

Please tick ✓ or click if using MS WORD

☐ FOUNDATION

☐ DIPLOMA

☒ DEGREE

☐

Assignment Coversheet

Please complete all details required clearly. For softcopy submissions, please ensure this cover sheet is included at the start of your document or in the file folder.

Assignment & Course Details:

Subject Code: (e.g. XCAT1234) XBCS 2174N		Subject Name (e.g. Fundamentals of Computing): HCI & User Experience	
Course (e.g. Bachelor in Computing) : Bachelor of Information System (Hons) Enterprise Information Systems			
Lecturer Name: Siti Fazilah Shamsudin			
Assessment Due Date: (dd/mm/yy)	27-11-2022	Assessment Title:	Group Assignment

I/We declare that:

- This assignment is my/our own original work, except where I/we have appropriately cited the original source.
- This assignment or parts of it has not previously been submitted for assessment in this or any other subject.
- I/We allow the assessor of this assignment to test any work submitted by me/us, using text comparison software for plagiarism.
 (For more information, Please read the Academic Integrity Guidelines)

Name : Goo Han Cong Student ID: 0133677 Email : 0133677@kdu-online.com Mobile No: 011-18668016 Signature: Goo Date: 27-11-2022	Name : Low Chun Tai Student ID: 0133252 Email : 0133252@kdu-online.com Mobile No: 018-3869211 Signature: Low Date: 27-11-2022	Name : Sudhirr Irshana Durai Kannan Student ID: 0135513 Email : 0135513@kdu-online.com Mobile No: 018-2315574 Signature: Sudhirr Date: 27-11-2022
Name : Student ID: Email : Mobile No: Signature: Date:	Name : Student ID: Email : Mobile No: Signature: Date:	Name : Student ID: Email : Mobile No: Signature: Date:

For office use only – Lecturer comments (if applicable)

Marks Breakdown

 Signature:
 Total

Table of Contents

1.0 Abstract.....	1
2.0 Introduction.....	1
3.0 User Centered Design and Evaluation	2
3.1 Requirement Gathering.....	2
3.1.1 Field Study.....	2
3.1.2 Data Gathering and Analysis.....	3
3.1.3 Persona and Scenarios.....	9
3.2 Design of ‘CampUs’.....	12
3.2.1 Use Case Diagram	12
3.2.2 Functional Requirements	13
3.2.4 Task Analysis	15
3.2.5 Application Storyboard.....	36
3.3 Evaluation of Interfaces Prototyping.....	47
6.0 Reference.....	52
7.0 Appendices	53

A User-Centered Design Approach to Design an Application 'CampUs'

1.0 Abstract

Our application strives to be supportive and humanized, with a list of usability goals and a good user experience as primary thoughts to push the design. Queensland University has a case on an application with game elements that helps students for exploration with particular interactions. They came up with this because they found out that freshmen might have obstacles and problems in the first week to get familiar with the university. The main thoughts we acquired on this, is they found out the problem and came up with a humanized solution. 'CampUs' is the title of our application, we create a few different supportive functions which can help students to manage or have a more convenient approach to interacting with people. Functions include, 'Attendance', 'Event Calendar', 'Club', and 'Library'. After the proposed ideas under our structured main concept, user experience and usability became major subjects, we design the interfaces as the major social media main structure for the familiar and used icons representing functions and results to metaphor users by instinct. Our major responses from the tester are concluded with easy-to-use and learn.

2.0 Introduction

When it came to designing the application, the goal was to create a tool that would give students more control over their lives on campus. While functionality is important, crafting the look and feel of the app to encourage the students to actually use it is another thing altogether. For this app, as it is first and foremost a tool to aid university students, one of the challenges was making sure functionality was not sacrificed in the name of design. The full results of the survey we conducted are below, but the data point most relevant is that a majority of students who do not already have an existing university application desired one, so an application that would serve their needs adequately was a priority. On top of that, a sleek design was needed to align with the look and feel of other apps of the modern era. A major challenge of this approach was inserting engaging elements into the design without compromising the core functionality and maintaining the utility of the application. In line with current design guidelines, we did try to add icons wherever possible to improve visual clarity and recognizability. The icons assigned were standard icons as used in other applications to enable students to hopefully be able to ascertain the function of buttons based on previous experience. The icons used were minimalistic ones based on material design guidelines, so as to provide additional information about some part of the application, but not to the point where it is overly distracting to the user. Certain colours were also used to provide positive

and negative feedback to the user, such as the use of green checkmarks being displayed when a user action is successful, and red X's to signify an error occurred. Wherever relevant, we also tried to add space to display relevant media. This was used mainly for the community aspects such as clubs and events. For these, we allowed clubs to upload user-generated media such as photos and videos to make their club info and event pages both more exciting and able to convey more information than simply through a text description alone. This hopefully creates a more engaging environment for students to engage with the different clubs on campus and their hosted events while being able to extract a meaningful amount of information from a glance at the relevant page. The addition of this visual media to the club pages not only breaks up the monotony of text upon text, but also conveys more information density in a smaller space. This strikes a balance between form and functionality as users (in this case, members of the student body) are able to glean meaningful information quickly and easily without being bogged down navigating through multiple pages. These were just some of the aspects of the application that we used to make it a more entertaining yet still functional user experience.

3.0 User Centered Design and Evaluation

3.1 Requirement Gathering

3.1.1 Field Study

A study by researchers at the Queensland University of Technology wanted to encourage new incoming students to participate in university orientation through the use of a mobile app that had elements of gamification involved. These interactive elements were found to complement and enhance the new student experience. In a similar vein, our app means to provide an interactive way to engage with multiple aspects of campus life that is accessible, practical, and engaging.

3.1.1.1 Discussion of Field Study

According to the field studies we acquired, we get to know that the Queensland University is more willing to attract students through psychologically satisfying interactions and a much stronger connection with the institution by using the application. They propose that students often feel lost during the first few weeks, especially on orientation day, so they give out a mobile app with three levels, exploration of campus or service as “goal”, interaction as “sensing”, and connection as “game”.

We learned that with a more user-centered design and more logical interactive design, the application can be enjoyable and easy to use, yet the mobile app has to have a clear

objective. The field study case is gamification of the app, which adds a game element for connection, fulfilling the sensing of the app by interacting and fulfilling the app objective, exploration of the campus and service to support students not feeling lost in the first few weeks.

3.1.2 Data Gathering and Analysis

Our survey topic is “Application design intention” and major target responders will be students of university or college, to help us acquire more understanding of college students needs and wants in terms of an application for their student life.

The survey are as follow:

1. What is your age?

29 responses

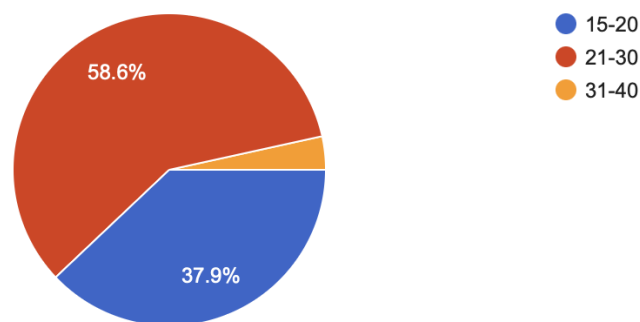


Image 1. Pie Chart of Survey 1 Question 1

This question asks for age in a specific range of respondents for the intention of our concept application which is majorly for college students. The pie chart shows that there are 17 respondents who are around 21-30 years old 58.6%, and 11 respondents with 37.9% between 18-20 years old.

2. Have you graduated from university/college?

29 responses

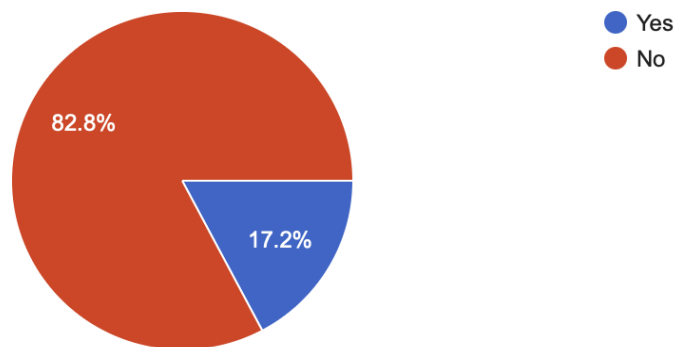


Image 2. Pie Chart of Survey 1 Question 2

This question is to collect more various experienced points and aspects of seniors in this survey. The pie chart shows that there are 5 respondents (17.2%) who have graduated and 26 respondents (82.8%) who have not graduated yet.

3. Does your university/college have a specific academic application for students to support students in all kinds of aspects?

29 responses

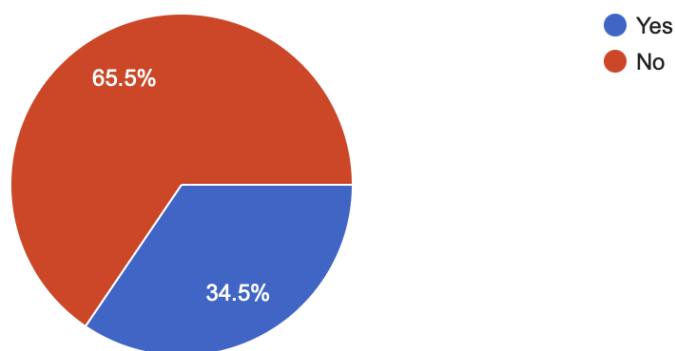


Image 3. Pie Chart of Survey 1 Question 3

This question is used to collect information about whether the responder has experience with having an application to support their college life, to further acquire their opinions on it. With the chart, we can see that 19 respondents picked **NO** (65.5%) as not having a specific application and 10 respondents (34.5%) picked **YES** as having. We learned that the majority of respondents never experienced an application that supports them as students in college.

4. According to **Question 3** above, if the answer is “YES”

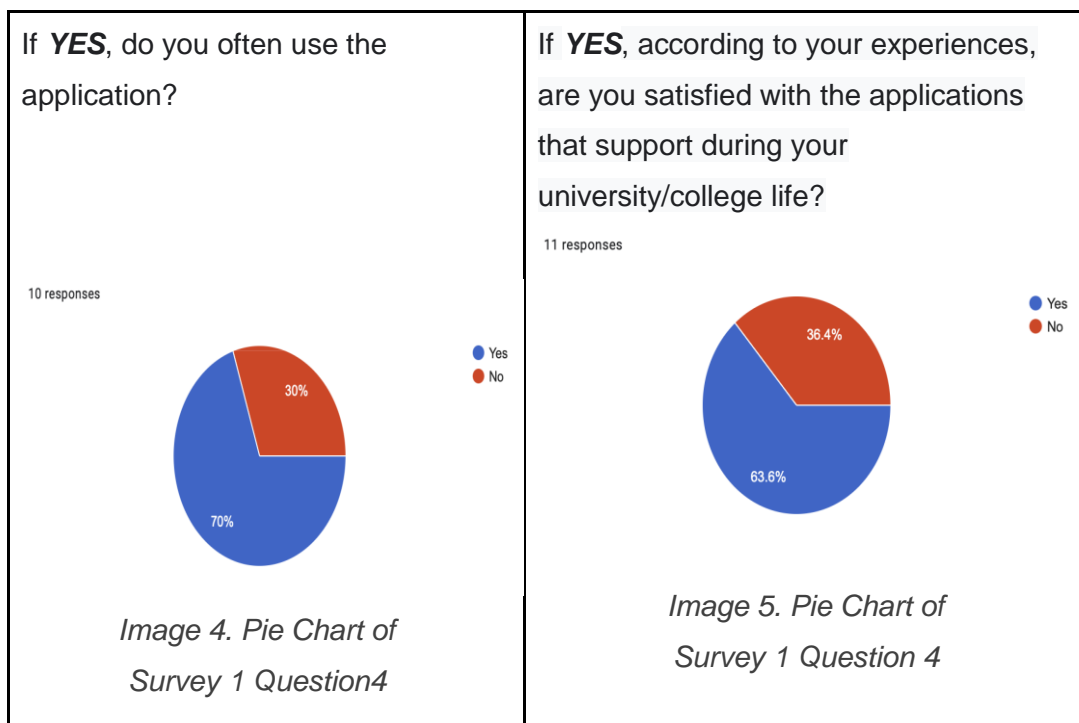


Table 1. Survey 1 Question 4

Among these 10 people, on the left side, we see the chart has 7 respondents (70%) who often use it, which tells that the application has supported them effectively, and 3 respondents (30%) do not often use them. And on the right side, we see the chart, there are 7 respondents (70%) who are satisfied with their experience and 3 respondents (30%) who are not.

5. Following the question **above**, do you find it supportive during your university/college life?

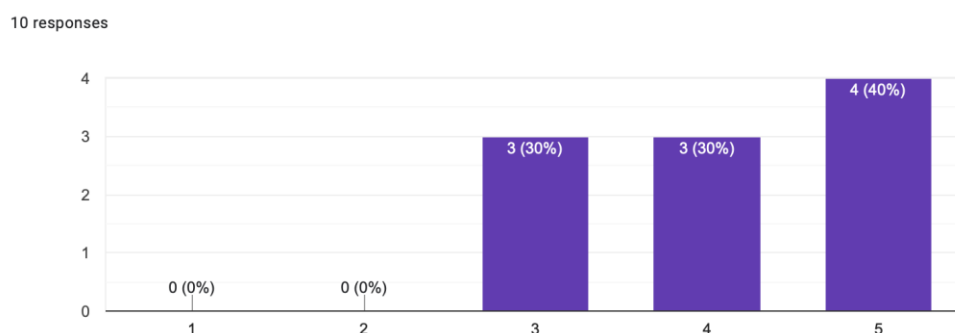


Image 6. Bar Chart of Survey 1 Question 5

The chart shows the 10 respondents that have experience with specific applications for college students, and found that the application is supportive. 7 respondents gave above neutral, 3 respondents gave neutral, 3 respondents gave 'supportive', and 4

respondents strongly supportive. In short, the application they have indeed is effective.

6. If **NO**, would you want a specific academic application for your own academic student for a variety of support of daily life?

24 responses

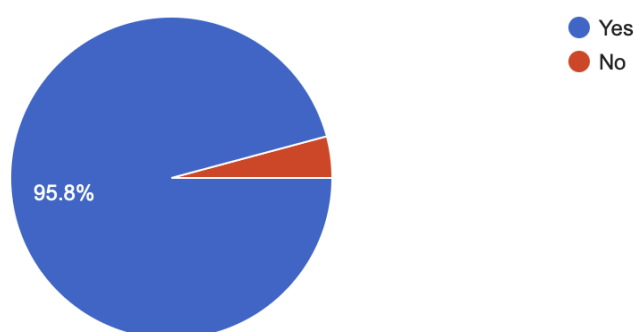


Image 7. Bar Chart of Survey 1 Question 6

The chart shows that 23 respondents (95.8%) with no experience in a specific university/college would want to have it to support themselves. Only 1 responder (4.2%) selected No.

7. According to the question **above**, can you state the reason for your choice?

24 responses

I hope the school can have an app that I can use easily

-

No study

The college management is really complex, if I would like to do something it is really troublesome

I think the application can support my college life

The application maybe can save my time to manage my college stuff

More convenient

Im not really familiar with my college management, if got the appication could manage my stuff it is really helpful for me and my friends...

It must improve my campus life experience

Image 8. Responses of Survey 1 Question 7

According to the comment we received, we learned that there are students who lack the capabilities to explore the university in terms of some management control, clubs,

etc. And some respondents would be attracted by the convenience, of the supportive application

8. Would you rather the app include an "**Attendance Bluetooth**" function?

The Bluetooth function is to record each student's attendance in a specific class and time

24 responses

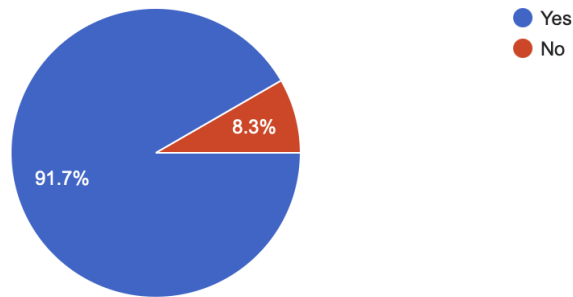


Image 9. Pie Chart of Survey 1 Question 8

According to the responses above, 22 respondents (91.7%) selected Yes which includes the "Attendance Bluetooth" function and 2 respondents (8.3%) selected No after understanding the concept of it. The function is to record each student's attendance in a specific class and time.

