



UUM
Universiti Utara Malaysia

STIW3044 Web Engineering GROUP A

SEMESTER A202

GROUP PROJECT

ASIA TOP U

Submitted to:

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Youtube Link: <https://youtu.be/N9VgHaU1Ijg>

Github Link: <https://github.com/TanYiQing/AsiaTopU>

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Thank you.

1. SYSTEM OVERVIEW

Higher education's contributions to long-term economic and social growth are increasing year by year and it can be said as a key in improving the quality of life. Hence, people are paying great attention to universities. Nowadays, people will do research on the quality, ranking, and reputation of universities before they apply to universities to further their level of education. The most efficient and easy way to make a comparison between universities is by comparing the Asia university ranking and getting ideas to make a decision.

1.1 Purpose of the system

Exploring Asia University Rankings Dashboard

The system is able to explore the Asia university ranking on WebApp. Checking the ranking of the top 20 Asia universities will help a student, academic instructor, or parents in having an idea to decide which universities to apply to. The WebApp shows the ranking, overall score, and some details in the scoring of each university in Asia. By comparing the Asia ranking of the universities, the user may be able to easily decide which universities to apply to.

1.2 Scope

I. User Scope - user

- System allows the user to sign up to WebApp as a member.
- System allows the user to view the top 20 Asia university ranking list.
- System allows the user to view ranking indicators.
- System allows the user to sort the list by rank, university, country and overall score.
- System allows the user to view the ranking details of universities by searching the name.
- System allows the user to filter the university by years and country.
- System allows the user who is a member to compare universities by adding universities to the compare list.

- System allows the user who is a member to add universities to the favourite list.
- System allows the user to send feedback about the WebApp by email.

II. Region Scope

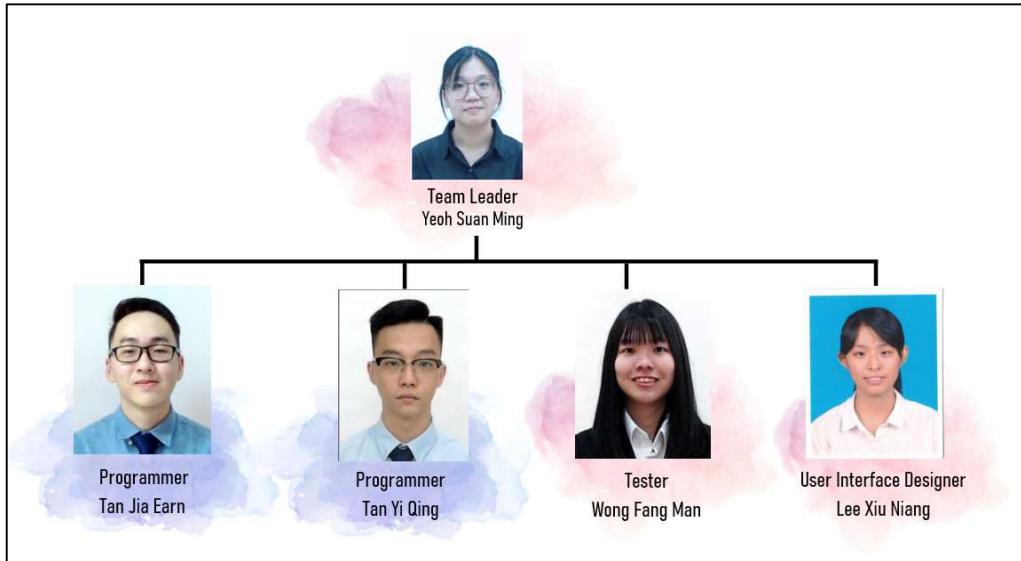
The Asia Top U WebApp is a web-based application for checking the top 20 Asia university ranking for universities in Asia.

III. Time Scope

The Asia Top U WebApp is a web-based application for checking the top 20 Asia university rankings for a period of the recent three years which are 2019, 2020 and 2021.

2. SYSTEM DEVELOPMENT MANAGEMENT

2.1 Project Organization



Role	Responsibilities
Team Leader	<ul style="list-style-type: none">Assigns work to team members based on the field of expertise.Ensure team members obey the rules.To make decisions on webapp development, and webapp testing.Ensures the completion of the webapp.
Programmer	<ul style="list-style-type: none">Realize the user requirements.Complete the webapp code.Update and modify the code to meet the needs of the user.
Tester	<ul style="list-style-type: none">Evaluate the webapp functionality, integration and acceptance.Access and develop the webapp consistency.Complete work assigned by the team leader.
User Interface Designer	<ul style="list-style-type: none">Design the application by collecting the criteria of usability.Keep track of the prototyping.To avoid the unnecessary user interface elements.

2.2 Methodology

In this project, we decided to use Agile Development Methodology to develop the Asia Top U webapp. The reason for using this methodology in development is because Asia Top U is a user experience-centric webapp which mainly focuses on providing high quality service with accurate data and the best user experience. Through using this methodology, we are able to fulfill this by iteratively developing with small increments that are fully tested on the webapp. Instead, Agile Development Methodology can also help us to have better monitoring on each team member's progress. A constant meeting will be conducted on the review phase of every sprint to ensure better visibility into project progress and monitor.



Phase 1: Requirements

In this phase, we will analyze the problems and current demands in the market trend and define different requirements based on them. Beside this, we will also make an analysis on these requirements and prioritize them with their importance. Meetings between team members will be conducted via online meeting tools Webex in this phase in order to make discussion and detailed analysis on requirements.

Phase 2: Design

In this phase, the requirements are defined. This phase will be categorised into two, which are visual design and architecture structural design. We will design the webapp based on the requirement analysed before. For visual design, we will first create a

mockup in this phase. However, for the architectural structural design, we will plan the flow of navigation, flow of data, and structure of the whole webapp.

Phase 3: Development

This phase is all about coding. We will convert the documentation in the design phase into the actual running webapp. We will write the design, function and the flow of the webapp in this phase.

Phase 4: Integration and Testing

In phase 4, we will do integration and testing on the webapp. We will integrate every team member's work into a complete webapp. Testing will be conducted to ensure the design and development of the webapp are matched with the requirements. In this phase, we will also ensure the webapp is bug-free before proceeding to the next phase. User acceptance testing, functionality testing, and systems integration testing will be involved in this phase.

Phase 5: Implementation and Deployment

In this phase, we will deploy the webapp for prototype and actual use. URL will be provided for users to access the webapp.

Phase 6: Review

In this phase, we will gather together and have a meeting to make a review on the webapp. If there is anything needed to improve, we will suggest ways in improving. Else, if the webapp is perfect and fulfills the requirements, the webapp will be considered as the final product.

2.3 Schedule and Milestone

Schedule

Task Name	Start Date	End Date	April	May	June	July
Requirements	4 April 2021	11 April 2021				
Design	12 April 2021	26 April 2021				
Development	27 April 2021	28 June 2021				
Integration and Testing	29 June 2021	4 July 2021				
Implementation and Deployment	5 July 2021	9 July 2021				
Review	10 July 2021	12 July 2021				

Milestone

- 11 April 2021 – Finish all the requirements about the webapp.
- 26 April 2021 – Finish visual design and architecture structural design.
- 28 June 2021 – Finish the development of the webapp.
- 4 July 2021 – Finish integration and testing of the webapp.
- 9 July 2021 – Finish implementation and deployment of webapp.
- 12 July 2021 – Finish review of webapp without any error.

3. SIZE & COST ESTIMATION

3.1 Software Size

Item	
Lines of Codes (Count or use any tool to calculate LOC- exclude comments)	6,962 Lines
Total Classes	17 Classes
Total Methods	25 Methods

3.2 Software Cost

Person-Month:

Weight Table

Object Type	Simple	Medium	Difficult
Screen	1	2	3
Report	2	5	8
Program Modules	-	-	10

Asia Top U system has 4 simple screens and 3 medium screens, then 2 simple reports and 2 medium reports

- Labor cost per month : RM 1800.00
- Productivity = 4
- Percentage of reuse software = 40%

Count object points

$$\begin{aligned}\text{Object points} &= (4*1) + (3*2) + (2*2) + (2*5) + 10 \\ &= 34\end{aligned}$$

1. Calculate Person-Months (PM)

$$\begin{aligned}\text{Formula; PM} &= (\text{NAP} * (1 - \% \text{ reuse}) / 100) / \text{PROD} \\ &= (34 * (0.6)) / 4 \\ &= 5.1 \text{ PM}\end{aligned}$$

2. Total Cost

Calculate total cost involved in your project.

Item	RM
-------------	-----------

Effort Cost

1. Total Salary:

- Yeoh Suan Ming (35 * RM 10) 350
- Tan Jia Earn (30 * RM 10) 300
- Tan Yi Qing (30 * RM 10) 300
- Wong Fang Man (30 * RM 10) 300
- Lee Xiu Niang (30 * RM 10) 300

Operating Cost

- 2. Travel -
- 3. Paper (stationeries) 40
- 4. Printing 40
- 5. Etc. -

TOTAL COST **1,630**

Name of team members	Requirements / Interface Design			Requirements / Interface Design		Preliminary Design		Prototype Coding				Total hours work spent (in hours)	
				Interface Coding/ Testing/ Coding-Pair Programming									
	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	
1. Yeoh Suan Ming	2	3	3	2	3	4	1	3	3	4	4	3	35
2. Tan Jia Earn	1	3	2	1	4	3	2	2	3	2	4	3	30
3. Tan Yi Qing	1	3	3	1	3	3	2	2	3	3	2	4	30
4. Wong Fang Man	1	3	2	1	4	2	3	3	2	2	3	4	30
5. Lee Xiu Niang	1	2	3	1	3	3	3	2	3	2	3	4	30

4. SOFTWARE TOOLS & PROGRAMMING LANGUAGE

There are some software items and programming language that are necessary to perform development activities.

No.	Item and Vendor	Version	Description/Purpose
1.	Windows 10 [Microsoft Corporation]	2020	Operating System
2.	Microsoft Word	2019	Documentation Tool
3.	Microsoft Powerpoint	2019	Presentation Tool
4.	Adobe Dreamweaver	2020	User Interface Design Tool
5.	Adobe Photoshop	2008	Photo / Graphic Editing Tool
6.	StarUML	2020	User Interface Design Tool
7.	HTML	-	Markup Language
8.	PHP	-	Scripting Language
9.	PHPMyAdmin	2019	Database Management System
10.	cPanel	-	Web Hosting Tool

5. LIST OF REQUIREMENTS

Listed below are the functional requirements and non-functional requirements of the system.

In the priority column, the following short hands are used:

- H - High (mandatory) requirements (something the system must do)
- M - Medium (desirable) requirements (something the system preferably should do)
- L - Low (optional) requirements (something the system may do)

5.1 Functional Requirements

No.	Requirement ID	Requirement Description	Priority
	ASTU_01	Sign Up	
1	ASTU_01_01	Users can sign up for a new account.	H
	ASTU_02	Log In	
1	ASTU_02_01	Admin and users log in to the system.	H
2	ASTU_02_02	Admin and users select from the selection whether the user is an admin or a user from the combo box.	H
3	ASTU_02_03	Users are allowed to re-login into the system if they forget the password and successfully receive the temporary password.	M
	ASTU_03	Manage User Details	
1	ASTU_03_01	Users can update their information from time to time.	M
	ASTU_04	View Ranking Page	
1	ASTU_04_01	Users can view the ranking list.	H

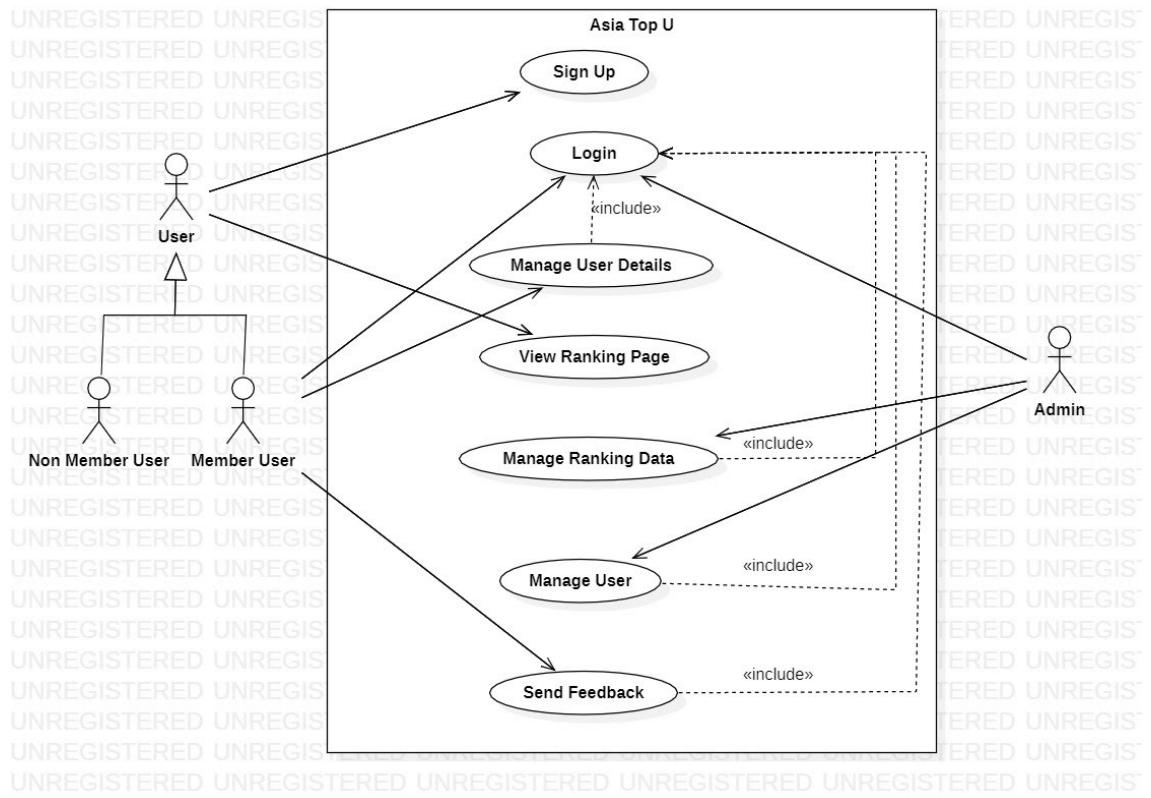
2	ASTU_04_02	Users can view the information of the university.	H
3	ASTU_04_03	Users can view the ranking indicator.	H
4	ASTU_04_04	Users can sort the rank, university, country, indicators and overall score.	M
5	ASTU_04_05	Users can search for the university by entering the university name.	M
6	ASTU_04_06	Users can filter the university by years and country.	M
7	ASTU_04_07	Users can add universities to the compare list.	L
8	ASTU_04_08	Users can add universities to their favourite list.	L
	ASTU_05	Manage Ranking Data	
1	ASTU_05_01	Admin can edit university information.	H
2	ASTU_05_02	Admin can edit university rankings.	H
3	ASTU_05_03	Admin can add a new university.	H
4	ASTU_05_04	Admin can delete the university.	H
5	ASTU_05_05	Admin can update the years of the university in the ranking list.	H
6	ASTU_05_06	Admin can search for the university by entering the university name.	M
7	ASTU_05_07	Admin can filter the university by years and country.	M
8	ASTU_05_08	Users can sort the rank, university, country, indicators and overall score.	M
	ASTU_06	Manage User	

1	ASTU_06_01	Admin can view the user list.	H
2	ASTU_06_02	Admin can search for specific users.	M
3	ASTU_06_03	Admin can delete the users.	M
	ASTU_07	Send Feedback Message	
1	ASTU_07_01	Users can send feedback messages to the admin.	L

5.2 Non Functional Requirements

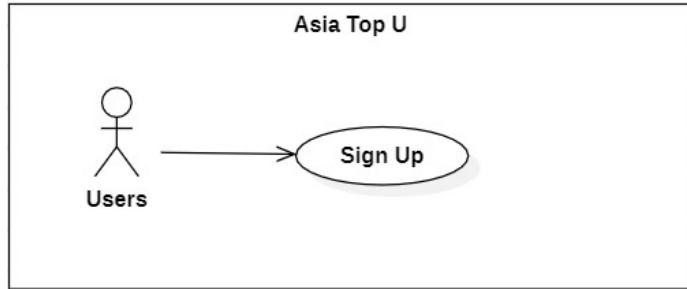
No.	Requirement ID	Requirement Description	Priority
	ASTU_08	Reliability	
1	ASTU_08_01	For a single user, the system should not crash more than once per 10 hours.	H
2	ASTU_08_02	If the system crashes, the restart should not exceed 3 minutes.	H
	ASTU_09	Security	
3	ASTU_09_01	The user's account ID must be unique.	H
4	ASTU_09_02	The user's personal details should be encrypted inside the database.	H
5	ASTU_09_03	Other unauthorized users or robots should not be able to access all accounts.	H
	ASTU_10	Performance	
6	ASTU_10_01	Any interaction between the system and the user must not exceed 3 seconds.	M
7	ASTU_10_02	The system should be available to use 24 hours per day.	H

6. USE CASE DIAGRAM/STORY CARD



USE CASE SPECIFICATION

1. Use Case: Sign Up (ASTU_01)



1.1 Brief Description

- Users can sign up for a new account to the system.

