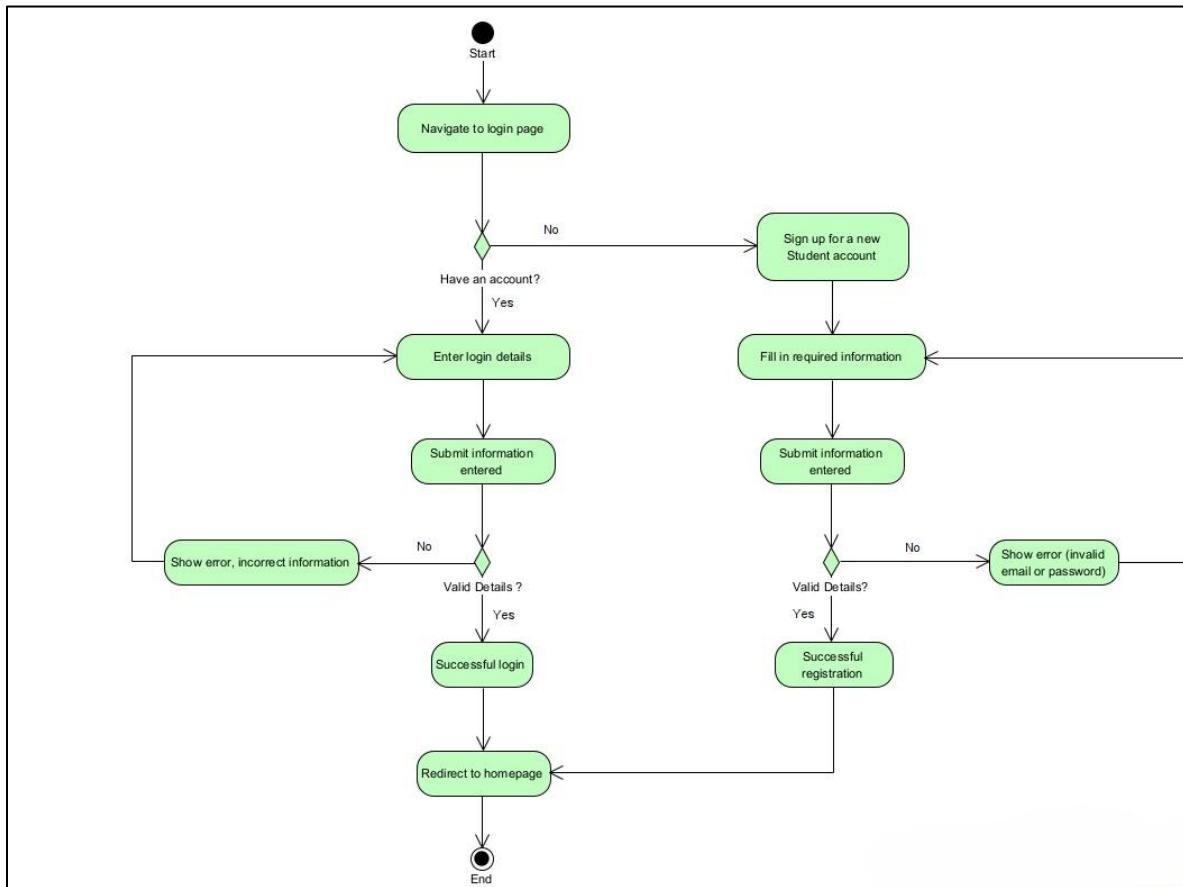
	Link their research profiles from ORCID and Google Scholar
Programme Coordinator	Login
	View researcher profiles
	Monitor, approve or reject submissions
	Notify authors on submission status
	Generate reports on Faculty/Department KPI individual summaries
	Access Analytics Dashboard

Table 8.1.1: Main Component Table

8.1.1 Student

8.1.1.1 Sign Up or Login as Student

The Student Login and Registration activity diagram shows that students can either login with an existing account or create a new one. The system checks the information or details entered by students (for both Login and Registration). If any details are incorrect, an error message will be shown. Once, information is valid, the system will redirect students to the homepage.



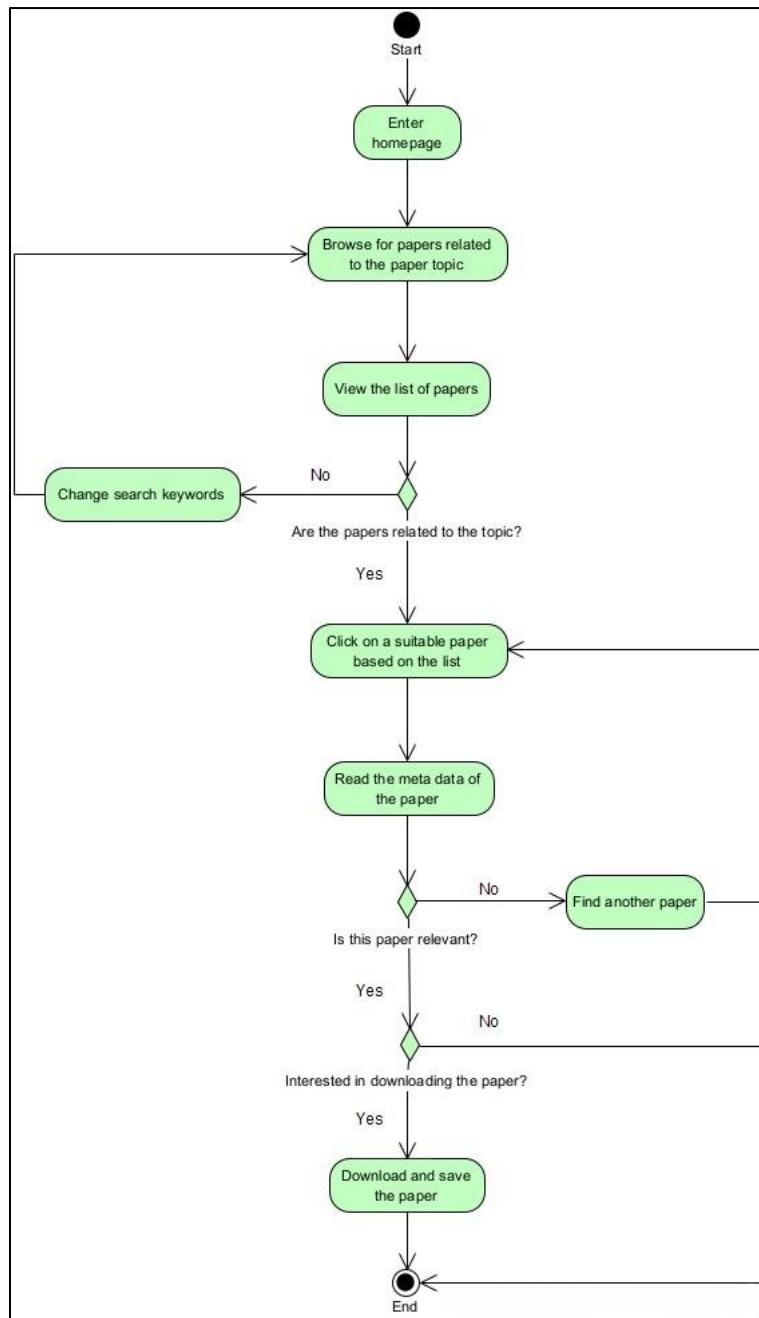
8.1.1.1 Sign Up or Login as Student Activity Diagram

```
1  START
2      Go to login page
3
4  IF (have account) THEN
5      FOR (as long as login successful is False)
6          Enter login details
7          Submit login details
8          IF (valid login) THEN
9              Login successful = True
10             Redirect to homepage
11        ELSE
12            Show error "incorrect information"
13            Prompt for reentry
14        END IF
15    END FOR
16 ELSE
17
18    FOR (as long as registration successful is False)
19        Sign up for new account
20        Fill in information
21        Submit registration
22        IF (valid registration details) THEN
23            Registration successful = True
24            Redirect to homepage
25        ELSE
26            Show error "invalid email or password"
27            Prompt for reentry
28        END IF
29    END FOR
30 END IF
31 END
```

8.1.1.1.2 Sign Up or Login as Student Pseudocode

8.1.1.2 Find / Browse and Download Research Papers

The Find / Browse and Download Research Papers activity diagram shows how students can browse for papers related to a specific topic. The system displays a list of papers. If the results are not related to the topic, students can change their keywords to refine the search. Once they've found a proper list, they can click on a paper they're interested in and read the metadata. If the specific paper is not relevant, students can find a different paper. Students can also download and save the paper afterwards.



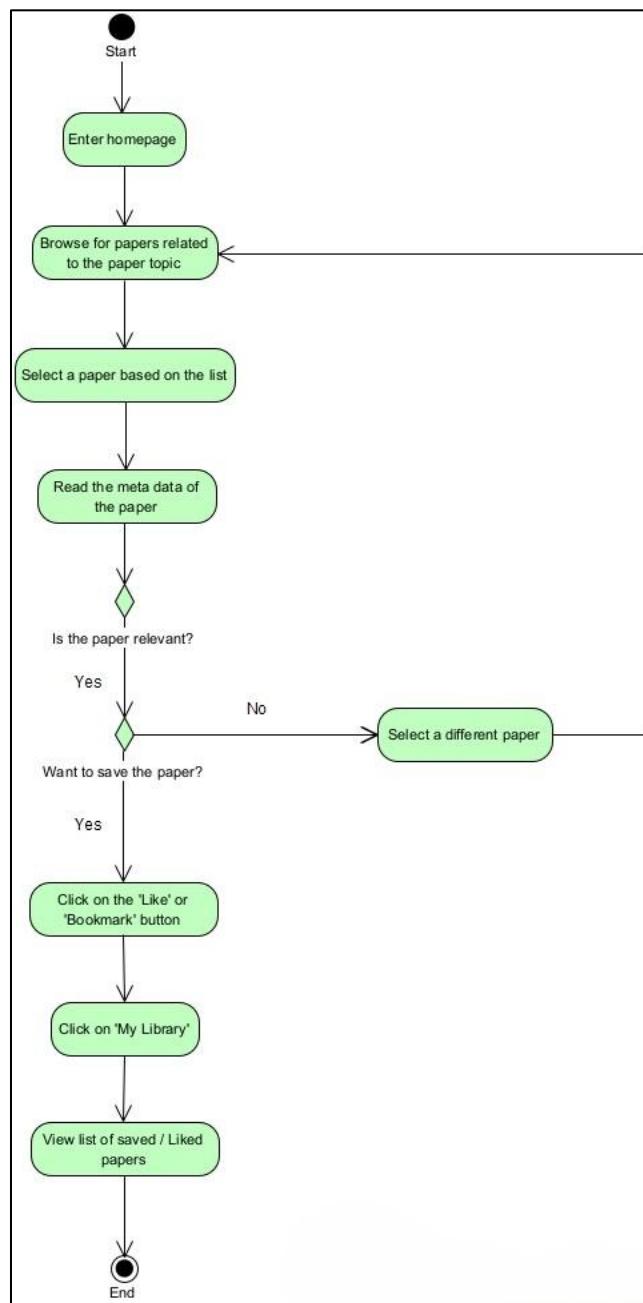
8.1.1.2.1 Find / Browse and Download Research Papers Activity Diagram

```
1 START
2   Go to homepage
3   Browse for papers related to topic
4
5   FOR (as long as paper is not suitable)
6     IF (papers are related to topic) THEN
7       View list of papers
8       Click on a suitable paper
9       Read meta data of the paper
10
11    IF (paper is relevant) THEN
12      IF (interested in downloading) THEN
13        Download and save the paper
14        Paper is suitable = True
15      ELSE
16
17        Continue
18      END IF
19    ELSE
20
21      Find another paper
22    END IF
23  ELSE
24
25    Change search keywords
26  END IF
27 END FOR
28 END
```

8.1.1.2.2 Find / Browse and Download Research Papers Pseudocode

8.1.1.3 Bookmark or Like and View Interested Research Papers

The Bookmark or Like and View Interested Research Papers activity diagram shows how students can ‘Like’ or ‘Bookmark’ a paper they are interested in. Once they’ve saved the paper, they can navigate to the ‘My Library’ section to view the list of papers they have bookmarked or liked. Conversely, if they are not interested in that specific paper, they can select another paper from the list.



