

The Source Library for Secondary Students

A R M
Academic esource aster



CSCI 3100 SOFTWARE ENGINEERING - GROUP 15

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1. Introduction

1.1. Project Overview

We are going to develop an open online learning system including a library, forum, and mailbox technique. It is a platform for users to find learning materials, share school exercise or exam paper source to others so as to build a friendly relationship with others.

1.2. Objective

University provides a good learning environment that students can receive enough academical supports. Students can get study materials freely and easily from their friends and the university library. However, in secondary education, we notice many students apply for tutorial beyond their school because the tutor centres provide extra materials for them. Because of that, the tuition fee is unaffordable by most of the students. These facts imply that the commodification of education is very serious in society.

To change this trend, we encourage open online learning platform to secondary students that the resources can be shared among the peers.

1.3. Highlights

1.3.1. Sharing and Trading System

Providing a platform for secondary students to share their materials is the main service of ARM. For the trading system, the fully functional system that allows using tokens to buy the resource. The uploader can get token and Buyer can get the permission to download the resource in full view. Users can rate and comment on the material that can recommend to another user, also the system can rearrange all the materials based on the rating of all the resource.

1.3.2. Material Preview

To guarantee the buyer not to be deceived, ARM provides the preview version of the resource. The preview automatically generated after the users upload the file to the platforms. The preview version only contains first few pages of the .pdf files, and contain a watermark for preventing others invalid commercial purpose and copyright infringement. It also protects the benefits of the publisher if files are priced.

1.3.3. Forum

We encourage every student can be questioner and respondent for providing a good communication environment with every user. Users can create a forum topic to ask questions or bring out some ideas, also they can leave comments to answer and help each other. For user-friendliness, We categorize questions into different subjects and order the topics by rating and activeness (the number of views).

1.3.4. Search Engine

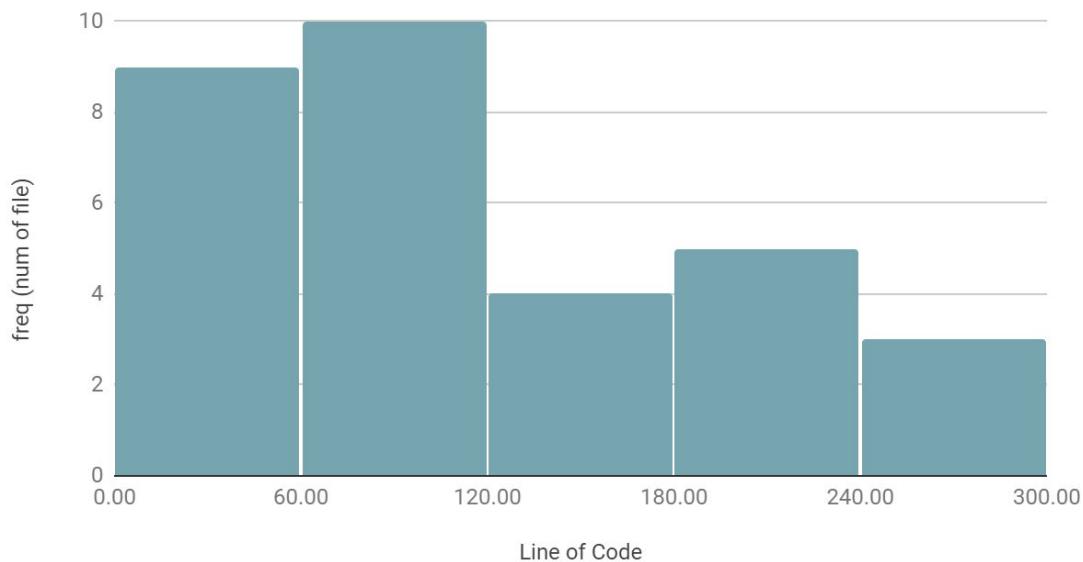
We have to make sure that the user can find what they want because it is a platform for sharing and getting the academic recourse. We provide a search feature that allows users to find the related material based on their typing words. To make the search feature more functional, We allow users to add the label tags during uploading the materials. When users type the keywords of tags, it will list all the material that contains the label. If users have no idea of the keywords that they want to search, we also provide category searching. Users can choose the subject that they want, then it lists all the related materials ordered by ratings.

1.4. Project Statistics

Our team have finished 31 php pages within 10 weeks. The table below shows the line of code and the McCabe's number of these pages. The statistics came from our self-calculation.

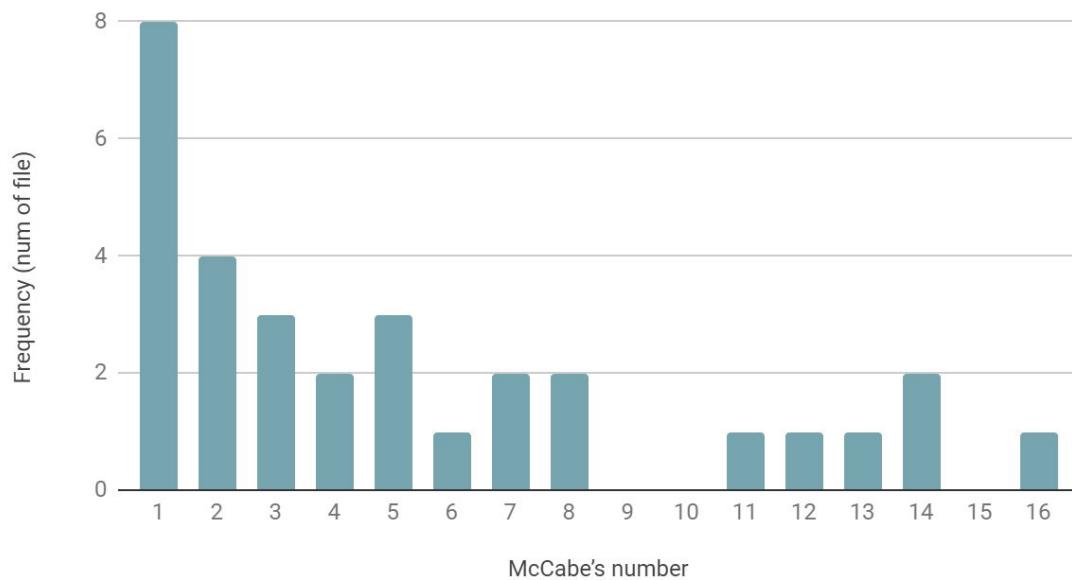
Name	LOC	McCabe's number	Name	LOC	McCabe's number
404.php	55	1	menu.php	49	2
about.php	71	1	previewGenerator.php	58	3
answer.php	60	5	question_category.php	206	11
ask_question.php	106	3	question.php	120	4
close_question.php	31	2	reference.php	73	1
comment.php	55	5	register.php	267	8
connect.php	21	1	result.php	171	14
contact.php	90	1	search_header.php	84	4
create_ueston.php	53	5	search.php	101	2
create_rating.php	36	3	update_profile.php	198	14
footer.php	60	1	upload_file.php	205	6
help.php	73	1	view_my_profile.php	179	8
index.php	236	7	view_profile.php	164	7
login.php	112	2	view_question.php	258	16
logout.php	16	1	view.php	280	13
mail.php	222	12			