1.2 Pre-Condition

- New users can sign up.

1.3 Characteristic of Activation

- Event-driven.

1.4 Flow of Events

1.4.1 Basic Flow

- This use case begins with new users.
- The system will display a sign up screen when users click the 'Sign Up' button. (**ASTU_01_01**)
- Users need to insert all the information required in the register form before signing up. Else, the system will display an error message and users are unable to sign up. (**E-3: Details Entered Incomplete**)
- If the email being used exists, the system will display an error message. (**E-1: Email Exists**)
- If the password field and confirm password field mismatch, the system will display a reminder message to remind users. (**E-2: Wrong Password**)
- After inserting all the information needed, users need to click on the "Sign Up" button and an account will be successfully created.

1.4.2 Alternative Flow

- Not applicable.

1.4.3 Exceptional Flow

- **E-1: Email Exists**

The system will display an error message “Email already exists” when users enter an email that already exists in the system.

- **E-2: Wrong Password**

The system will display a reminder message when the user enters a password on the confirm password field that is different from the password on the password field.

- **E-3: Details Entered Incomplete**

The system will display an error message when users did not fill in all the information to sign up.

1.5 Post Condition

- The users can successfully sign up as a member if they provide all the information needed correctly.

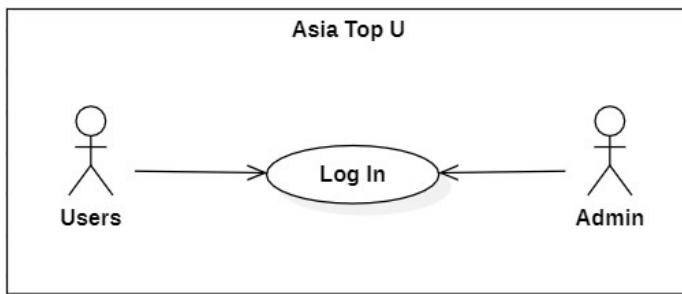
1.6 Rules

- The email created must be unique and the password must be in the correct format.

1.7 Constraint

- Only new users can sign up for a new account.

2. Use Case: Log In (ASTU_02)



2.1 Brief Description

- Admin and users can log in to the system.

2.2 Pre-Condition

- Admin can log in to the system.
- Users who have successfully registered an account can log in to the system.

2.3 Characteristic of Activation

- Event-driven.

2.4 Flow of Events

2.4.1 Basic Flow

- This use case begins from users and admin.
- The system will display a login screen when users click the ‘Log In’ button. (**ASTU_02_01**)
- Admin and users select from the selection whether the user is an admin or user and key in their email and password to login. (**ASTU_02_02**)
- Admin and users can select “Forget password?” if they forgot their own password. (**A-1: Forgot Password**)
- Admin and users are allowed to re-login into the system once they successfully receive the temporary password.. (**ASTU_02_03**)
- If admin and users try to login with the wrong password, the system will display an error message. (**E-1: Invalid Email or Password**)
- If admin and users only enter one of the fields for either email or password, which means it is incomplete, the system will display an error message to remind them. (**E-2: Email or Password Incomplete**)

2.4.2 Alternative Flow

A-1: Forgot Password

- If the users forgot their password, the system allows them to click the “Forget password?” button. Users must insert their email and click the “Reset Password” button to continue the process. After that, the system will send a temporary password to the email.

2.4.3 Exceptional Flow

• E-1: Invalid Email or Password

When the admin and users enter the email or password wrongly, the system shall display an error message “Failed! Please enter correct email or password!” and shall let until the admin and users enter the correct email or password.

• E-2: Email or Password Incomplete

The system will display an error message “You have entered an invalid email address!” when the admin and users did not fill in the email completely and “Format password is wrong.” for the admin and users that does not fill in password completely.

2.5 Post Condition

- Admin and users can log in successfully if they enter email and password correctly.

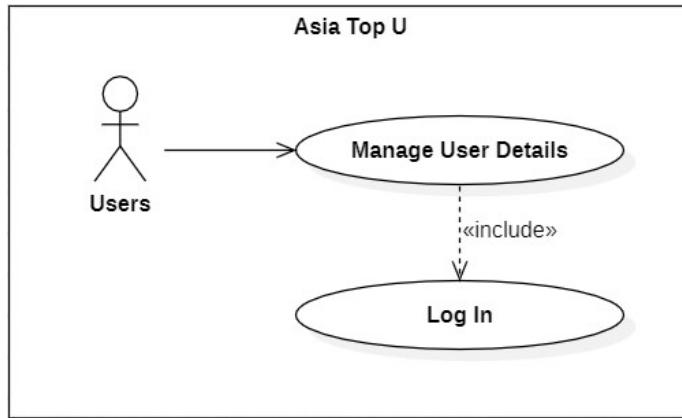
2.6 Rules

- The email and password are inserted correctly.

2.7 Constraint

- Admin and users must have an account to log in to the system.

3. Use Case: Manage User Details (ASTU_03)



3.1 Brief Description

- This use case is initiated by the users. This use case will enable the users to update or change their details.

3.2 Pre-Condition

- Users have successfully logged into the system.

3.3 Characteristic of Activation

- Event-driven.

3.4 Flow of Events

3.4.1 Basic Flow

- This use case begins when the users click the “My Profile” button.
- The system should display the “My Profile” interface, which displays the user details.
- Users are allowed to update or change their details such as first name, last name, phone number, email, education level, and profile picture. **(ASTU_03_01)**
- Users can click the “Save” button after editing their personal information. **(A-1: Edit Profile)**
- The system will display the “Success!” message.
- Users also can click the “Cancel” button if they do not want to edit. **(A-2: Cancellation)**

- In the editing session, if users are not completely filled in the required field, the system will display an error message. (**E-1: Details Entered Incomplete**)

3.4.2 Alternative Flow

A-1: Edit Profile

- Users are allowed to update or change their personal information when clicking the “Edit Profile” button.
- After finishing editing their details, the users can click the “Save” button.
- The system will display the “Success!” message.

A-2: Cancellation

If the users click the “Cancel” button, the system should return to the previous screen.

3.4.3 Exceptional Flow

- **E-1: Details Entered Incomplete**

The system will display an error message when users did not fill the required information which is the email when users click the “Save” button. The required fields are first name, last name and email.

3.5 Post Condition

- The latest user details will be updated.

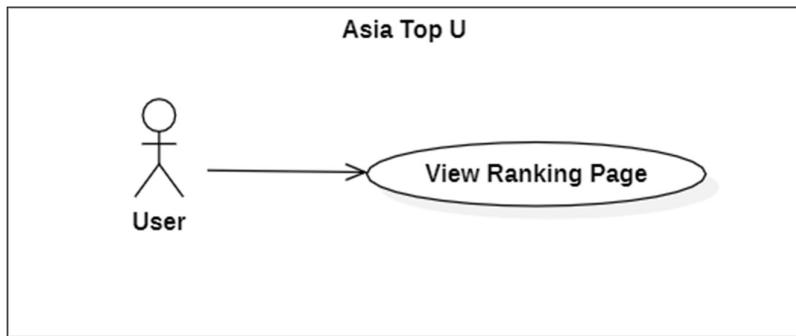
3.6 Rules

- All the information must be inserted.

3.7 Constraint

- Users must log in to the system.

4. Use Case: View Ranking Page (ASTU_04)



4.1 Brief Description

- This use case is initiated by the users. This use case will enable users to view the ranking list, information and ranking indicator of universities. Users can search for a certain university either by searching the university name, sorting or filtering the list. Users are also able to add universities to Compare List and Favourite List for focused universities.

4.2 Pre-Condition

- To add universities to the Compare List and Favourite List, users need to log in.

4.3 Characteristic of Activation

- Event-driven.

4.4 Flow of Events

4.4.1 Basic Flow

- This use case begins when users press the “Explore Now” button at the Dashboard and navigate to the home screen, University Ranking Screen.
- Users will overview on the ranking lists of universities in ascending ranking order of last year by default. (**ASTU_04_01**)
- Instead, users can search for the specific university. (**A-1: Search for specific university**)
- Users can also sort the ranking list. (**A-2: Sort ranking list**)

- Users click on the “View More Info” button to link to the official university page of a specific university. (**ASTU_04_02**)
- Users click on the “Rankings Indicators” button to view the ranking list by several indicators. (**ASTU_04_03**)
 - Indicators included Faculty Student Ratio, International Students, International Faculty, Academic Reputation, Employer Reputation, and also Overall Score.
- To perform extra features users can sign in as a member. (**A-3: Add on features**)

4.4.2 Alternative Flow

A-1: Search for specific university

- Instead of viewing a ranking list one by one, users can search for a specific university.
 - Users can key in the university name in the search bar to search for specific universities. (**ASTU_04_05**)
 - Users can search for universities by filtering the list by certain criteria, which are country and years. (**ASTU_04_06**)
 - If users are searching for data that does not exist, the table will display an error message. (**E-1: Data Not Found**)

A-2: Sort ranking list

- Users can also sort the ranking list by rank, university name, country, and overall score. (**ASTU_04_04**)
 - Users are also able to sort the ranking list by indicators, which are Faculty Student Ratio, International Students, International Faculty, Academic Reputation, and Employer Reputation.

A-3: Add on features

- If users login with their account, they can perform extra features.
 - Users can add universities to the Compare List to compare universities by using Country, Overall Score, Faculty Student Ratio, International Students, International Faculty, Academic Reputation, and Employer Reputation. (**ASTU_04_07**)

- Users can add universities to the Favourite List to mark on universities which users are favourite with. (**ASTU_04_08**)

4.4.3 Exceptional Flow

- **E-1: Data Not Found**

When there is no result on search or applied filters, the table will display “No matching records found”.

4.5 Post Condition

- Users successfully viewed the university ranking list.
- Users successfully searched for specific universities.
- Logged in users successfully added university to Compare List.
- Logged in users successfully added university to Favourite List.

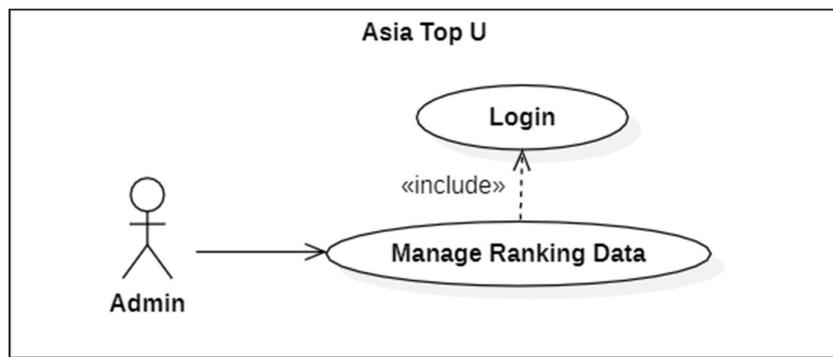
4.6 Rules

- Users must key in a valid record when they are searching.

4.7 Constraint

- Users must login to perform extra features which are add universities to Compare List and Favourite List.

5. Use Case: Manage Ranking Data (ASTU_05)



5.1 Brief Description

- This use case is initiated by the admin. This use case will enable admin to manage the ranking data.

5.2 Pre-Condition

- To manage the ranking data, admin must log in first.

5.3 Characteristic of Activation

- Event-driven.

5.4 Flow of Events

5.4.1 Basic Flow

- This use case begins when the admin pressed the “Manage Ranking Data” button.
- System will display a ranking list and the admin manages the ranking data on this page.
 - Admin can edit university information. (**ASTU_05_01**)
 - Admin can edit the university name, country, overall score, more information of university and the indicators.
 - Admin can edit university rankings. (**ASTU_05_02**)
 - Admin can add a new university into the ranking list. (**ASTU_05_03**)

- If the admin does not key in the university data completely, the system will display an error message.
- (E-2: Data Not Complete)**
- Admin can delete the university from the ranking list. **(ASTU_05_04)**
 - Admin can update the years of the ranking list. **(ASTU_05_05)**
 - Admin can search for specific universities instead of viewing the ranking list. **(A-1: Search for specific university)**
 - Admin can also sort the ranking list as needed. **(A-2: Sort ranking list)**

5.4.2 Alternative Flow

A-1: Search for specific university

- Admin can search for the specific university for the purpose of management.
 - Admin can key in the university name in the search bar to search specific universities. **(ASTU_05_06)**
 - Admin can search for universities by filtering the list by certain criteria, which are country and years. **(ASTU_05_07)**
 - If the data search by admin is not found, the table will display an error message. **(E-1: Data Not Found)**

A-2: Sort ranking list

- Admin can also sort the ranking list by rank, university name, country, and overall score. **(ASTU_05_08)**
 - Admin is also able to sort the ranking list by indicators, which are Faculty Student Ratio, International Students, International Faculty, Academic Reputation, and Employer Reputation.

5.4.3 Exceptional Flow

- **E-1: Data Not Found**

When there is no result on search or applied filters, the table will display a message, “No matching records found”.

- **E-2: Data Not Complete**

When the admin does not key in university data completely, the system will display “Please fill out the required field” and the ranking data are not able to be updated.

5.5 Post Condition

- Admin successfully managed the ranking data.

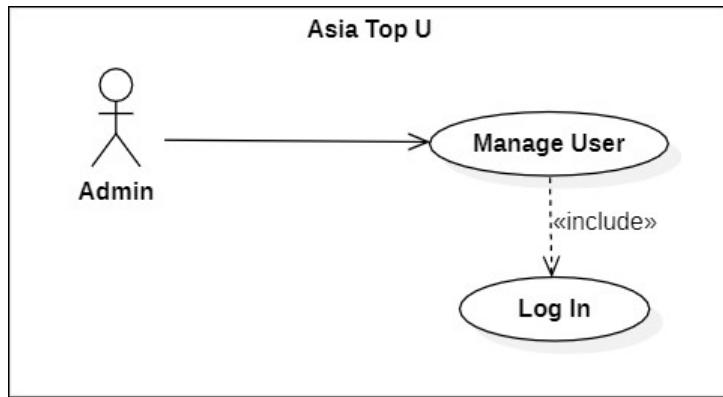
5.6 Rules

- Only the admin can manage the ranking data.

5.7 Constraint

- Admin must login into the system.

6. Use Case: Manage User (ASTU_06)



6.1 Brief Description

- This use case is initiated by the admin. This use case will enable admin to view the user list, search users by entering the user's name and delete the users.

6.2 Pre-Condition

- Admin must log in to the system.

6.3 Characteristic of Activation

- Event-driven.

6.4 Flow of Events

6.4.1 Basic Flow

- This use case begins when admin login into the system.
- Admin can view the list of registered users. (**ASTU_06_01**)
- Admin can search users. (**A-1: Search for Specific Users**)
- If the name is not the result, the table will display a message, “No matching records found”. (**E-1: User Not Found**)
- Admin can delete the user. (**A-2: Delete the Users**)

6.4.2 Alternative Flow

A-1: Search for Specific Users

- Instead of viewing a user list one by one, the admin can search for a specific user.
 - Admin can key in the user's name in the search bar to search specific users. (**ASTU_06_02**)
 - If there is no user found, the table will display an error message. (**E-1: User Not Found**)

A-2: Delete the Users

- Admins are allowed to delete the user.
 - Admins are allowed to delete the user by clicking the "Delete User" button. Then, the system will pop up a confirmation message. If the admin confirms to delete the selected user click "Delete", otherwise click close button. (**ASTU_06_03**)

6.4.3 Exceptional Flow

• E-1: User Not Found.