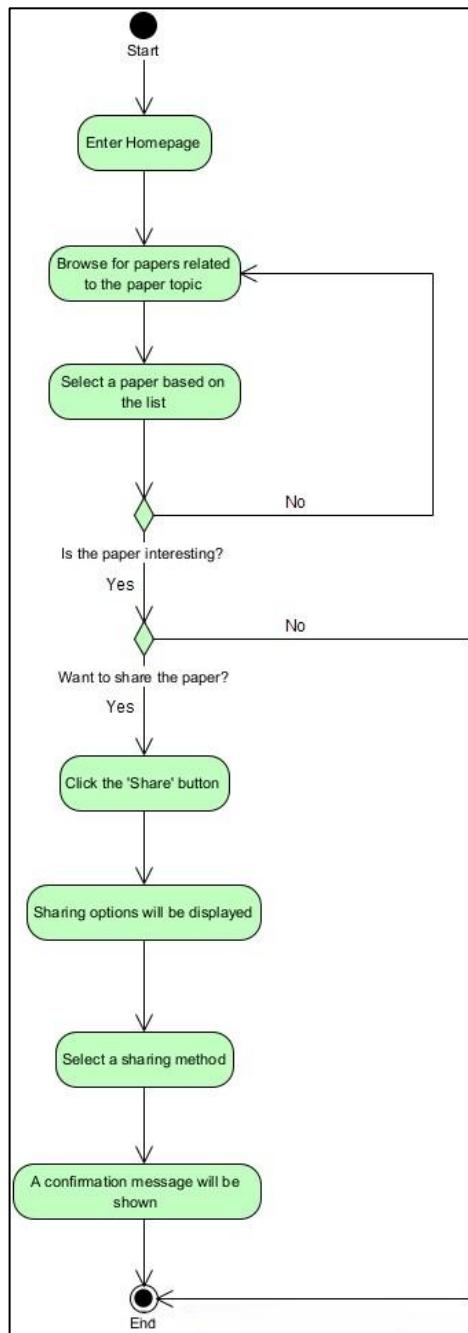
8.1.1.3.1 Bookmark or Like and View Interested Research Papers Activity Diagram

```
1 START
2   Go to homepage
3   Browse for papers related to the paper topic
4
5   FOR (as long as paper is not suitable)
6
7     Select a paper based on the list
8     Read the meta data of the paper
9
10    IF (Is the paper relevant?) THEN
11
12      IF (Want to save the paper?) THEN
13        Click on the 'Like' or 'Bookmark' button
14        Click on 'My Library'
15        View list of saved / Liked papers
16        Paper is suitable = True
17      ELSE
18
19        Continue to End
20      END IF
21
22    ELSE
23
24      Select a different paper
25    END IF
26
27  END FOR
28 END
```

8.1.1.3.2 Bookmark or Like and View Interested Research Papers Pseudocode

8.1.1.4 Share Interested Research Papers

The Share Research Papers activity diagram shows how students can share a paper they find interesting. If they decide to share, they can simply click on the ‘Share’ button. After that, sharing options will be displayed, allowing students to select a specific sharing method. Finally, a confirmation message will be shown to verify the successful action.



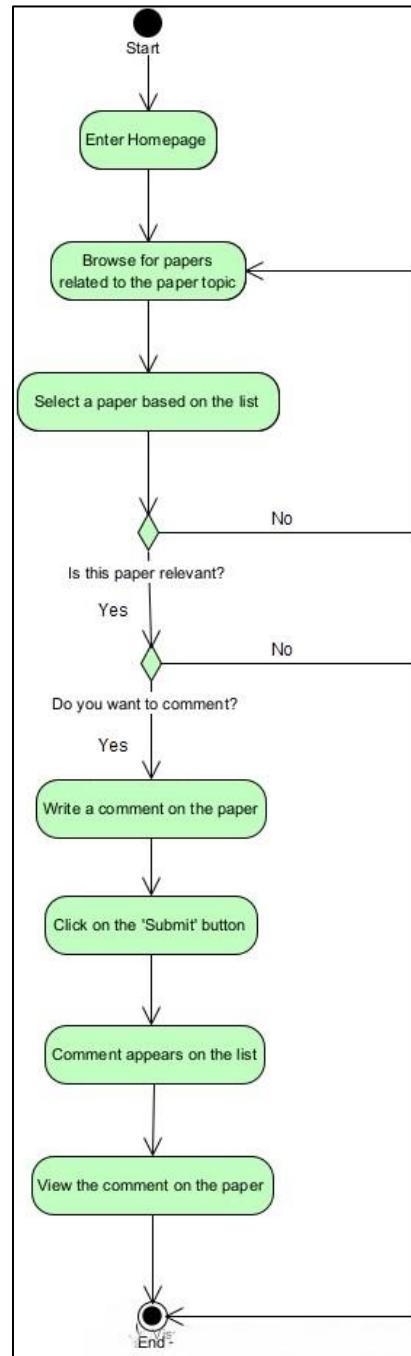
8.1.1.4.1 Share Interested Research Papers Activity Diagram

```
1  START
2      Go to homepage
3      Browse for papers related to the paper topic
4      Select a paper based on the list
5
6      FOR (as long as sharing is not complete)
7          IF (Is the paper interesting?) THEN
8              IF (Want to share the paper?) THEN
9                  Click the 'Share' button
10                 Sharing options will be displayed
11                 Select a sharing method
12                 A confirmation message will be shown
13                 BREAK LOOP
14             ELSE
15
16                 GOTO END
17             END IF
18         ELSE
19
20             Browse for papers related to the paper topic
21             END IF
22         END FOR
23
24 END
```

8.1.1.4.2 Share Interested Research Papers Pseudocode

8.1.1.5 Comment and View Comments on Research Papers

The Comment and View Comments activity diagram shows how students can leave a comment on papers they are interested in. If they choose to comment, they can write their feedback and click the submit button. They then, can view the comment on the paper's page. If the paper is not interesting, they can choose to skip it.



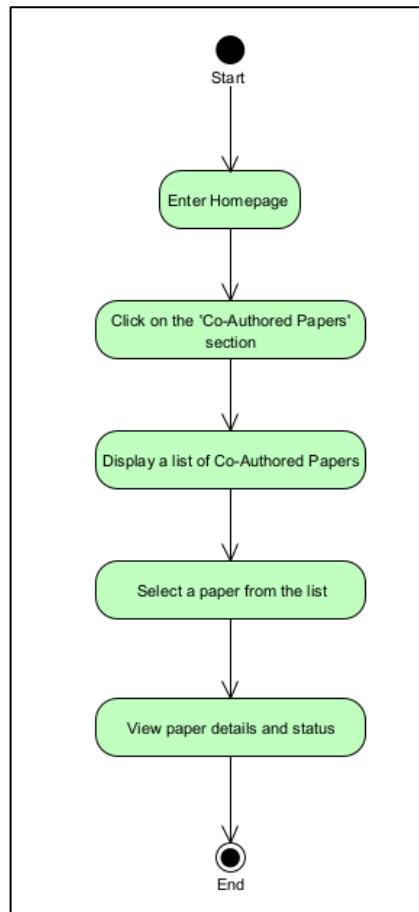
8.1.1.5.1 Comment and View Comments on Research Papers Activity Diagram

```
1 START
2   Go to homepage
3   Browse for papers related to the paper topic
4   Select a paper based on the list
5
6   FOR (as long as a suitable paper is not found)
7     IF (Is this paper relevant?) THEN
8       IF (Do you want to comment?) THEN
9         Write a comment on the paper
10        Click on the 'Submit' button
11        Comment appears on the list
12        View the comment on the paper
13        BREAK LOOP (Go to End)
14     ELSE
15
16     GOTO END
17   END IF
18 ELSE
19
20   Browse for papers related to the paper topic
21 END IF
22 END FOR
23 END
```

8.1.1.5.2 Comment and View Comments on Research Papers Pseudocode

8.1.1.6 Contribute to Sharing Research Papers / Be a Co-Author

The Contribute to Sharing Research Papers / Be a Co-Author activity diagram shows how students can collaborate with lecturers to publish papers or in another words, be a co-author. Students can select the 'Co-Authored Papers' section to view the submissions where they have been tagged as co-author by a lecturer. By selecting a specific paper, the student can view its full details and current publication status, such as 'Pending Subject Coordinator Approval', 'Changes Required', or 'Published'.



8.1.1.6.1 Contribute to Sharing Research Papers / Be a Co-Author Activity Diagram

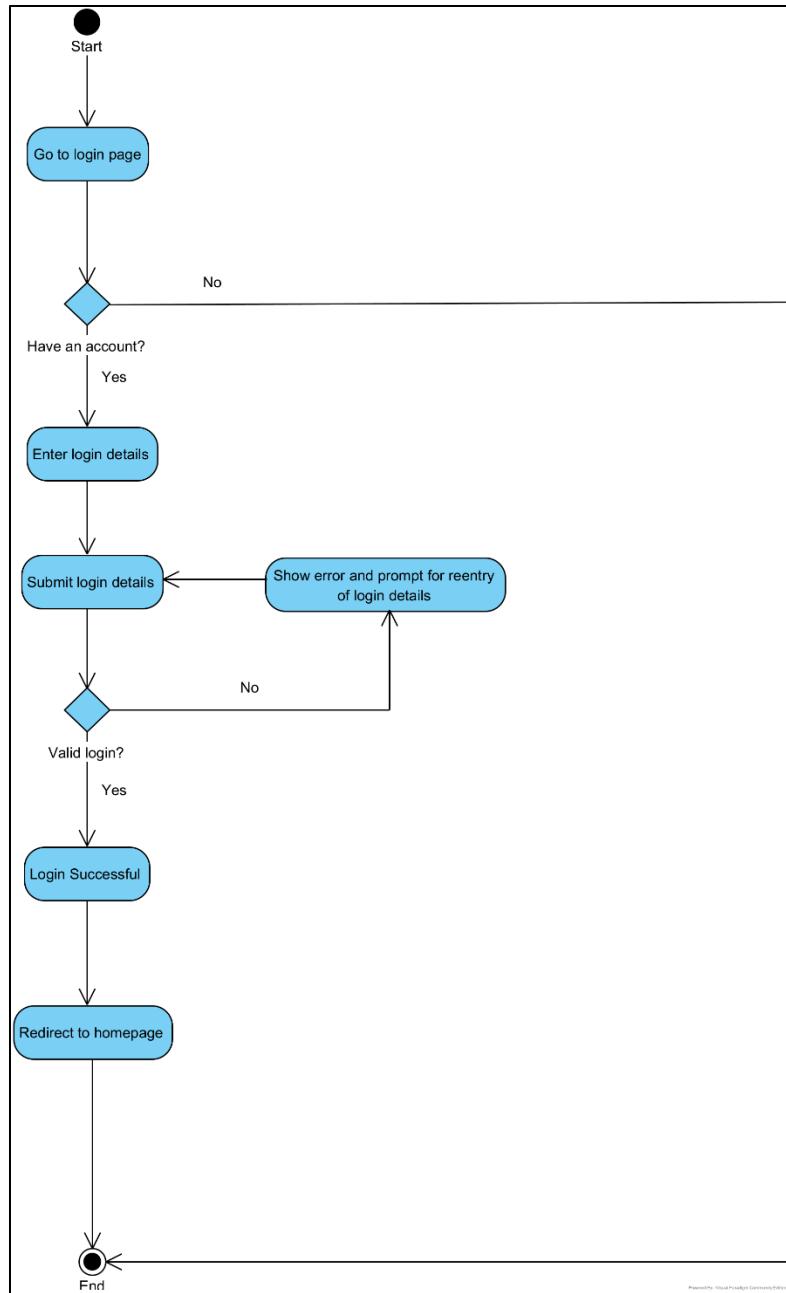
1	START
2	Enter Homepage
3	Click on the 'Co-Authored Papers' section
4	Display a list of Co-Authored Papers
5	Select a paper from the list
6	View paper details and status
7	END

8.1.1.6.2 Contribute to Sharing Research Papers / Be a Co-Author Pseudocode

8.1.2 Program Coordinator

8.1.2.1 Login

Programme Coordinator can login to the website using specific id and password, created by the administrator.