9. Would you rather the app has a specific "**Event Calendar**"?

The calendar in the app show/tell you the:

- events that are held inside the campus, including college official events, club events, collab events, etc
- exam dates, holidays/sembreak, etc will also be stated inside
- each date can be selected to show details of the days on the calendar

24 responses

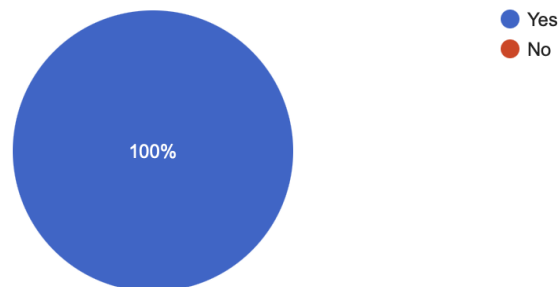


Image 10. Pie Chart of Survey 1 Question 9

According to the responses above, there are a total of 24 responders (100%) selecting Yes to include the "Event Calendar" function. This shows us that university students might be interested and wish to more actively join university events, and

require a function that effectively displays the information in a concise way and is easy to learn, a way that users avoid from confusion and even build a better sense of time on the calendar.

10. Would you rather the app has the "**Club**" function?

The club function is to allow students to sign up for a club, and also for a club to sign up for club events

24 responses

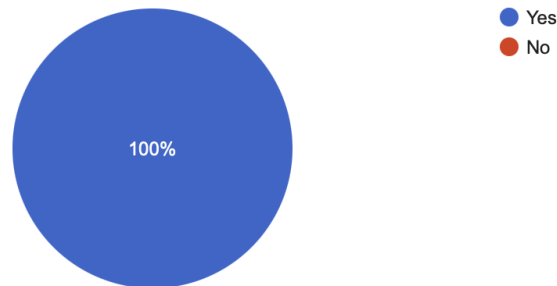


Image 11. Pie Chart of Survey 1 Question 10

According to the responses above, there are a total of 24 respondents (100%) selecting Yes to include the "Club" function. This shows that university students are more willing to interact with different activities and people while building their ideas for their goals. The club function is to allow students to sign up for a club, and also for a club to sign up for club events.

11. Would you rather the app have the "**Library**" function?

The library function allows students to access E-books and online resources.

And also shows the deadlines for borrowed books, and students are able to reserve table/room through this function.

24 responses

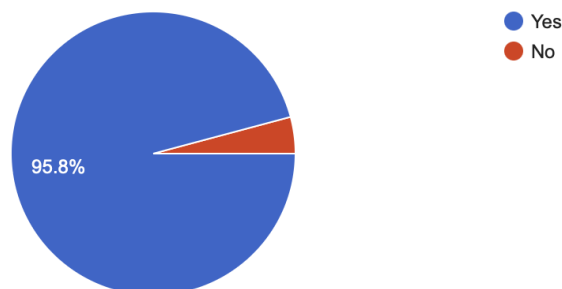


Image 12. Pie Chart of Survey 1 Question 11

According to responses above, there are a total 23 respondents (95.8) selected to include the "Library" function. This shows that the majority of university students

would want a better way to attach with the library. The library function allows students to access E-books and online resources. And also shows the deadlines for borrowed books, and students are able to reserve a table/room through this function.

3.1.2.1 Conclusion of Data Gathering and Analysis

According to the survey, we learned that the majority of students tend to have an application to support their life in terms of university and college aspects, including brief exploration of the campus, much easier and effective ways to join events and clubs, and etc. And the responders also offer their idea on the function that the application can include, they also show consensus on the concept idea function we have.

3.1.3 Persona and Scenarios

By analysing the questionnaire, the persona and scenario came out.

3.1.3.1 Persona



Image13. Emily James Selfie Photo

Emily James is 21 years old today, she is Malaysian and now studies at the UOWKDU, which is located at Shah Alam. She is enrolled in the course of Bachelor of Computer Science and it is Year 2 Semester 2 for her. Normally, she takes 4-5 subjects during the long semester and 2-3 subjects during the short semester. Emily tends to stay on campus even after classes are over. She once said that college campus is her second house as she spends more than 7 hours a day staying there every weekday. Emily is a student who is optimistic, outgoing and responsible. She usually will pay a hundred percent to attempt to do the best in her academics as she will spend most of the time at library learning. Then, she also takes care of work-life balance, so she will catch the chances to join the clubs and

events that are available from UOWKDU. Currently, she is participating in Badminton Club and Chinese Society.

Emily is hoping to enrol in a few more clubs in the future as she wants to explore her potential hobby and experience college life as much as possible. Therefore, she is looking forward to a few more clubs that she is interested in. From an academic perspective, Emily desires to hit the goal of first class CGPA.

Emily is usually used to utilising the smartphone to manage her daily life such as the memo, list to do, order delivery and so on. However, UOWKDU currently does not have an appropriate software application that could accommodate these requirements that are needed at campus. She will feel frustrated and troublesome when she has to use a separate application to finish her daily needed operation at the campus. For instance, checking events by Email, taking attendance by Google Form, reserving tables for the library in physical and so on. She hopes there is an application that includes most of the functions as the students need to satisfy their requirements and address the trouble.

Emily is the user, student who takes care of the user experiences while using any application. The application which is low-effective or insufficient is usually unacceptable by Emily. It is due to Emily thinking the application which is available on the market should have the quality instead of issuing some semi-finished product. She would tend to use the interface with a simple and clear design because she thinks the application with too many functions or complex is really difficult to use. Therefore, the design of the application should keep it simple that is exactly needed by her rather than include too many redundant functions.

3.1.3.2 Scenarios and User Stories

It's year 2 semester 2 for Emily. That was a Tuesday, the day most busy for Emily as the final examination was close to the students at UOWKDU. After 12pm, Emily had finally finished her class but she didn't want to go back home, so she went to the library. She would like to print out a hardcopy for assignment submission used. The college rules that the students must use the student card for the payment of using the printer. However, the balance of that student card was not enough for payment. She had to go to the finance office to top up the balance of student card. After that, she finally had printed the documents she needed, but the seat that she preferred to sit in was full. In this case, it almost made her crazy. But, she still sat in a seat and went to the bookshelves to search for some articles needed by her. Unfortunately, the articles were not available anymore as all of it was out.

She hopes there is an application that can include the function of a top up student card by herself and it can be used to reserve the seat and explore the e-resources.

At 6pm, Emily reached her home. She started to check the club events and the college official events by using social media applications and Google Gmail. She hopes that she could use only software for checking the events that she could join and be interested in. At 10pm, she was almost sleeping, however she realised she had forgotten to sign the attendance for class today because each lecturer had different requirements on how to sign the attendance. Emily was still hoping her college life experience could be improved.

3.2 Design of 'CampUs'

3.2.1 Use Case Diagram

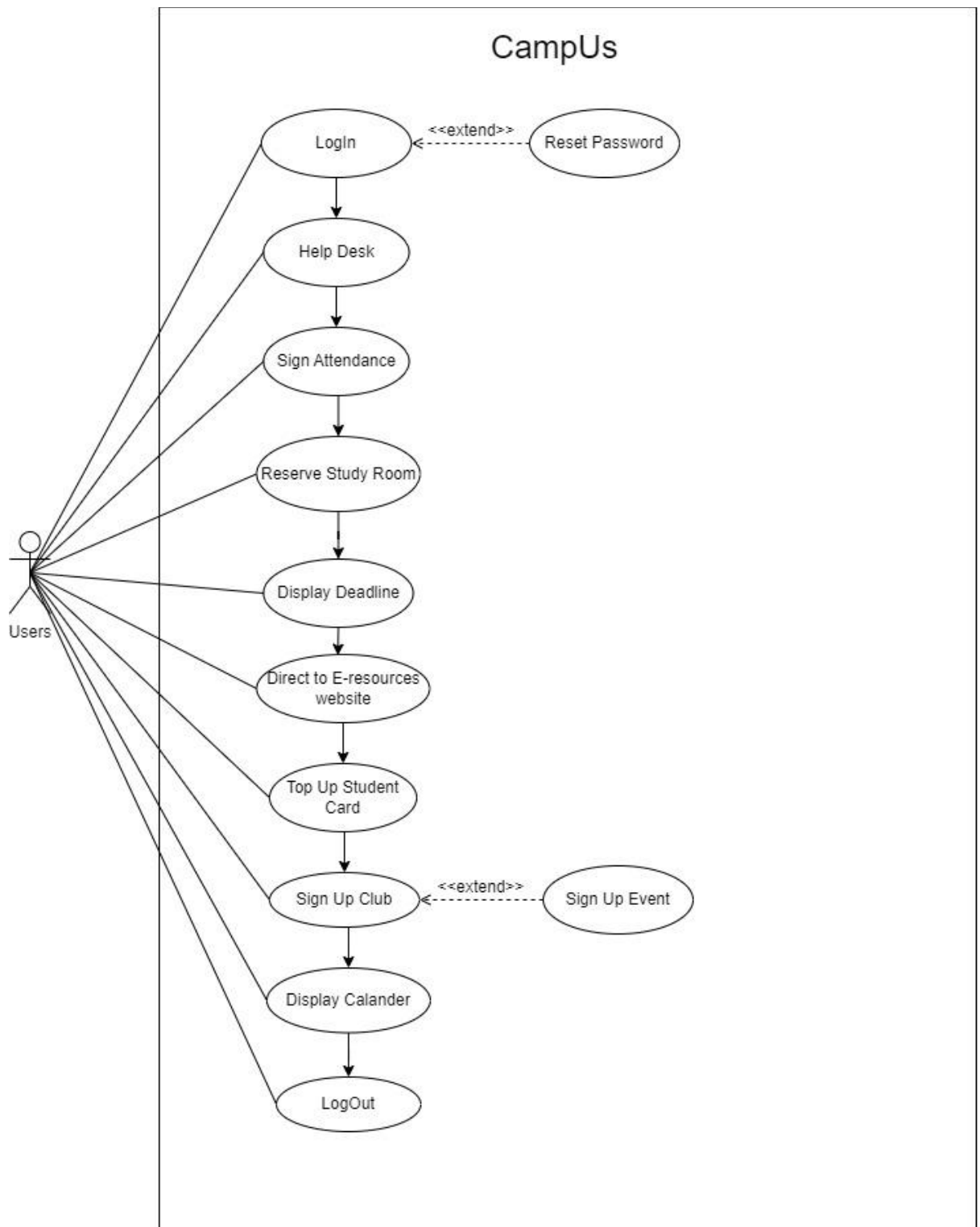


Image14. Class Diagram of 'CampUs'

3.2.2 Functional Requirements

Requirement ID	REQ_F001	Version	1.0
Description	System shall be able to login in user and authenticate the login credentials entered by user		
Author	Goo Han Cong		

Requirement ID	REQ_F002	Version	1.0
Description	System shall be able to reset the user's password if user forget the password		
Author	Goo Han Cong		

Requirement ID	REQ_F003	Version	1.0
Description	System shall be able to provide a help option to let user know more about the application itself, or ask about the incomprehensible within the application		
Author	Goo Han Cong		

Requirement ID	REQ_F004	Version	1.0
Description	System shall be able to provide an option that could let the user sign the class attendance within a distance and some specific requirements.		
Author	Goo Han Cong		

Requirement ID	REQ_F005	Version	1.0
Description	System shall be able to allow users can log out from the application.		
Author	Goo Han Cong		

Requirement ID	REQ_F006	Version	1.0
Description	System shall be able to allow users to reserve study rooms in the library.		
Author	Low Chun Tai		

Requirement ID	REQ_F007	Version	1.0
Description	System shall be able to display the detail and deadline for borrowed books by users from the library.		
Author	Low Chun Tai		

Requirement ID	REQ_F008	Version	1.0
Description	System shall be able to direct users to E-resource website.		
Author	Low Chun Tai		

Requirement ID	REQ_F009	Version	1.0
Description	System shall be able to allow users to top up credit into their student card		
Author	Sudhirr Irshana Durai Kannan		

Requirement ID	REQ_F010	Version	1.0
Description	System shall be able to allow users to sign up for clubs		
Author	Sudhirr Irshana Durai Kannan		

Requirement ID	REQ_F011	Version	1.0
Description	System shall be able to allow users to sign up for events		
Author	Sudhirr Irshana Durai Kannan		

Requirement ID	REQ_F012	Version	1.0
Description	System shall be able to display a calendar with relevant dates and events		
Author	Sudhirr Irshana Durai Kannan		

3.2.4 Task Analysis

3.2.4.1 F001 LogIn

The functional requirements for Log In are as follows:

Requirement ID	REQ_F101	Version	1.0
Description	System shall be able to check if the login credentials inputted is valid or invalid		
Author	Goo Han Cong		

Requirement ID	REQ_F102	Version	1.0
Description	System shall be able to direct individuals to respective pages upon successful login		
Author	Goo Han Cong		

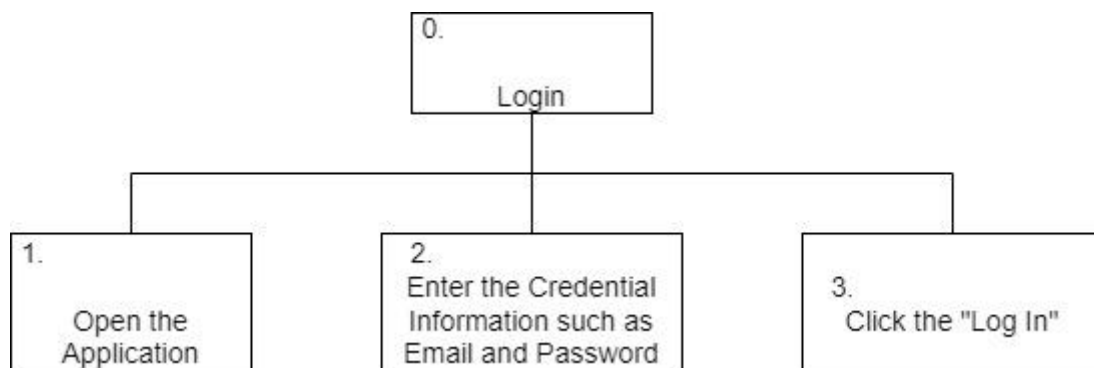
Requirement ID	REQ_F103	Version	1.0
Description	System shall be able to display an error message if the credentials entered are invalid		
Author	Goo Han Cong		

Use case table

Use Case ID	UC001	Version	1.0
Feature	F001 Login.		
Purpose	To allow users to login to their accounts to use the application		

Actor	User	
Trigger	User will click on the "Login" option from the login page	
Precondition	<ul style="list-style-type: none"> • User is on the login page • User is not logged in 	
Scenario Name	Step	Action
Main Flow	1	Users open the application.
	2	Users will enter their credentials information such as student Email, and password
	3	Login credentials are validated
Alternate Flow - Login credentials are incorrect	1.1	Login credentials entered by user is invalid
	1.2	System shall display an error message upon the invalid credentials entered
	1.3	Repeat step 2
Rules	<ul style="list-style-type: none"> • Login credentials should be correct 	
Author	Goo Han Cong	

Hierarchical Task Analysis



3.2.4.2 F002 Reset Password

The functional requirements for Reset Password are as follows:

Requirement ID	REQ_F201	Version	1.0
Description	System shall be able to validate it is the owner of account to reset password		
Author	Goo Han Cong		

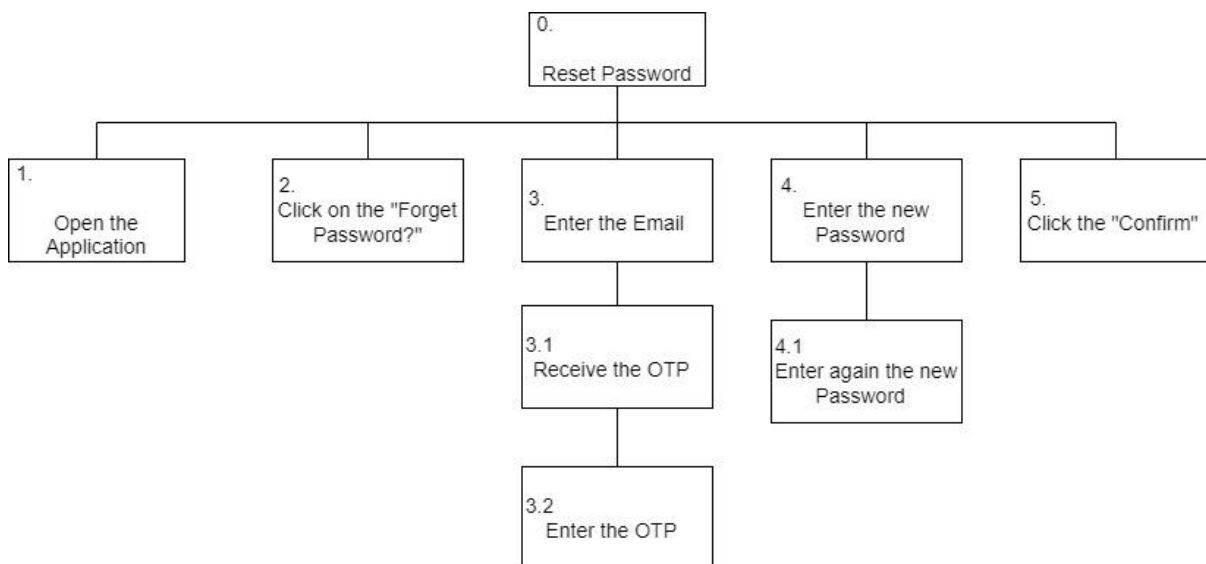
Requirement ID	REQ_F202	Version	1.0
Description	System shall be able to send the OTP for user to validate the user		
Author	Goo Han Cong		