- The system allows the admin to search the user by entering the name of the user.
- If the name is not the result, the table will display a message, "No matching records found".

6.5 Post Condition

- Admin successfully view the user list,
- Admin successfully search users by entering the user's name,
- Admin successfully deleted the users.

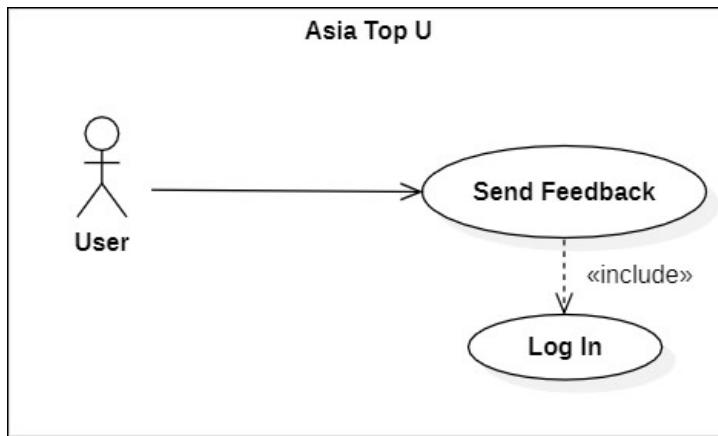
6.6 Rules

- Only the admin can manage the user.

6.7 Constraint

- Admin must log in to the system.

7. Use Case: Send Feedback Message (ASTU_07)



7.1 Brief Description

- This use case is initiated by the user. This use case will enable users to send feedback messages to the admin.

7.2 Pre-Condition

- Users must log in to the system.

7.3 Characteristic of Activation

- Event-driven.

7.4 Flow of Events

7.4.1 Basic Flow

- This use case begins when the user pressed the “Feedback” button.
- The system requests the user to enter the feedback message.
- After the user enters the feedback message, the user can click “Send”.
(ASTU_07_01)
- If the feedback message is blank when the user clicks “Send”, the system will display an error message. **(E-1: Message is blank)**
- If the feedback message is not blank, the system will send the feedback message of the user to the admin.
- Users also can click the “Cancel” button if they do not want to send the message. **(A-1: Cancellation)**

7.4.2 Alternative Flow

- A-1: Cancellation**

If the users click the “Cancel” button, the system should return to the previous screen.

7.4.3 Exceptional Flow

- E-1: Message is blank.**

- The system allows the user to send feedback messages to the admin.
- If the feedback message is blank when the user clicks “Send”, the system will display a message “Please fill out this field”.

7.5 Post Condition

- Users successfully send feedback to the admin.

7.6 Rules

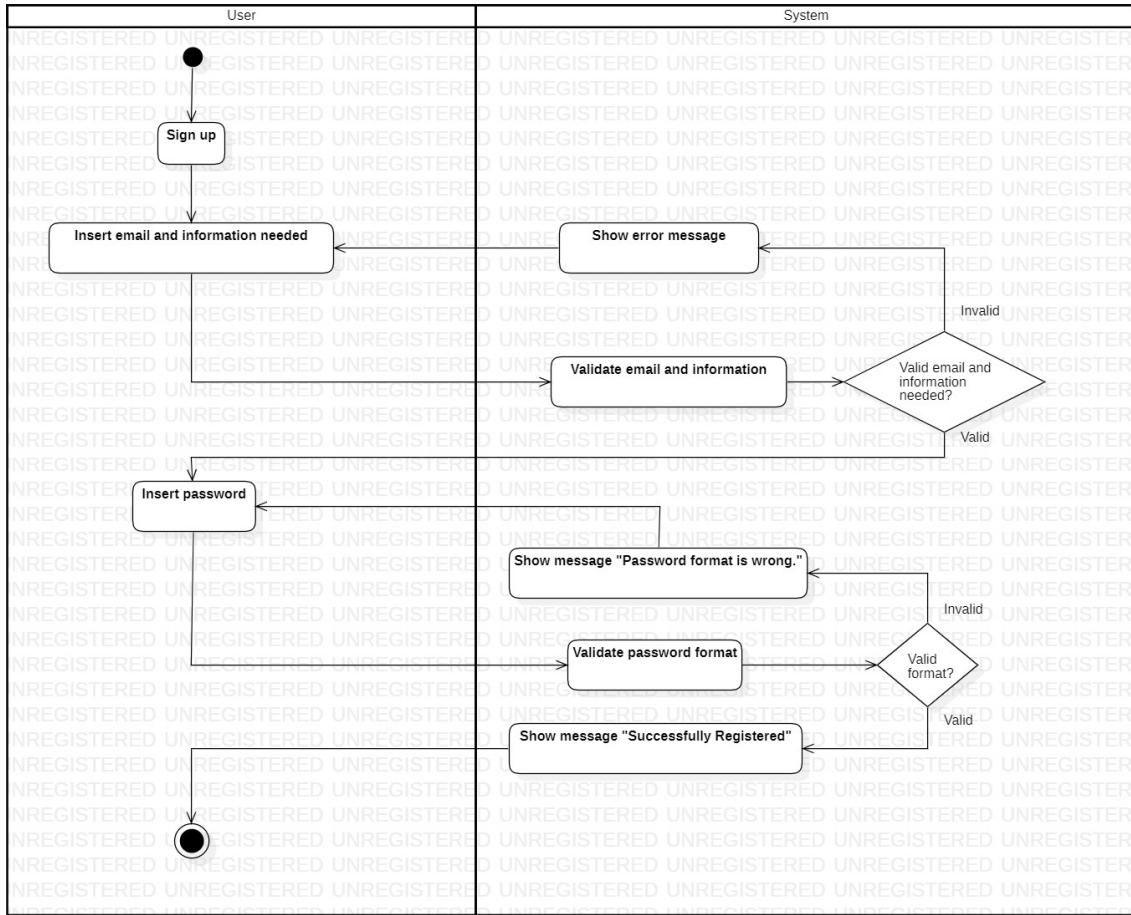
- Users must enter the feedback message (not blank message) when sent to the admin.

7.7 Constraint

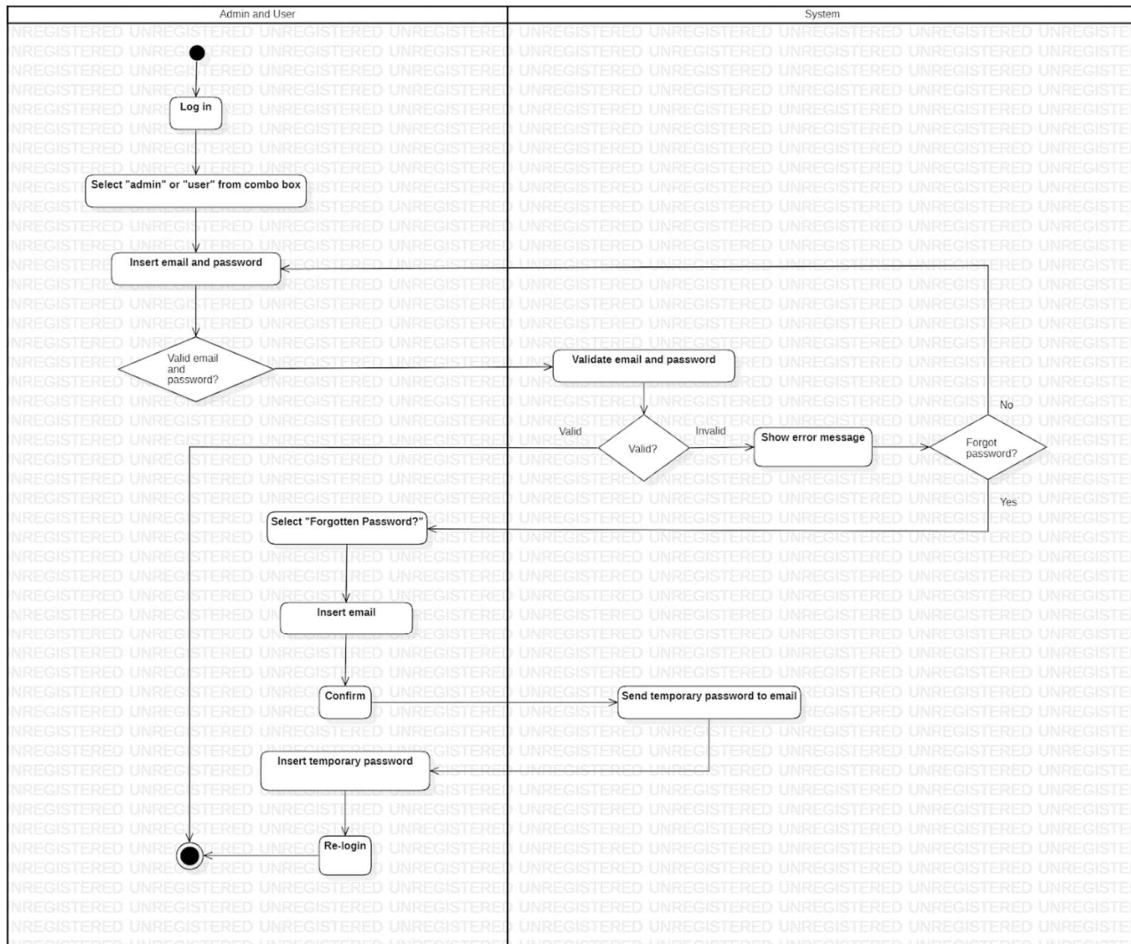
- Users must log in to the system.