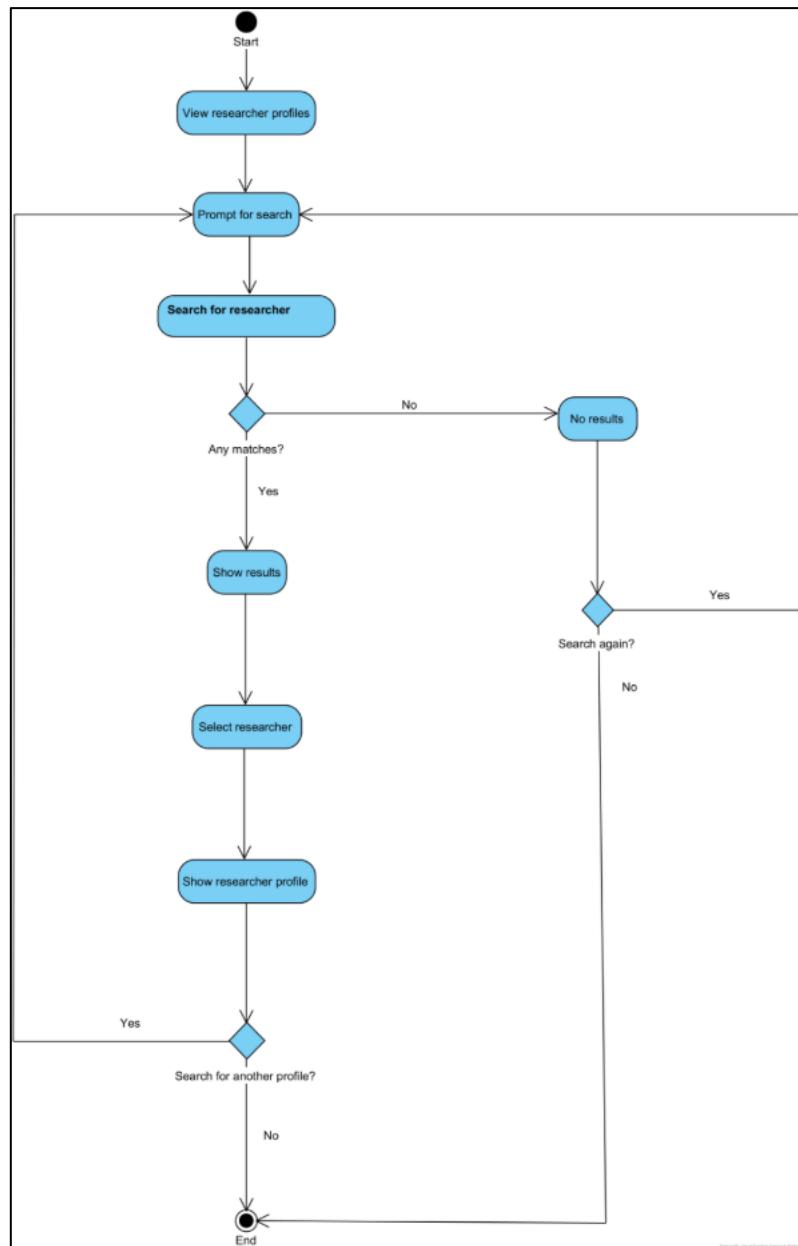
8.1.2.1.1 Login Activity Diagram

```
1 START
2 Go to login page
3 IF(have account)
4     Enter login details
5     Submit login details
6 FOR(as long as login successful not true)
7     IF(valid login)
8         Login successful = True
9         Redirect to homepage
10    ELSE
11        Show error
12        Prompt to reentry
13    ELSE
14        Prompt to register account
15 END
```

8.1.2.1.2 Login Pseudocode

8.1.2.2 View researcher Profiles

Programme coordinator can search for and view the profiles of existing researchers.



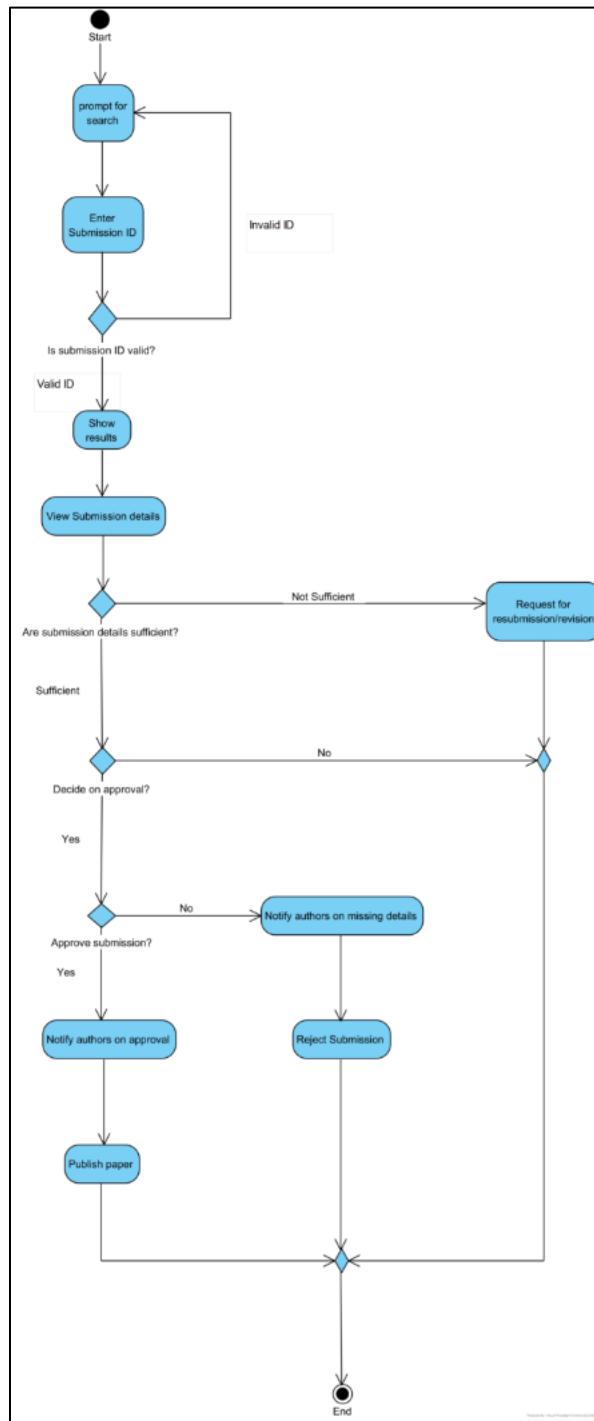
8.1.2.2.1 View Researcher Profiles Activity Diagram

```
1 WHILE searching for researchers:  
2  
3   IF (Matches search)  
4     Show Results  
5     Select researcher  
6     Show researcher profile  
7     Exit while loop  
8  
9   ELSE  
10    No results  
11    Search for other researchers?  
12  
13    IF (Yes)  
14      Continue  
15  
16    ELSE  
17      Exit while loop  
18  
19 END  
20  
21  
22
```

8.1.2.2.2 View Researcher Profiles Pseudocode

8.1.2.3 Monitor, Approve Or Reject Submissions

Programme coordinator can search for, and view submitted papers. Program coordinator then approves, reject, or asks for revision on the submission. Authors are notified on the status of their submission after review process ends.



8.1.2.3.1 Monitor, approve, or Reject Submissions Activity Diagram

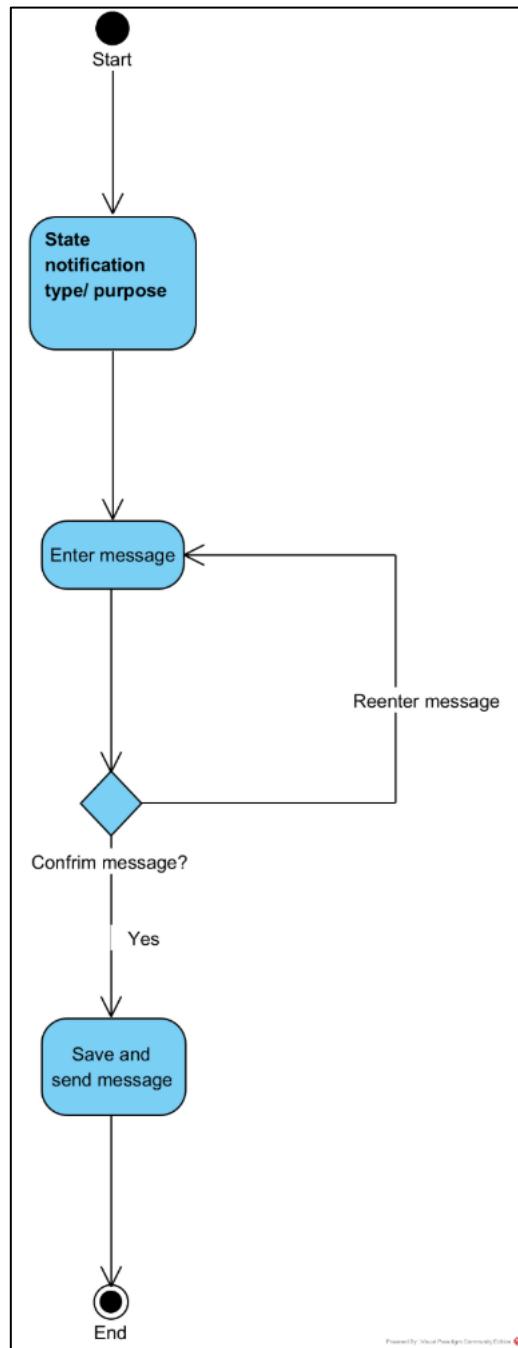
```

1 START
2
3 WHILE searching for submission:
4
5   Prompt for search
6   Enter submission ID
7
8   IF (Submission ID is valid)
9     Show results
10    View submission details
11
12   IF (submission details are sufficient)
13     Decide whether to continue to approval decision
14
15   IF (decide on approval)
16     Make decision to approve or not
17
18   IF (approve)
19     Notify authors on approval
20     Publish paper
21     Exit while loop
22
23   ELSE
24     Notify authors on reason
25     Reject submission
26     Exit while loop
27
28   ELSE
29     Exit while loop
30
31   ELSE
32     Request for resubmission or revision
33     Exit while loop
34
35   ELSE
36     Continue searching
37
38 End

```

8.1.2.3.2 Monitor, approve, or Reject Submissions Pseudocode

8.1.2.4 Notifying Authors on Submission Status



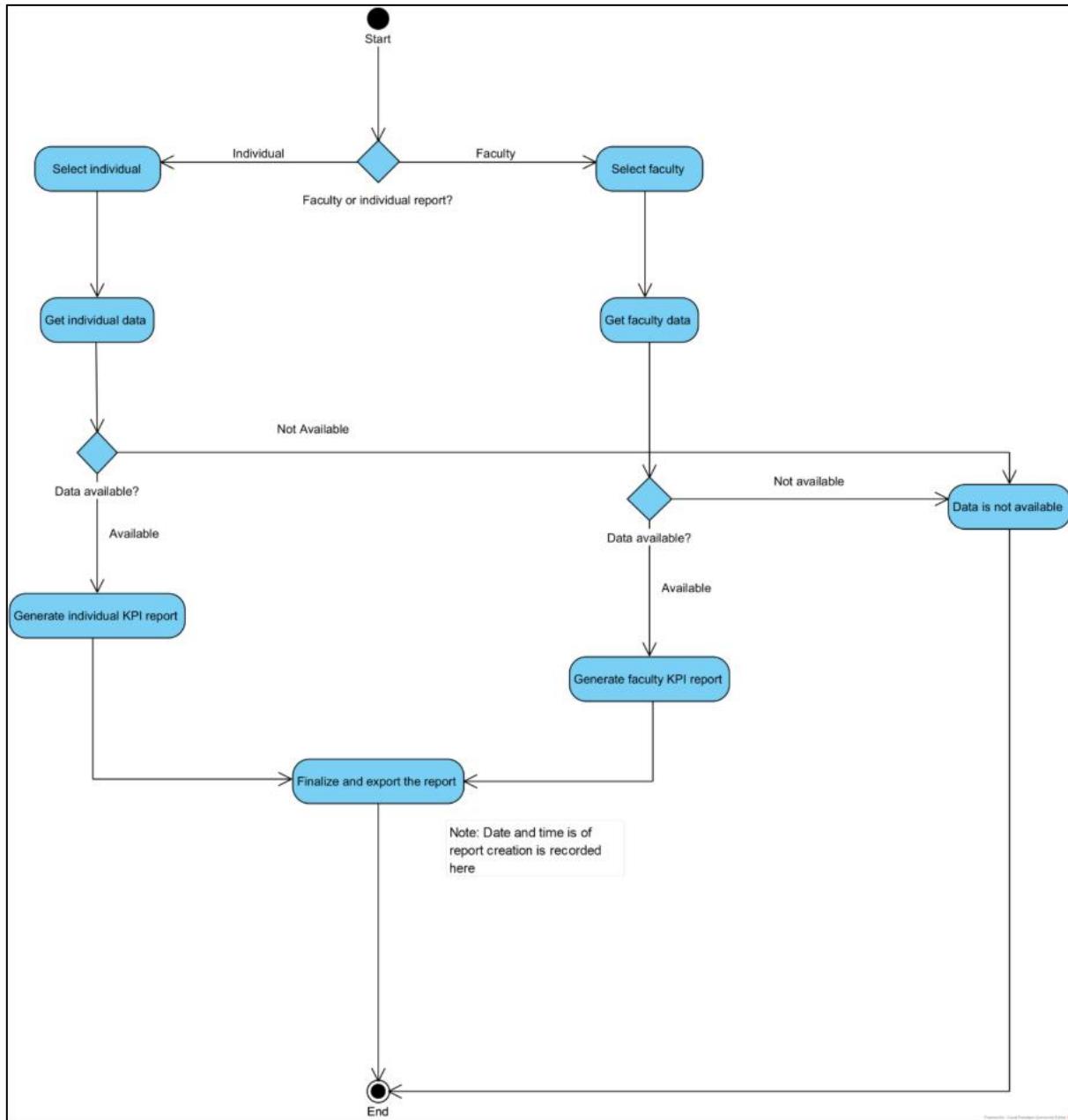
8.1.2.4.1 Notifying Authors on Submission Status Activity Diagram

```
1 START
2
3 State notification purpose
4
5 WHILE typing message:
6
7     Enter message
8
9     IF (confirm message)
10        Exit while loop
11
12    ELSE
13        Continue (typing)
14
15 Save and send message after typing
16
17 END
```

8.1.2.4.2 Notifying Authors on Submission Status Pseudocode

8.1.2.5 Generating Reports

Reports on Faculty KPI and individual summaries are generated, can be reviewed by Programme Coordinators.