Use Case Table

Use Case ID	UC001	Version	1.0
Feature	F002 Reset Password		
Purpose	To allow users to reset the account password		
Actor	User		
Trigger	User will click on the “Forget Password?” option from the login page		
Precondition	<ul style="list-style-type: none">• User is on the login page• User is not logged in• User forget the password		
Scenario Name	Step	Action	
Main Flow	1	Users open the application.	
	2	Users click on the “Forget Password”	
	3	Users enter the Email to receive the OTP from Email account	

	4	User enter OTP and click "Confirm"
	5	User enter the new password
	6	Password is reset
Alternate Flow - OTP is not correct	1.1	OTP entered by user is invalid
	1.2	System shall display an error message
	1.3	Repeat step 3
Rules	<ul style="list-style-type: none"> OTP should be correct 	
Author	Goo Han Cong	

Hierarchical Task Analysis



3.2.4.3 F003 Help Desk

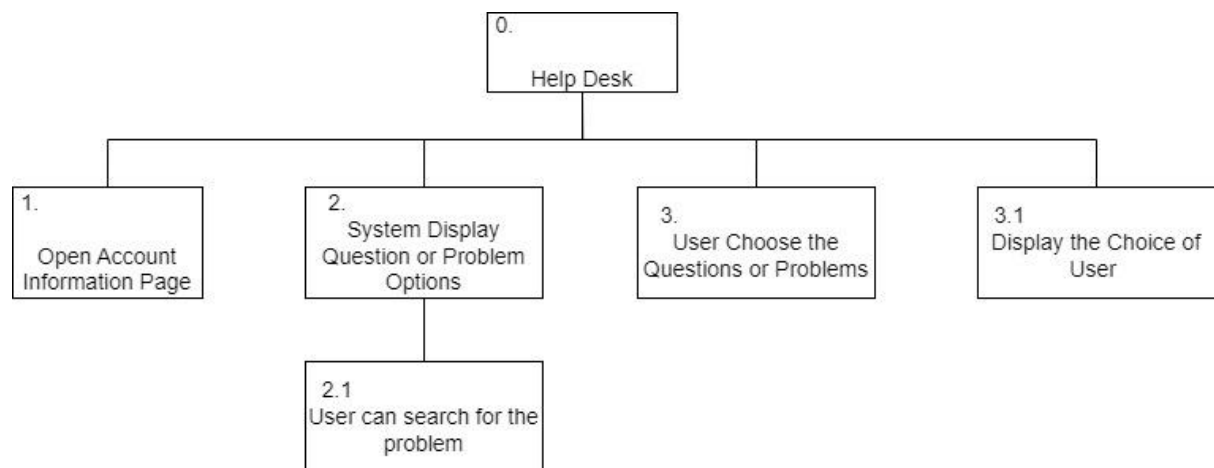
The functional requirements for Help Desk are as follows:

Requirement ID	REQ_F301	Version	1.0
Description	System shall be able to allow users to search their question via the navigation bar		
Author	Goo Han Cong		

Use Case Table

Use Case ID	UC003	Version	1.0
Feature	F003 Help Desk		
Purpose	To allow users to know more about the application or request for assistance		
Actor	User		
Trigger	User will click the “Help Desk” option in the account information page		
Precondition	<ul style="list-style-type: none">• User is on the account information page• User is logged in		
Scenario Name	Step	Action	
Main Flow	1	User will click the “Help Desk” option in the account information page	
	2	System shall display frequently asked questions along with answers	
	3	User can choose the option (question) and search the question that available on the screen	
	4	System display the question details that is chose by the user	
Rules	<ul style="list-style-type: none">• The question is available within this application		
Author	Goo Han Cong		

Hierarchical Task Analysis



3.2.4.4 F004 Sign Attendance

The functional requirements for Sign Attendance are as follows:

Requirement ID	REQ_F401	Version	1.0
Description	System shall be able to detect whether the user has met the requirements of signing attendance		
Author	Goo Han Cong		

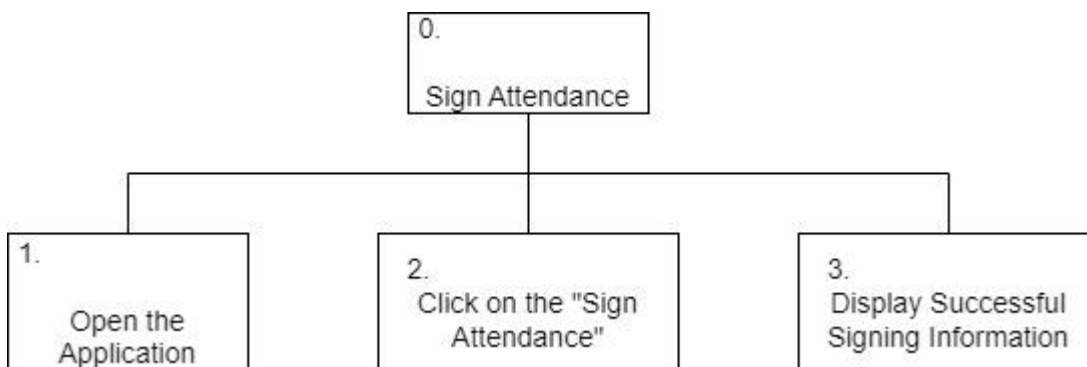
Requirement ID	REQ_F402	Version	1.0
Description	System shall be able to display the error message when user is failure to sign the attendance		
Author	Goo Han Cong		

Use Case Table

Use Case ID	UC001	Version	1.0
Feature	F004 Sign Attendance		
Purpose	To allow users to sign the class attendance		
Actor	User		
Trigger	User will click on the “Sign Attendance” option from the home page		

Precondition	<ul style="list-style-type: none"> • User is on the home page • User is not logged in • User has connected to the WiFi and the bluetooth is opening • User is in the right venue and at the right time 	
Scenario Name	Step	Action
Main Flow	1	Users open the application.
	2	Users click on the “Sign Attendance” from the home page
	3	System display the information about the user successfully signed attendance
Alternate Flow - Unsuccessful to Take Attendance	1.1	Users click on the “Sign Attendance” from the home page
	1.2	System shall display an error message
	1.3	Repeat step 2
Rules	<ul style="list-style-type: none"> • WiFi is connected to college WiFi • Bluetooth is opening • User in the correct classroom and at the right time 	
Author	Goo Han Cong	

Hierarchical Task Analysis

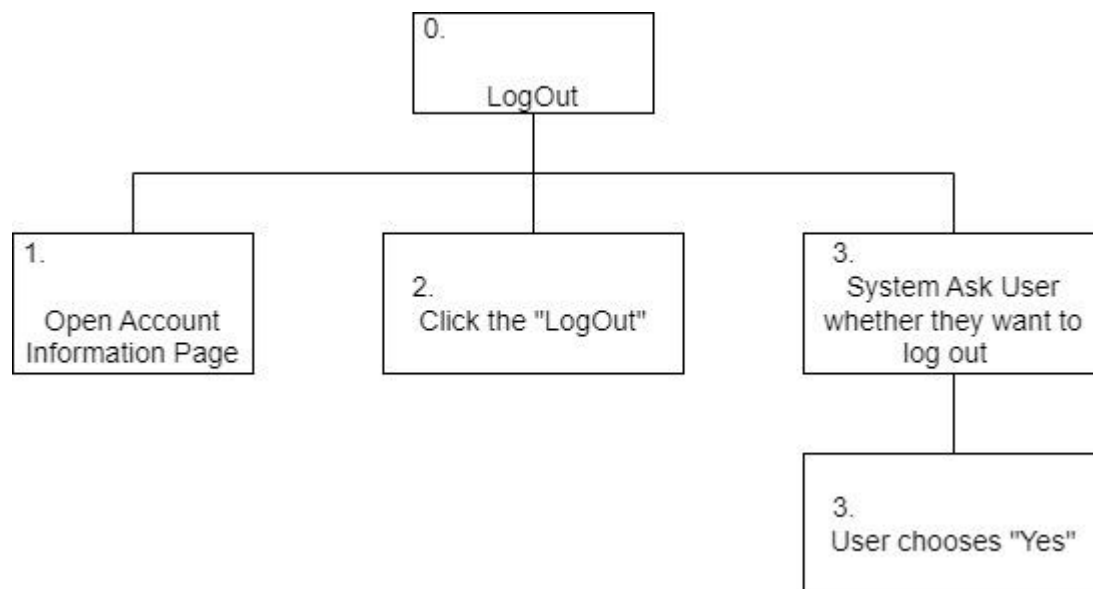


3.2.4.5 F005 Log Out

Use Case Table

Use Case ID	UC005	Version	1.0
Feature	F005 Log Out		
Purpose	To allow users to logout of their respective account from the application		
Actor	User		
Trigger	User will click on the “LogOut” option from the account information page		
Precondition	<ul style="list-style-type: none">• User is on the Account Information Page• User logged in		
Scenario Name	Step	Action	
Main Flow	1	User will click on the “LogOut” option provided in the account information page	
	2	System will ask users whether they want to log out	
	3	User chooses the “Yes”	
	4	System will log out the user account	
Alternate Flow - User cancel to log out	1.1	User chooses the “No”	
Rules	-		
Author	Goo Han Cong		

Hierarchical Task Analysis



3.2.4.6 F006 Reserve Study Room

The functional requirements for Reserve Study Room are as follows:

Requirement ID	REQ_F601	Version	1.0
Description	System shall be able to allow users to reserve study room		
Author	Low Chun Tai		

Requirement ID	REQ_F602	Version	1.0
Description	System shall be able to show the reservation status and show a timetable.		
Author	Low Chun Tai		

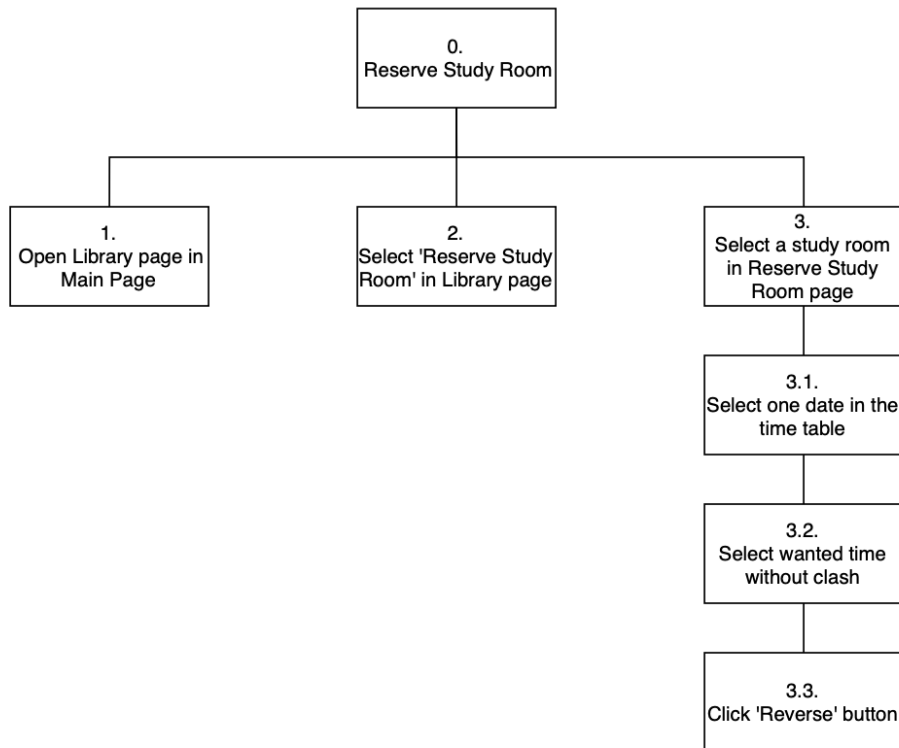
Use Case Table

Use Case ID	UC006	Version	1.0
Feature	F006 Reserve Study Room		
Purpose	To allow users to reserve study room		
Actor	User		

Trigger	User selected Reserve Study Room	
Precondition	<ul style="list-style-type: none"> • User is in Library page • User account is logged in 	
Scenario Name	Step	Action
Main Flow	1	User click 'Library', system will direct user to 'Library' page, this page display 'Reserve Study Room', 'Borrowed Books', and 'E-resource'.
	2	On the 'Library' page, the user selects 'Reserve Study Room', the system will direct the user to 'Reserve Study Room' page, the page will display both study rooms with their current status.
	3	On this page, users pick one study room and click the 'time table' button. The system will direct the user to the time table page.
	4	On the time table page, users are allowed to select a date out of 5 weekdays, and also next 5 weekdays, after selecting the date, the system will direct the user to the reserve page.
	5	On this page, users can select the beginning and end time with each hour, minute and am/pm, while unavailable time will be clearly shown.
	6	After selecting the time the user wants, the reservation will be made by the system.

Rules	<ul style="list-style-type: none"> • Wifi is connected • The time range user selected is available
Author	Low Chun Tai

Hierarchical Task Analysis



3.2.4.7 F007 Display Deadline

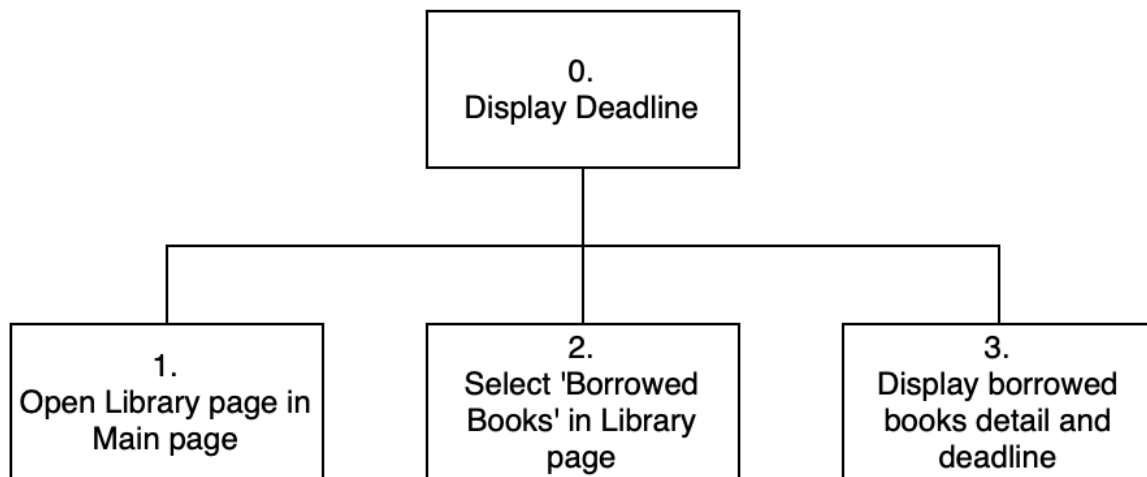
The functional requirements for Display Deadline are as follows:

Requirement ID	REQ_F701	Version	1.0
Description	System shall be able to display detail and deadline of borrowed books to users		
Author	Low Chun Tai		

Use Case Table

Use Case ID	UC007	Version	1.0
Feature	F007 Display Deadline		
Purpose	To display detail and deadline of borrowed books by users from library		
Actor	User		
Trigger	User selected the Library, and selected Borrowed Books.		
Precondition	<ul style="list-style-type: none">• User account is logged in• User is in Library page		
Scenario Name	Step	Action	
Main Flow	1	User clicks ‘Borrowed Books’ in ‘Library’ page, the system will direct the user to the Borrowed Books page.	
	2	On this page users can see the detail and deadline that is displayed.	
Alternate Flow	1.1	-	
Rules	<ul style="list-style-type: none">• Wifi is connected• User is in Library page		
Author	Low Chun Tai		

Hierarchical Task Analysis



3.4.2.8 F008 Direct to E-Resource Website

The functional requirements for Direct to E-resources Website are as follows:

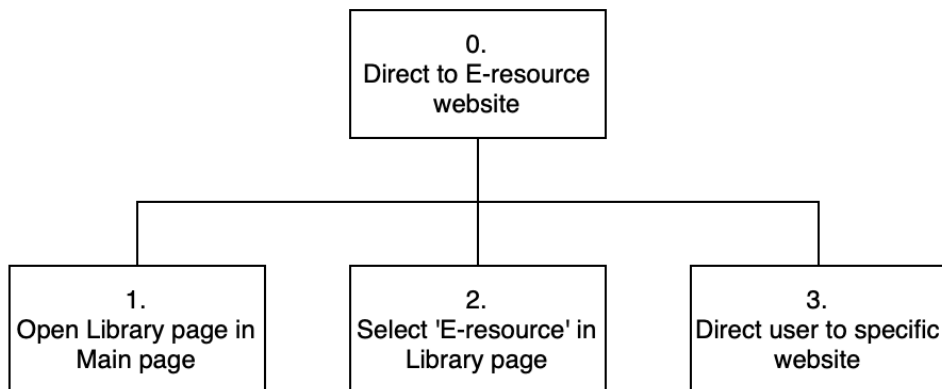
Requirement ID	REQ_F801	Version	1.0
Description	System shall be able to direct users to e-resource website		
Author	Low Chun Tai		

Use Case Table

Use Case ID	UC008	Version	1.0
Feature	F008 Direct to E-Resource Website		
Purpose	Direct users to specific E-resources website		
Actor	User		
Trigger	User selected Library, and selected E-resource		
Precondition	<ul style="list-style-type: none">• User account is logged in• User is in Library page		
Scenario Name	Step	Action	

Main Flow	1	User clicks 'E-resources' in the 'Library' page, the user will be directed by the system to a specific website.
	2	Users will be on the website particularly for students.
Rules	<ul style="list-style-type: none"> • Wifi is connected • User is in Library page 	
Author	Low Chun Tai	

Hierarchical Task Analysis



3.2.4.9 F009 Top Up Student Card

The functional requirements for Top Up Student Card are as follows:

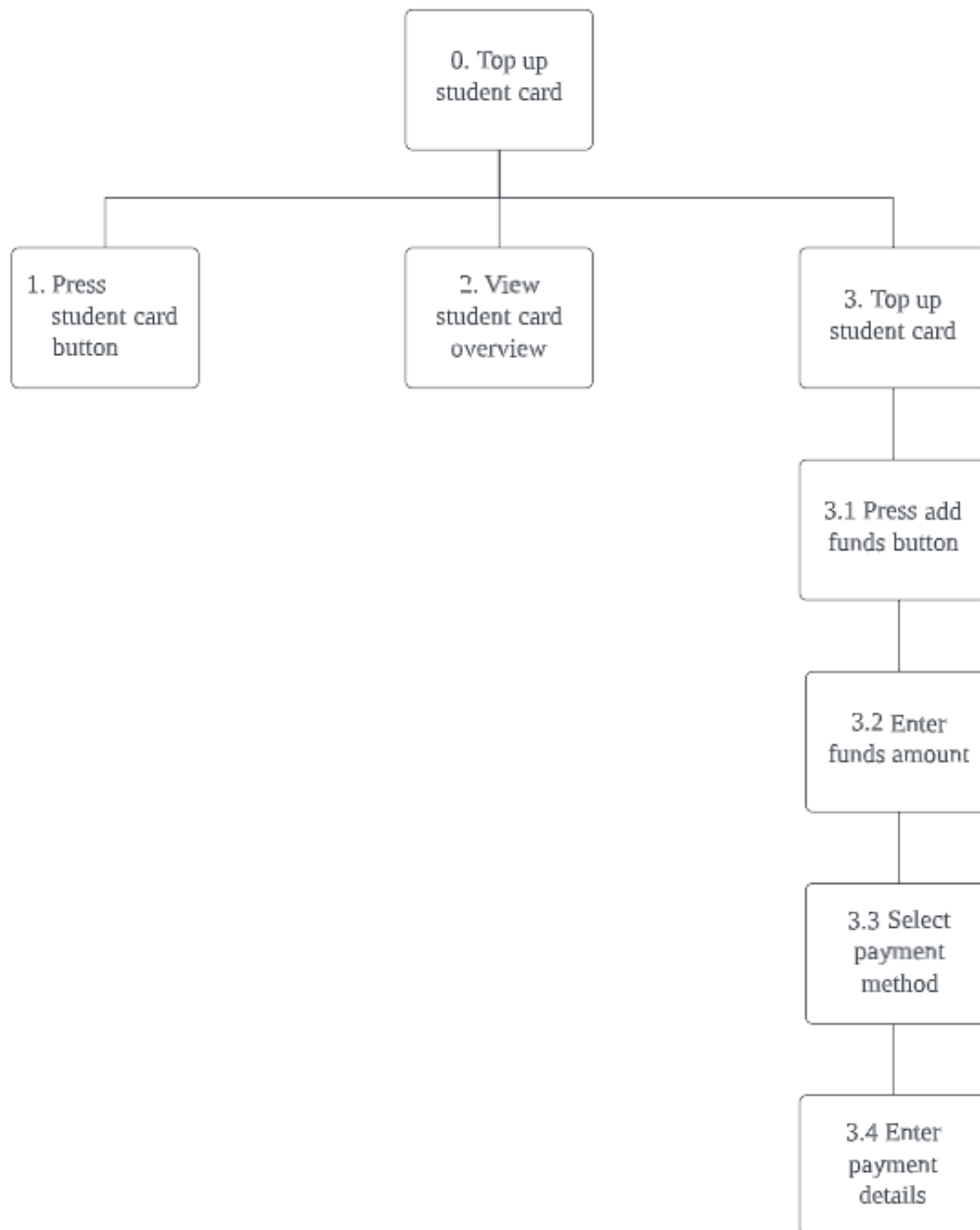
Requirement ID	REQ_F901	Version	1.0
Description	System shall be able to allow users to top up their student card		
Author	Sudhirr Irshana Durai Kannan		

Use Case table

Use Case ID	UC009	Version	1.0
Feature	F009 Top Up Student Card		
Purpose	To allow users to top up their student card balance		

Actor	User	
Trigger	User presses the 'Student Card' button	
Precondition	<ul style="list-style-type: none"> • User is logged in • User is on the homepage 	
Scenario Name	Step	Action
Main Flow	1	User presses the 'Student Card' button
	2	System displays current student card balance
	3	User presses the 'Top Up' button
	4	User enters top-up amount and payment details
	5	System redirects to payment provider
	6	Student card is topped up with previously entered amount
Alternate Flow - Payment Invalid	1.1	Payment details entered are invalid
	1.2	System displays error message
	1.3	User is returned to 'Student Card' screen
Rules	Payment details must be valid	
Author	Sudhirr Irshana Durai Kannan	

Hierarchical Task Analysis



3.2.4.10 F010 Sign Up Club

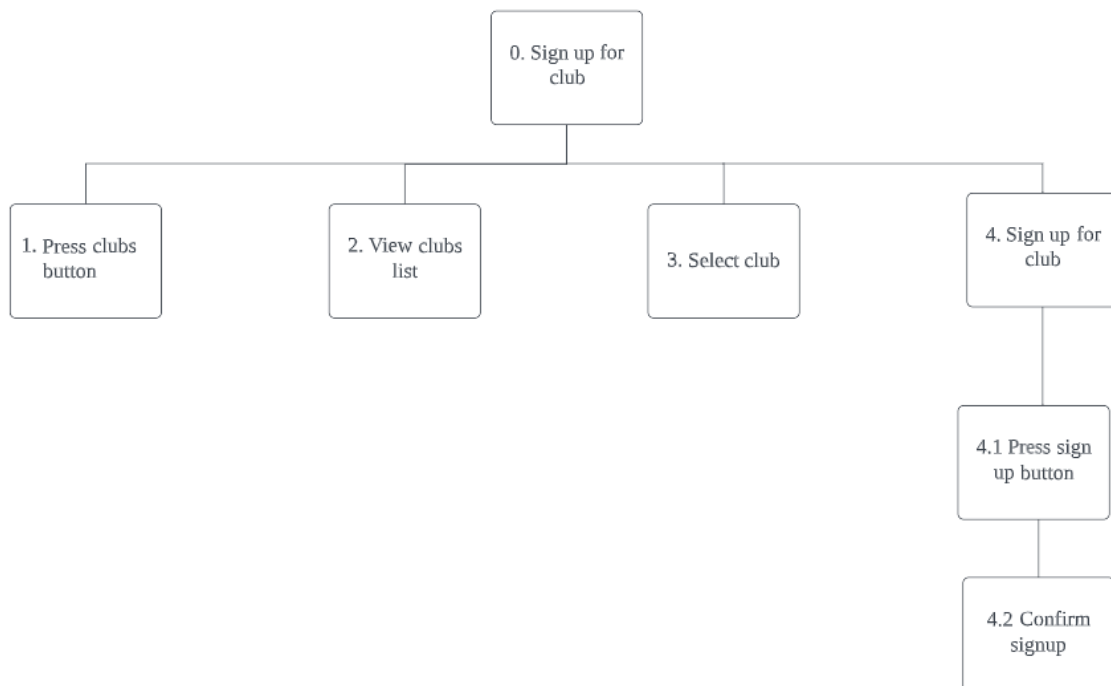
The functional requirements for Sign Up Club are as follows:

Requirement ID	REQ_F101	Version	1.0
Description	System shall be able to allow user to sign up for a club		
Author	Sudhirr Irshana Durai Kannan		

Use Case Table

Use Case ID	UC010	Version	1.0
Feature	F010 Sign Up Club		
Purpose	To allow the user to sign up for a club		
Actor	User		
Trigger	User presses the 'Clubs' button		
Precondition	<ul style="list-style-type: none">• User is logged in• User is on the homepage		
Scenario Name	Step	Action	
Main Flow	1	User presses the 'Clubs' button	
	2	System displays the 'Clubs' screen	
	3	User selects a club from the 'More Clubs' list	
	4	System displays club information	
	5	User presses 'Join club' button	
	6	System requests confirmation from user	
	7	User confirms signup	
Rules	-		
Author	Sudhirr Irshana Durai Kannan		

Hierarchical Task Analysis



3.2.4.11 F011 Sign Up Event

The functional requirements for Sign Up Event are as follows:

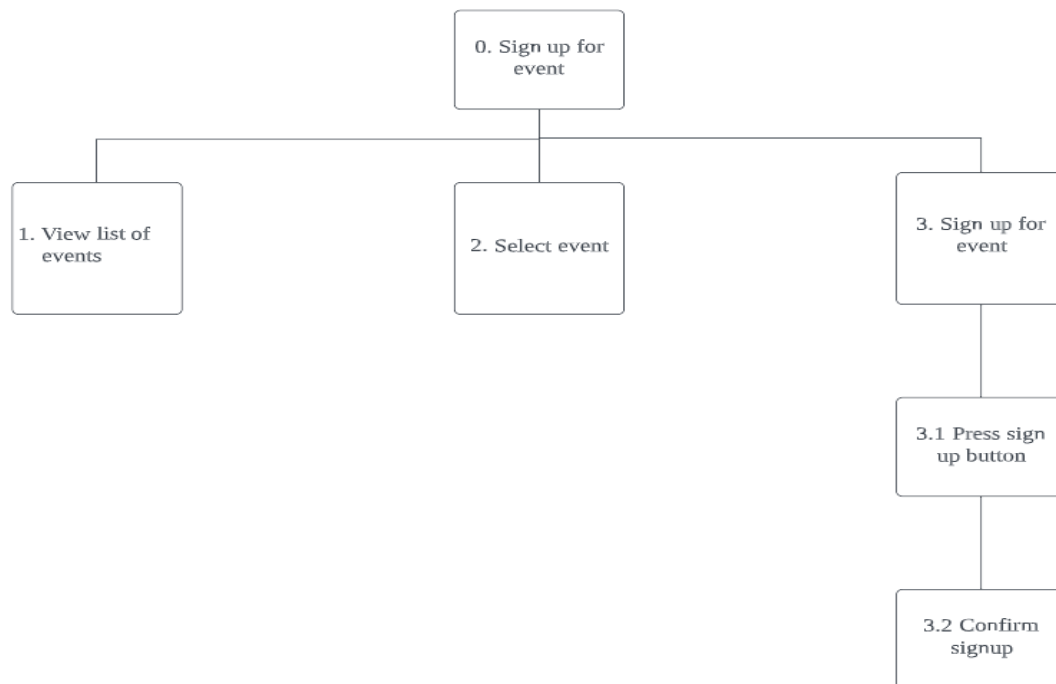
Requirement ID	REQ_F111	Version	1.0
Description	System shall be able to allow users to sign up for an event		
Author	Sudhirr Irshana Durai Kannan		

Use Case Table

Use Case ID	UC011	Version	1.0
Feature	F011 Sign Up Event		
Purpose	To sign up for an event		
Actor	User		
Trigger	User selects an event from the list of events		

Precondition	<ul style="list-style-type: none"> • User must be logged in • User must be on a club page 	
Scenario Name	Step	Action
Main Flow	1	User selects an event from the list of events
	2	System displays event info
	3	User presses 'Signup' button
	4	System requests confirmation from user
	5	User confirms signup
Alternate Flow	1.1	User has other event with clashing schedule
	1.2	System displays error message
	1.3	User is returned to the homepage
Rules	- User must not have an event with clashing schedule	
Author	Sudhirr Irshana Durai Kannan	

Hierarchical Task Analysis



3.2.4.12 F012 Display Calendar

The functional requirements for Display Calendar are as follows:

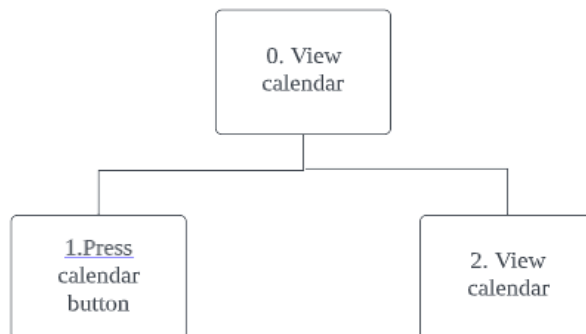
Requirement ID	REQ_F121	Version	1.0
Description	System shall be able to check the calendar		
Author	Sudhirr Irshana Durai Kannan		

Use Case Table

Use Case ID	UC012	Version	1.0
Feature	F012		
Purpose	To view the calendar		
Actor	User		
Trigger	User presses the 'Calendar' button		
Precondition	<ul style="list-style-type: none">• User is logged in• User is on the homepage		

Scenario Name	Step	Action
Main Flow	1	User presses the 'Calendar' button
	2	System displays a calendar with events relevant to the user highlighted
Rules	-	
Author	Sudhirr Irshana Durai Kannan	