LOC distribution



There are 3710 lines of code across the whole system, excluding external libraries. Majority of php files have less than 120 lines of code. On average, each file has 119.6 lines of code. As we have 5 team members, the LOC per person is 742 LOC/person.

McCabe's number distribution

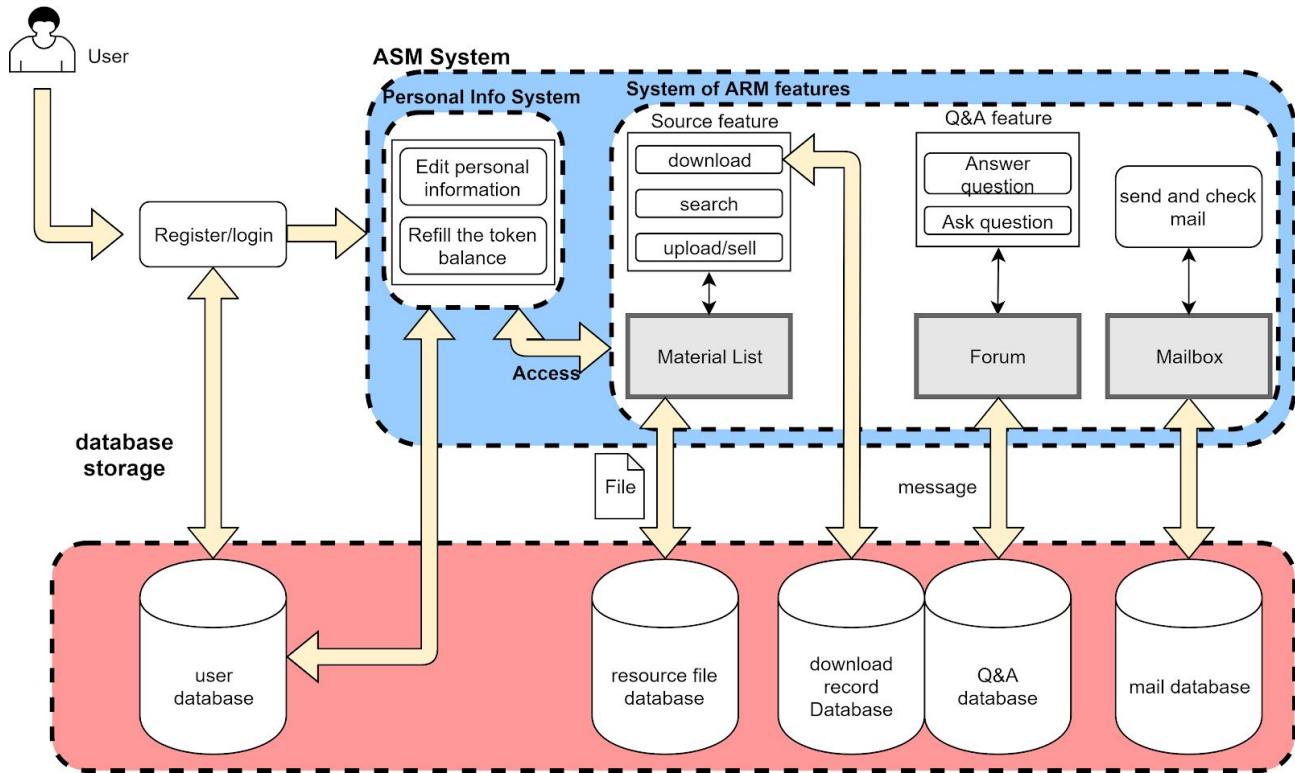


As the figure shown, the majority of php files' McCabe's number are less than 8. This shows that the system are in appropriate complexity.

2. System Architecture Design by DFD

2.1. Architecture Design

2.1.1. Architecture Diagram



2.1.2. System Components

Personal Account System	Users Information are stored into the user database and record the token of the account. The system allows users to edit their email address, Based on user sharing and downloaded priced materials, the balance of token will change.
Academic Resource System	The system that manages the database of resource files. By the user searching result, the system will show the list of related materials.
Question Discussion Forum	List of question threads collected from Q&A database, allows users to ask and answer.
Mailbox	The system allows users to send mails to others and receive the system messages.