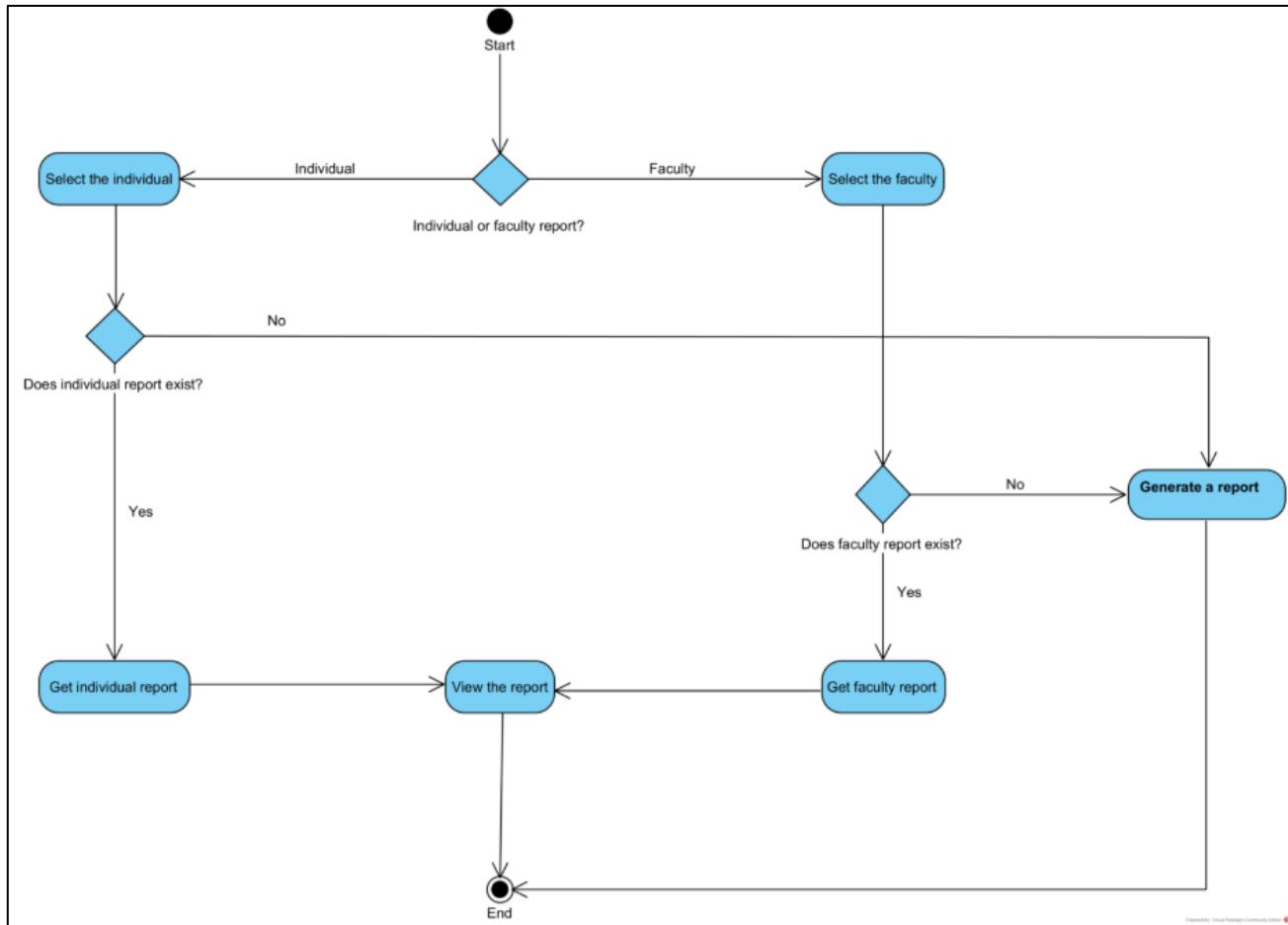
8.1.2.5.1 Generating Reports Activity Diagram

```
1 START
2
3 To generate an individual or faculty report?
4
5 IF (individual report)
6
7     Select individual
8     Get individual data
9
10    IF (data is available)
11        Generate individual KPI report
12        Finalize and export report
13        BREAK
14
15    ELSE
16        Data is not available
17        BREAK
18
19 ELSE
20
21     Generate faculty report
22     Select faculty
23     Get faculty data
24
25     IF (Data is available)
26         Generate faculty KPI report
27         Finalize and export the report
28         BREAK
29
30 END
```

8.1.2.5.2 Generating Reports Pseudocode

8.1.2.6 Access Analytics Board

Programme Coordinator can view analytics on publication types, publication quantity, publication trend and researcher performance.



8.1.2.6.1 Access Analytics Dashboard Activity Diagram

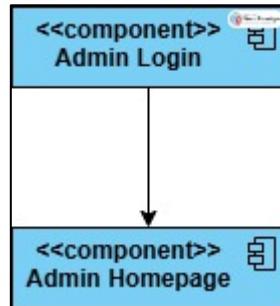
```
1 START
2
3 Decide to view individual or faculty report?
4
5 IF (individual)
6
7     does report on the selected individual exist?
8
9     IF (report available)
10        Get the report
11        View the report
12
13
14 ELSE
15     Generate a report (see (list of content num) generate report pseudocode)
16     View the report
17
18 ELSE
19
20     Select the faculty
21     Does report on faculty exist?
22
23     IF (faculty report is available)
24        Get the report
25        View the report
26
27
28 ELSE
29     Generate a report on faculty
30     View the report
```

8.1.2.6.2 Access Analytics Dashboard Pseudocode

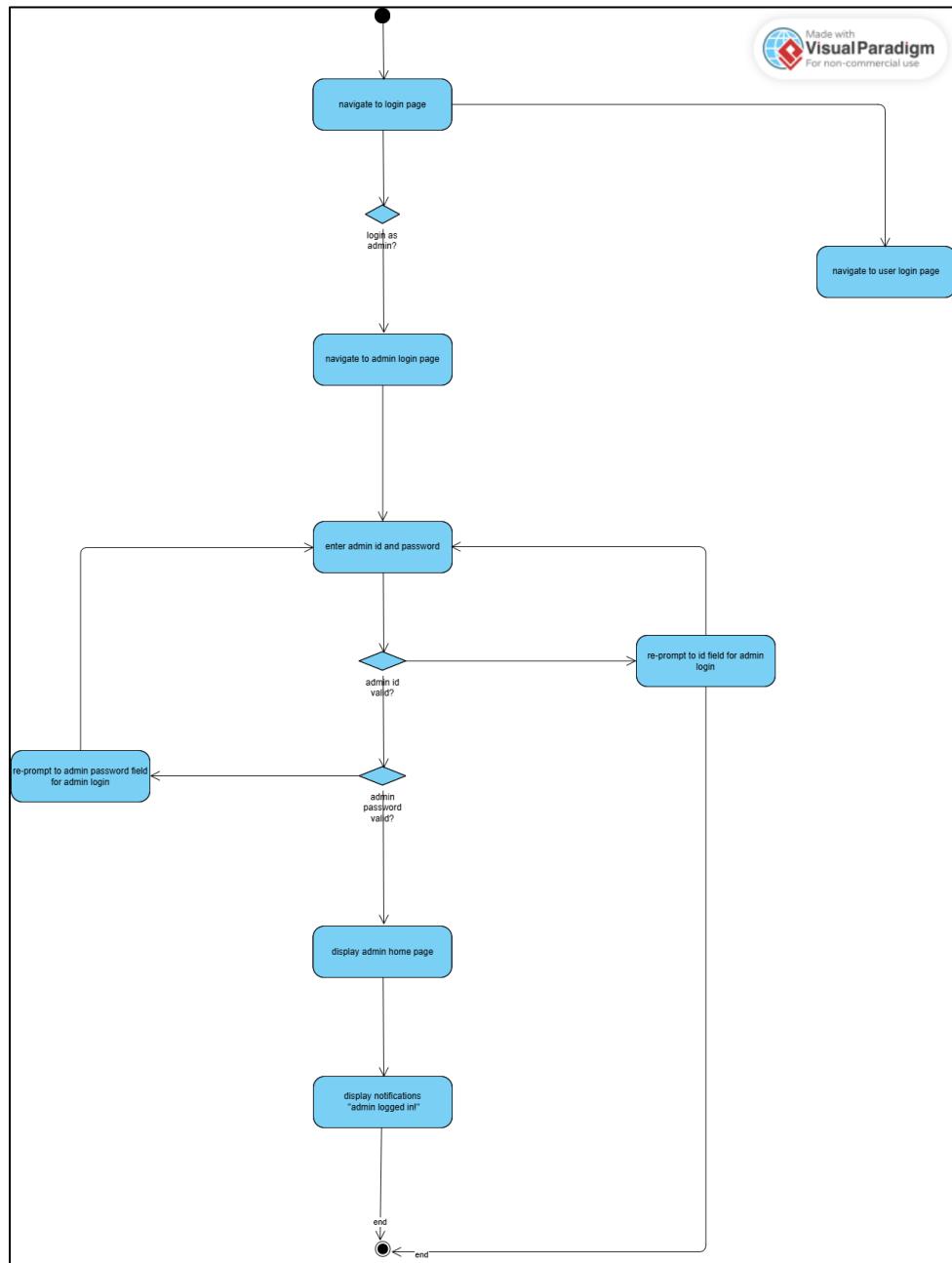
8.1.3 Admin

8.1.3.1 Login as Admin

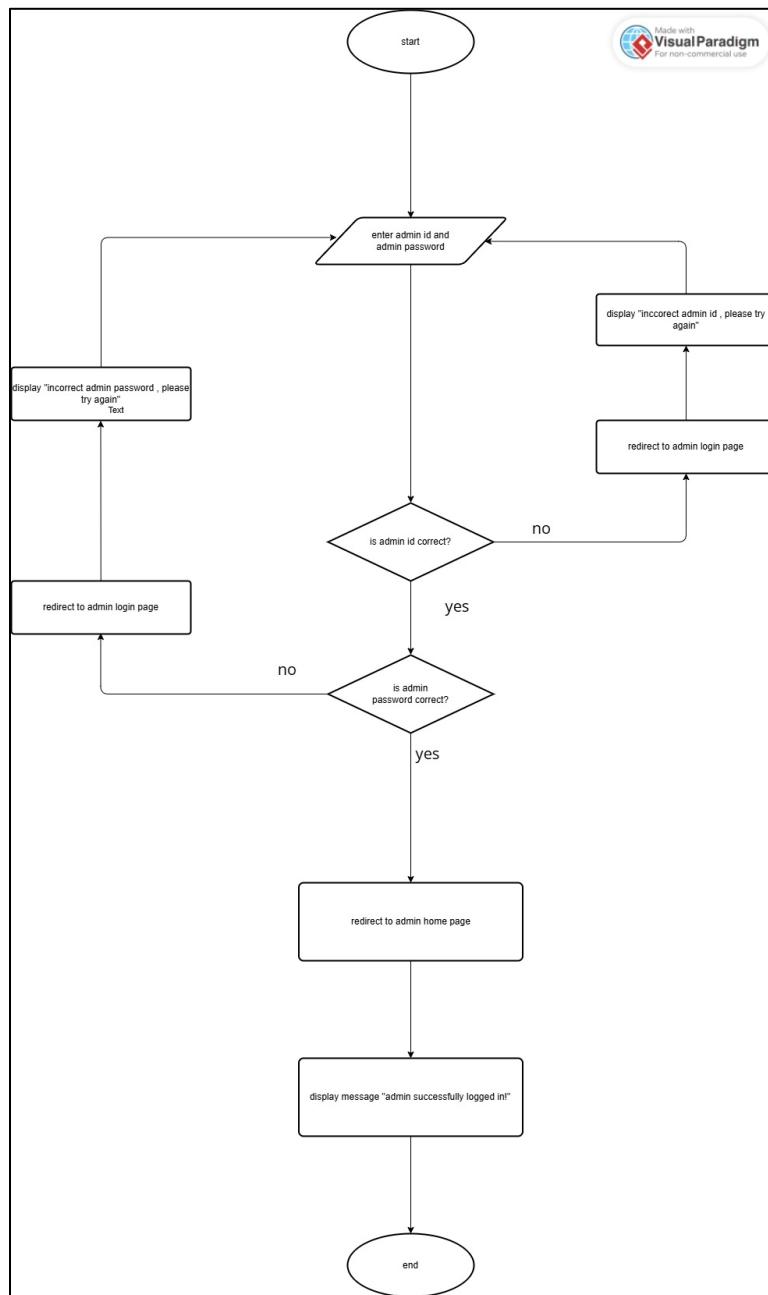
The system has a login as admin option where if the website admin wants to use the functionality of the website, they can login as an admin, they must provide special id and password to redirect to the admin homepage where they can use some features only admin can use such as managing comment sections and updating Term and Conditions to the website.