Hierarchical Task Analysis



3.2.5 Application Storyboard

3.2.5.1 Log in

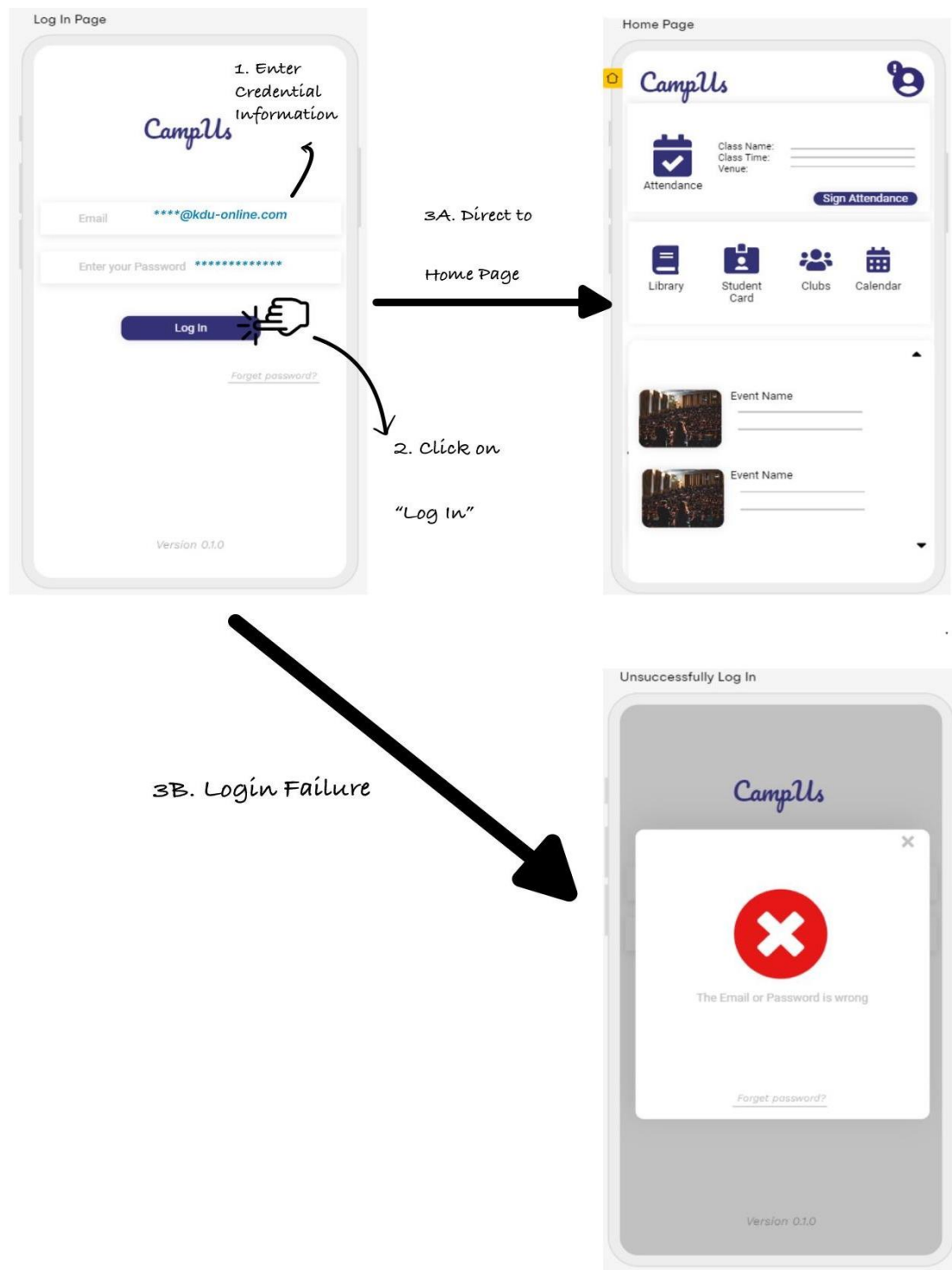


Image15. Application Storyboard of Log In

3.2.5.2 Reset Password

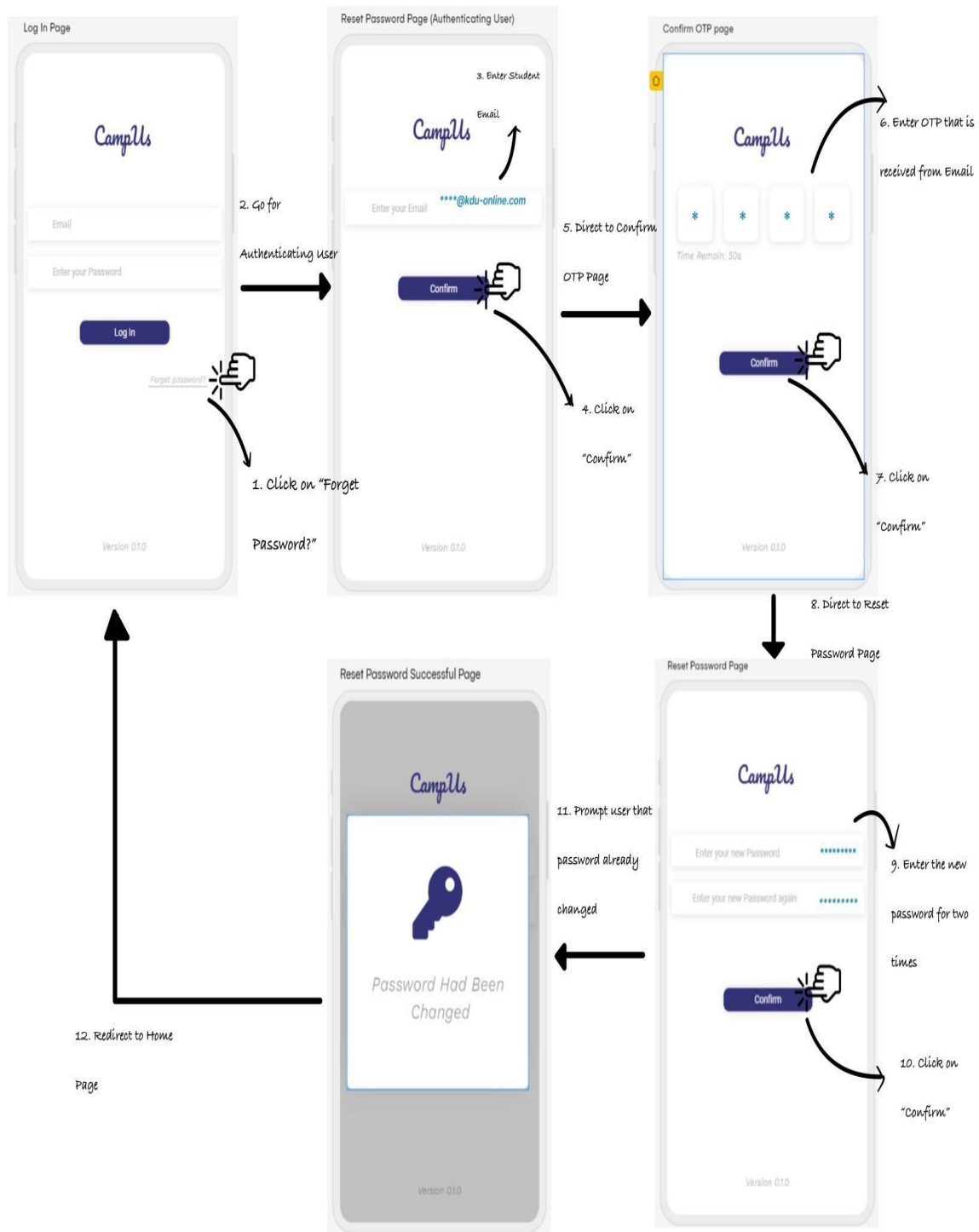


Image16. Application Storyboard of Reset Password

3.2.5.3 Help Desk

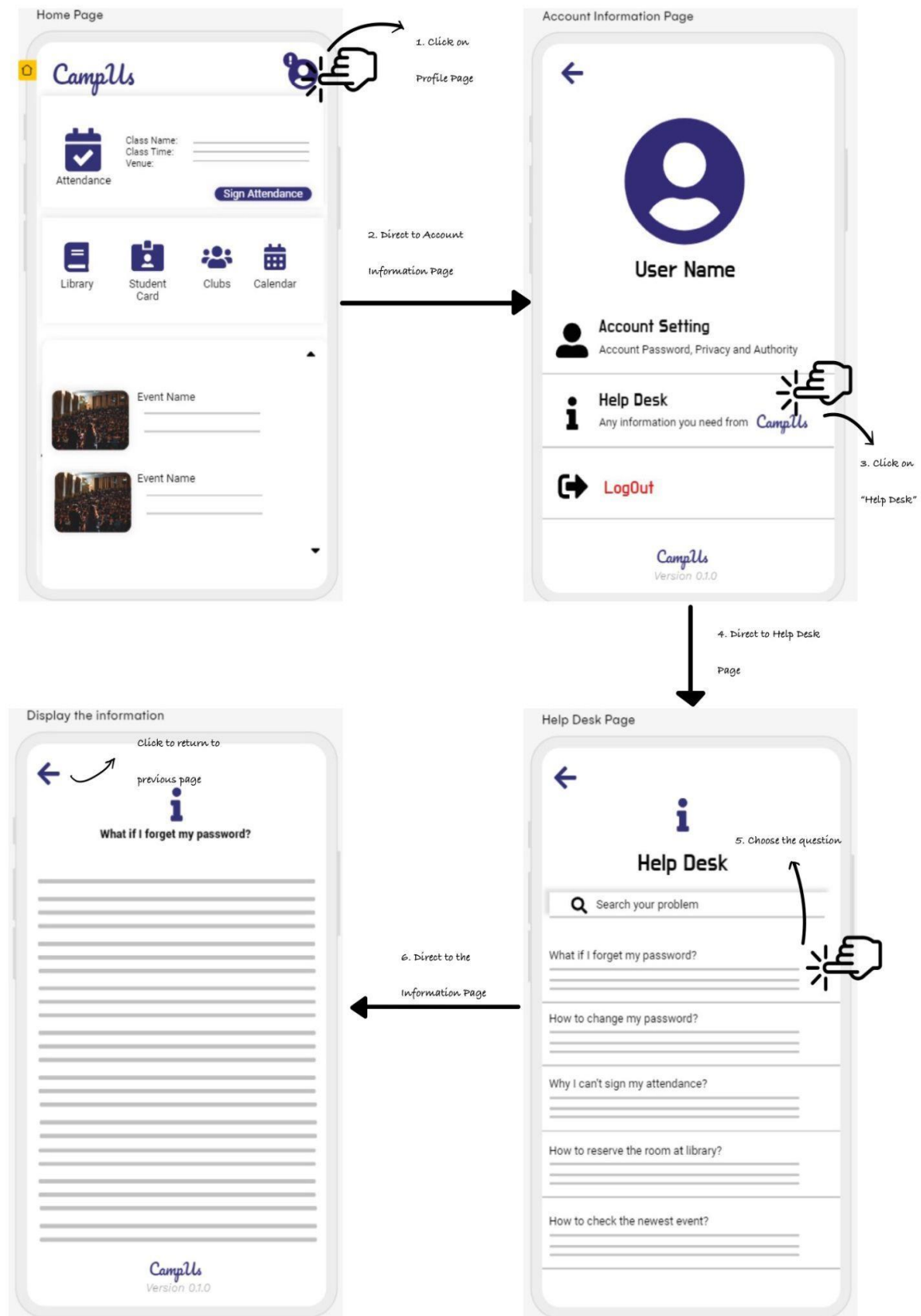


Image17. Application Storyboard of Help Desk

3.2.5.4 Sign Attendance

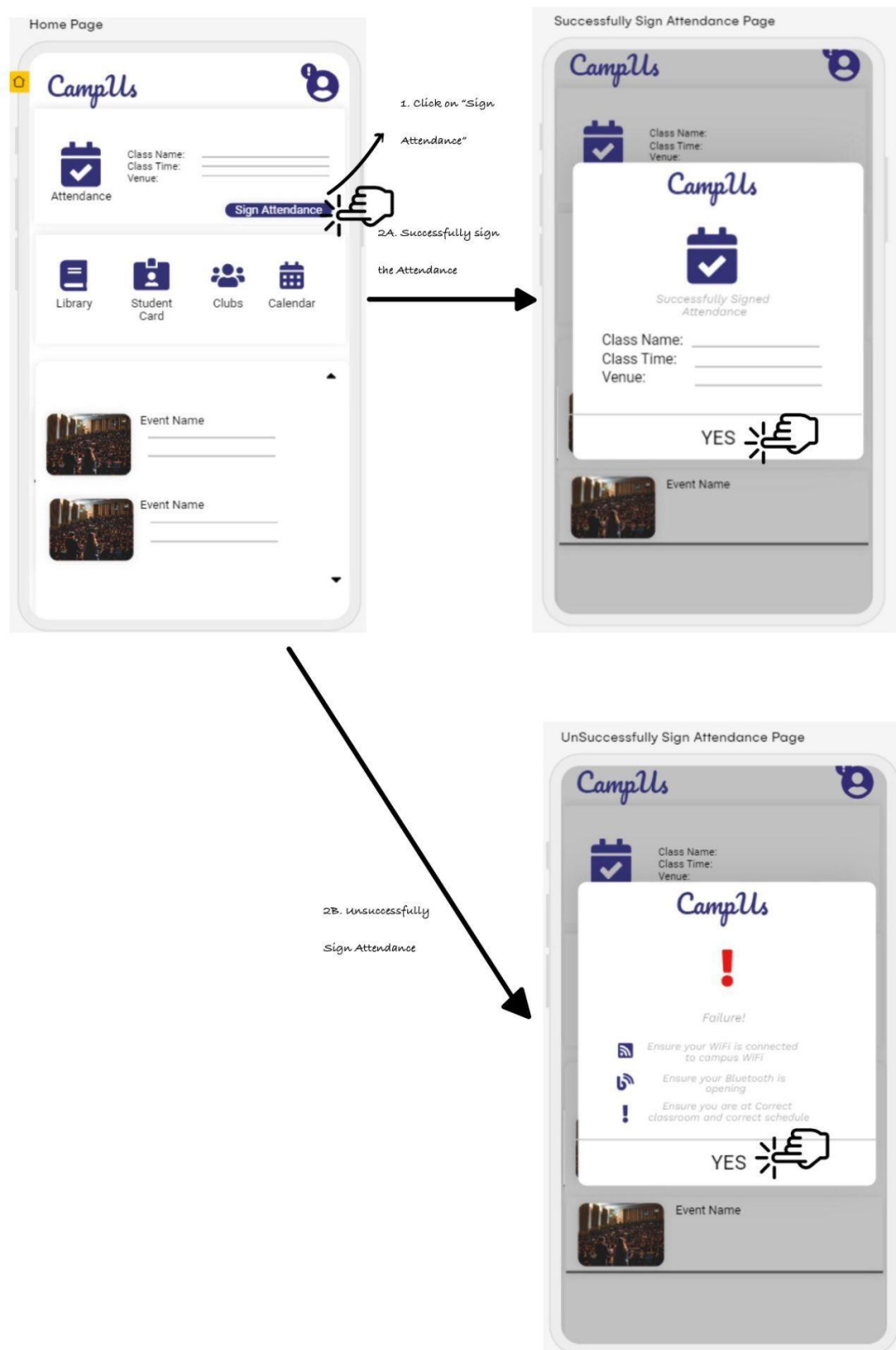


Image18. Application Storyboard of Sign Attendance

3.2.5.5 LogOut

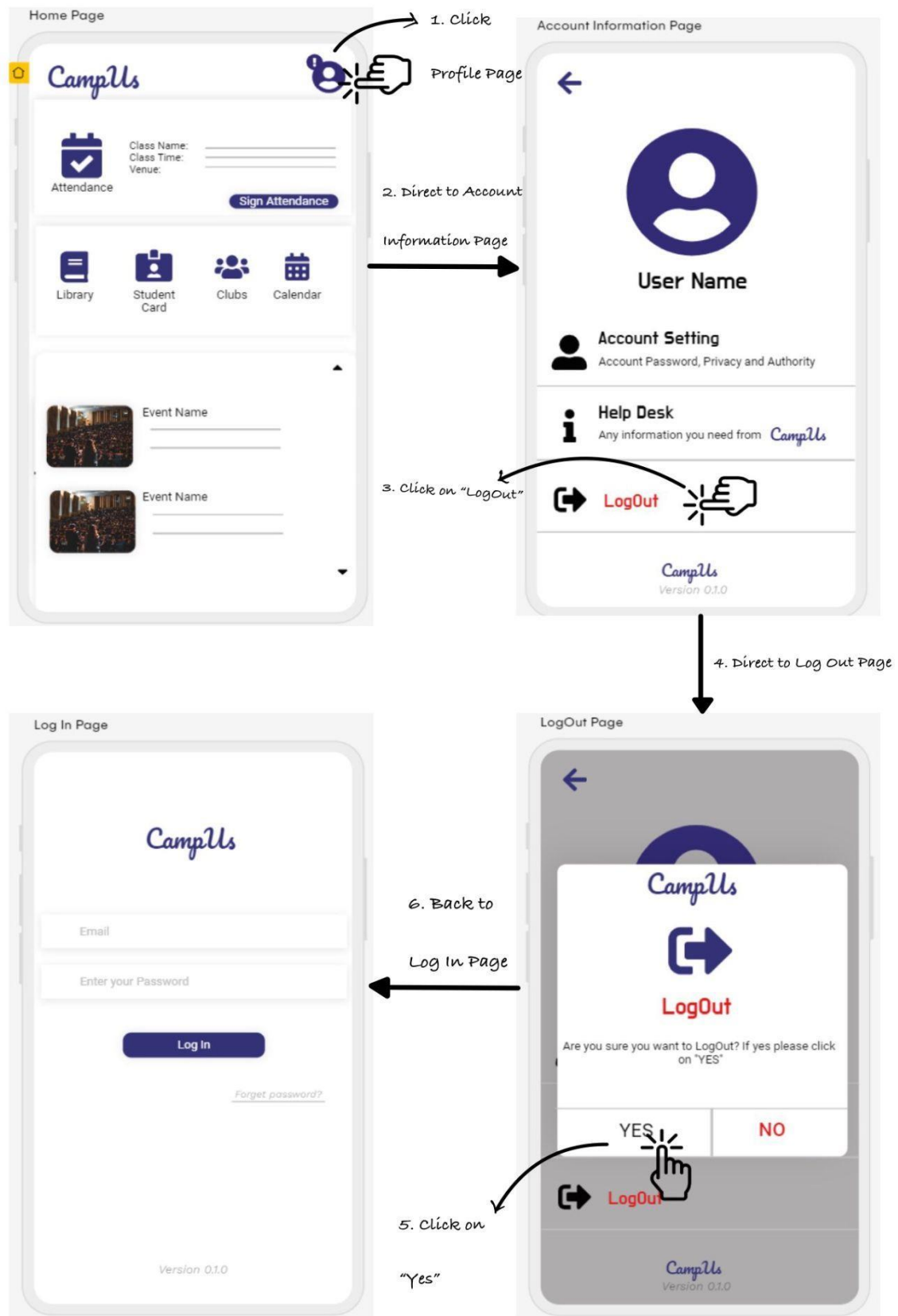


Image19. Application Storyboard of LogOut

3.2.5.6 Reserve Study Room

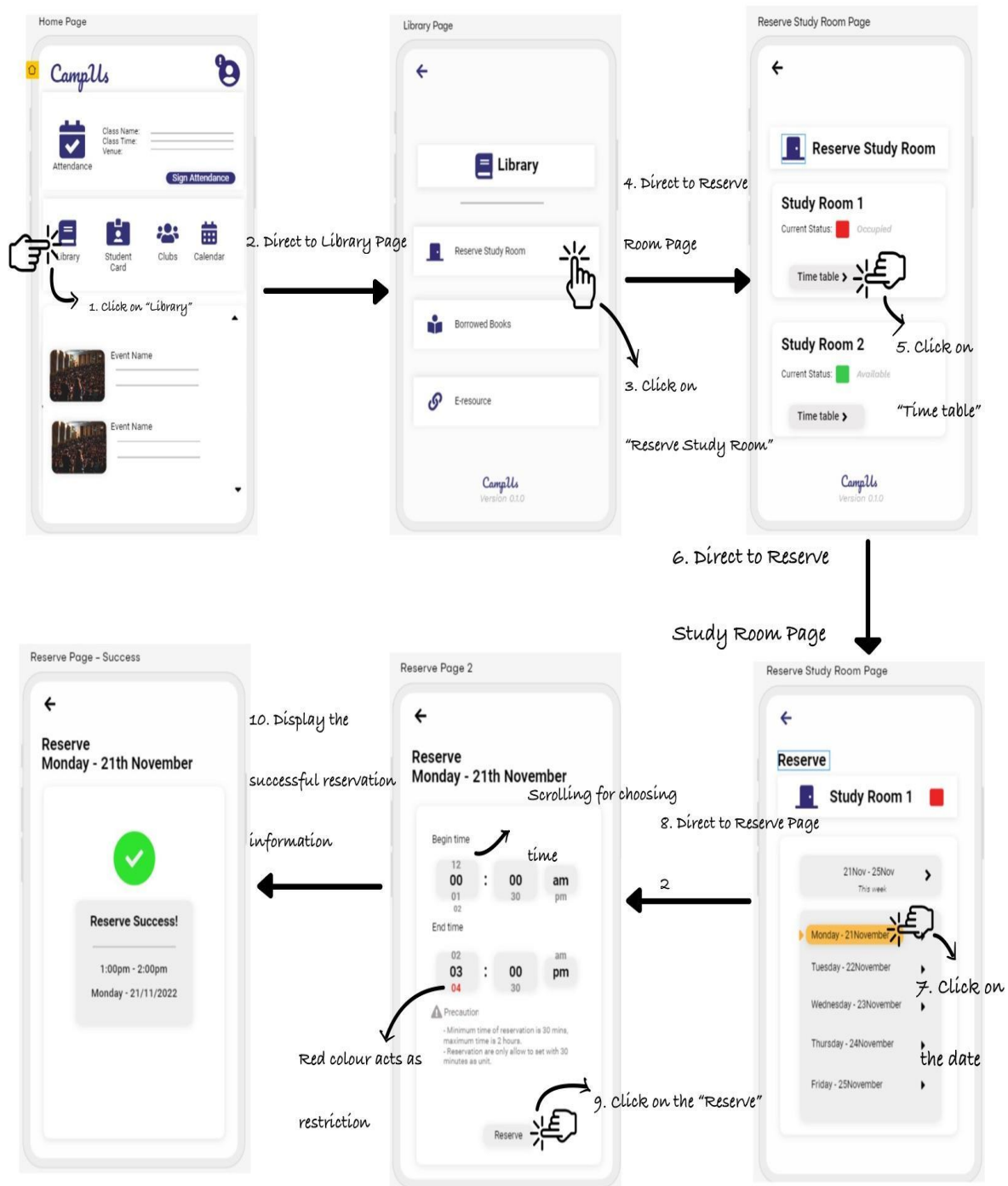


Image20. Application Storyboard of Reserve Study Room

3.2.5.7 Display Deadline

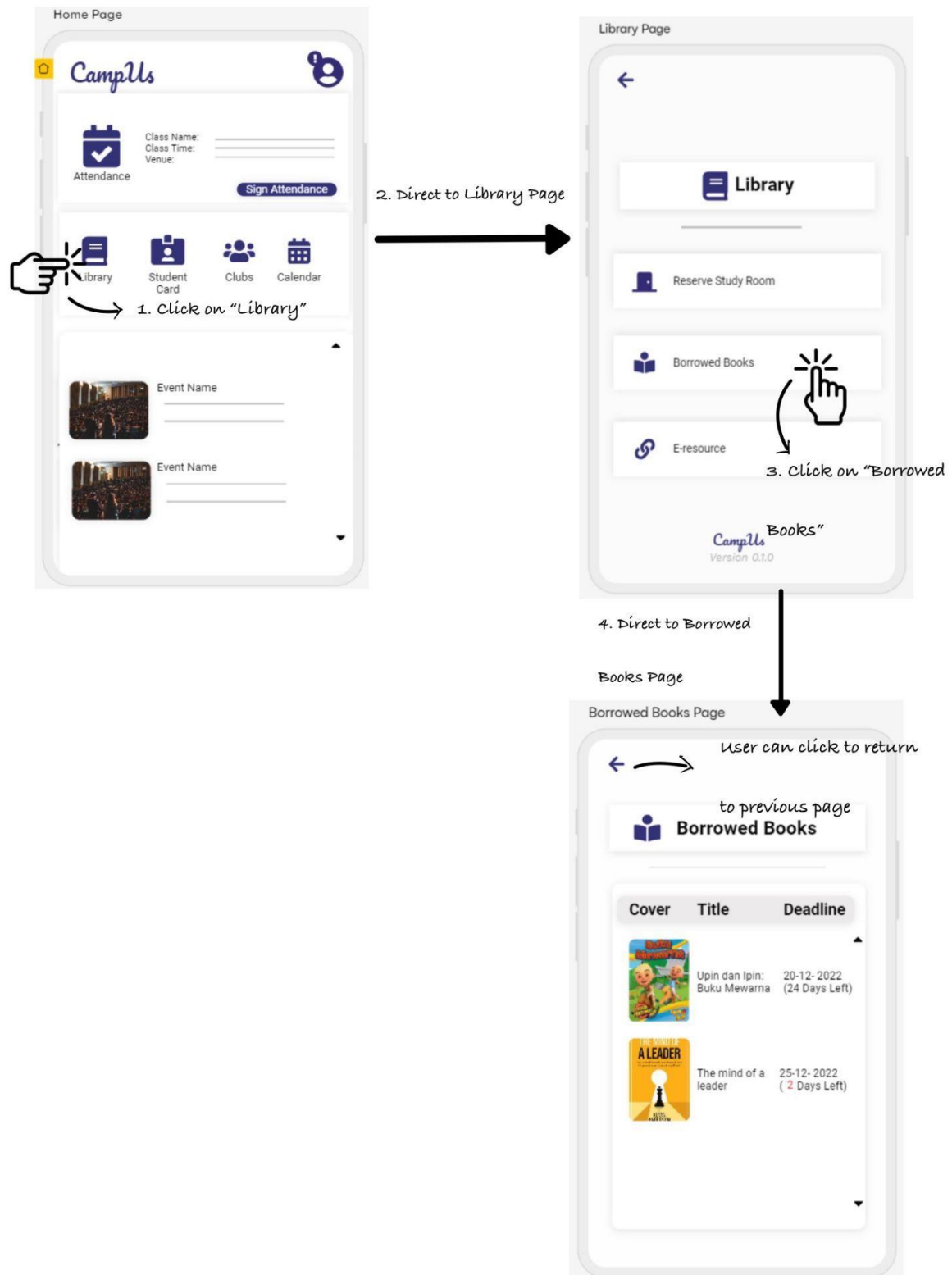


Image21. Application Storyboard of Display Deadline

3.2.5.8 Direct to E-Resource Website

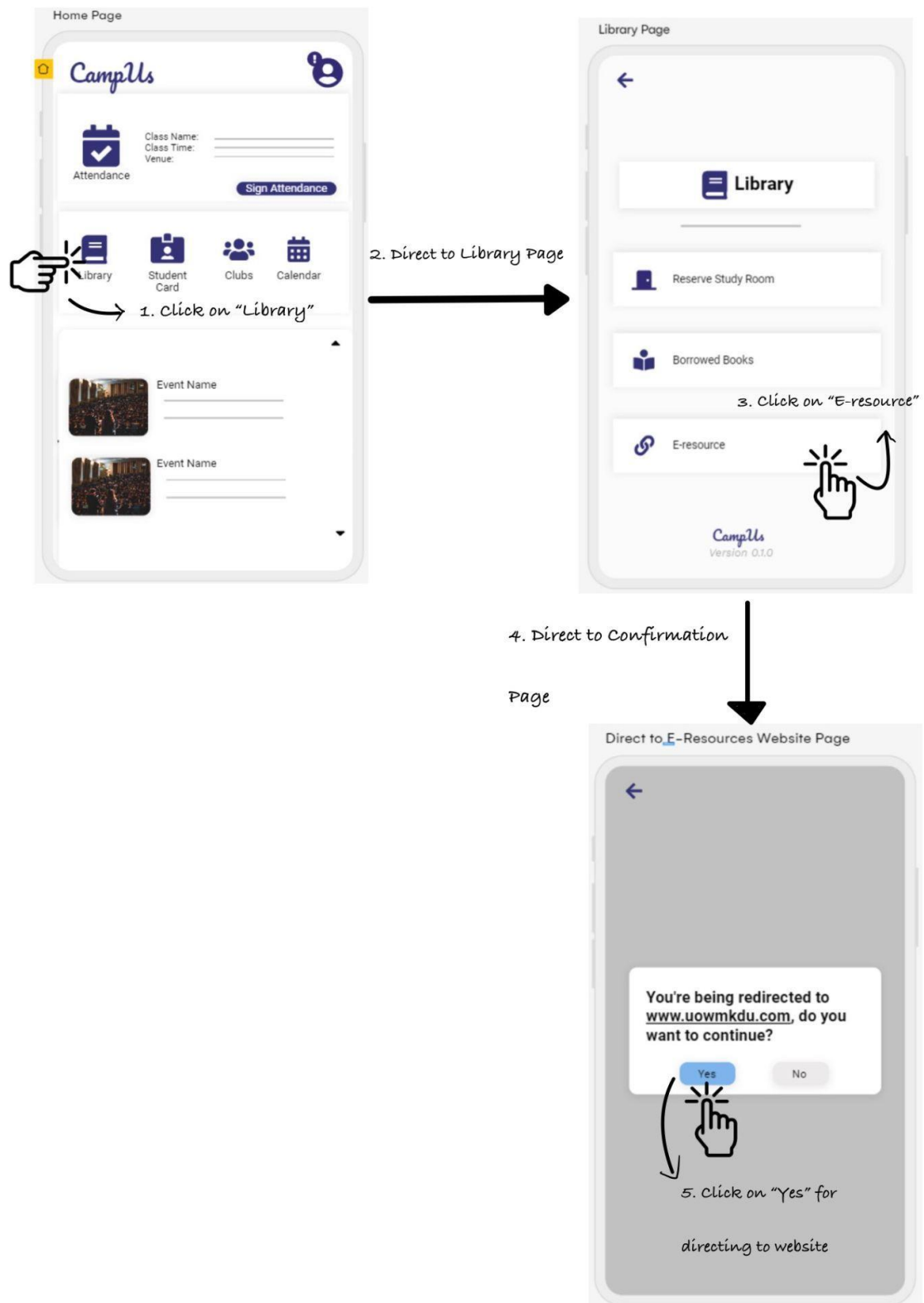


Image22. Application Storyboard of Direct to E-Resources Website

3.2.5.9 Top Up Student Card

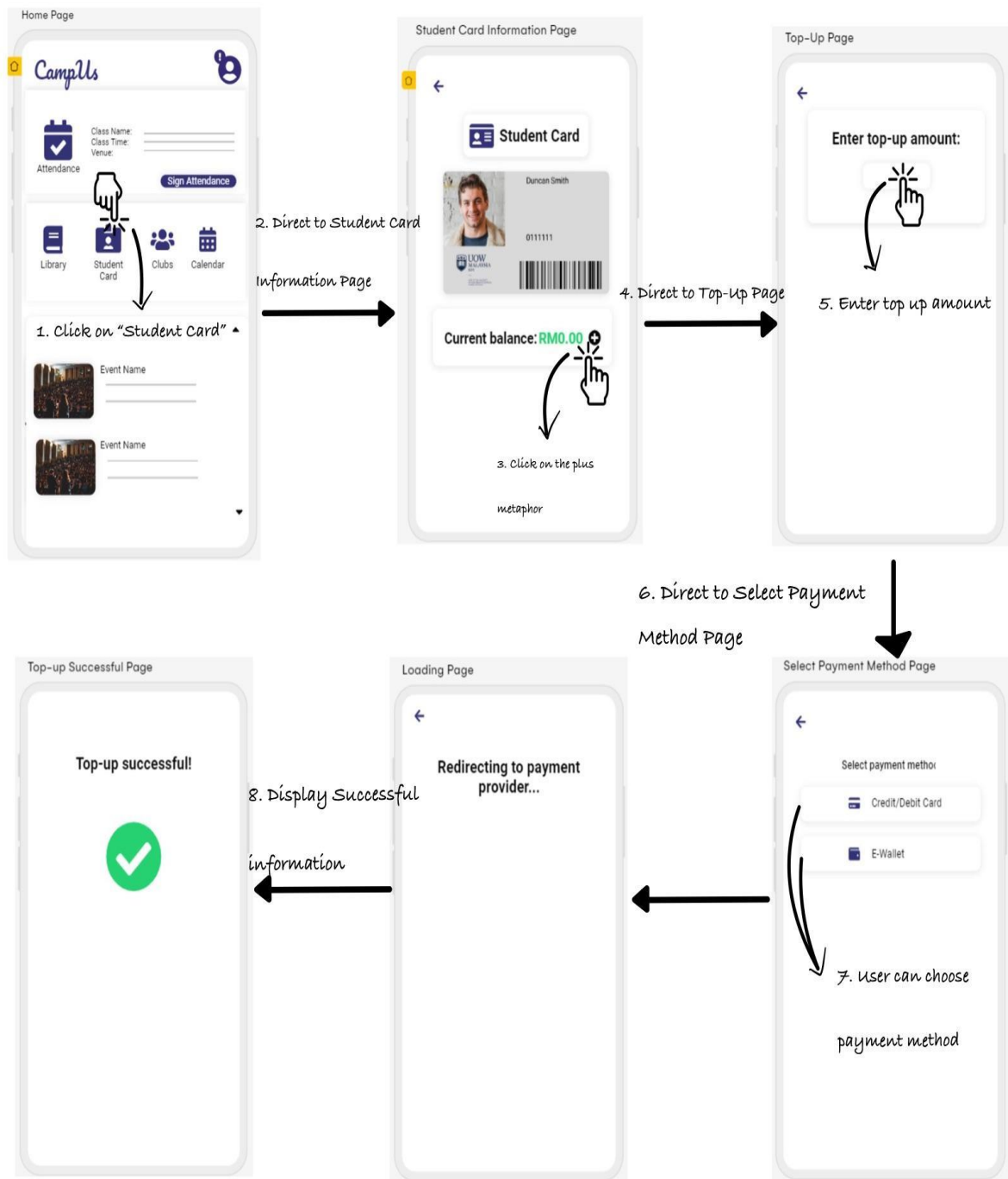


Image23. Application Storyboard of Top Up Student Club

3.2.5.10 Sign Up Club

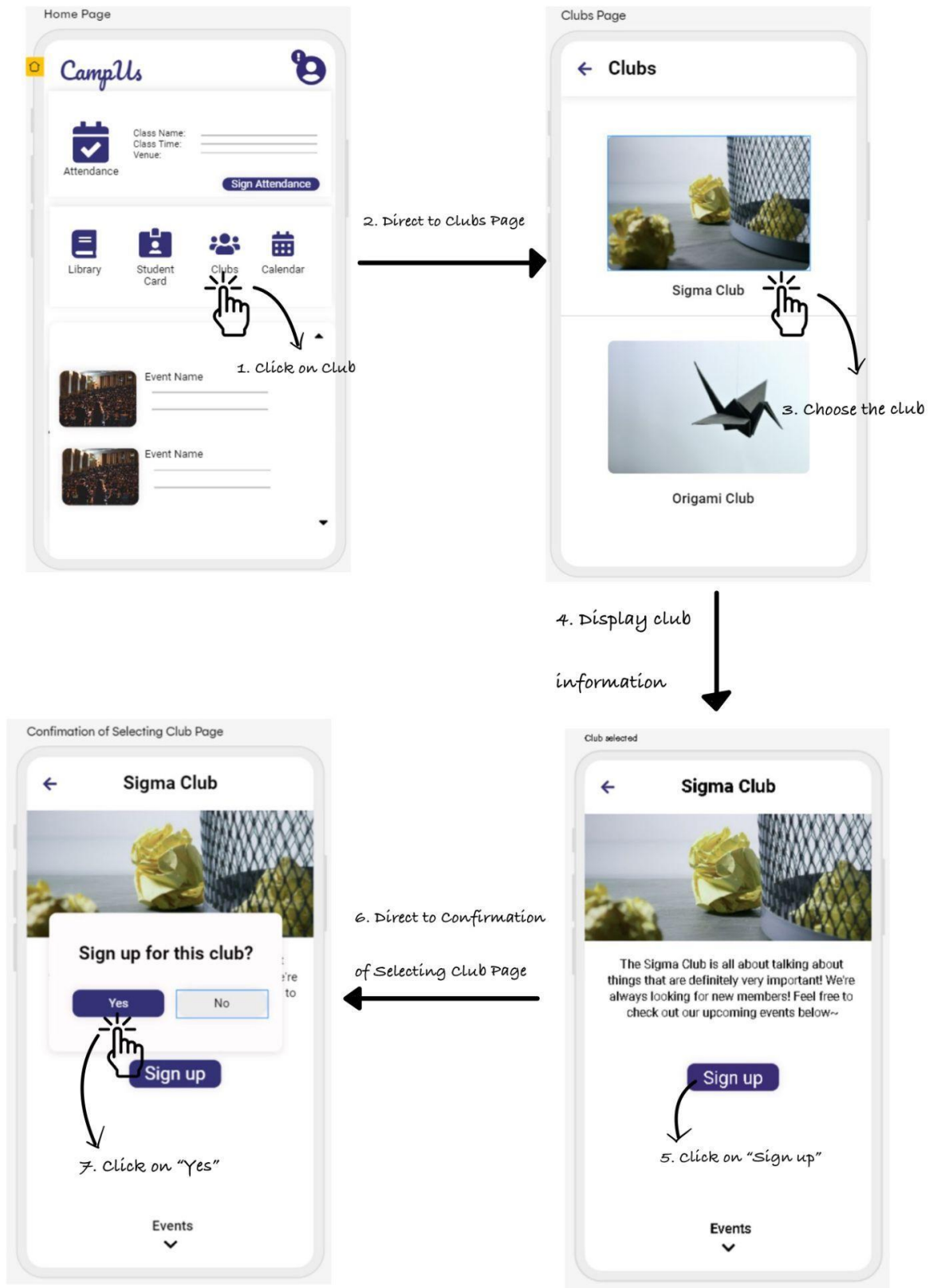


Image24. Application Storyboard of Sign Up Club

3.2.5.11 Sign Up Events

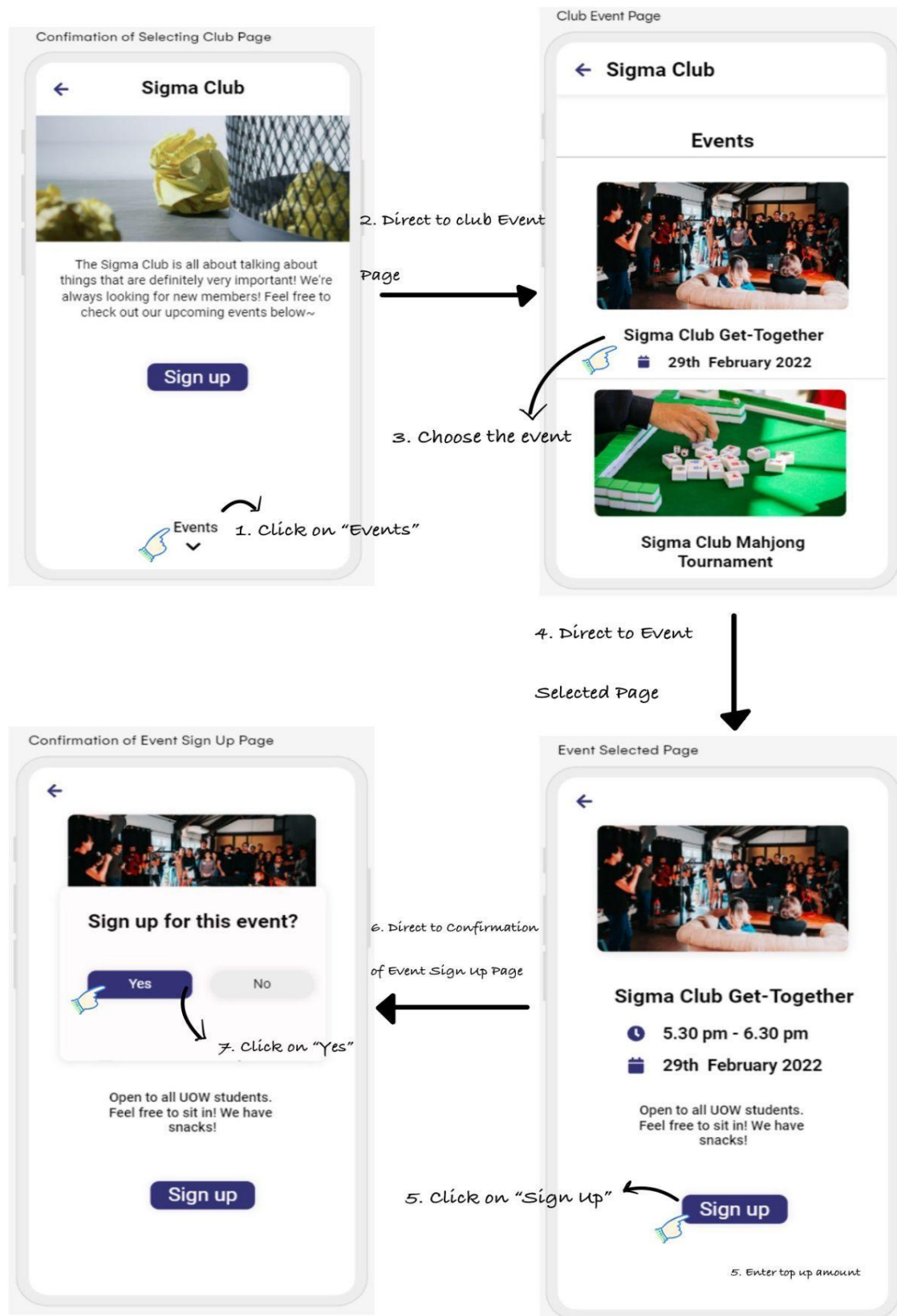


Image24. Application Storyboard of Sign Up Event

3.2.5.12 Display Calendar

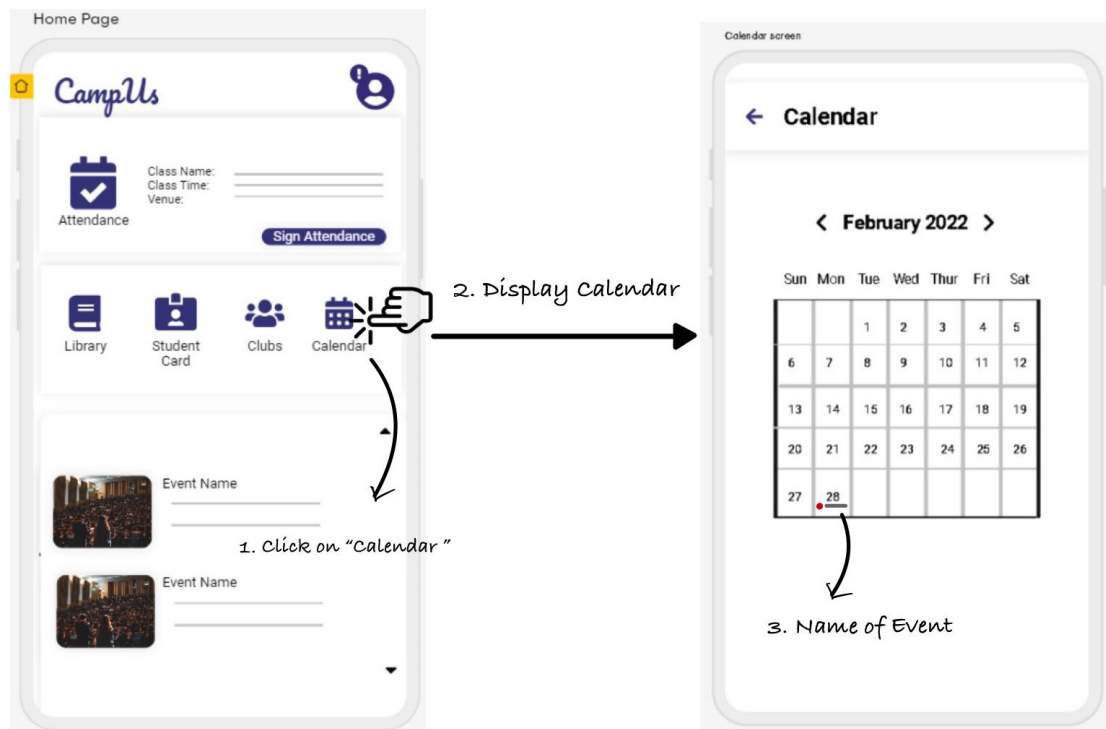


Image25. Application Storyboard of Display Calendar