7. ACTIVITY DIAGRAM

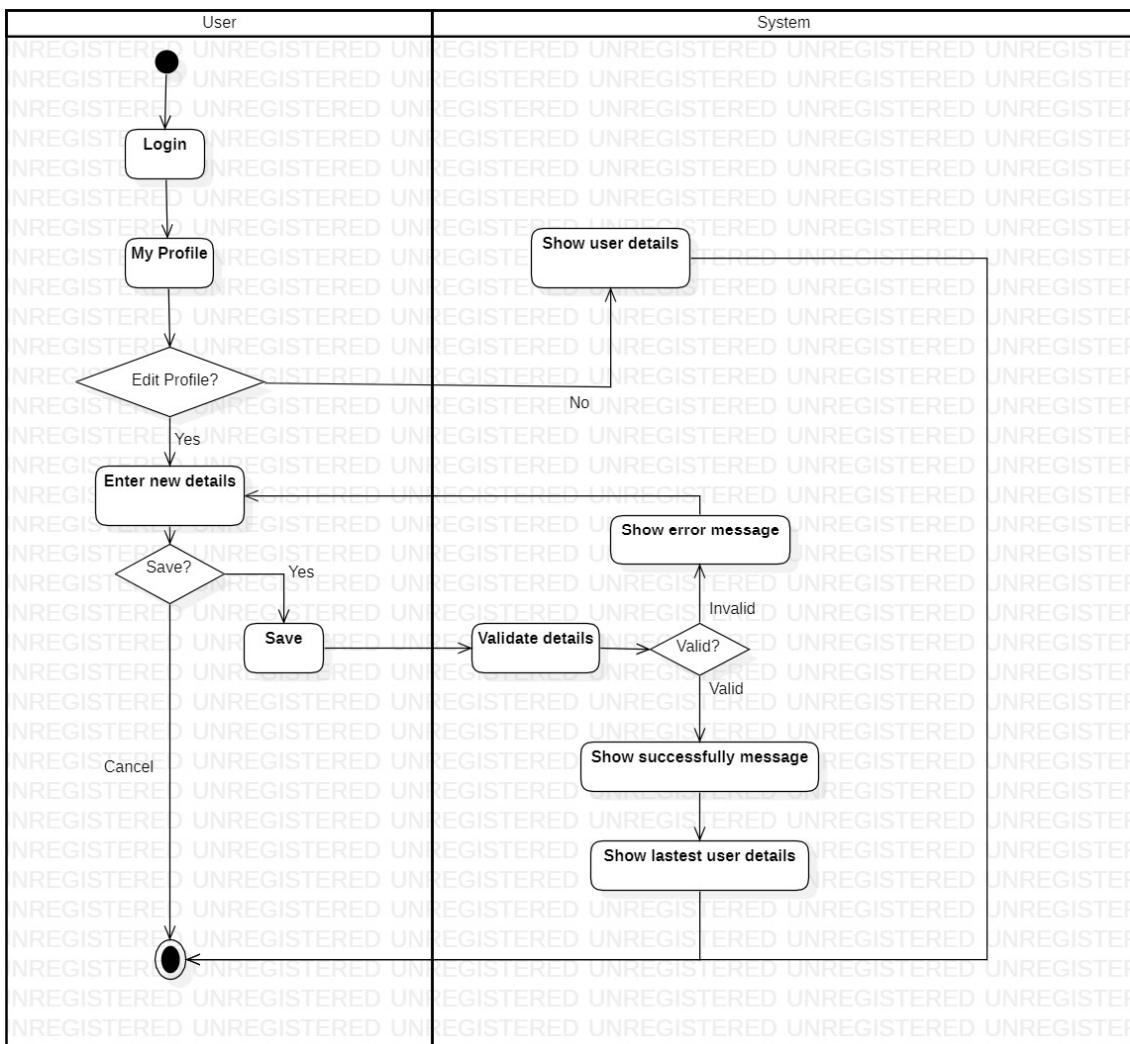
1. Sign Up



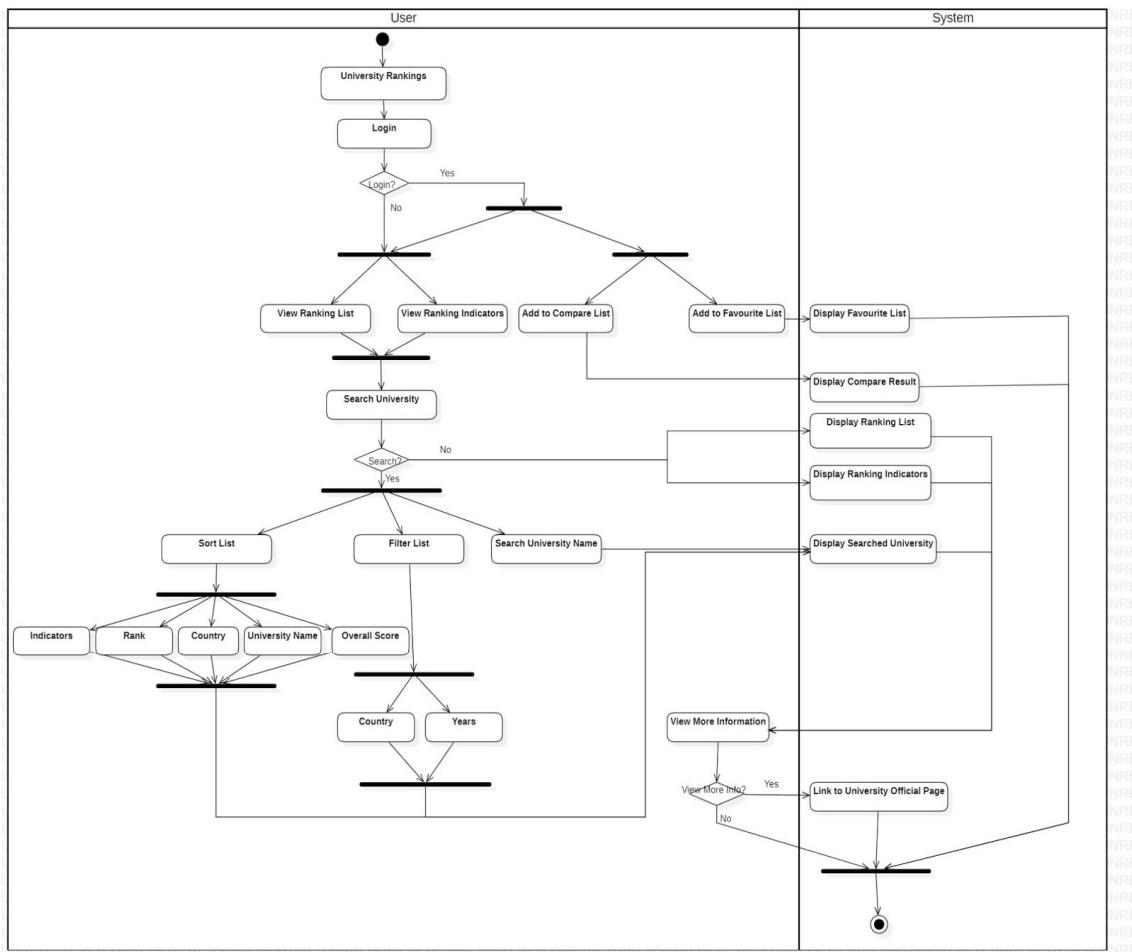
2. Log In



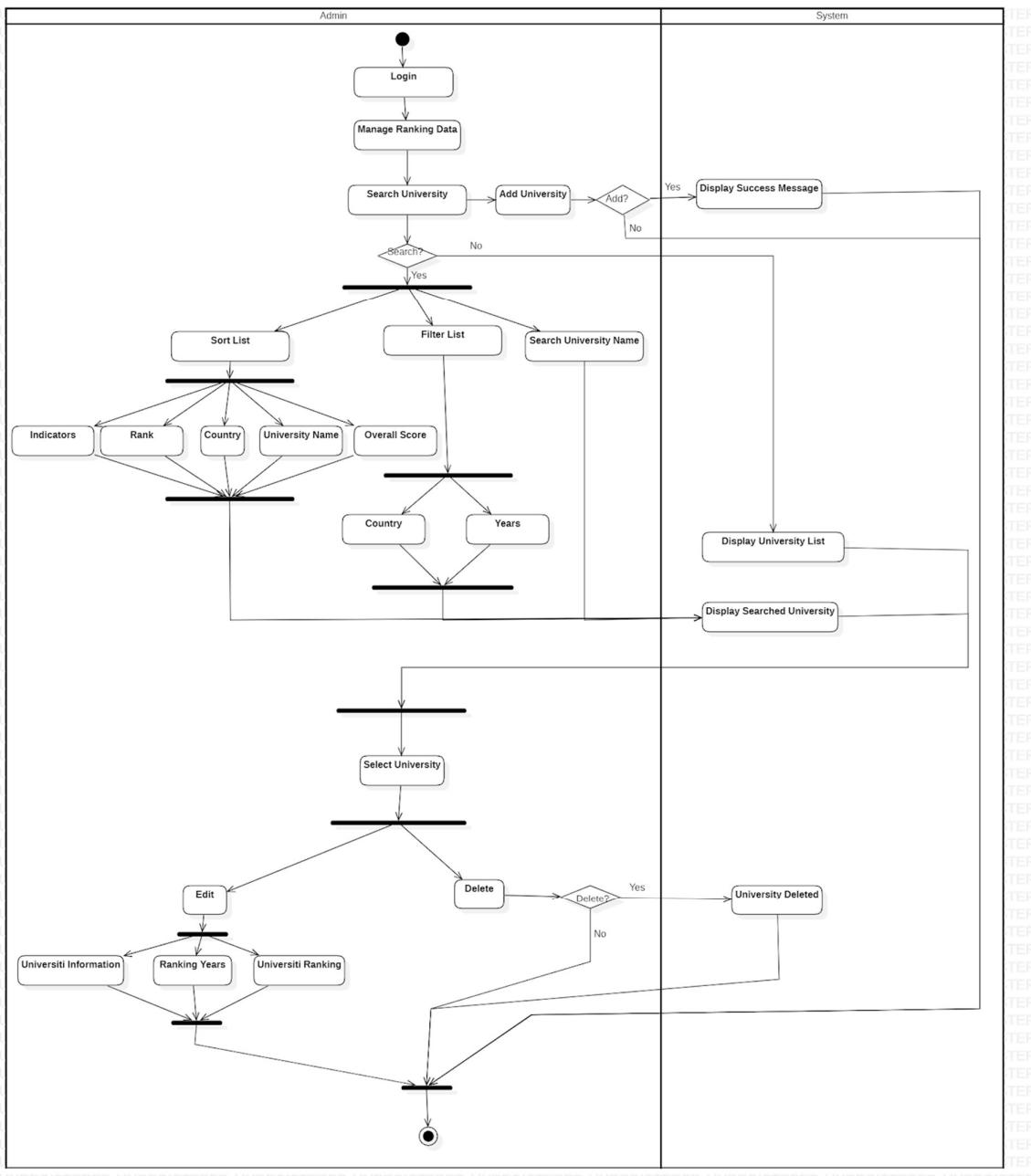
3. Manage User Details



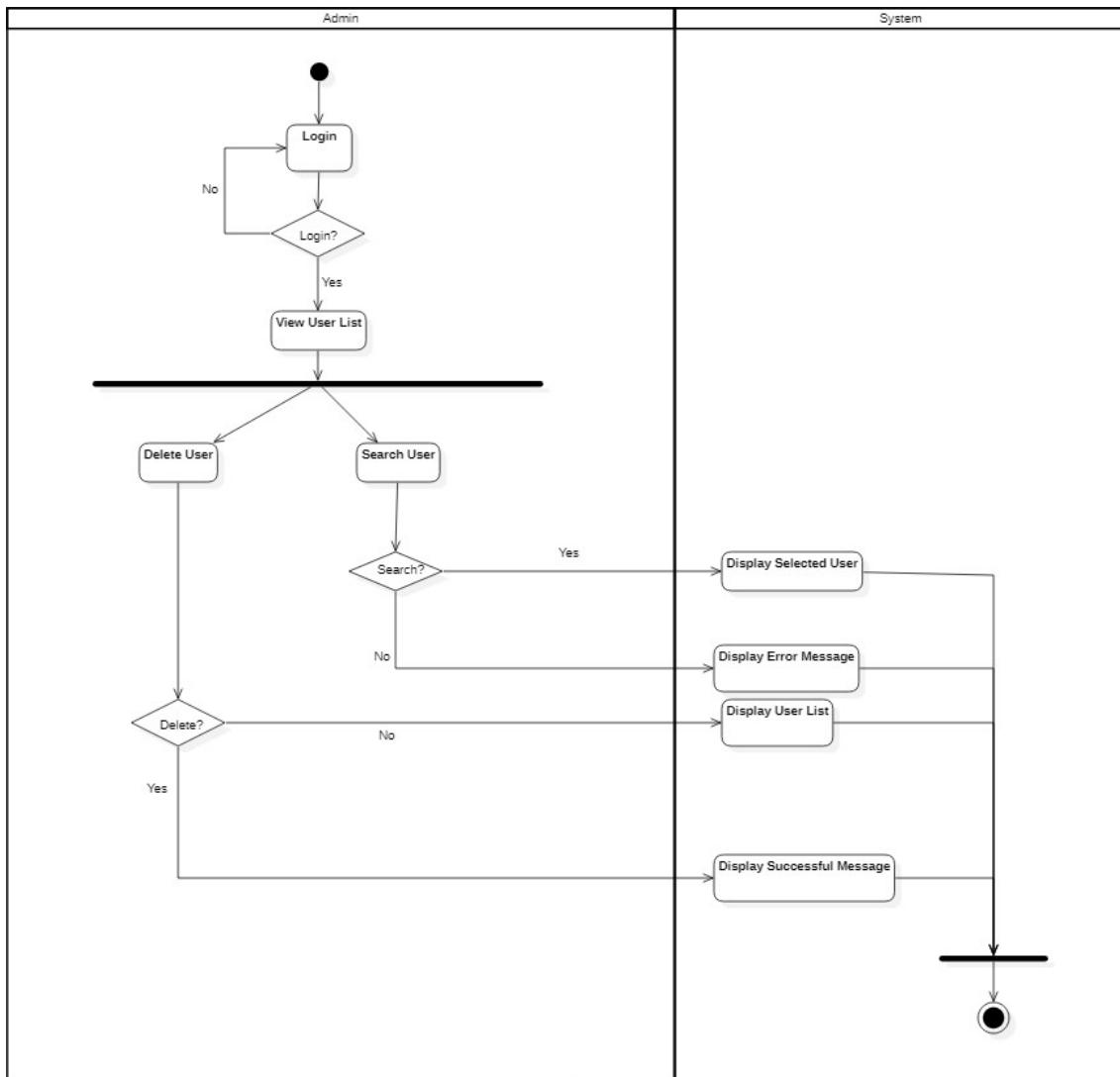
4. View Ranking Page



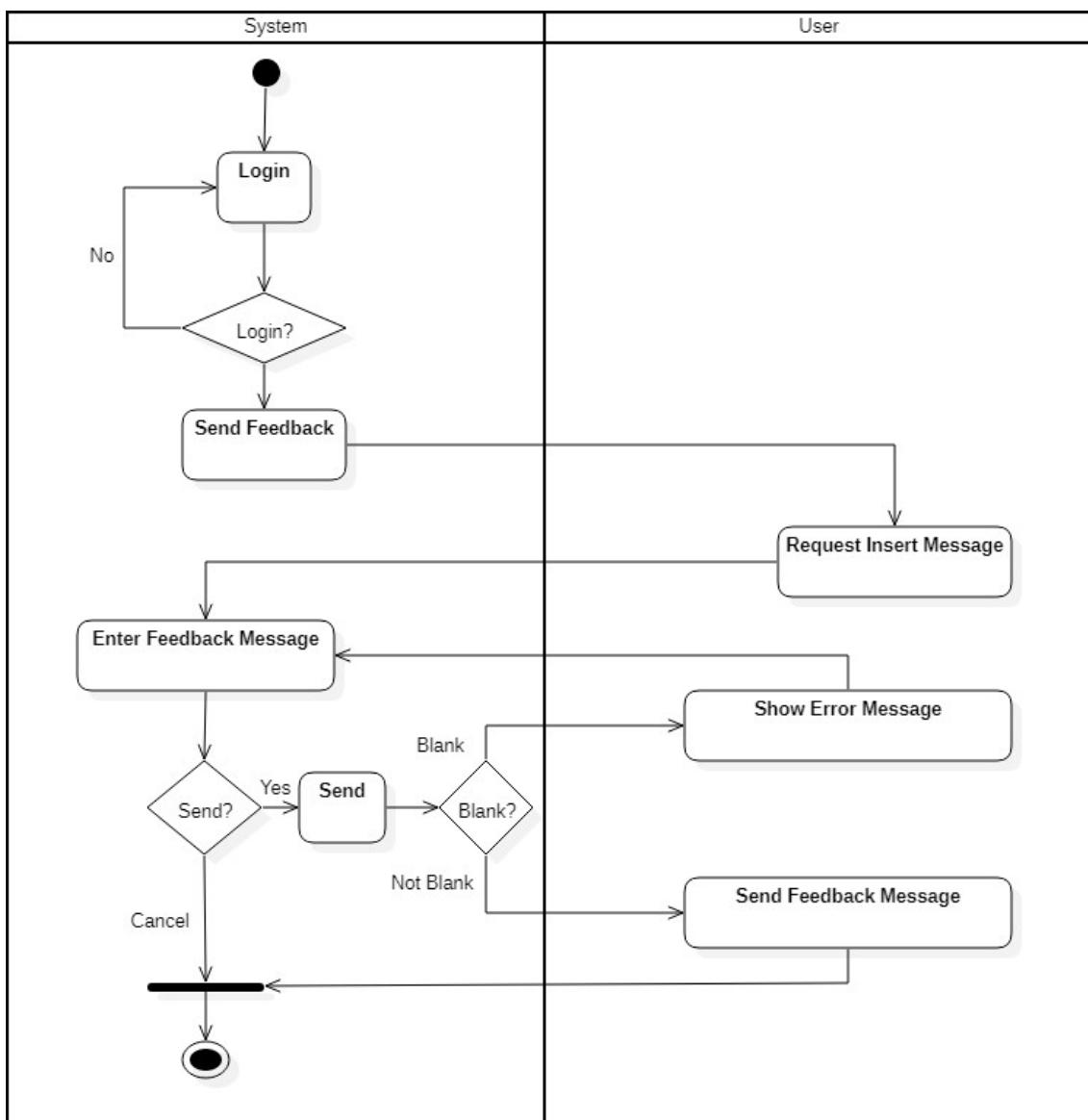
5. Manage Ranking Data