8.1.3.1.1 Admin Login Component Diagram



8.1.3.1.2 Admin Login Page Activity Diagram



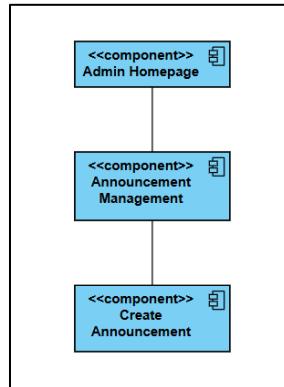
8.1.3.1.3 Admin Login Page Flowchart Diagram

```
1 START
2
3 · IF have_registered_before THEN
4
5     · Navigate_to_login_page()
6
7     · IF login_as_admin()
8
9         Navigate_to_admin_login_page()
10
11     ENTER admin_id , admin_password
12
13     IF admin_id is incorrect
14
15         · DISPLAY "admin_id is incorrect, please try again"
16
17         · Navigate_to_admin_login_page()
18
19     ELSE-IF admin_password is incorrect
20
21         · DISPLAY "admin_password is incorrect , please try again"
22
23         · Navigate_to_admin_login_page()
24
25
26     ELSE
27
28         · Navigate_to_admin_homepage()
29
30         · DISPLAY "admin successfully logged in!"
31
32
33     · REPEAT
34     ·
35     · ELSE
36         display_register_page()
37
38
39 END
```

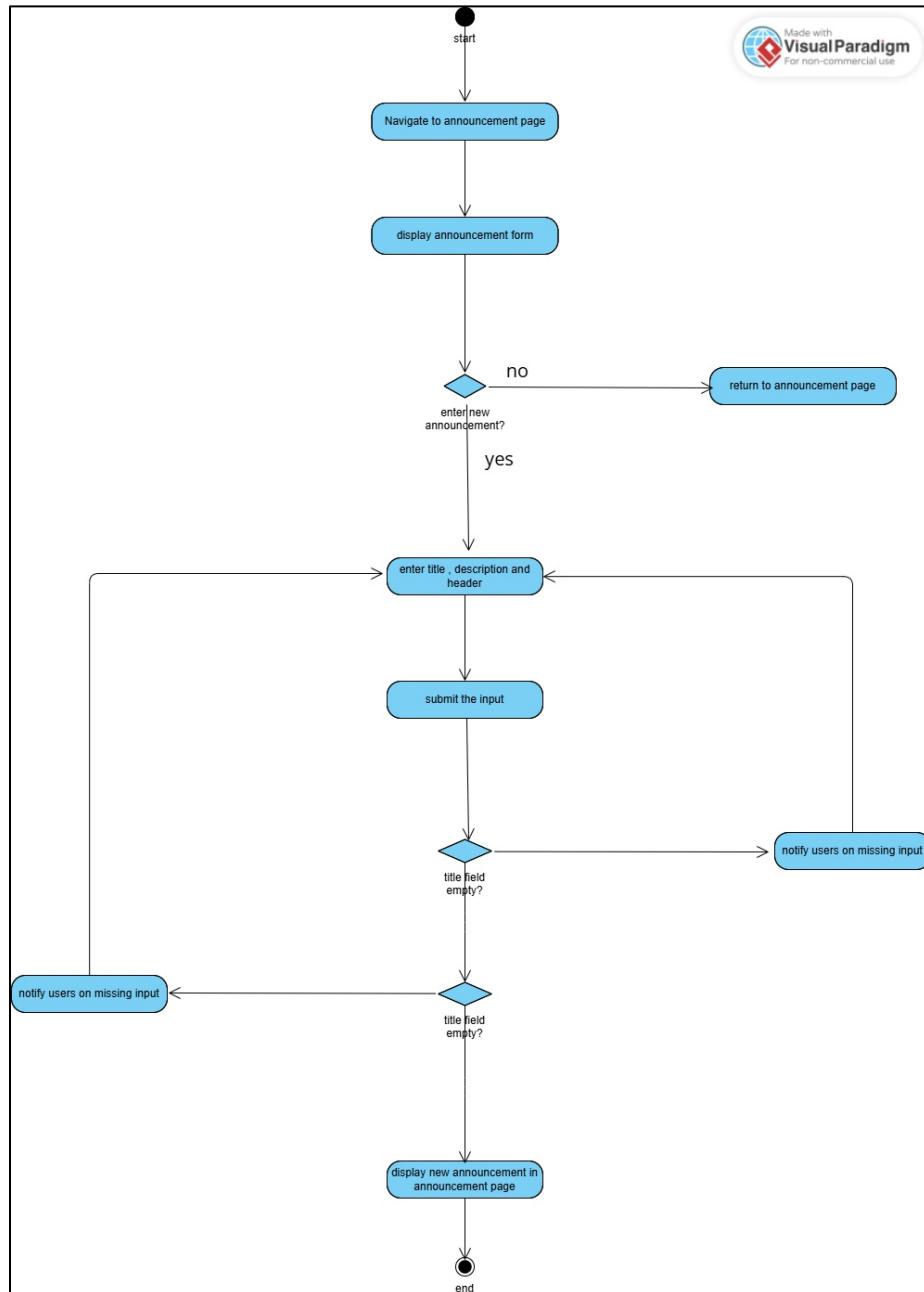
8.1.3.1.4 Admin Login Page Pseudocode

8.1.3.2 Post Announcements

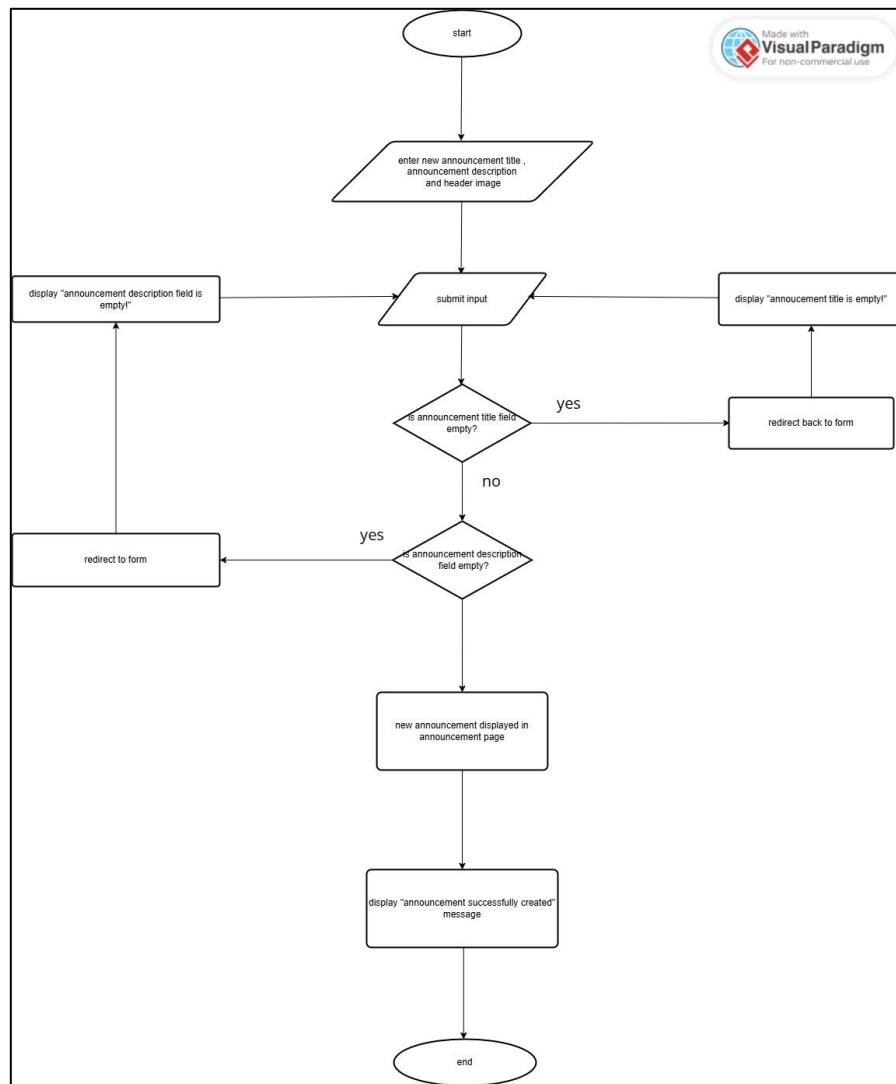
The system allows admin to create a new announcement for all users or actors to see in the website. This enables admin to share all new and latest news or programmes that are happening to the users in the website. It consists of announcement page management and creating a new announcement by submitting title , description and header image. Title and description is a requirement and header image is optional.



8.1.3.2.1 Announcement Component Diagram



8.1.3.2.2 Post Announcements Activity Diagram



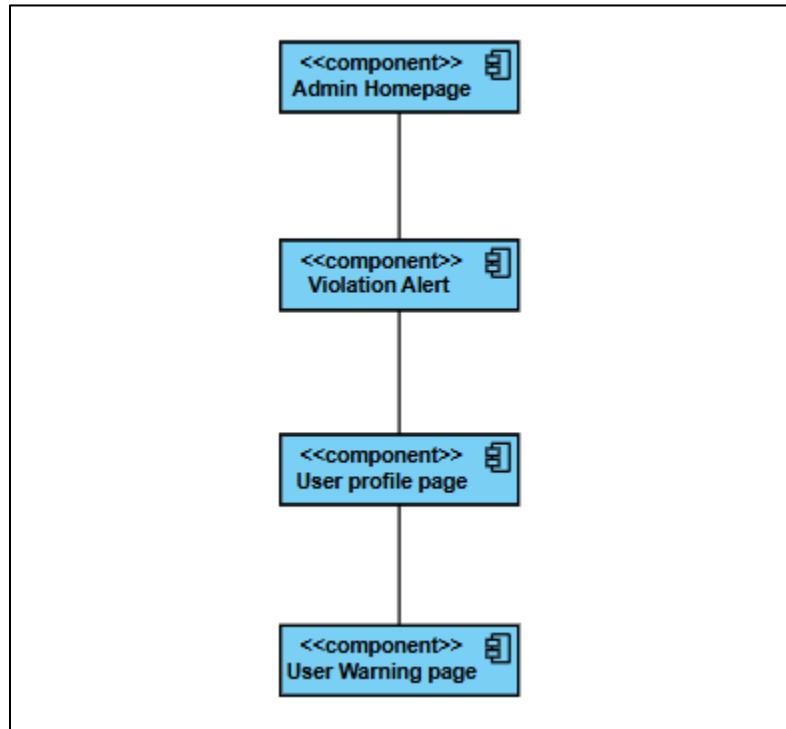
8.1.3.2.3 Post Announcements Flowchart Diagram

```
1 START
2
3 ·Navigate_to_announcement_page
4
5 ·IF add_new_announcement()
6
7     go_to_new_announcement_form()
8
9     ENTER announcement_title , announcement_description , header image IF available
10
11    submit_new_announcement()
12
13    IF announcement_title is EMPTY
14
15        ·redirect_to_announcement_form()
16
17
18        ·DISPLAY "announcement title is empty"
19
20    ELSE IF announcement_description is EMPTY
21
22        redirect_to_announcement_form()
23
24        DISPLAY "announcement description is empty"
25
26    ELSE
27
28        insert_new_announcement_to_display()
29
30        DISPLAY "announcement is created!"
31
32
33 END
```