3.3 Evaluation of Interfaces Prototyping

By using the User Centered Design Approach to design a college used application for addressing the students' daily routine matters, the involvement of students is extremely important since they are the user for this application 'CampUs'.

In order to understand what the students want, we distributed the questionnaire to collect the requirements of students. After that, we analysed the data and adopted the opinion that could be used in this application. Apparently, it's all about the functional requirements of CampUs. Then, we did the research for the creation of an interactive interface and produced it.

The result of conceptual models and interfaces from the research and data gathering prompt us that the interface of CampUs should not be too boring and traditional. The interfaces of CampUs should be designed in the form of modern, clear and memorable. So, the design of CampUs is highly similar to modern social media applications such as colour design, log in interface and account information interface. For example, it uses plenty of metaphors to explore the user's knowledge of doing something they are not familiar with. Furthermore, we

also provide different interfaces styles, it will let users know which one is better, such as F001-F005, F006-F008, F009-F0012. They have the slightly different design.

Besides that, the distribution of the icons is the same as some applications that we use in our daily life like Touch N Go E-wallet, Shopee, Grab and so on. CampUs includes the advantages of two types of interfaces that are mentioned in above. Through the survey of potential users, we found that our design which is initial prototyping of interface is feasible.

The question we had asked were as follow:

Part 1 Interface Design Questions:

1. Are the interfaces of 'CampUs' suitable for you?

11 responses

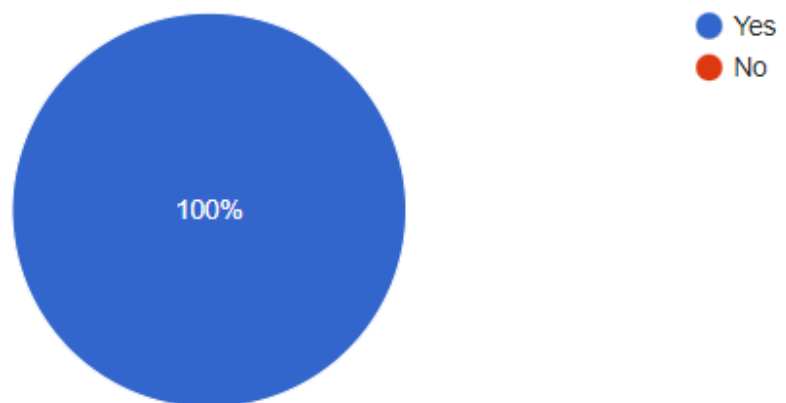


Image26. Pie Chart of Survey 2 Question 1

2. Do the colour design interfaces of 'CampUs' allow you to see clearly?

11 responses

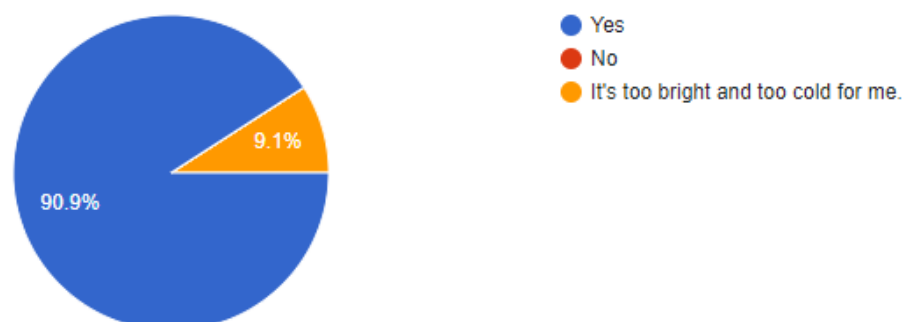


Image27. Pie Chart of Survey 2 Question 2

3. After looking at the interfaces of 'CampUs', could you understand how to use it?

11 responses

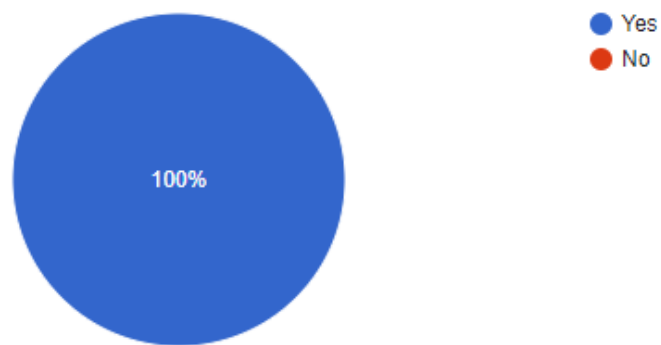


Image28. Pie Chart of Survey 2 Question 3

4. Does the feedback of interaction with this interface could make you understand what you had been done?

11 responses

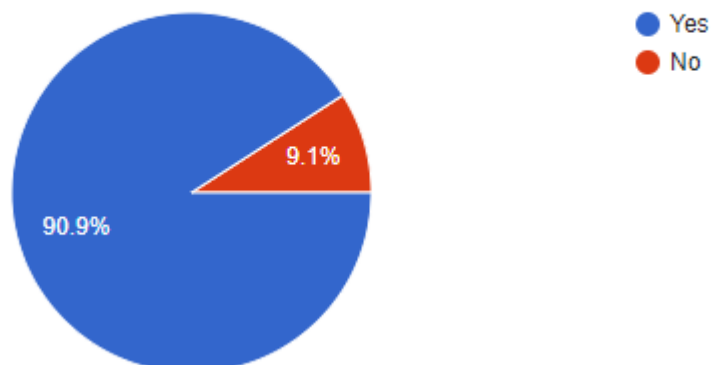


Image29. Pie Chart of Survey 2 Question 4

5. Why do you think these interfaces will be able to make you can understand how to use the application?

11 responses

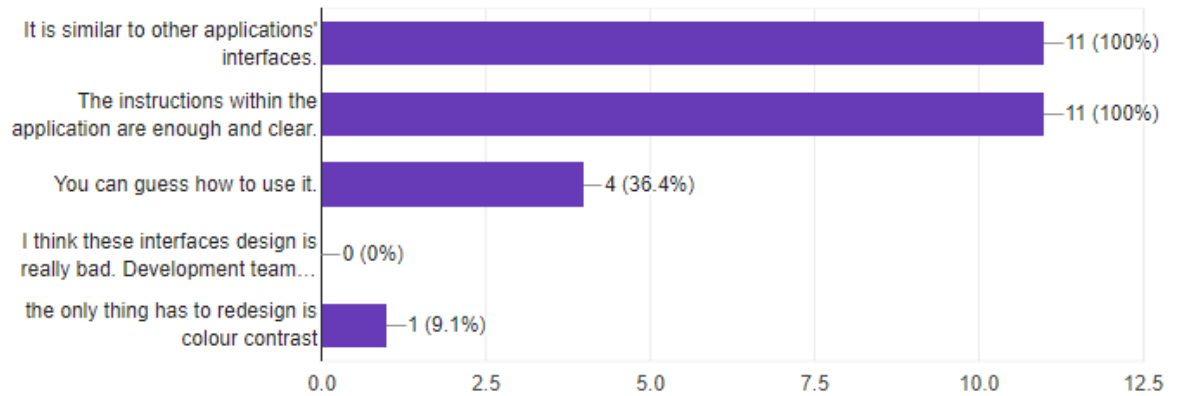


Image26. Bar Chart of Survey 2 Question 5

6. Regarding to the design of interfaces, any improvement could we do for you?

Could use more colours to design the interface

I think all good, no need improves anything else

Its really good, i hope i can use it instantly

.