6. Manage User

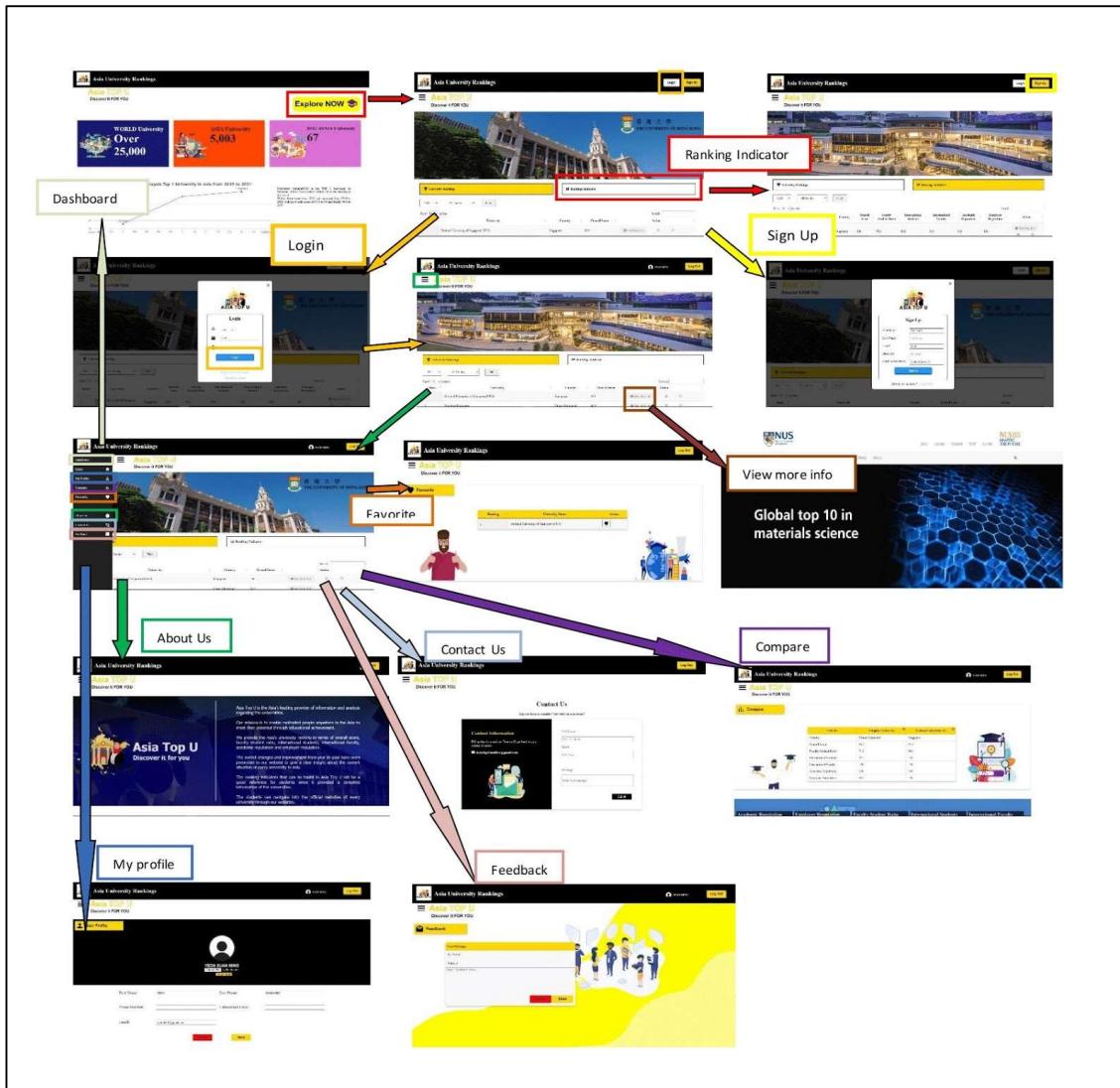


7. Send Feedback Message



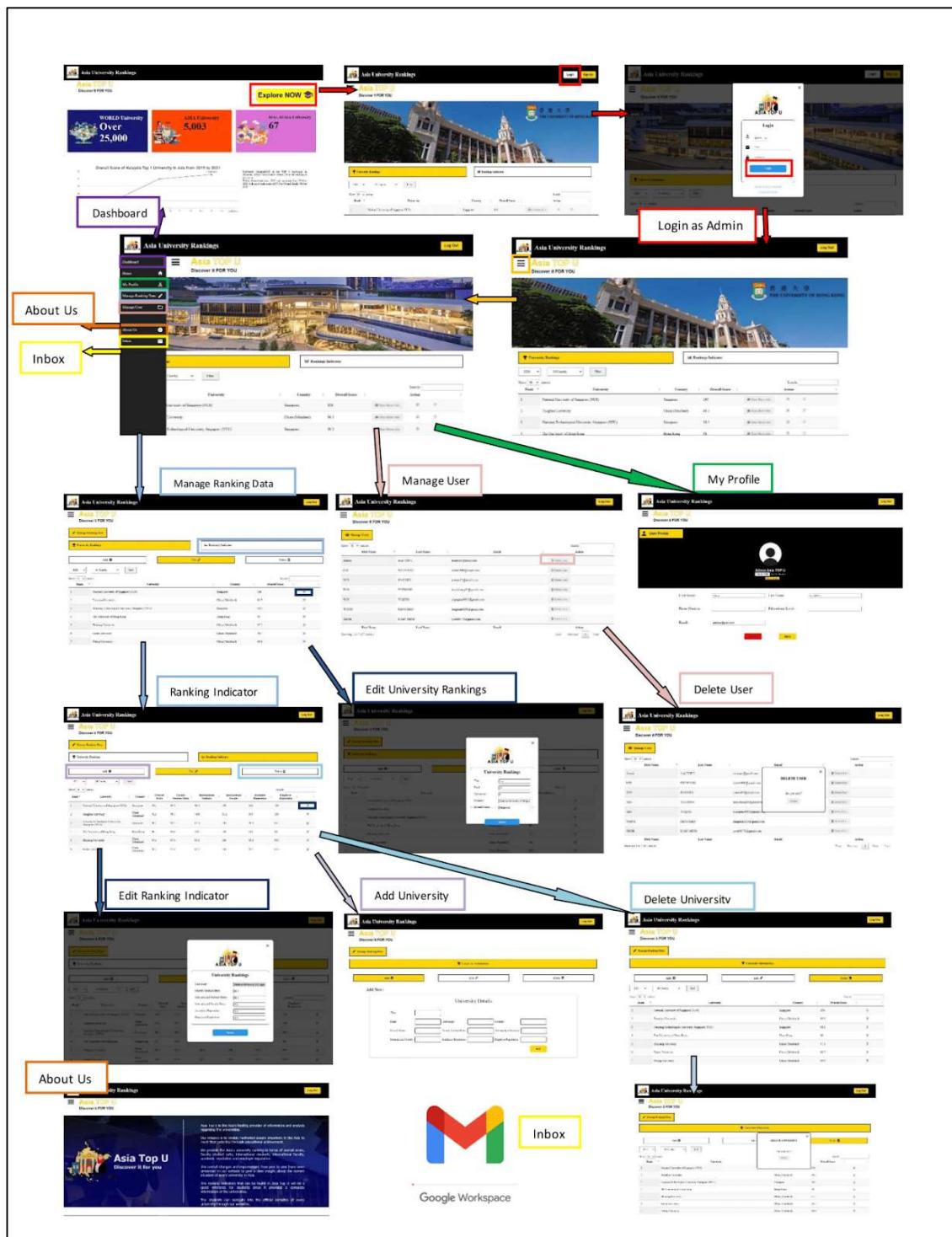
SCREEN STORYBOARD:

User



SCREEN STORYBOARD:

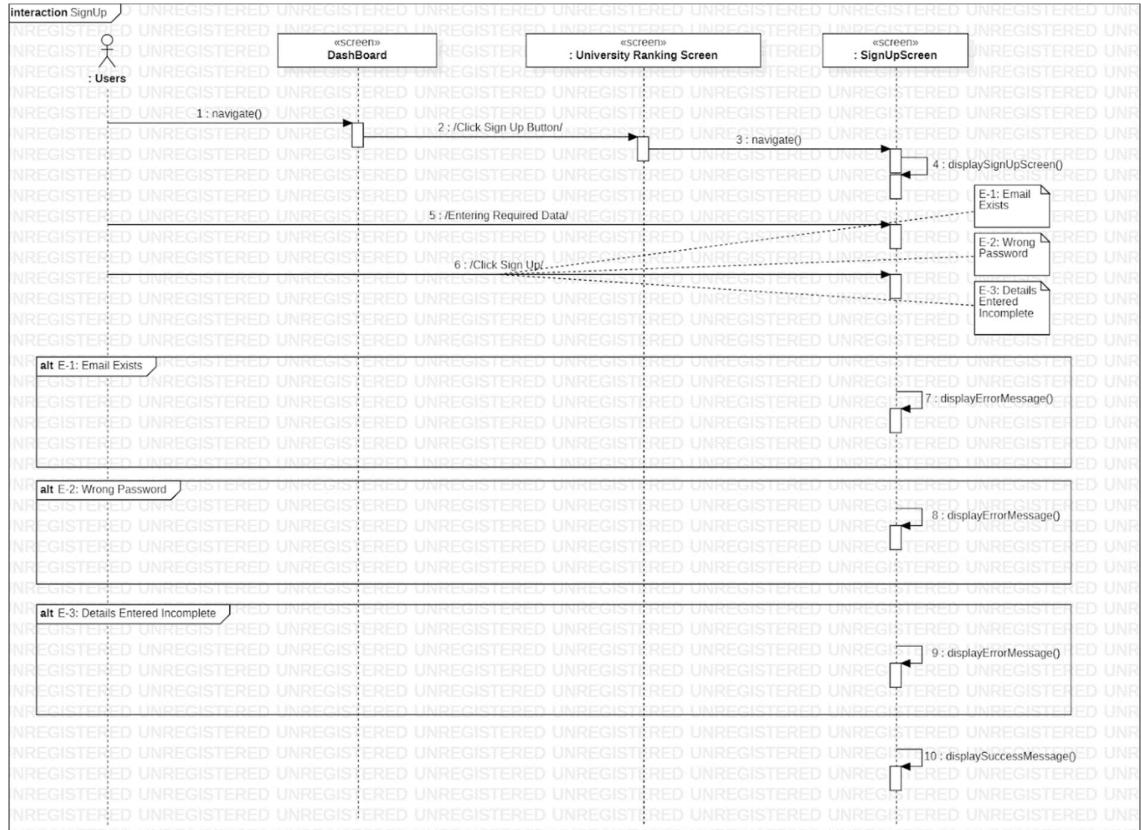
Admin



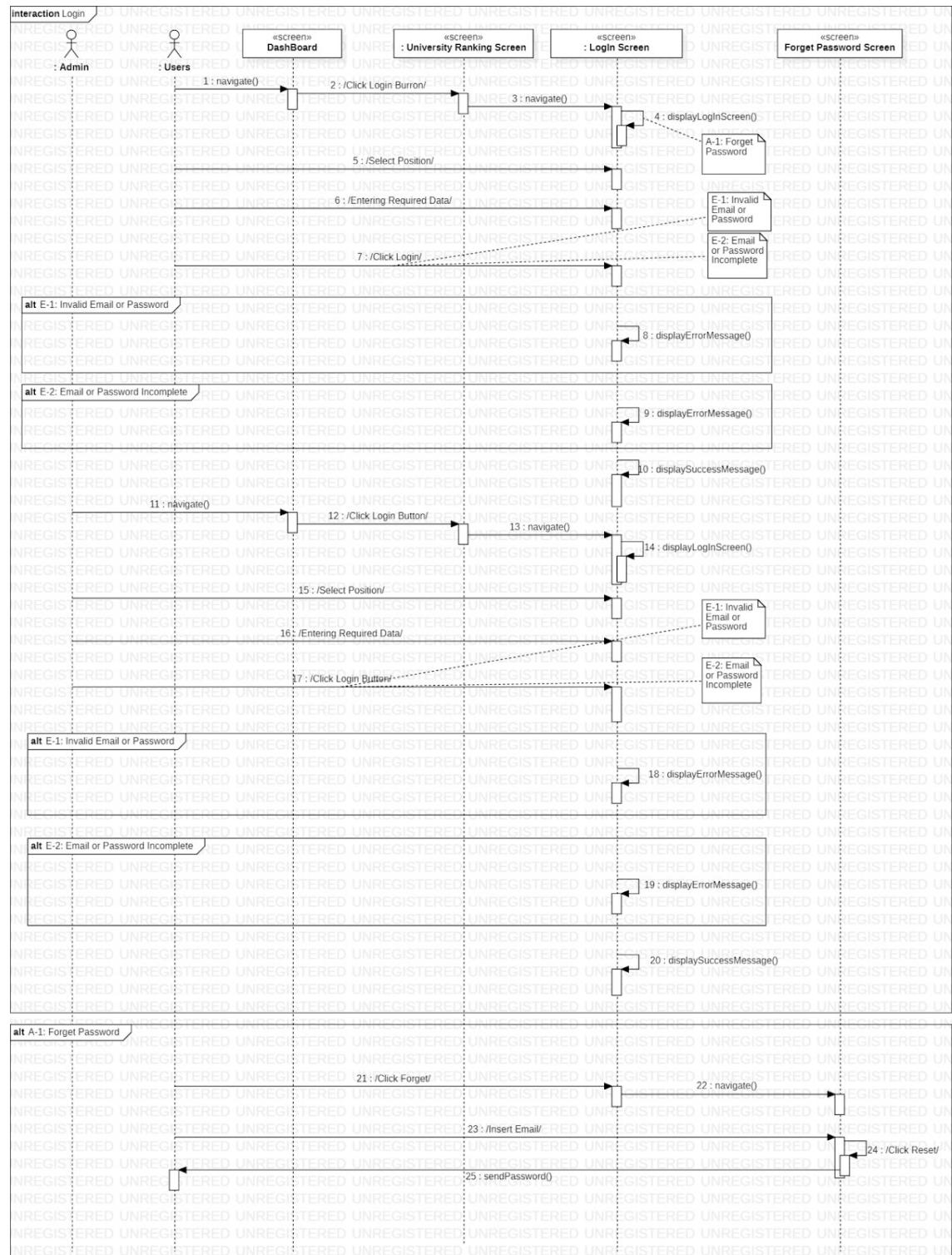
8.0 The USER EXPERIENCE (UX) MODEL DIAGRAM