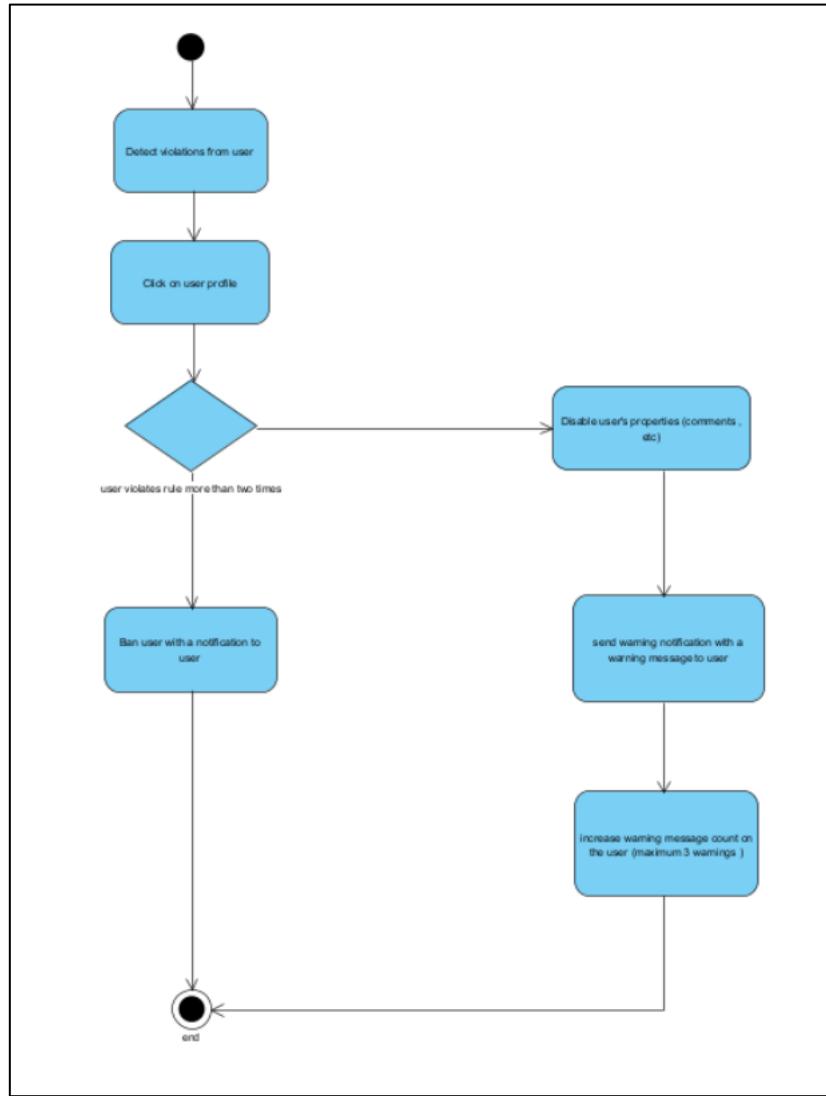
8.1.3.2.4 Post Announcements Pseudocode

8.1.3.3 Ban users if violating Code of Conduct of the website

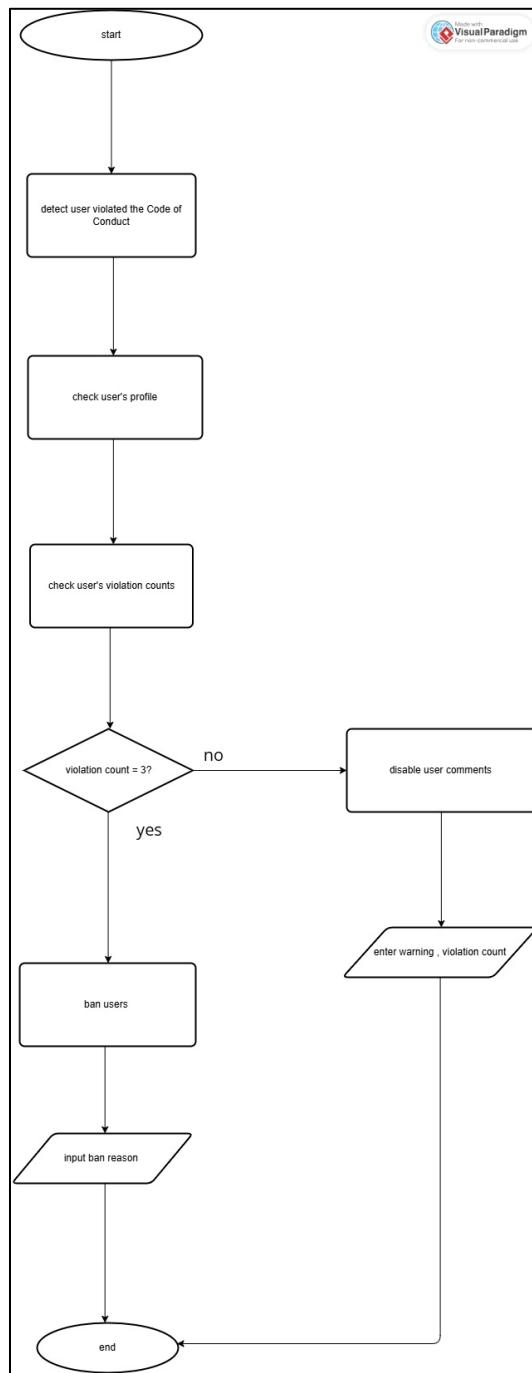
This system will allow admin to have some moderation privilege to maintain the integrity of the website users. Admin can send warnings and ban users if a certain amount of warnings have been exceeded by a user. Admin are allowed to inspect user's comments or any properties that causes the report to be notified to the admin.



8.1.3.3.1 Ban users if violating Code of Conduct of the website



8.1.3.3.2 Ban users if violating Code of Conduct Activity Diagram



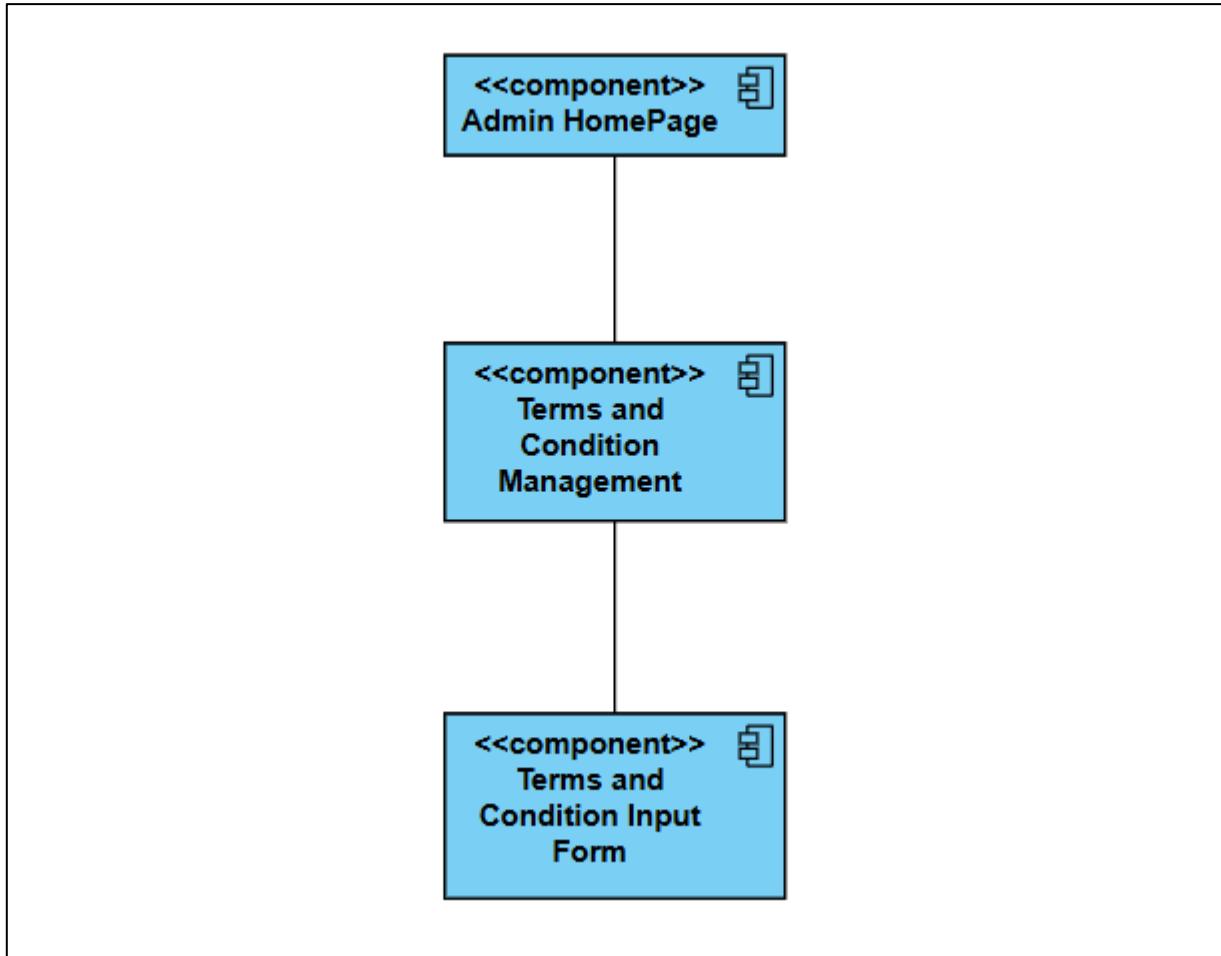
8.1.3.3.3 Ban users if violating Code of Conduct Flowchart Diagram

```
1 START
2
3     IF received_userViolationReport()
4
5         ·viewUserProfile()
6
7
8         ·checkViolateCount()
9
10
11        ·IF violateCount == 3
12
13            banUser()
14
15
16
17            message = "You have been banned because of {reasons}"
18
19            sendBanReason(message)
20
21
22
23        ·ELSE
24
25            disableUserProperties()
26
27
28            sendWarningToUser()
29
30            INCREASE violateCount by 1
31
32
33    ·ELSE
34
35        redirectToAdminHomepage()
36
37 END
```

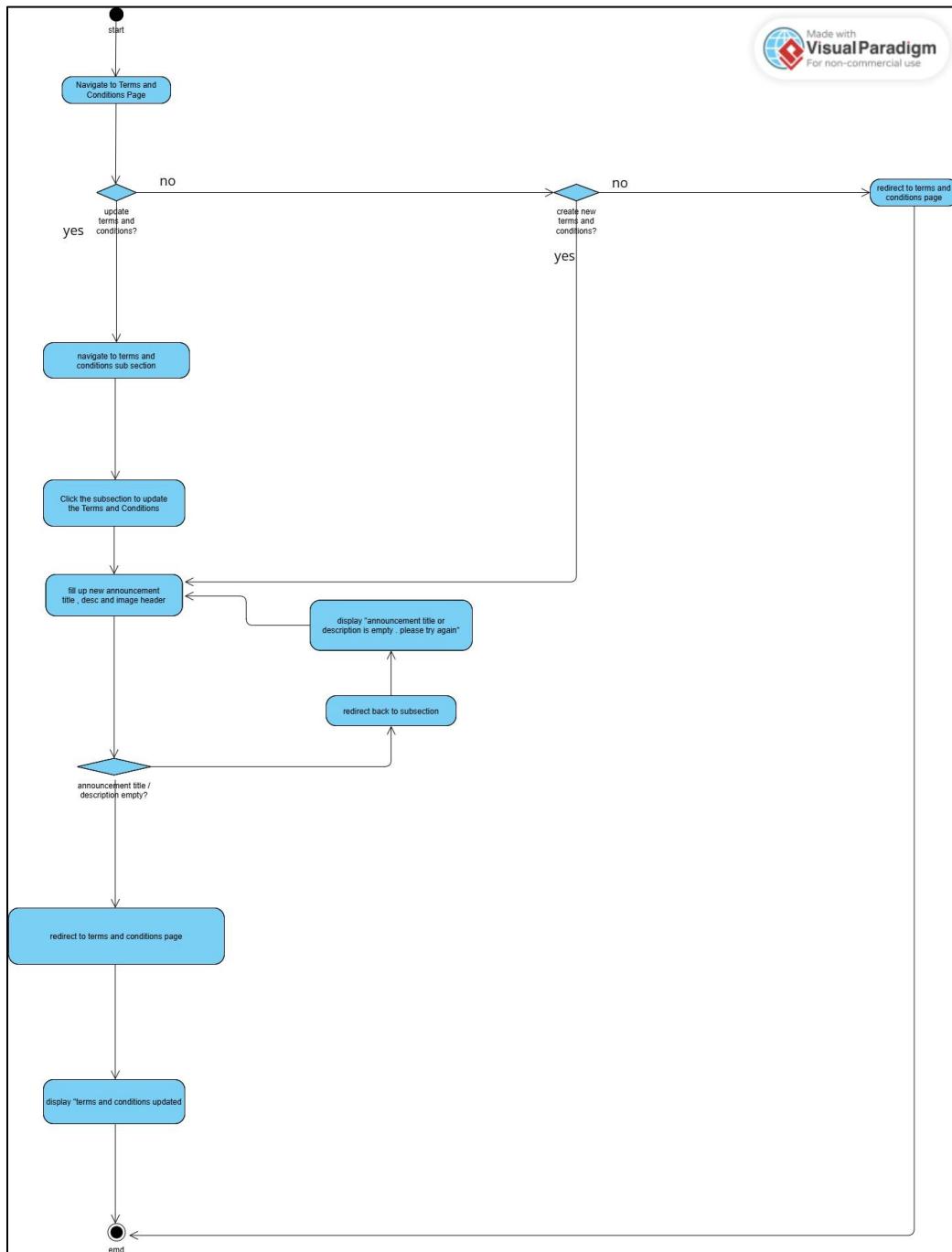
8.1.3.3.4 Ban users if violating Code of Conduct Pseudocode