Provides more languages will be better

Image26. Responses of Survey 2 Question 1

Part 2 Functional Requirement Questions:

1. Are you satisfied with the functions that are provided by 'CampUs'?

11 responses

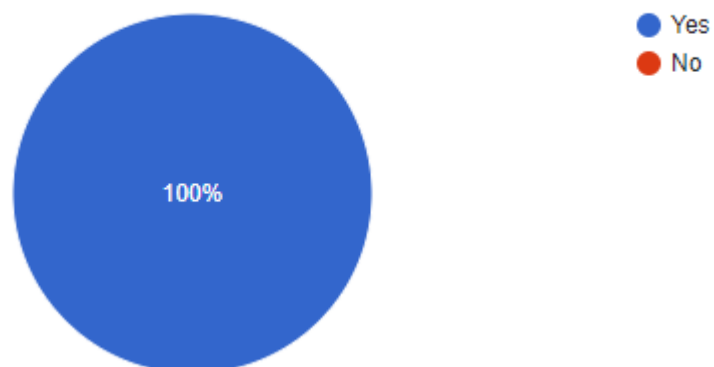


Image26. Pie Chart of Survey 2 Question 1

Besides the evidence that design is feasible, the answers of questions that had been asked by potential users demonstrate that the initial prototype also has various kinds of drawbacks that need to be improved. For example, some respondents stated that the colour design should be improved. Furthermore, multiple language choices should also be available in CampUs, therefore increasing the inclusiveness of application.

The result of the survey provides important resources in helping us to improve and redesign our interfaces. It can make sure the user will easily use this application.

The design of interfaces is iterative in this application. So, the potential user will be involved in this project throughout the development process rather than only one time.

4.0 Discussion

Throughout the design process, the challenges were not just designing the application to be attractive to the student user, but to strike a balance between functionality and design so as to not negatively affect the user's education and student life. A minimalistic and material design approach helps to convey this functionality and utility while being easy on the eye and drawing attention to significant areas.

If we had more time to work on this project, we could add more features that improve and streamline other aspects of student life. This could include features such as parking payment help for students who drive to campus.

Among the lessons we learned from this project is that designing a good user experience is not easy. Making sure the application is usable, first and foremost, is a priority. There are multiple aspects of the user experience that may appear okay at first glance, but upon closer inspection, are flawed and require more iterations to get right. Simplicity in design is also another important factor. This is especially important in applications that have important functions such as ours, which serve as a bridge between a student and multiple aspects of campus life, which have important real-world effects.

5.0 Conclusion

In this assignment, we manage the project design in different aspects with user-centered design being our major concept, with supportive functions in the application for students. In terms of interfaces, we structure the interfaces in a form of social media such as Facebook and applications like TnG E-wallet, so users who are first time using it would find it familiar. Icons in the application are using metaphors to express the results users can get in the most instinctive way, to measure up the usability goal and smoothen user experiences.

6.0 Reference

Fitz-Walter, Zachary/Dian Tjondronegoro/Peta Wyeth (2012): A gamified mobile application for engaging new students at university orientation, Acm, [online]
https://dl.acm.org/doi/abs/10.1145/2414536.2414560?casa_token=yD3Bxt-avMEAAAAA%3AZ6Hrv5cw7ocZghgcPkzGUsrEmIzXuKvdZlICU7j6yl32G_obTetS9HuvSqP9Vs4hQ5HVDPsg7eETMw [Accessed 18Nov..2022].

7.0 Appendices

NAME

Emily James

DESCRIPTOR

#UOWKDU Student

QUOTE

"Campus is my second house, I spend more than 7 hours a day staying there every weekday."

WHO IS IT ?

Sketch the personal profile, age, location, job title, what kind of person is it? Think about one or more personas from segmentation.

Emily James is 21 years old today, she is the Malaysian and now study at the UOWKDU, which is located at Shah Alam. She is enrolled in the course of Bachelor of Computer Science and it is Year 2 Semester 2 for her. Normally, she takes 4-5 subjects during the long semester and 2-3 subjects during the short semester. Emily tends to stay in campus even the classes are ended. Emily is a student who optimistic, outgoing and responsible. She usually will pay hundred percent of attempt to do the best in her academic as she will spend most of the time at library for learning. Then, she also takes care of work-life balance, so she will catch the chances to join the clubs and events that available from UOWKDU. Currently, she is participating in Badminton Club and Chinese Society.

WHAT GOALS?

What is the supreme motivator? What are (latent) needs and desires?

Emily is hoping to enrol in a few more clubs in the future as she wants to explore her potential hobby and experience college life as much as possible. Therefore, she is looking forward to a few more clubs that she is interested in. From an academic perspective, Emily desires to hit the goal of first class CGPA.

WHAT ATTITUDE?

What is the point of view? What is the expectation, perception of the service, company or brand. What motivates the persona to go to the website, into the shop, or use the service.

Emily is usually used to utilising the smartphone to manage her daily life such as the memo, list to do, order delivery and so on. However, UOWKDU currently does not have an appropriate software application that could accommodate these requirements that are needed at campus. She will feel frustrated and troublesome when she has to use a separate application to finish her daily needed operation at the campus. For instance, checking events by Email, taking attendance by Google Form, reserving tables for the library in physical and so on. She hopes there is an application that includes most of the functions as the students need to satisfy their requirements and address the trouble.

WHICH BEHAVIOUR?

What does she do? Tell stories about her behaviour while using a service, product or site. Channel usage for various needs (internet, visiting comparable sites, mobile, social media).

What works well what are the frustrations what is stopping her from choosing a function service or product?

Emily is the user, student who takes care of the user experiences while using any application. The application which is low-effective or insufficient is usually unacceptable by Emily. It is due to Emily thinking the application which is available on the market should have the quality instead of issuing some semi-finished product. She would tend to use the interface with a simple and clear design because she thinks the application with too many functions or complex is really difficult to use. Therefore, the design of the application should keep it simple that is exactly needed by her rather than include too many redundant functions.

Which Trends, mindstyles or other indicators are applicable for this persona?

How important are functional, emotional expressive benefits

Fast or slow decision maker? Why, how can you tell?

Decisions made on facts or emotion?

THE PERSONA CORE POSTER by CREATIVE COMPANION

This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International license. To view a copy of this license, visit <http://creativecommons.org/licenses/by-sa/4.0/> or send a letter to Creative Commons, 444 Castro Street, Suite 900, Mountain View, California, 94041, USA.

WWW.CREATIVE-COMPANION.COM

PERSONA: Emily James

USER STORY/SCENARIO: A day of Emily's campus life.



After 12 pm, Emily had finished her class then she went to the library at UOWKDU. She went for print out the hardcopy of her assignment.



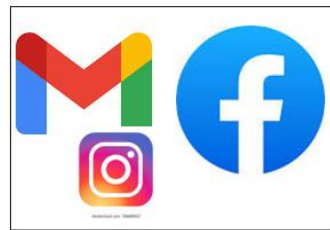
She had to use the student ID to make payment. The card balance was running low so she went to top up the card.



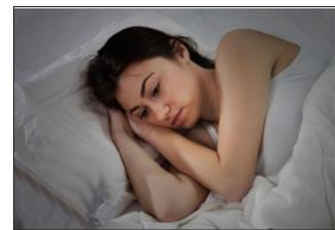
After she came back, the seat that she preferred to sit in was full. However, she still found a new seat to sit in.



After that, she was finding the articles on bookshelves. But, it was not available again since it was out.



At 6pm, Emily started to check the club and college official events by using various type of social media application and Google Email.



At 10pm, she realized she had forgotten to sign attendance for the class today because each lecturer had different Requirements on how to sign the attendance.

PAGE
#1

PROJECT/TEAM:
Pikachu

DATE:
20/11
2022

STORYBOARD - [NNGROUP.COM](https://nngroup.com)

11 responses



Accepting responses

Summary

Question

Individual

Are the interfaces of 'CampUs' suitable for you?

Copy

11 responses

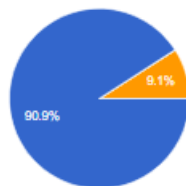


● Yes
● No

Do the colour design interfaces of 'CampUs' allow you to see clearly?

Copy

11 responses



● Yes
● No
● It's too bright and too cold for me.

After looking at the interfaces of 'CampUs', could you understand how to use it?

Copy

11 responses

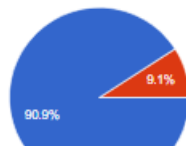


● Yes
● No

Does the feedback of interaction with this interface could make you understand what you had been done?

Copy

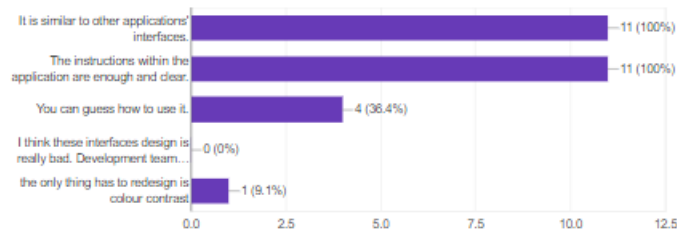
11 responses



● Yes
● No

Why do you think these interfaces will be able to make you can understand how to use the application? [Copy](#)

11 responses



Regarding to the design of interfaces, any improvement could we do for you?

5 responses

Could use more colours to design the interface

I think all good, no need improves anything else

Its really good, i hope i can use it instantly

.

Provides more languages will be better

Functional Requirement Question

Do you satisfy with the functions that are provided by 'CampUs'?

[Copy](#)

11 responses

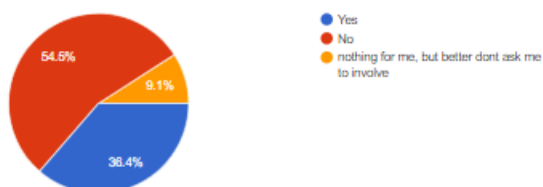


General Question

As a user, will you be happy if you can be involved in the development progress?

[Copy](#)

11 responses



According to the question in above, why you think it is **happy/ unhappy** to involve in the development progress?

11 responses

.	▲
The interface could be designed as the way we glad to use	
It is really taking my time to do it	
The college paid for development team rather that me, why i should involve?	
Time consuming	
nothing for me, but better dont ask me to involve	
How many time i have to spend in those progress?	
It is good if i can involve it and i can give my opinion	
?	▼

29 responses



Not accepting responses ☒

Message for respondents

This form is no longer accepting responses

Summary

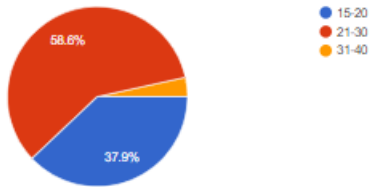
Question

Individual

1. What is your age?

29 responses

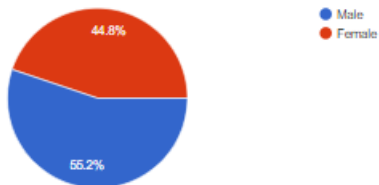
Copy



2. Select your gender

29 responses

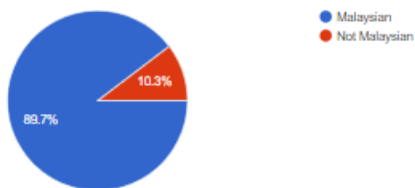
Copy



3. What is your nationality?

29 responses

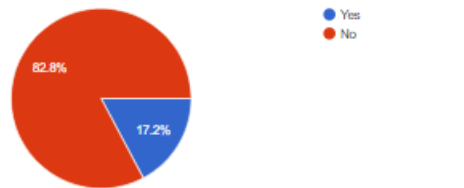
Copy



4. Have you graduated from university/college?

 Copy

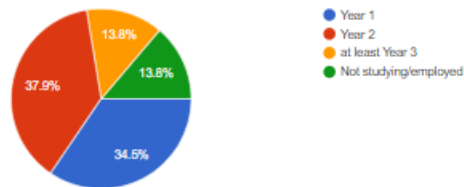
29 responses



5. What semester year are you currently in?

 Copy

29 responses

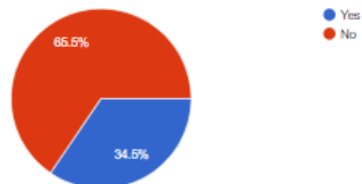


General Question

Does your university/college have a specific academic application for students to support students in all kinds of aspects?

 Copy

29 responses

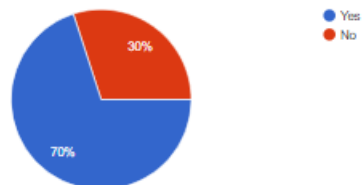


If Yes

If YES, do you often use the application?

 Copy

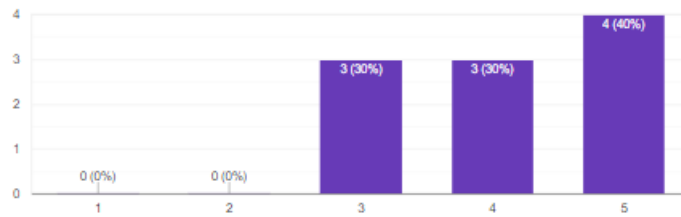
10 responses



According to the question **above**, do you find it supportive during your university/college life?

[Copy](#)

10 responses

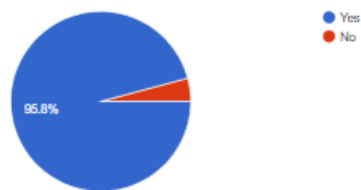


If No

If **NO**, would you want a specific academic application for your own academic student for a variety of support of daily life?

[Copy](#)

24 responses



According to the question **above**, can you state the reason for your choice?

24 responses

no idea

It may help me to address all of the trouble in my daily college life

I hope the school can have an app that I can use easily

-

No study

The college management is really complex, if I would like to do something it is really troublesome

No

I have no idea but if i have about it is better than dont have

ldw

I think the application can support my college life

The application maybe can save my time to manage my college stuff

More convenient

Im not really familiar with my college management, if got the appciation could manage my stuff it is really helpful for me and my friends...

It must improve my campus life experience

?

I suppose it is an application can save my time from addressing my trouble in campus

-

At that time, i really spends a lot of time to manage my stuff physically

?

I suppose it is an application can save my time from addressing my trouble in campus

.

At that time, i really spends a lot of time to manage my stuff physically

asdf

.

Convenience

convenient for me

easier for me

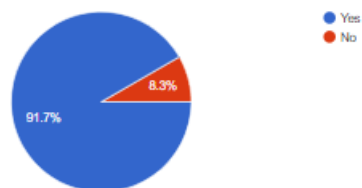
A college student application for you

Would you rather the app include an "Attendance Bluetooth" function?

[Copy](#)

The Bluetooth function is to record each student's attendance in a specific class and time

24 responses



Would you rather the app have a specific "Event Calendar"?

[Copy](#)

The calendar in the app show/tell you the:

- events that are held inside the campus, including college official events, club events, collab events, etc
- exam dates, holidays/sembreak, etc will also be stated inside
- each date can be selected to show details of the days on the calendar

24 responses



Would you rather the app have the "Club" function?

[Copy](#)

The club function is to allow students to sign up for a club, and also for a club to sign up for club events

24 responses



Would you rather the app have the "Library" function?



The library function allows students to access E-books and online resources.

And also shows the deadlines for borrowed books, and students are able to reserve table/room through this function.

24 responses



Comment

If you have a college application to support your student life, what functionality would you like it to have? (Can relate back to previous sections)

16 responses

- Submit a assignment
- Bluetooth and library function
-
- library reservation
- online reservation for table in the library
- Checking my calender
- Checking resource of the library
- I can check the money balance of my student card
- NO IDEA

- I can check the money balance of my student card
- NO IDEA
- The function mentioned in previous page is enough for my college
- submit letter of absence via application, digital student card, updates personal information
- I hope the application can give a calendar and it will display all of the important stuff.
- I really hope I can reserve the room at library for studying used.
- transport schedule
- parking related features
- student card top up