2.2. Data Flow Diagram (DFD)

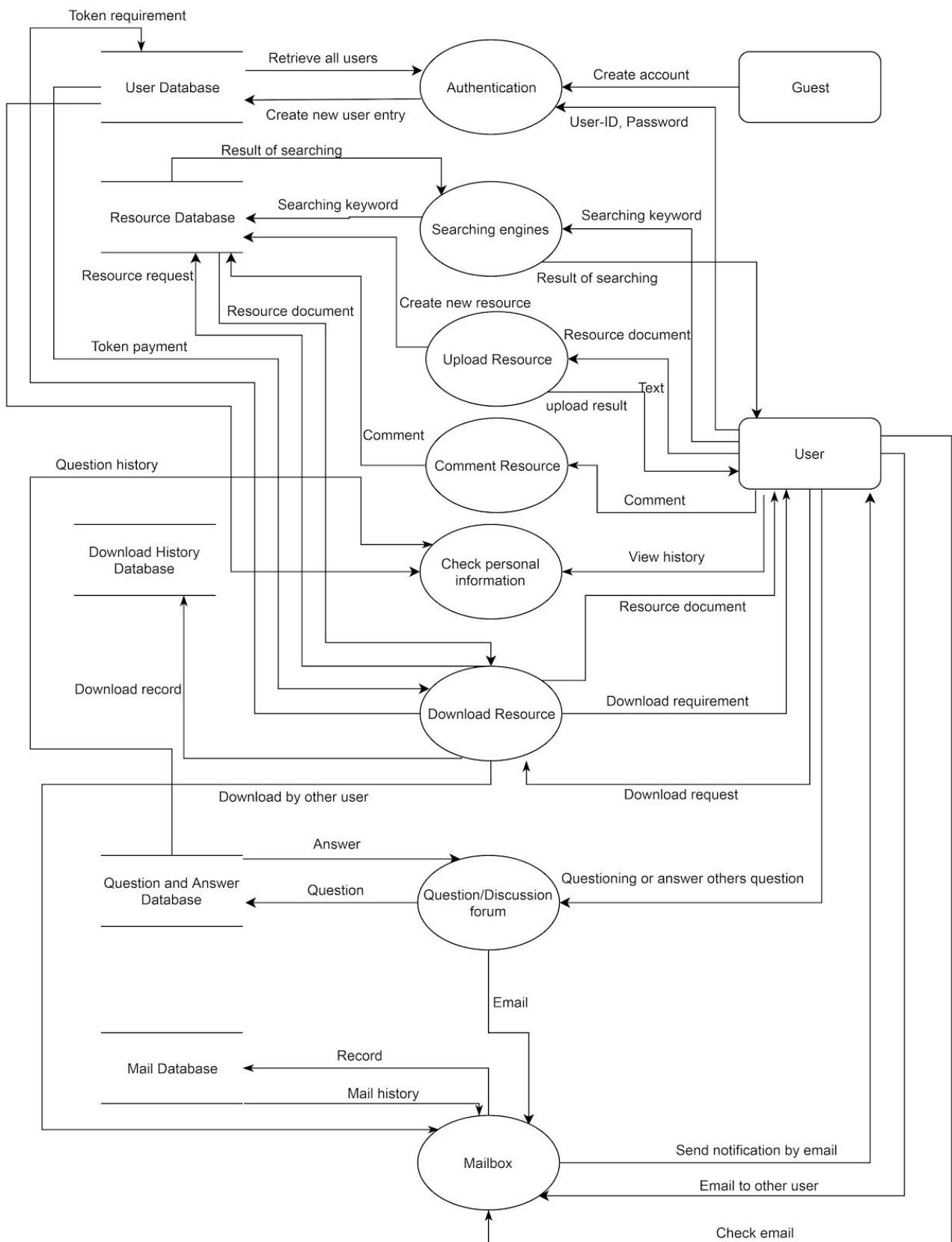
2.2.1. Database

The database of ARM is shown below.

1. User Database includes the user account, account password, user token points
2. Resource database includes the resource content(name, category, uploader, material type, the rating, comment of the source, free or purchase)
3. Download history database includes the download resource record
4. Question and Answer database includes the question (categories, reply, the rating for the reply)
5. Mail database includes the mail history with the user exchanging messages and system messages.

2.2.2 Data Flow Diagram

Data Flow Diagram of our main functions is shown below.



3. Detailed Description of Component by UML

3.1. Component-1: Personal Account System

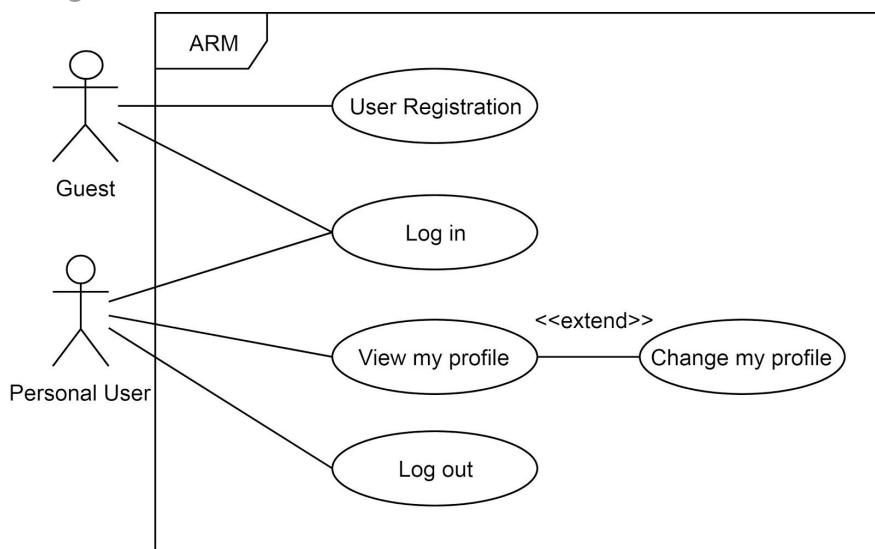
Personal Account System is a database system to provide the identity for students in server and interact with others.