8.1 Storyboard Sequence

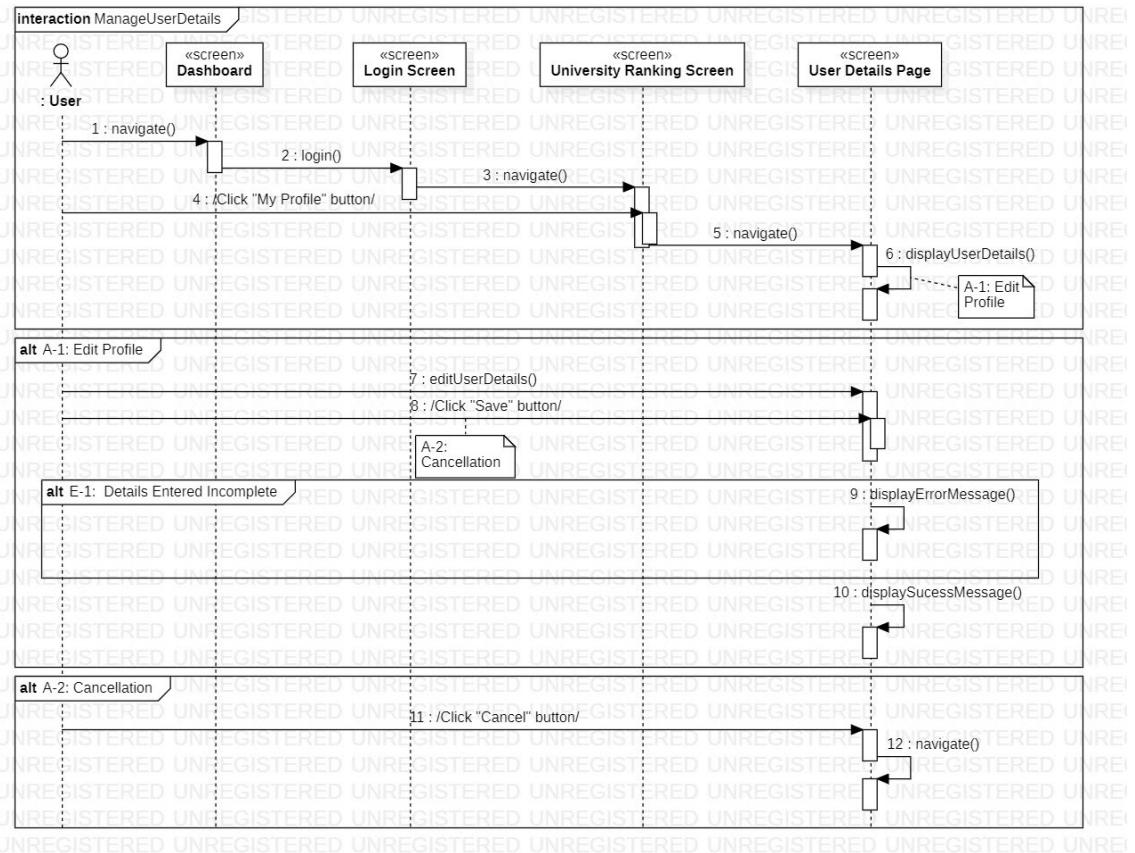
1. Sign Up



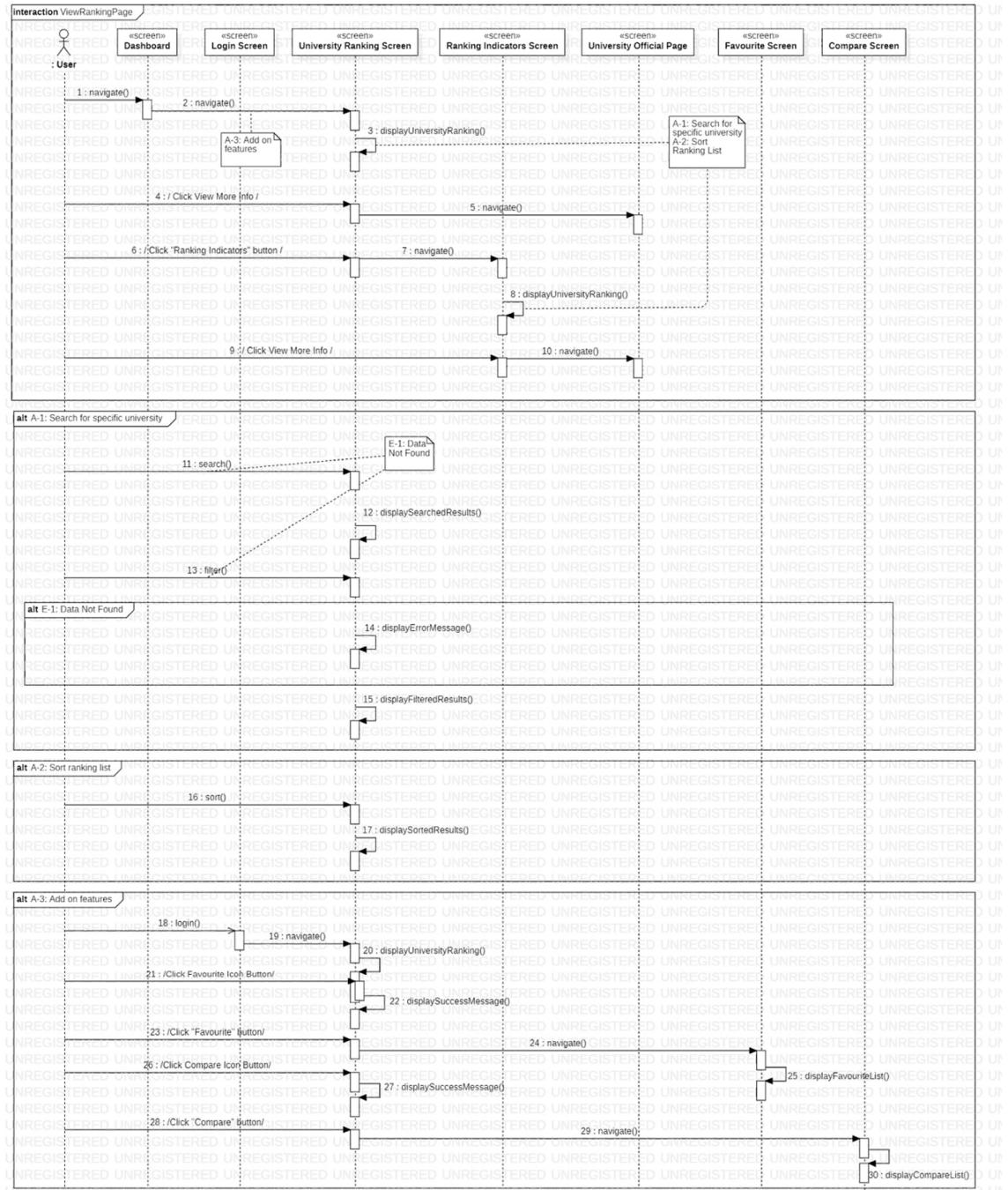
2. Log In



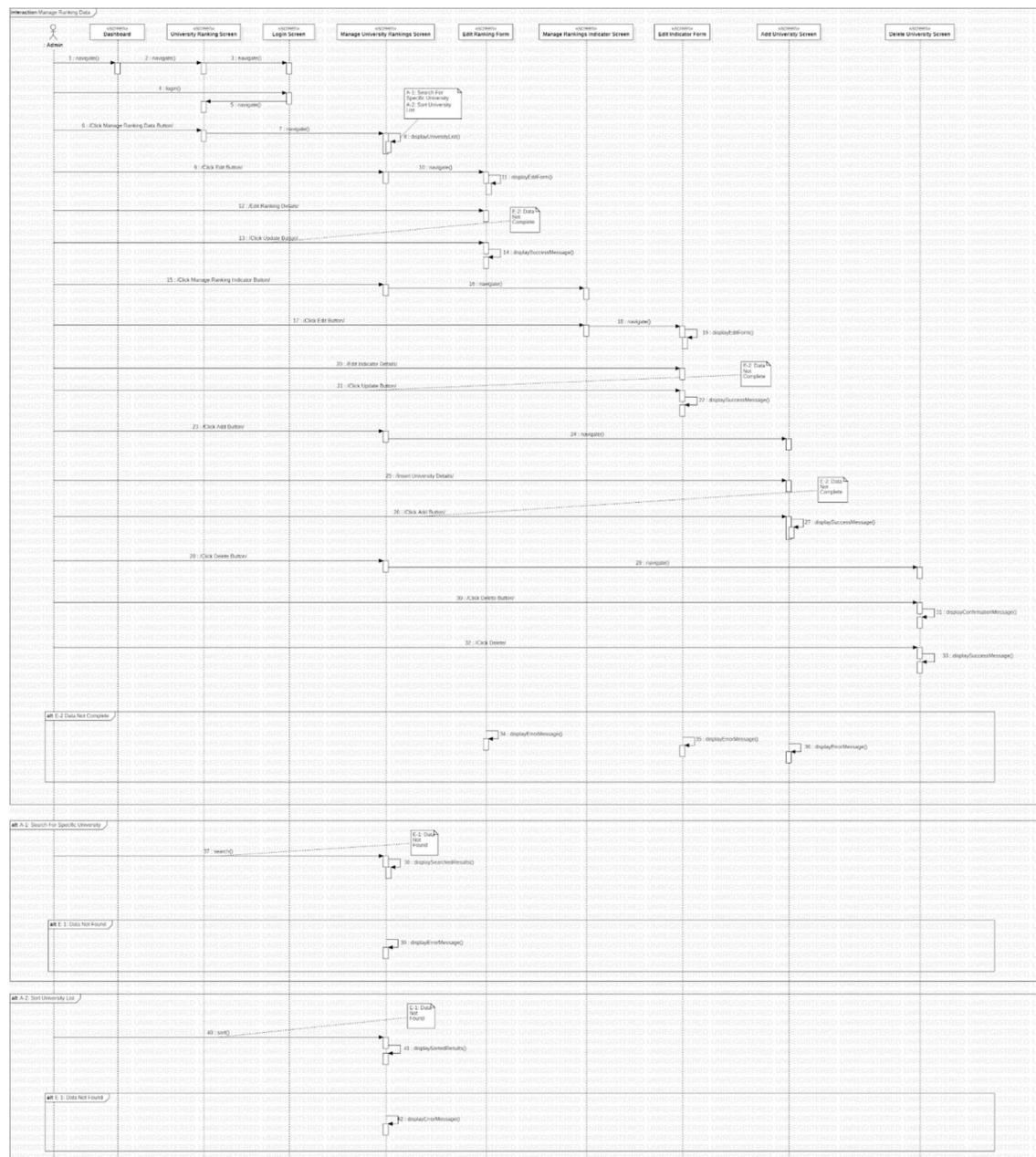
3. Manage User Details



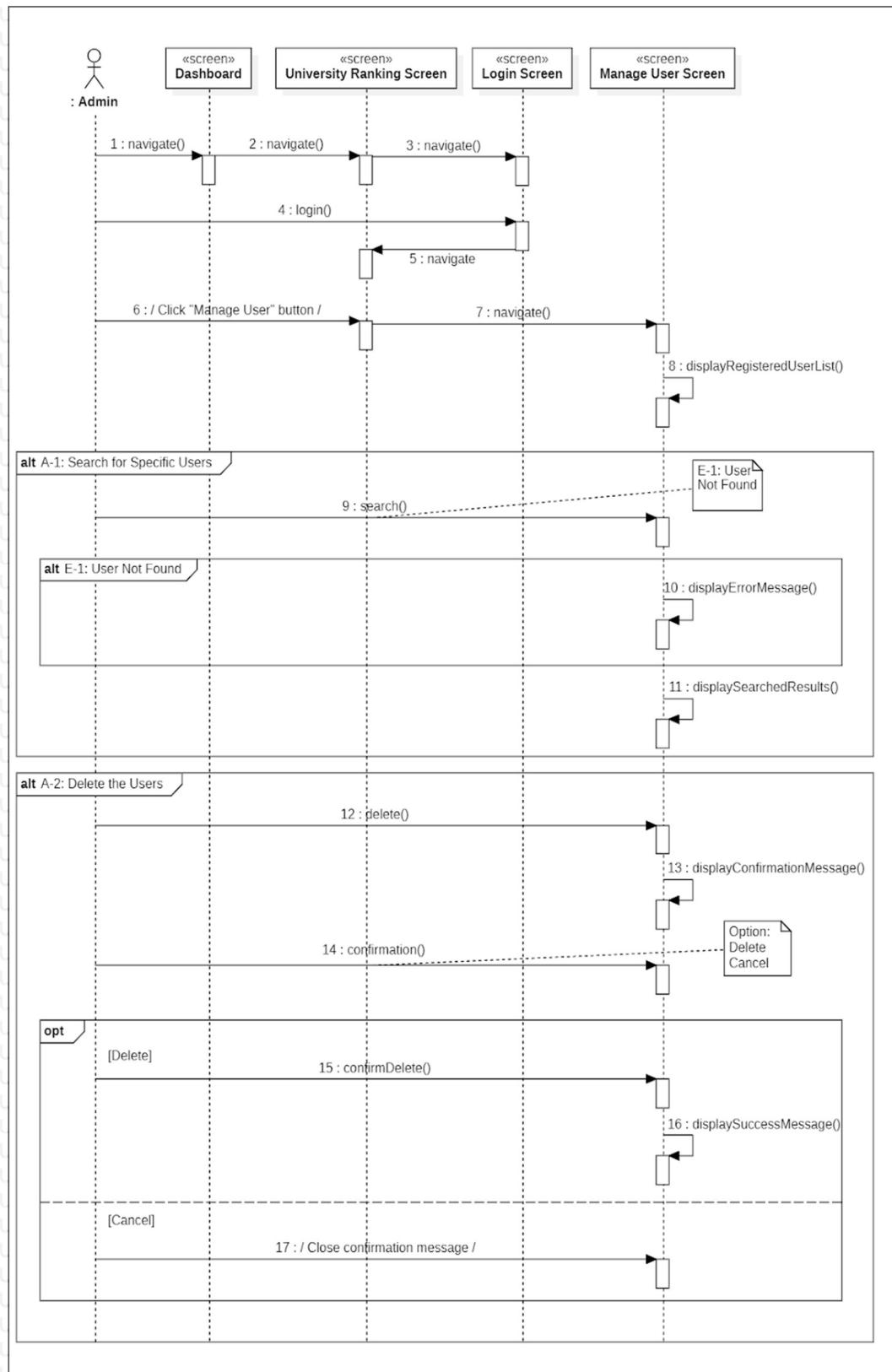
4. View Ranking Page



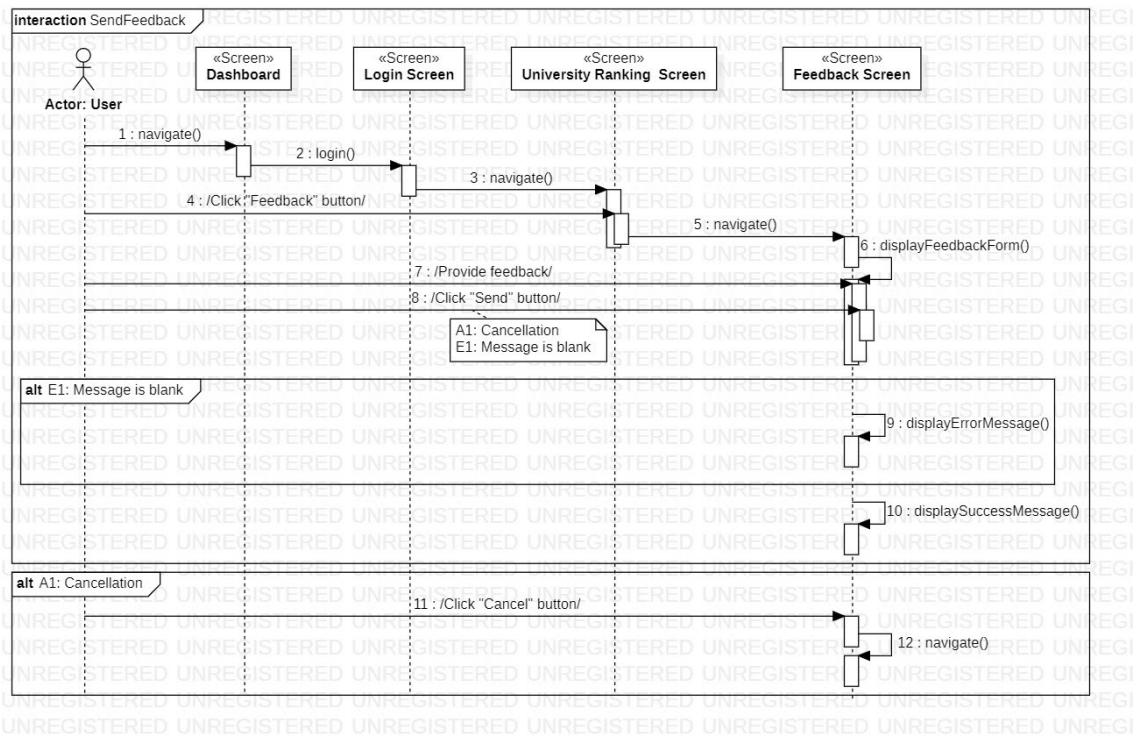
5. Manage Ranking Data



6. Manage User

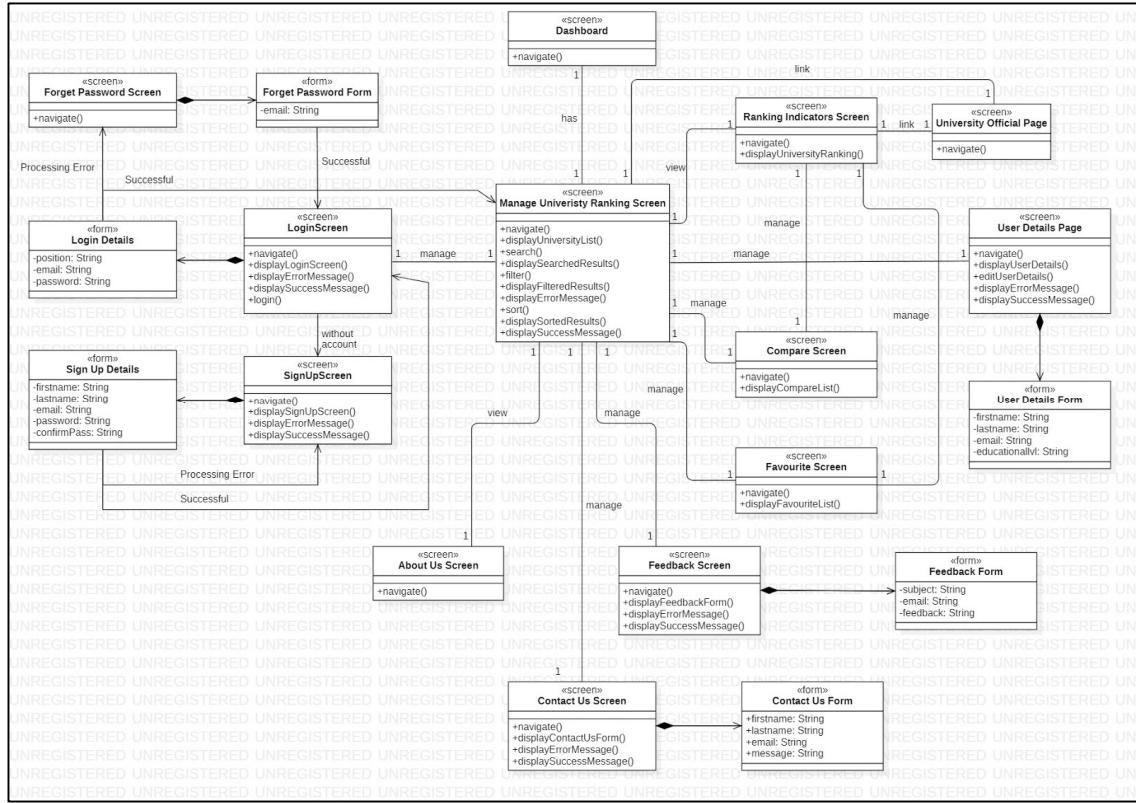


7. Send Feedback Message

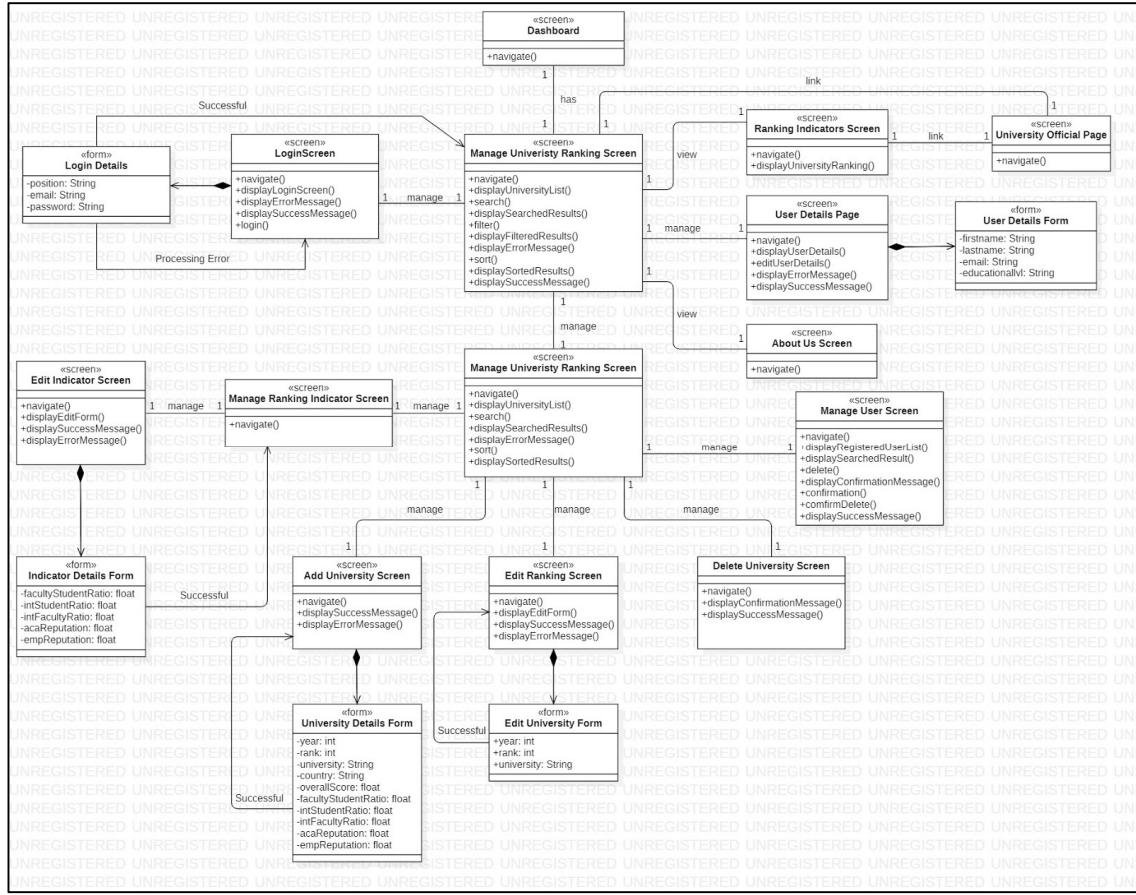


8.2 NAVIGATIONAL MAP

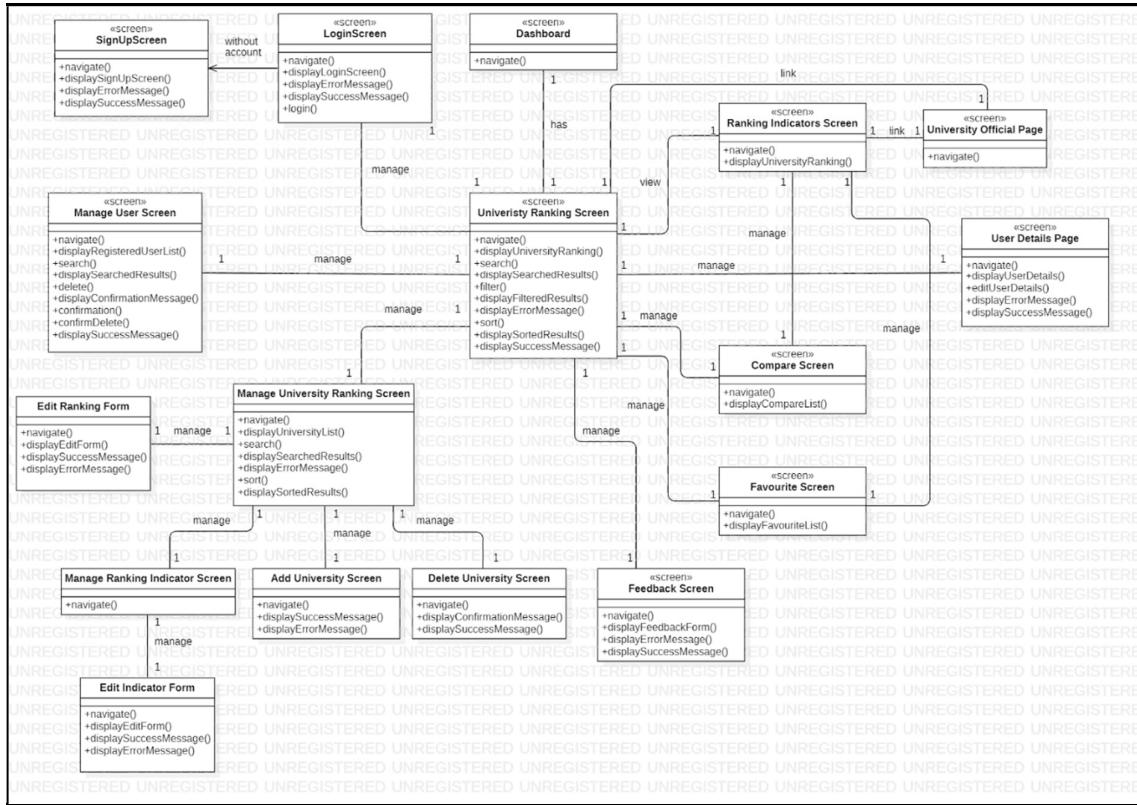
8.2.1 Navigational Map (User)



8.2.2 Navigational Map (Admin)



9.0 CLASS DIAGRAM



10. CONCLUSION AND FUTURE WORKS

Limitation

The system's limitation is that the member user cannot see the university's difference, which has been added to compare list and favourite list on the homepage. After the user added a university to the compare or favourite list, they can only get notified by an alert dialog about the success or failure of the action. They may get confused to know which universities are already added to the lists because the icon buttons for universities which are in the list or not in the list look no different.

Future works

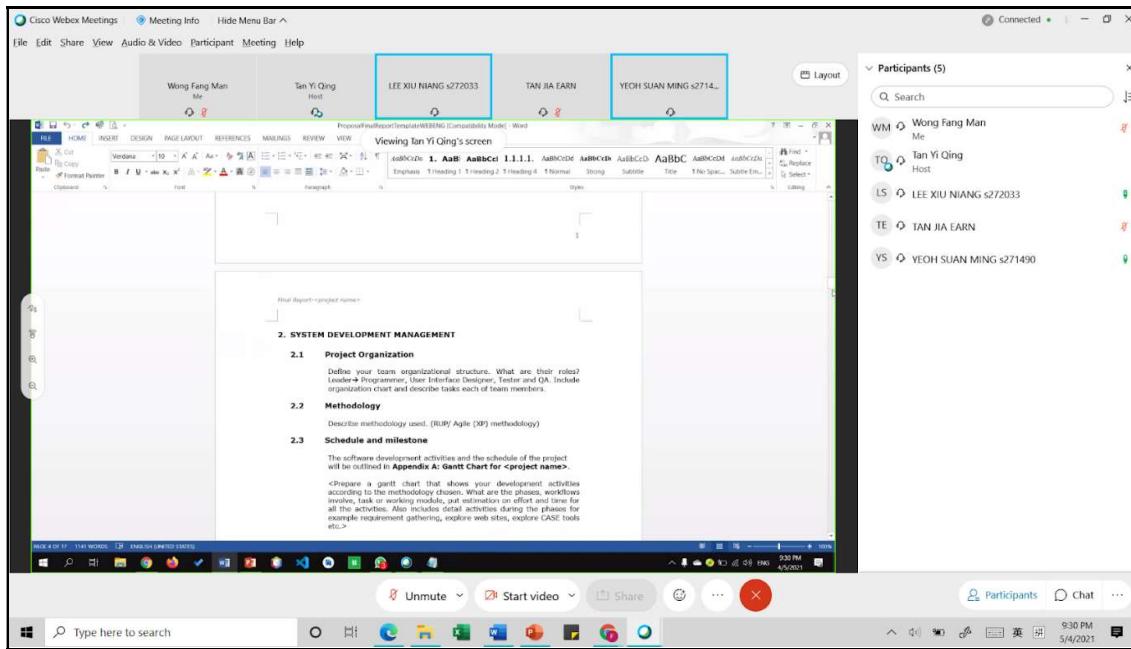
The system can be improved so that there will be some visible changes on the icon. For example, the icon buttons for the action, add to compare and the favourite list can have visible changes like turns to a filled coloured icon if they have been added to each list respectively. Therefore, the user may see the differences of those universities and easily identify whether the universities have been added to the lists. Besides that, the alert dialog can be removed to improve the user experience too.

REFERENCES

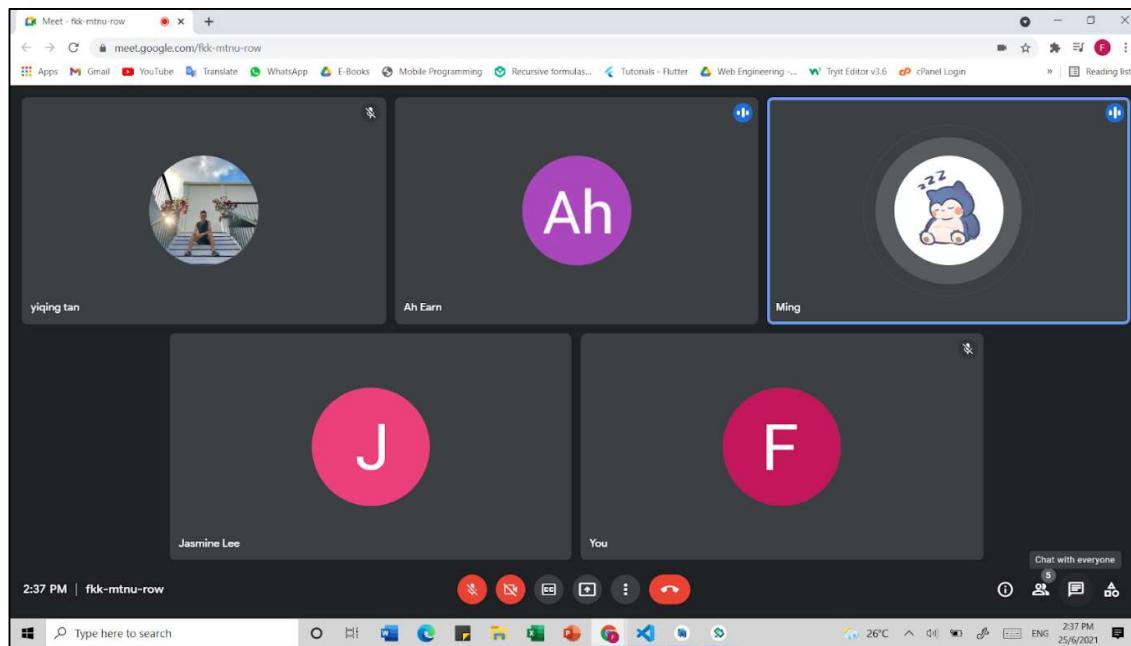
- Denning, S. (2016, August 13). What Is Agile? Retrieved from
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- Morelos, D. (2018, Feb 11). Traditional vs. Agile Software Development Method: Which One is Right for Your Project? *DZone*. Retrieved from
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<https://www.topuniversities.com/>

APPENDIX