8.1.3.4 Creating / Updating Code of Conduct

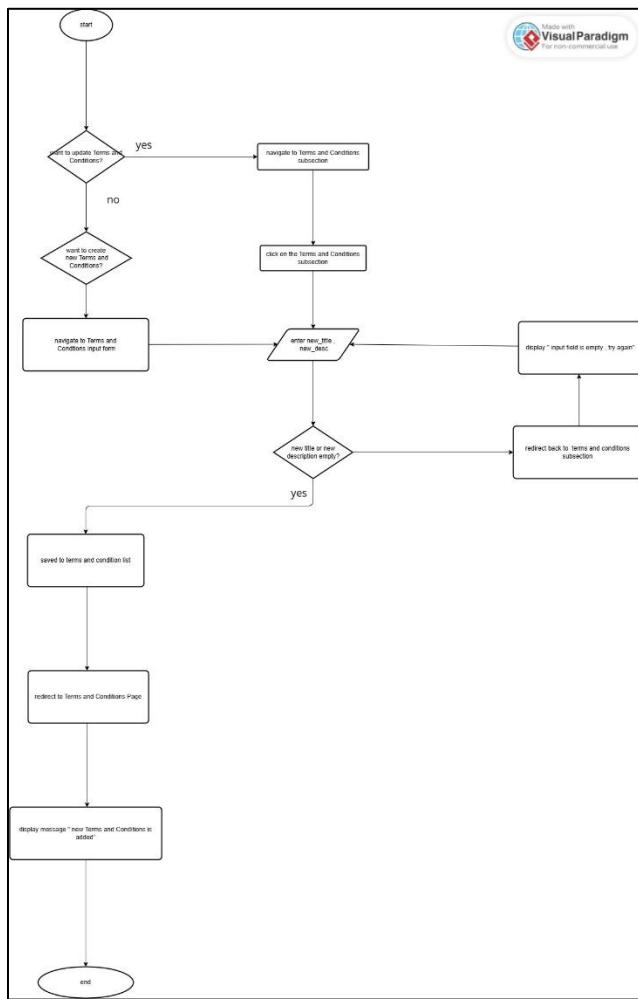
This feature allows admin to create or update Code of Conduct or Terms and Condition of the website. This is to ensure that the website is updated across new threats or new violation cases from time to time. Once the Term and Conditions rules is updated or created , it will display a successful message saying the Terms and Conditions is updated



8.1.3.4.1 Creating / Updating Code of Conduct Component Diagram



8.1.3.4.2 Creating / Updating Code of Conduct Activity Diagram



8.1.3.4.3 Creating / Updating Code of Conduct Flowchart Diagram

```

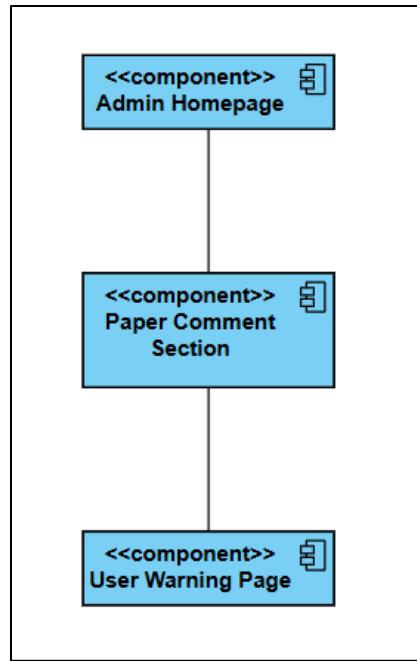
1  START
2
3  ·IF Admin wants to_update_Terms_and_Conditions() THEN
4
5      ·Navigate_to_Terms_and_Conditions_subsection()
6
7
8      ·Click on the_Terms_and_Conditions_subsection()
9
10
11     ·ELSE IF Admin wants to create_new_Terms_and_Conditions() THEN
12
13
14     ·Navigate_to_Terms_and_Conditions_input_form()
15
16
17
18     ·ELSE
19
20         ·EXIT
21
22     ·ENDIF
23
24
25     ·LABEL InputForm:
26
27
28     ·ENTER new_title, new_desc
29
30
31     ·IF (new_title is empty OR new_desc is empty) THEN
32
33         ·Redirect back to Terms_and_Conditions_subsection()
34
35         ·DISPLAY "Input field is empty, try again"
36
37         ·GOTO InputForm
38
39
40     ·ELSE
41
42         ·SAVE to Terms and Conditions list
43
44         ·REDIRECT to Terms_and_Conditions_page()
45
46         ·DISPLAY "New Terms and Conditions is added"
47
48     ·ENDIF
49
50 END

```

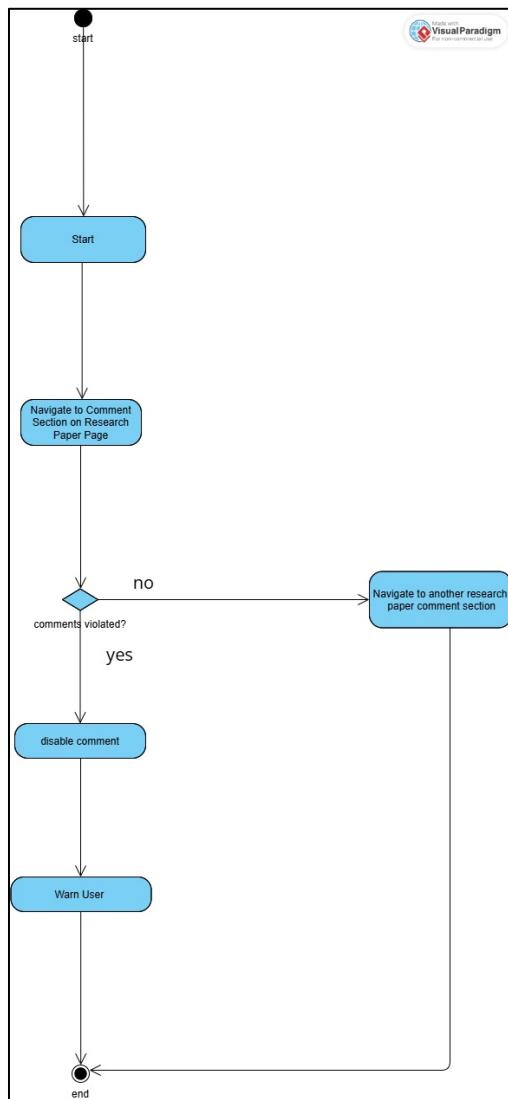
8.1.3.4.4 Creating / Updating Code of Conduct Pseudocode

8.1.3.5 Review Comment Section

This feature allows admin to review any comment sections and disable if there is any information or content that violatesthe T&C on the website.



8.1.3.5.1 Review Comment Section Component Diagram



8.1.3.5.2 Review Comment Section Activity Diagram

```
BEGIN Process
    START

        NAVIGATE to Research Paper comment section

        IF comments violate guidelines THEN
            DISABLE the comment
            WARN the user who posted the comment
        ELSE
            NAVIGATE to another research paper comment section
        END IF

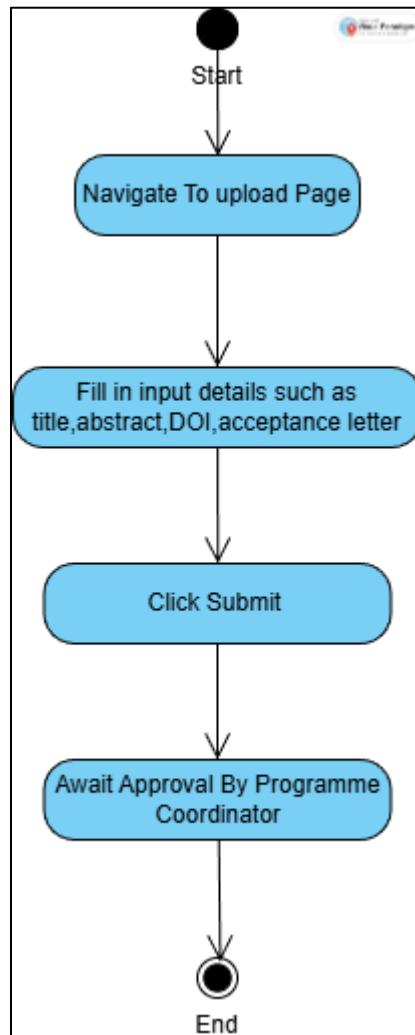
    END Process
END
```

8.1.3.5.3 Review Comment Section Pseudocode

8.1.4 Researcher

8.1.4.1 Upload Page

Researchers navigate to the upload page to submit their work by filling in details like the title, abstract, and DOI, and uploading their acceptance letter. They submit the data for a preliminary review and inspect the generated preview to ensure accuracy. If the preview is incorrect, they return to correct the input details; otherwise, they confirm the submission and await approval from the Programme Coordinator.



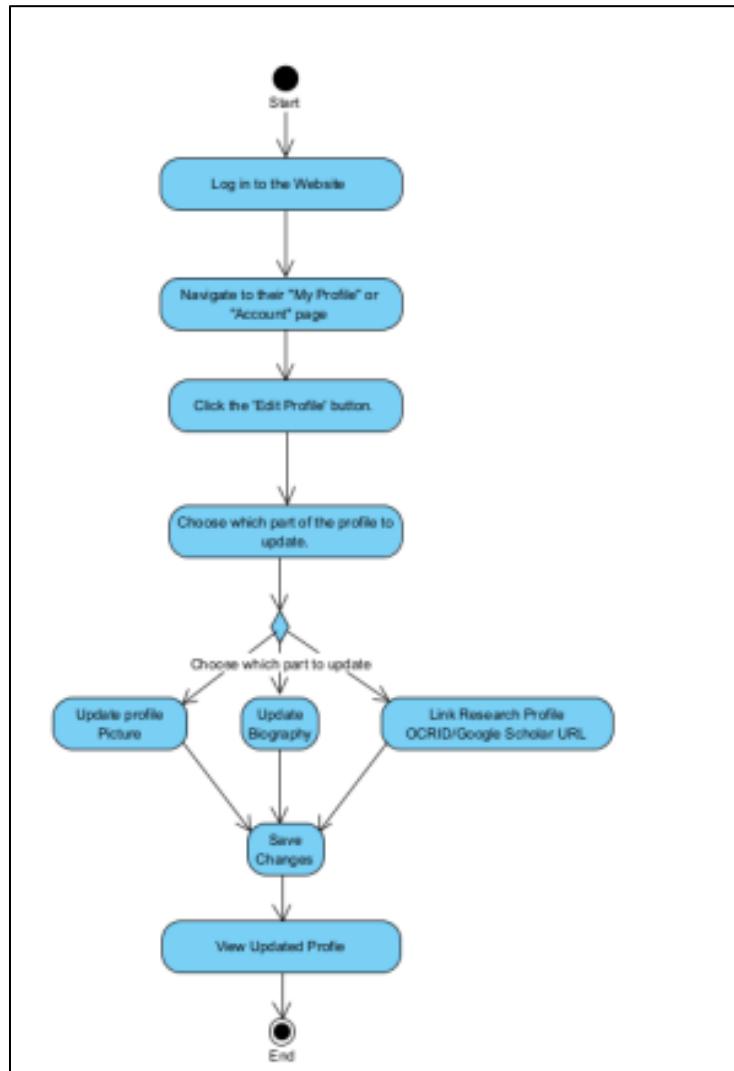
8.1.4.1.1 Upload Page Activity Diagram

```
1 START
2
3     · Navigate to Upload Page
4
5
6     · REPEAT
7
8         · Fill in input details (Title, Abstract, DOI, Acceptance Letter)
9
10        · Click Submit
11
12        · Review the Submission Preview
13
14
15        · IF the preview is incorrect THEN
16
17            · Return to input details
18
19        · END IF
20
21    · UNTIL the preview is correct
22
23
24    · Click Confirm Submission
25
26    · Await approval by Programme Coordinator
27
28
29 END
```

8.1.4.1.2 Upload Page Pseudocode

8.1.4.2 Update Researcher Profile

Researchers log in to the website and navigate to their profile page to make updates. They click the "Edit Profile" button and choose which specific section to modify, such as uploading a new profile picture, updating their biography, or linking an external research profile. Upon saving the changes, they can view the updated profile to confirm the modifications.