3.1.1. Structural Diagram



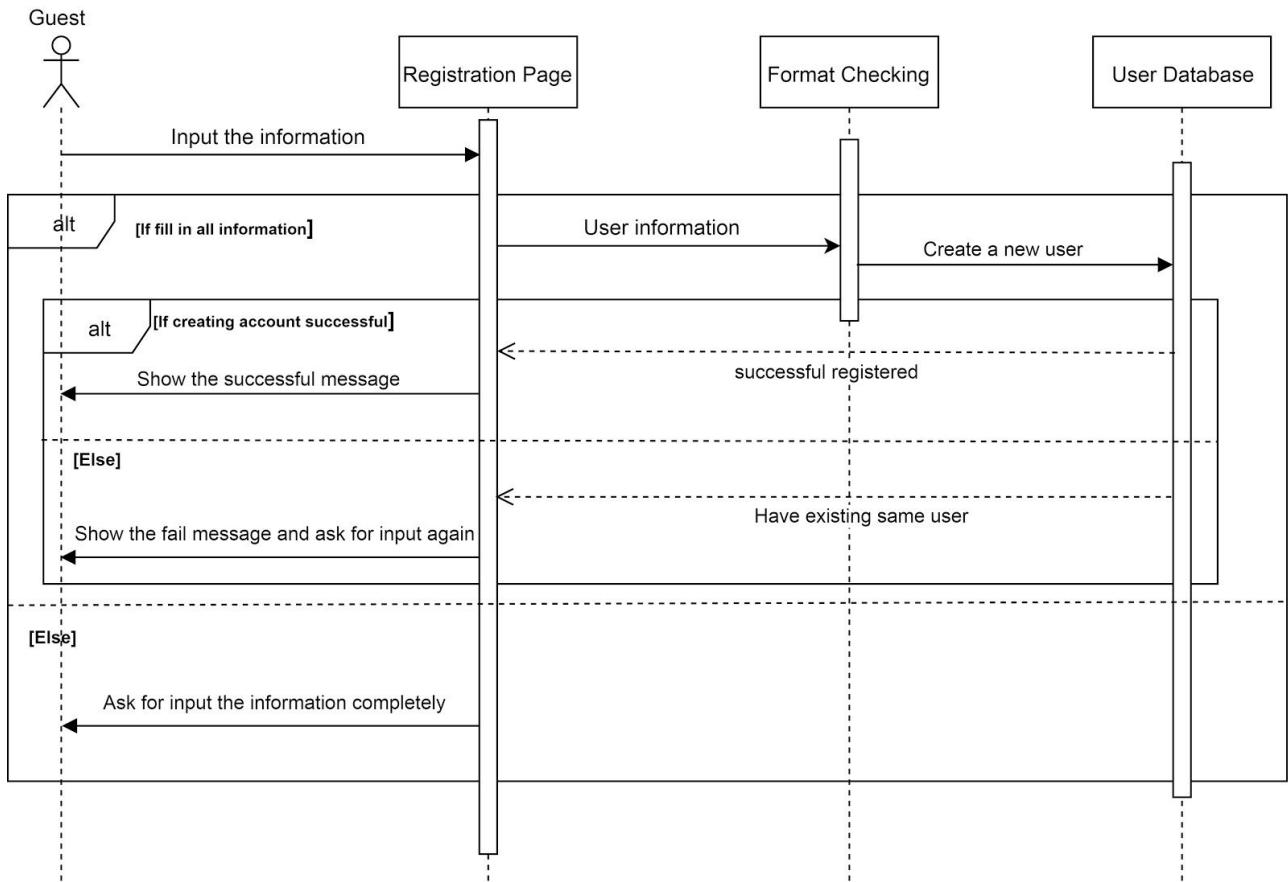
3.1.2. UMLs

3.1.2.1. Use Case Diagram

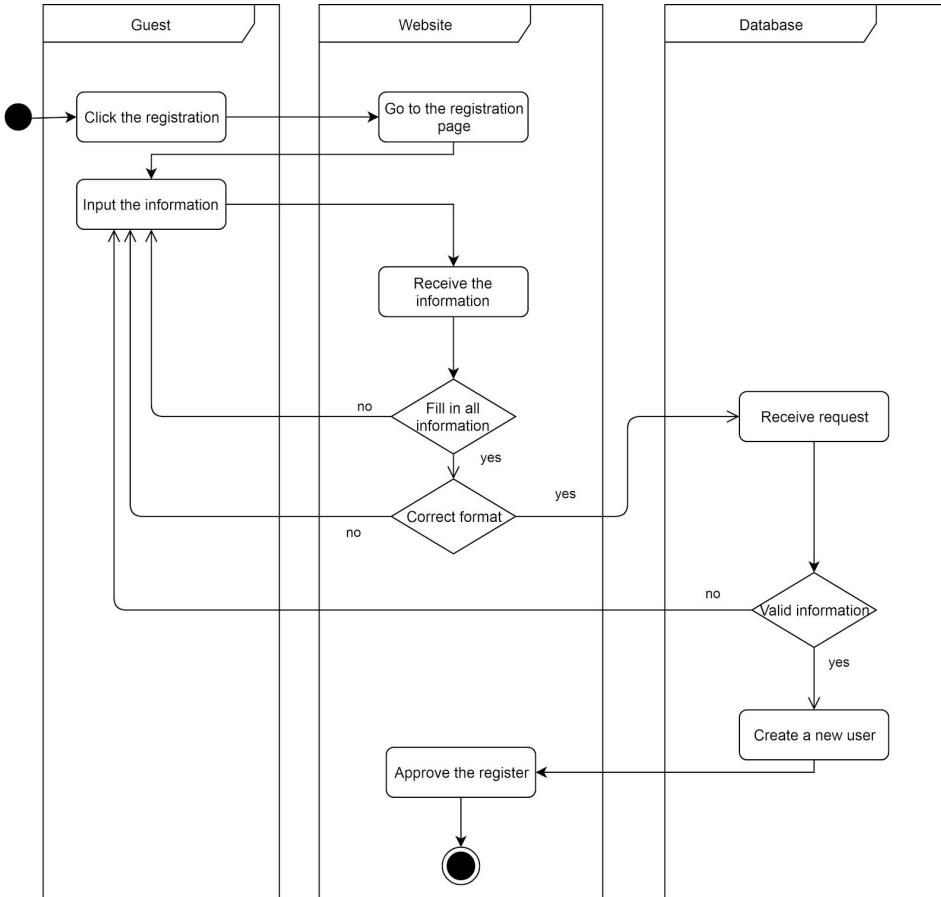


For a new coming guest, Personal Account System allows he/she can either go to log in or register. For a user, Personal Account System allows he/she to log in and view their profile. And it provided a page for user to change their personal information, such as email address, icon or personal introduction.