Webex Meeting:



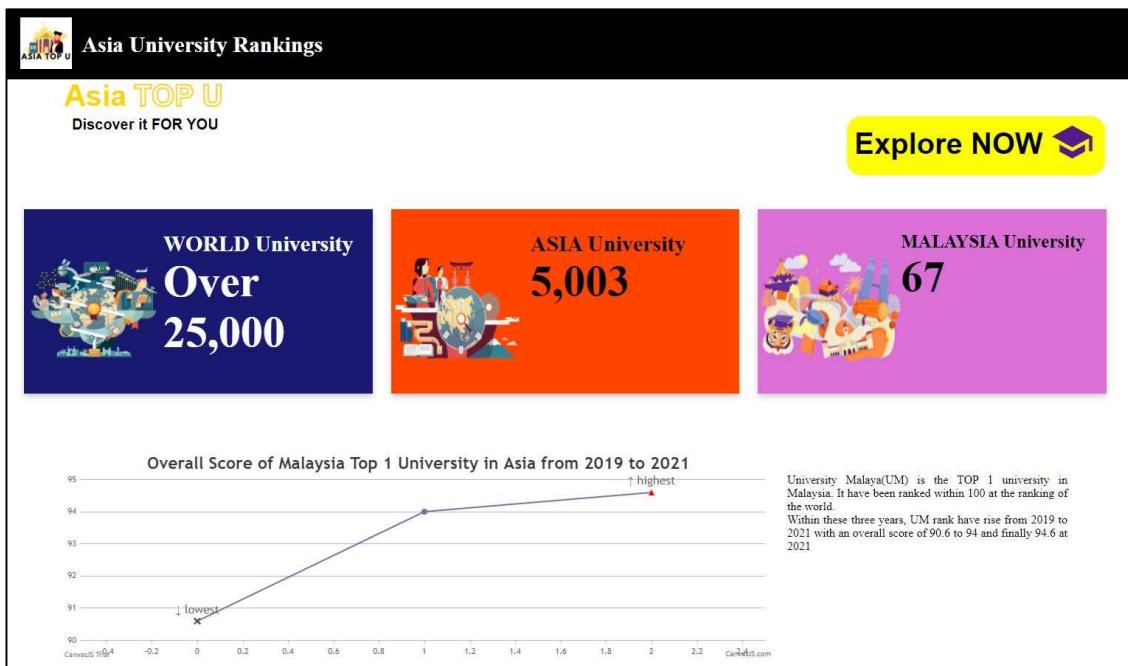
Google Meet Meeting:



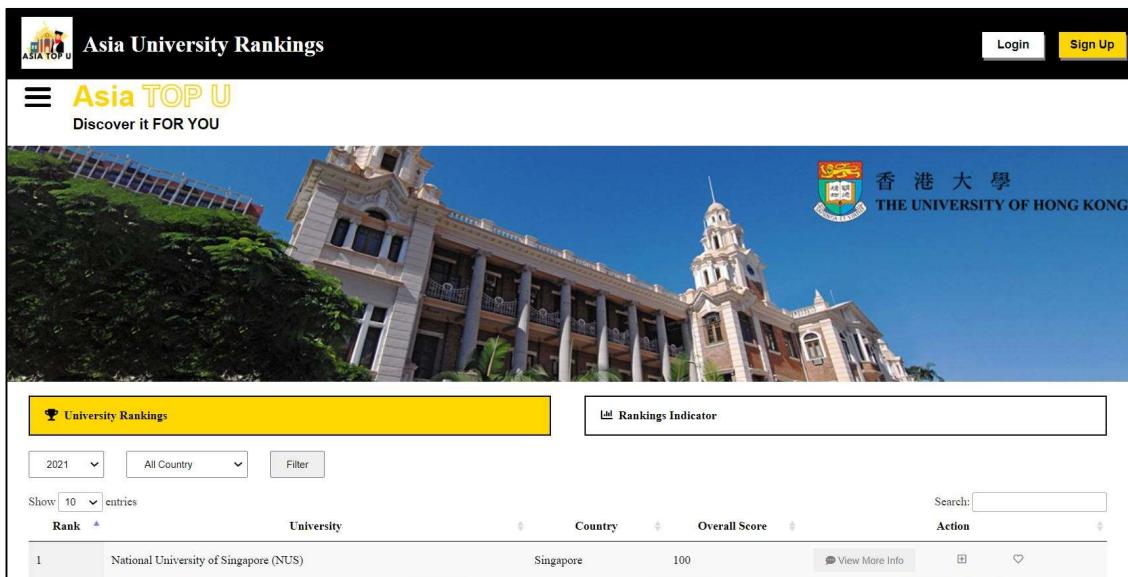
SCREENSHOTS OF EACH PAGE

User

Dashboard



University Rankings Screen



Rankings Indicator Screen

The screenshot shows the homepage of the Asia University Rankings website. At the top, there is a navigation bar with the 'ASIA TOP U' logo, the text 'Asia University Rankings', and buttons for 'Login' and 'Sign Up'. Below the navigation bar is a banner with the text 'Asia TOP U' and 'Discover it FOR YOU'.

The main content area features a large image of a modern university building at night. Below the image are two tabs: 'University Rankings' (selected) and 'Rankings Indicator' (highlighted in yellow). There are dropdown menus for '2021' and 'All Country', a 'Filter' button, and a search bar.

A table displays the top university ranking:

Rank	University	Country	Overall Score	Faculty Student Ratio	International Students	International Faculty	Academic Reputation	Employer Reputation	Action
1	National University of Singapore (NUS)	Singapore	100	95.4	99.4	100	100	100	View More Info

Login Screen

The screenshot shows the same website as the previous one, but with a login modal overlay. The modal has a logo for 'ASIA TOP U' and a title 'Login'. It contains fields for 'User' (with a dropdown menu), 'Email', and 'Password', along with a 'Login' button. Below the modal, there are links for 'Register New Account' and 'Forgot Password'.

The background of the website shows the same university building image and the 'University Rankings' table, which remains the same as the previous screenshot.

Sign Up Screen

The screenshot shows a modal window titled "Sign Up" from the "ASIA TOP U" website. The modal contains fields for First Name, Last Name, Email, Password, and Confirm Password, each with a corresponding input box. Below the input boxes is a blue "Sign Up" button. At the bottom of the modal, there is a link "Already our member? [Login Now](#)". The background of the modal shows a blurred view of the university rankings page, which features a large building at night and a search bar.