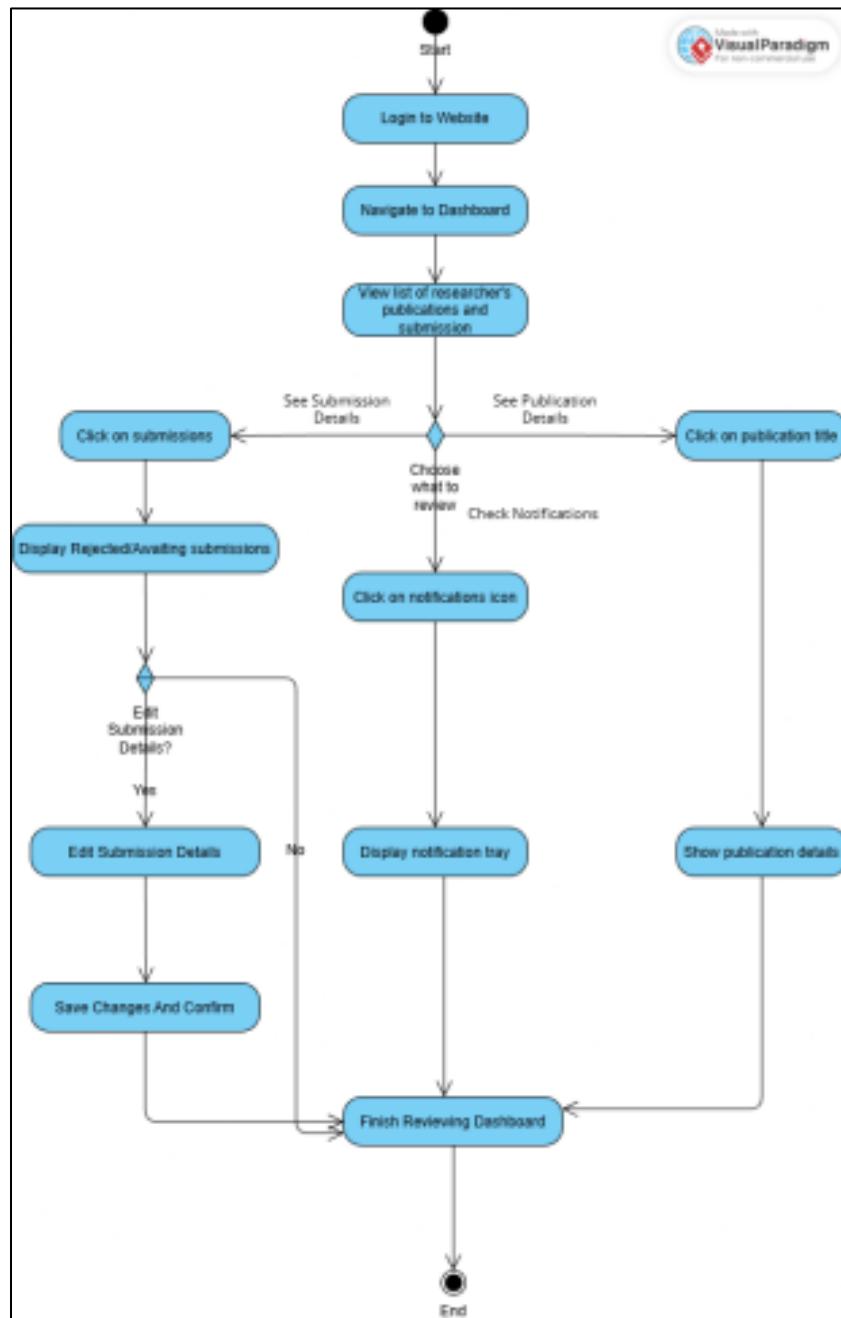
8.1.4.2.1 Update Researcher Profile Activity Diagram

```
1 · BEGIN
2
3     · Log in to the Website
4
5     · Navigate to "My Profile" or "Account" page
6
7     · Click the "Edit Profile" button
8
9
10    · IF user chooses to update Profile Picture THEN
11
12        · image = Prompt_User_Input
13
14        · UpdateProfilePicture(image)
15
16    · ELSE IF user chooses to update Biography THEN
17
18        · Click Edit button
19
20        · Update Biography
21
22    · ELSE IF user chooses to Link Research Profile THEN
23
24        · Click "Add ORCID/GoogleScholar Link" Button
25
26        · Link ORCID or Google Scholar URL
27
28    · END IF
29
30    · Save Changes
31
32 View Updated Profile
33
34
35
36
37 END
```

8.1.4.2.2 Update Researcher Profile Pseudocode

8.1.4.3 Dashboard

After logging in, researchers navigate to the dashboard to view a list of their publications and submissions. They can choose to manage their work by clicking on submissions to view or edit details, check for updates by clicking the notifications icon, or select specific publication titles to view full details. Once they have managed their tasks, they finish reviewing the dashboard.



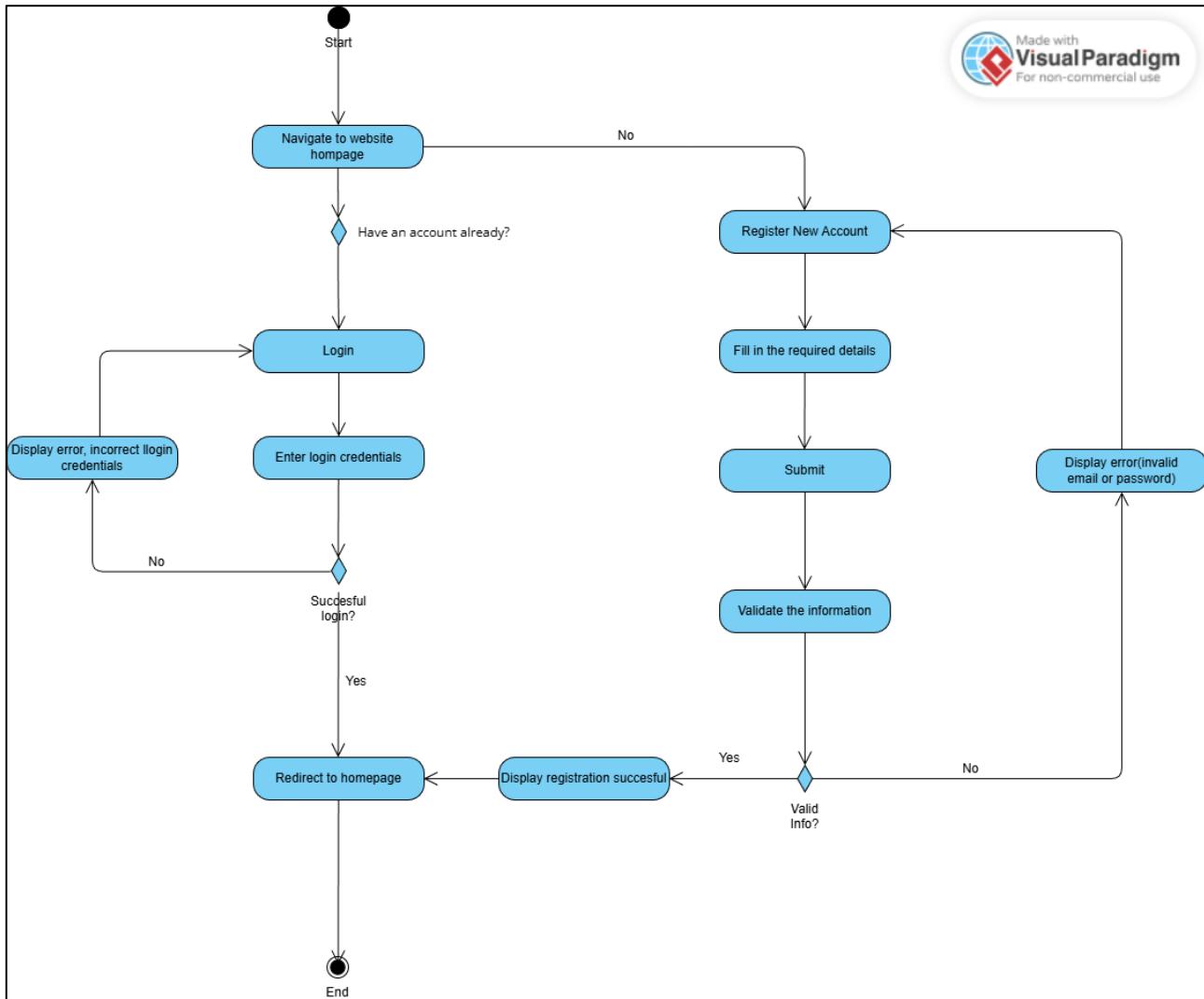
8.1.4.3.1 Dashboard Activity Diagram

```
1 START
2
3     · Login to Website
4
5     · Navigate to Dashboard
6
7     · View list of researcher's publications and submissions
8
9
10    · IF user chooses "See Submission Details" THEN
11
12        · Click on submissions
13
14        · ShowSubmissions()
15
16
17    · IF user chooses to edit submission details THEN
18
19        · Edit Submission Details
20
21        · Save Changes and Confirm
22
23    · END IF
24
25
26    · ELSE IF user chooses "Check Notifications" THEN
27
28        · Click on notifications icon
29
30        · GetNotifications()
31
32
33    · ELSE IF user chooses "See Publication Details" THEN
34
35        · Click on publication title
36
37        · Show publication details
38
39    · END IF
40
41    · Finish Reviewing Dashboard
42
43 END
```

8.1.4.3.2 Dashboard Pseudocode

8.1.4.4 Register And Login

Researchers start at the homepage and determine their path based on whether they have an account. If they already have one, they enter their credentials, correcting them if authentication fails, until they successfully log in. If they don't have an account, they navigate to the registration page to fill in the required details, correcting any invalid information if necessary, and are redirected to the homepage upon successful registration.



8.1.4.4.1 Register and Login Activity Diagram

```

1  START
2
3      · Navigate to website homepage
4
5      · IF user already has an account THEN
6
7          · Navigate to Login Page
8
9          · REPEAT
10
11         · Enter login credentials
12
13         · IF login is unsuccessful THEN
14
15             · Display error "Incorrect login credentials"
16
17         · END IF
18
19         · UNTIL login is successful
20
21
22         · Redirect to homepage
23
24
25
26     · ELSE (User does not have an account)
27
28         · Navigate to Register New Account page
29
30         · REPEAT
31
32         · Fill in the required details
33
34         · Submit form
35
36         · Validate the information
37
38         · IF information is invalid THEN
39
40             · Display error "Invalid email or password"
41
42         · END IF
43
44         · UNTIL information is valid
45
46
47         · Display "Registration successful"
48
49         · Redirect to homepage
50
51     · END IF
52
53 END

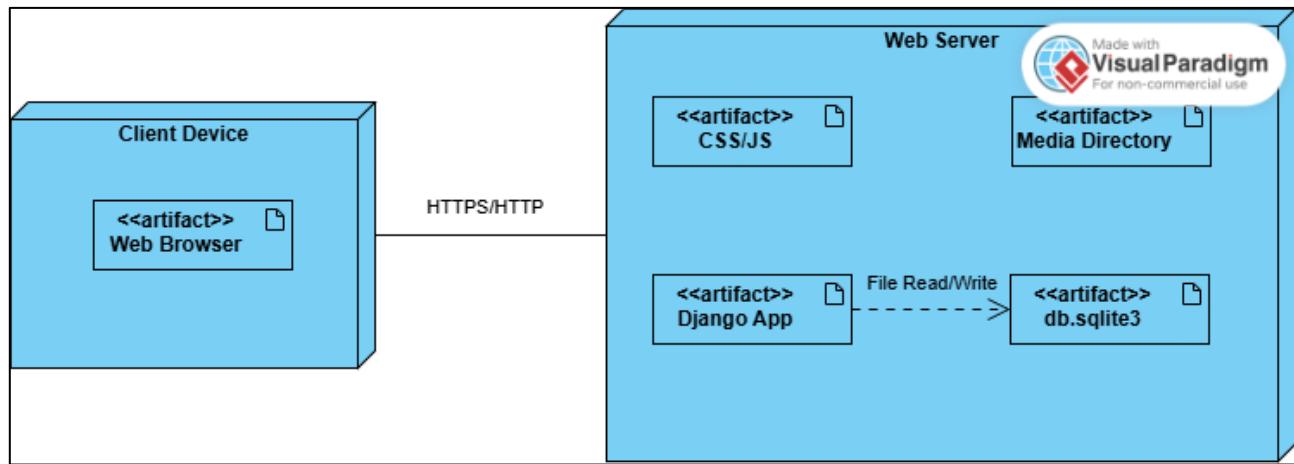
```

8.1.4.4.2 Register and Login Activity Diagram

9 Deployment Design

9.1 Deployment Diagram

This deployment diagram shows a client-server architecture where a **Client Device** node, hosting a web browser, connects to a central **Web Server** node via an HTTPS/HTTP communication path. The Web Server consolidates all application components, housing the **Django App**, **CSS/JS** static assets, and a **Media Directory** for file storage within the same environment. Internally, the Django App artifact manages data persistence by directly performing file read/write operations on the local **db.sqlite3** database artifact.



9.1.1 Deployment Diagram

10 Summary

This design of MMU Xplore aims to ensure that users of any actors are able to use this website to its fully immerse experience and it modernizes the way research paper tracking system is usually done. By prioritizing a clean , intuitive interface , the platform minimizes the learning curve associated with traditional academic repositories. The responsive design ensures that research paper tracking and engagement are accessible across all devices , fostering a truly mobile academic environment.

Centralized knowledge management by consolidating PDF Storage , metadata tracking and user authentication into a unified architecture , MMU Xplore eliminates the fragmentation of data. This centralized approaches allows for faster retrieval of academic papers and more accurate tracking of researchers trends with the university, providing administrators with valuable insights into the institution's intellectual output