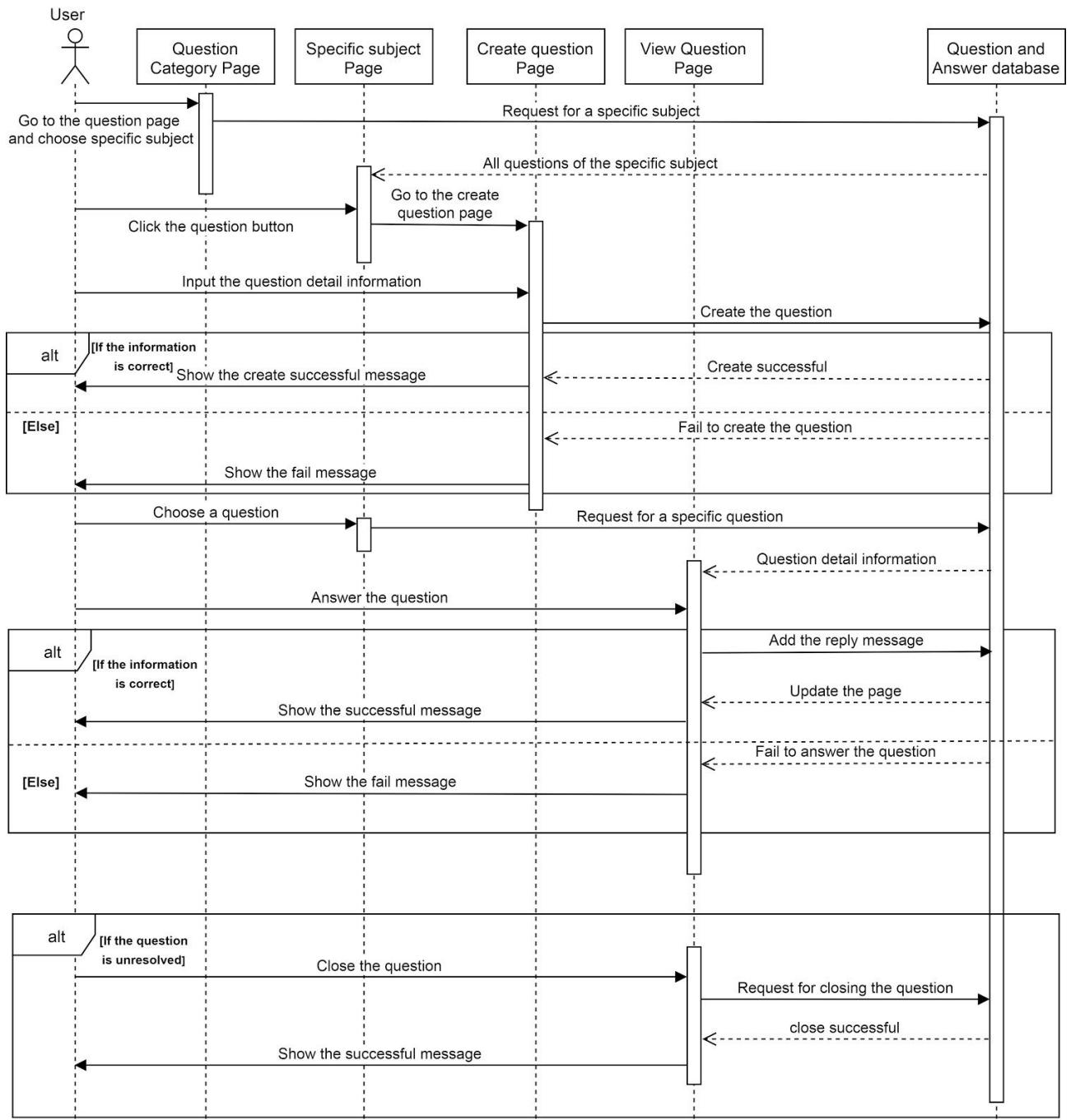
3.1.2.2. Sequence Diagram for Guest



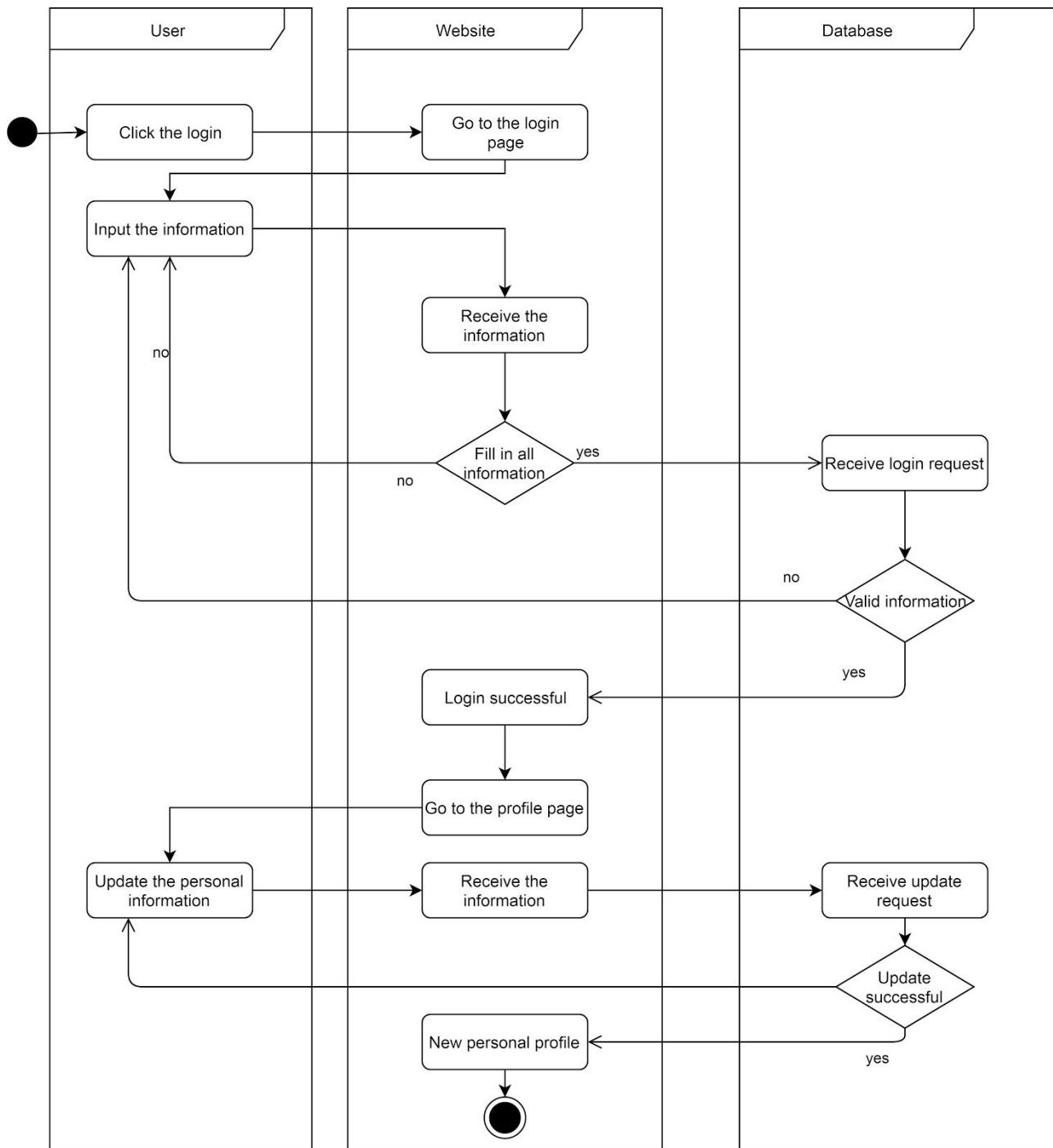
3.1.2.3. Activity Diagram for Guest



3.1.2.4. Sequence Diagram for User (log in and change personal info)



3.1.2.5. Activity Diagram for User (log in and change personal info)



3.1.3. Functionality

This component provided user authentication. It prevented guest without authentication to use some functions which need user identity. For example, uploading materials, updating personal information or commenting materials. It also provides an easier way for the system to record all payment history, uploaded history or personal information. And user can retrieve those information.

3.1.4. Procedures and Functions

This component provides front-webpages, which are guest registration, user login page, user information page.

The guest registration and user login page provided basic input checking (format, completion, and length) before passing data request to the server side. After passing the input checking, the webpages will send requests