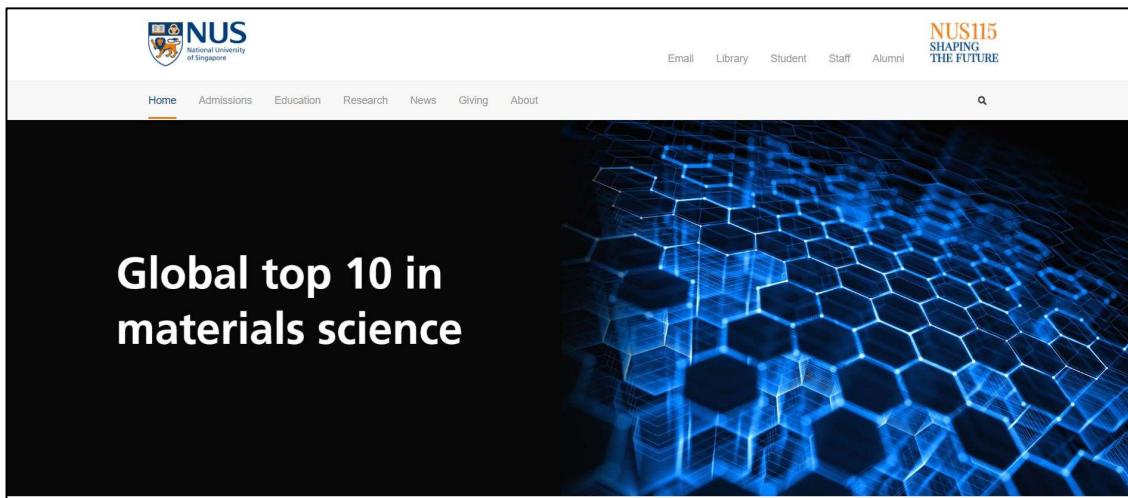
Rank	University	Country	Overall Score	Action
1	National University of Singapore (NUS)	Singapore	100	View More Info Edit Heart

University Rankings Screen (after login)

The screenshot shows the user interface after logging in. The top right corner displays the user's name "SUAN MING" and a "Log Out" button. The main content area includes a banner for "Asia TOP U" and a large image of a modern university building at night. Below the banner are two tabs: "University Rankings" (highlighted in yellow) and "Rankings Indicator". The "University Rankings" tab has dropdown menus for "2021", "All Country", and "Filter", and a "Show 10 entries" button. The "Rankings Indicator" tab has a "Search" field. The main table lists the top universities:

Rank	University	Country	Overall Score	Action
1	National University of Singapore (NUS)	Singapore	100	View More Info Edit Heart
2	Tsinghua University	China (Mainland)	98.5	View More Info Edit Heart

[View More Info \(University Official Page\)](#)



User Navigation Bar

The screenshot shows the Asia University Rankings interface. On the left is a dark sidebar with white text and icons. The main area has a white background. At the top right is a user profile icon and a 'Log Out' button. The central part displays a large image of a classical-style university building under a clear blue sky. To the right of the image is the logo for 'THE UNIVERSITY OF HONG KONG'. Below the image is a search bar with a yellow placeholder and a 'Rankings Indicator' section. At the bottom is a table with columns for University, Country, Overall Score, and Action.

University	Country	Overall Score	Action
University of Singapore (NUS)	Singapore	100	View More Info
University	China (Mainland)	98.5	View More Info

User Details Page

Asia University Rankings

SUAN MING Log Out

Asia TOP U

Discover it FOR YOU

User Profile



YEOH SUAN MING

Choose File No file chosen

Save Image

First Name: YEOH Last Name: SUAN MING

Phone Number: Educational Level:

Email: yeoh66778@gmail.com

Cancel Save

Compare Screen

Asia University Rankings

SUAN MING Log Out

Asia TOP U

Discover it FOR YOU

Compare



Criteria	Tsinghua University	National University of...
Country	China (Mainland)	Singapore
Overall Score	98.7	95.4
Faculty Student Ratio	74.8	99.4
International Students	95.2	100
International Faculty	100	100
Academic Reputation	100	100
Employer Reputation	98.5	100

Academic Reputation Emplover Reputation Faculty Student Ratio International Students International Faculty

Favourite Screen

The screenshot shows the 'Favourite' screen of the Asia University Rankings website. At the top, there is a navigation bar with the 'ASIA TOP U' logo, the text 'Asia University Rankings', and a 'Log Out' button. Below the navigation bar, the 'Asia TOP U' logo and the tagline 'Discover it FOR YOU' are displayed. A yellow header bar contains a heart icon and the word 'Favourite'. The main content area features a table with one row, showing the ranking, university name, and an action column with a heart icon. To the left of the table is a cartoon character of a man with a beard and glasses giving a thumbs up. To the right is another cartoon illustration of people interacting with a globe and graduation caps. Below the table is a black banner with two white rectangular boxes containing small icons.

Ranking	University Name	Action
1	National University of Singapore (NUS)	<input type="checkbox"/>

About Us Screen

The screenshot shows the 'About Us' screen of the Asia University Rankings website. At the top, there is a navigation bar with the 'ASIA TOP U' logo, the text 'Asia University Rankings', and a 'Log Out' button. Below the navigation bar, the 'Asia TOP U' logo and the tagline 'Discover it FOR YOU' are displayed. The main content area features a large dark blue background image with a map of Asia and the text 'Asia Top U' and 'Discover it for you'. To the right of the image, there is a vertical column of text. The text includes:
- 'Asia Top U is the Asia's leading provider of information and analysis regarding the universities.'
- 'Our mission is to enable motivated people anywhere in the Asia to meet their potential through educational achievement.'
- 'We provide the Asia's university ranking in terms of overall score, faculty student ratio, international students, international faculty, academic reputation and employer reputation.'
- 'The overall changes and improvement from year to year have been presented in our website to give a clear insight about the current situation of every university in Asia.'
- 'The ranking indicators that can be found in Asia Top U will be a good reference for students since it provided a complete information of the universities.'
- 'The students can navigate into the official websites of every university through our websites.'

Contact Us Screen

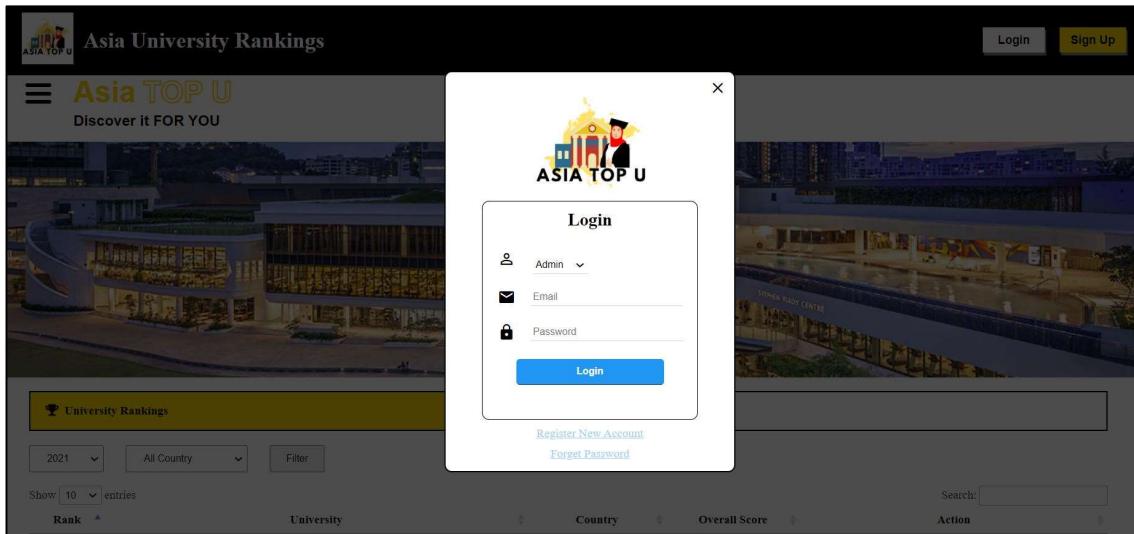
The screenshot shows the 'Contact Us' section of the Asia University Rankings website. At the top, there is a logo for 'ASIA TOP U' and the text 'Asia University Rankings'. On the right side, there is a 'Log Out' button. Below the header, the 'Asia TOP U' logo is displayed with the tagline 'Discover it FOR YOU'. The main title 'Contact Us' is centered above a form. A sub-header 'Contact Information' is followed by a note: 'Fill up the form and our Team will get back to you within 24 hours.' An email address 'AsiaTopUmailbox@gmail.com' is listed. To the left of the form is a graphic illustration of two people interacting with a smartphone and a laptop. The form itself has fields for 'Full Name' (with placeholder 'Your Full Name.'), 'Email' (placeholder 'Your Email.'), and a large 'Message' area (placeholder 'Write Your Message.'). A 'Submit' button is located at the bottom right of the form.

Feedback Screen

The screenshot shows the 'Feedback' section of the Asia University Rankings website. At the top, there is a logo for 'ASIA TOP U' and the text 'Asia University Rankings'. On the right side, there is a user profile icon labeled 'SUAN MING' and a 'Log Out' button. Below the header, the 'Asia TOP U' logo is displayed with the tagline 'Discover it FOR YOU'. The main title 'Feedback' is centered above a message input field. The message input field has sections for 'To: Admin', 'Subject:', and a large text area placeholder 'Enter feedback here...'. At the bottom of the message input field are 'Cancel' and 'Send' buttons. The background features a yellow and white wavy pattern with a small illustration of five people holding speech bubbles.

Admin

Login Screen



Manage University Rankings Screen

The screenshot shows the 'University Rankings' section of the website. At the top right is a 'Log Out' button. The background features a large image of a historic university building with the logo of 'The University of Hong Kong'. The main area has a yellow header bar with 'University Rankings' and a 'Rankings Indicator' section. Below is a search bar and a table of university rankings. The table columns are 'Rank', 'University', 'Country', 'Overall Score', and 'Action'. The data rows are:

Rank	University	Country	Overall Score	Action
1	National University of Singapore (NUS)	Singapore	100	View More Info
2	Tsinghua University	China (Mainland)	98.5	View More Info
3	Nanyang Technological University, Singapore (NTU)	Singapore	98.2	View More Info
4	The University of Hong Kong	Hong Kong	98	View More Info

Admin Navigation Bar

The screenshot shows the 'Asia TOP U' dashboard. On the left is a dark sidebar with navigation links: Dashboard, Home, My Profile, Manage Ranking Data, Manage User, About Us, and Inbox. The main area features a large image of a modern university building at night. Below it is a search bar with 'Rankings' and a 'Filter' button. A table lists three universities: NUS (100), China (Mainland) (98.5), and NTU (98.2). Each row includes a 'View More Info' button, a save icon, and a heart icon.

University	Country	Overall Score	Action
University of Singapore (NUS)	Singapore	100	
University	China (Mainland)	98.5	
Technological University, Singapore (NTU)	Singapore	98.2	

User Details Page

The screenshot shows the 'User Profile' section. It features a placeholder profile picture and a file input field for uploading a new image. The user is identified as 'Admin Asia TOP U'. Below the profile area are input fields for First Name (Admin), Last Name (Asia TOP U), Phone Number, Educational Level, and Email (aslatopu@gmail.com). At the bottom are 'Cancel' and 'Save' buttons.

First Name: Admin Last Name: Asia TOP U

Phone Number: [] Educational Level: []

Email: aslatopu@gmail.com

Manage University Rankings Screen

Rank	University	Country	Overall Score
1	National University of Singapore (NUS)	Singapore	100
2	Tsinghua University	China (Mainland)	98.5
3	Nanyang Technological University, Singapore (NTU)	Singapore	98.2
4	The University of Hong Kong	Hong Kong	98
5	Zhejiang University	China (Mainland)	97.2
6	Fudan University	China (Mainland)	96.7
7	Peking University	China (Mainland)	96.6

Edit Ranking Screen

University Rankings

Year: 2021

Rank: 1

University: National University of Singap

Country: Singapore

Overall Score: 100

Update

Manage Rankings Indicator Screen

Asia University Rankings

Asia TOP U
Discover it FOR YOU

Manage Ranking Data

University Rankings **Rankings Indicator**

Add Edit Delete

2021 All Country Sort

Show 10 entries Search:

Rank	University	Country	Overall Score	Faculty Student Ratio	International Students	International Faculty	Academic Reputation	Employer Reputation
1	National University of Singapore (NUS)	Singapore	100	95.4	99.4	100	100	100
2	Tsinghua University	China (Mainland)	98.5	98.7	74.8	95.2	100	100
3	Nanyang Technological University, Singapore (NTU)	Singapore	98.2	98.2	97.4	100	99.4	99.1
4	The University of Hong Kong	Hong Kong	98	94.6	100	100	100	96
5	Zhejiang University	China (Mainland)	97.2	97.2	96.6	100	93.1	99.1
6	Fudan University	China (Mainland)	96.7	97.9	88.5	100	98.5	99.5

Edit Indicator Screen

Asia University Rankings

Asia TOP U
Discover it FOR YOU

Manage Ranking Data

University Rankings

Add

2021 All Country Sort

Show 10 entries

Rank	University	Country	Overall Score	Faculty Student Ratio	International Students	International Faculty	Academic Reputation	Employer Reputation
1	National University of Singapore (NUS)	Singapore	100	95.4	99.4	100	100	100
2	Tsinghua University	China (Mainland)	98.5	98.7	74.8	95.2	100	100
3	Nanyang Technological University, Singapore (NTU)	Singapore	98.2	98.2	97.4	100	99.4	99.1
4	The University of Hong Kong	Hong Kong	98	94.6	100	100	100	96

Rankings Indicator

University:

Faculty Student Ratio:

International Students Ratio:

International Faculty Ratio:

Academic Reputation:

Employer Reputation:

Update

Add University Screen

The screenshot shows the 'University Information' section of the 'Add New' form. It includes fields for Year, Rank, Overall Score, International Faculty, University, Country, Faculty Student Ratio, Academic Reputation, International Students, Employer Reputation, and a yellow 'Add' button.

Year:	University:	Country:
<input type="text"/>	<input type="text"/>	<input type="text"/>

Overall Score:	Faculty Student Ratio:	International Students:
<input type="text"/>	<input type="text"/>	<input type="text"/>

International Faculty:	Academic Reputation:	Employer Reputation:
<input type="text"/>	<input type="text"/>	<input type="text"/>

Add New:

University Details

Year:

Rank: University: Country:

Overall Score: Faculty Student Ratio: International Students:

International Faculty: Academic Reputation: Employer Reputation:

Add

Delete University Screen

The screenshot shows a table of university rankings with columns for Rank, University, Country, and Overall Score. A search bar and sorting options are also present.

Rank	University	Country	Overall Score
1	National University of Singapore (NUS)	Singapore	100
2	Tsinghua University	China (Mainland)	98.5
3	Nanyang Technological University, Singapore (NTU)	Singapore	98.2
4	The University of Hong Kong	Hong Kong	98
5	Zhejiang University	China (Mainland)	97.2
6	Fudan University	China (Mainland)	96.7
7	Peking University	China (Mainland)	96.6

Manage User Screen

The screenshot shows a user management interface for the 'Asia TOP U' platform. At the top, there's a logo for 'ASIA TOP U' and a 'Log Out' button. Below the header, the 'Asia TOP U' logo and tagline 'Discover it FOR YOU' are displayed. A 'Manage Users' button is highlighted with a yellow border. The main content area is a table showing user data:

First Name	Last Name	Email	Action
Admin	Asia TOP U	asiatopu@gmail.com	Delete User
LEE	XIU NIANG	xnlee1999@gmail.com	Delete User
TAN	JIA EARN	jiaearn07@gmail.com	Delete User
TAN	YI ZHONG	tanyizhong02@gmail.com	Delete User
TAN	YI QING	yiqingtan9991@gmail.com	Delete User
WONG	FANG MAN	fangman0218@gmail.com	Delete User
YEOH	SUAN MING	yeohh66778@gmail.com	Delete User

Below the table, there are navigation links: 'First', 'Previous', a page number '1' in a highlighted box, 'Next', and 'Last'.