to the database, checking the availability, whether the guest input available username and checking the information correctness, whether the user login with correct pair of username and password.

And the user information page allows users to check their personal information when they need. In this page, users can find their profile with icon, username, email address, the number of tokens, and their question asking history. This page will send a request to the server side, getting those information. Moreover, this page allows users to change their profile, and it will do the data checking for user input. Then it will send the request to the server side, changing the personal information.

For the backend application part, there are lots of functions with SQL statement to retrieve data or update data from the database. And it will return the result to the front-end web pages after retrieving or updating data, whether it is successful to get or change data.

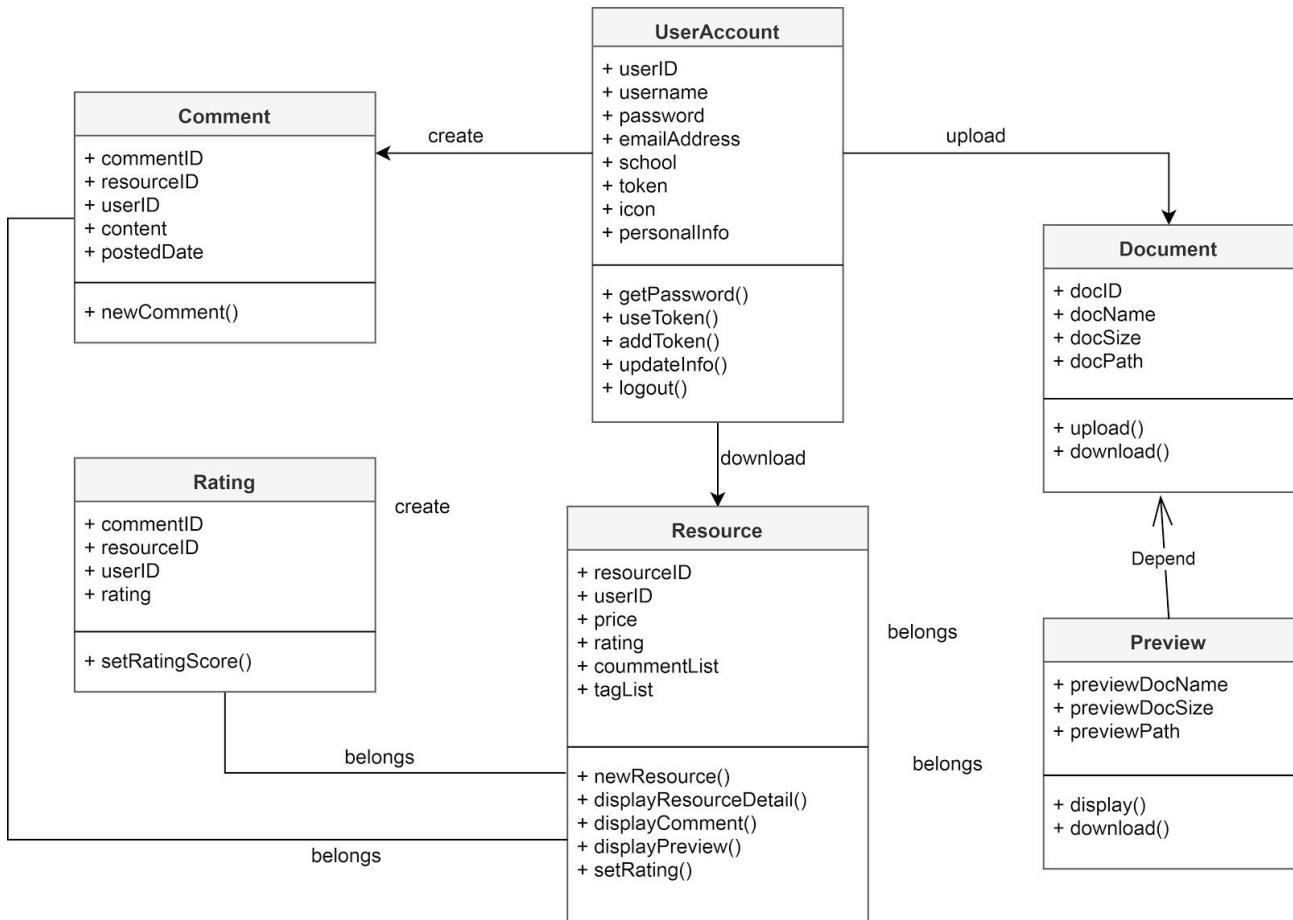
In conclusion, this system contains the following functions:

- ❖ **Account registration**, which is for the user registers account. This function will check whether the information user input is valid. If all information is in valid format, and keyfield is without duplication, create a new account related to the user information and report successful message, otherwise, request the user to input correct format information.
- ❖ **Account Login**, which gets a pack of user input which is ID and password, and checks the correctness from the account database. Log in to the server with user identity if the input is valid, otherwise request the user to input again.
- ❖ **Change personal information**, which is for user updates personal information, like email address.
- ❖ **Logout**, which stops the access permission with a logged in account.

3.2. Component-2: Academic Resource System

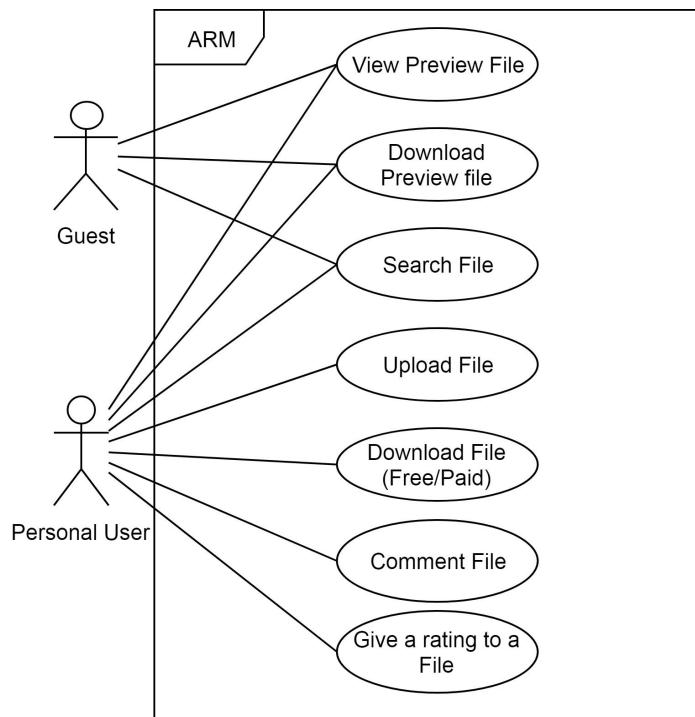
This is the system provides user to upload new academic paper into the resource database and download an existing file from the server.

3.2.1. Structural Diagram



3.2.2. UMLs

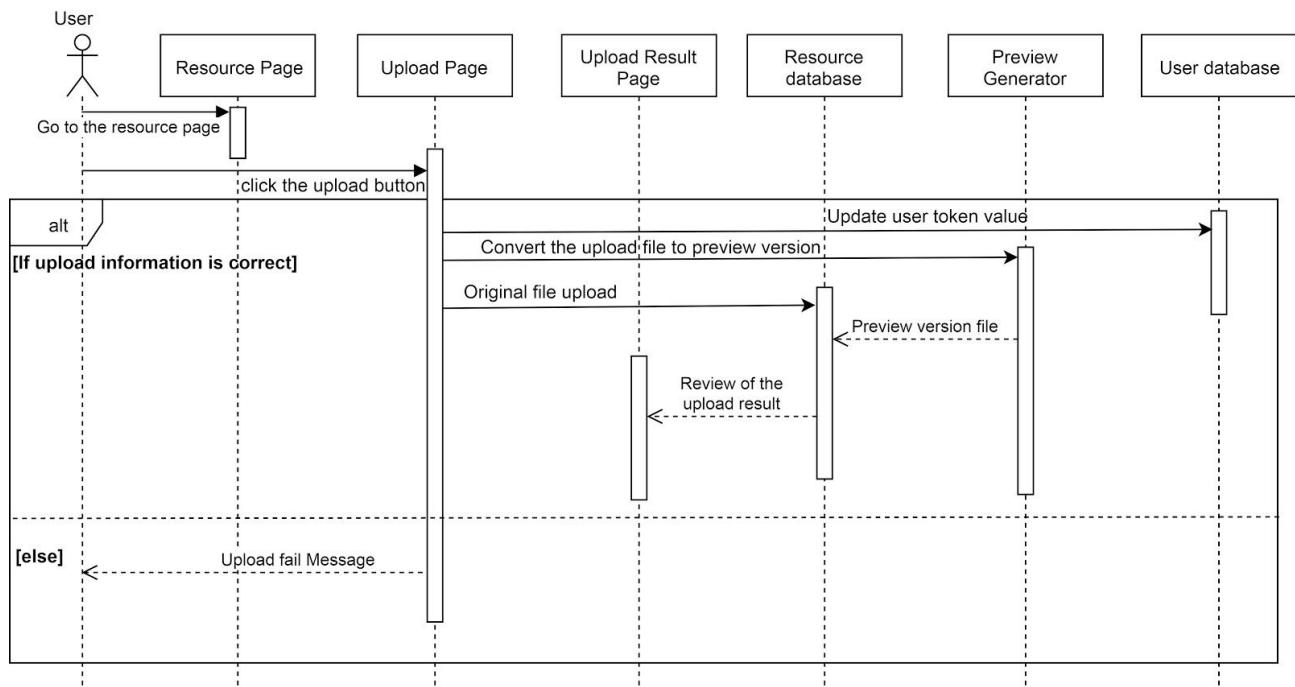
3.2.2.1. Use Case Diagram



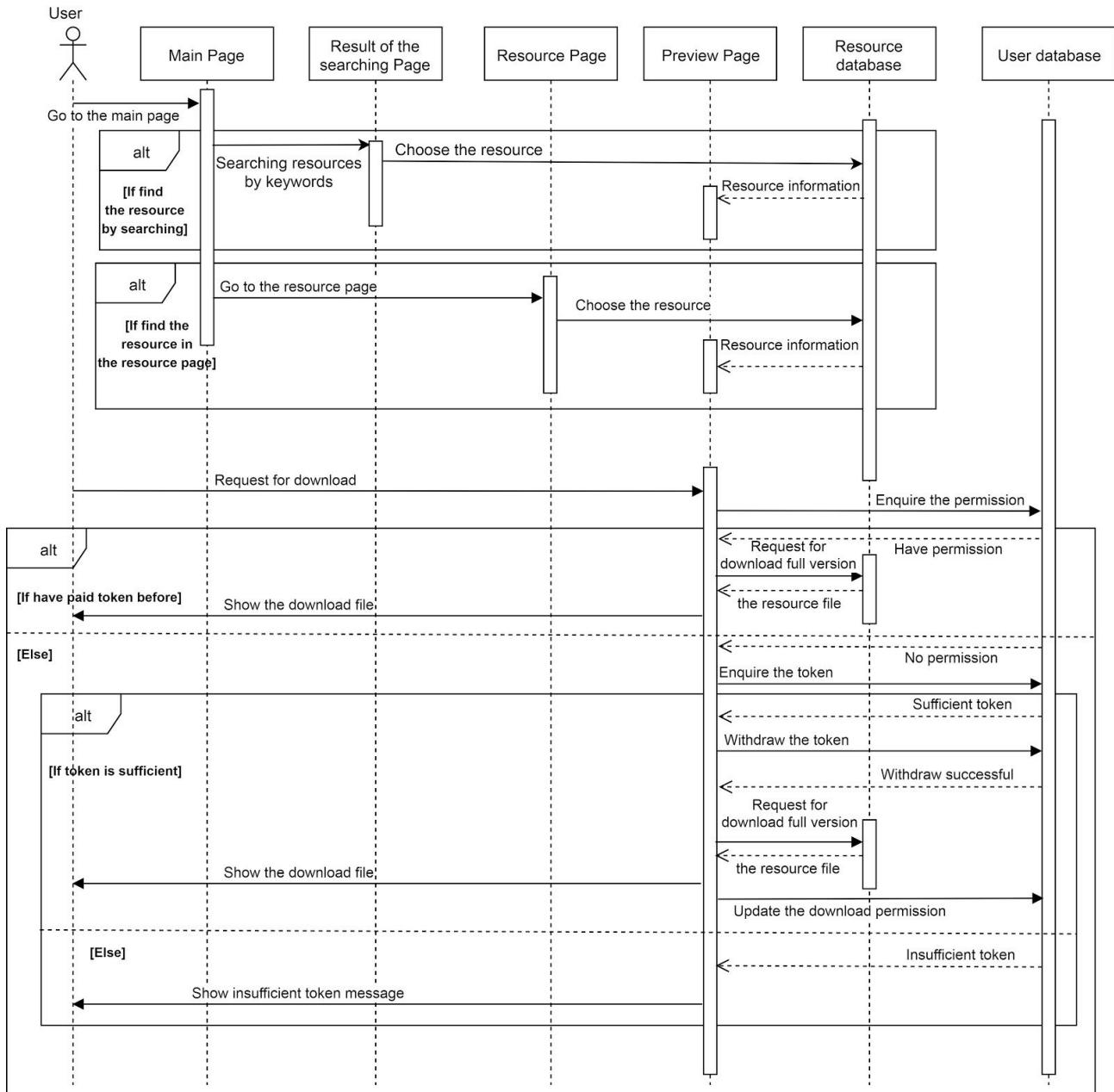
In this system, functions are limited to a guest, but guests can preview the file, download preview file or search file with tags.

And every user can upload resources, search other resources by related tags, or download different resources. Before downloading, there will be a preview of the file. Users might need to pay for some of the files by token, which they can earn by uploading files. Also, users can leave a comment or give a rating for each file.

3.2.2.2. Sequence Diagram for Uploading Resources



3.2.2.3. Sequence Diagram for Searching and Download Resources



3.2.3. Functionality

The resource system is our main provided system, which allows users to upload, download and search resource.

When a user uploads a resource, the user is required to write the resource name, type, token needed and the related tags. There will generate a preview version of the resource, which contains limited pages of the original resource with “This is a preview version.” watermark. And the uploader will get 5 tokens for uploading reward. Another user needs to make a payment with enough token if they want to download the original resource with full pages and no watermark.

For each resource, there is a comment section, which allows users to leave a comment under the resource. Also, It allows users to give a rating for the resource. Moreover, it provides a search engine for searching for resources with different tags and material types. And the searching result will be shown to the user. Different material types will be shown in a different color. It makes users easy to identify the type of resource.

3.2.4. Procedures and Functions

From the perspective of evaluating the front end procedures, We provide a preview version of the pdf file with the user to help them evaluate the file whether the material is worth it to download.

When downloading the file, the user can download the preview version and also the full version. If users download the full version of the material and it is priced, we have to check whether the user have enough token to buy the resource.

For commenting and rating, after users rate and comment on the material, the rating and other comments are visible to every user.

When uploading the file, the user needs to fill all the information of the source to insert a new file into the database.

With the back end procedure, every function needs to access the content of related databases. For example, after downloading the priced file, the system will insert a new record into the database. Therefore all function require a SQL statement to access the record to perform the tasks.

Behind the webpage, when users upload the file, it will automatically generate a preview version. There is a treatment of previewing the files such as watermarking and page cropping.

In conclusion, this system contains the following functions:

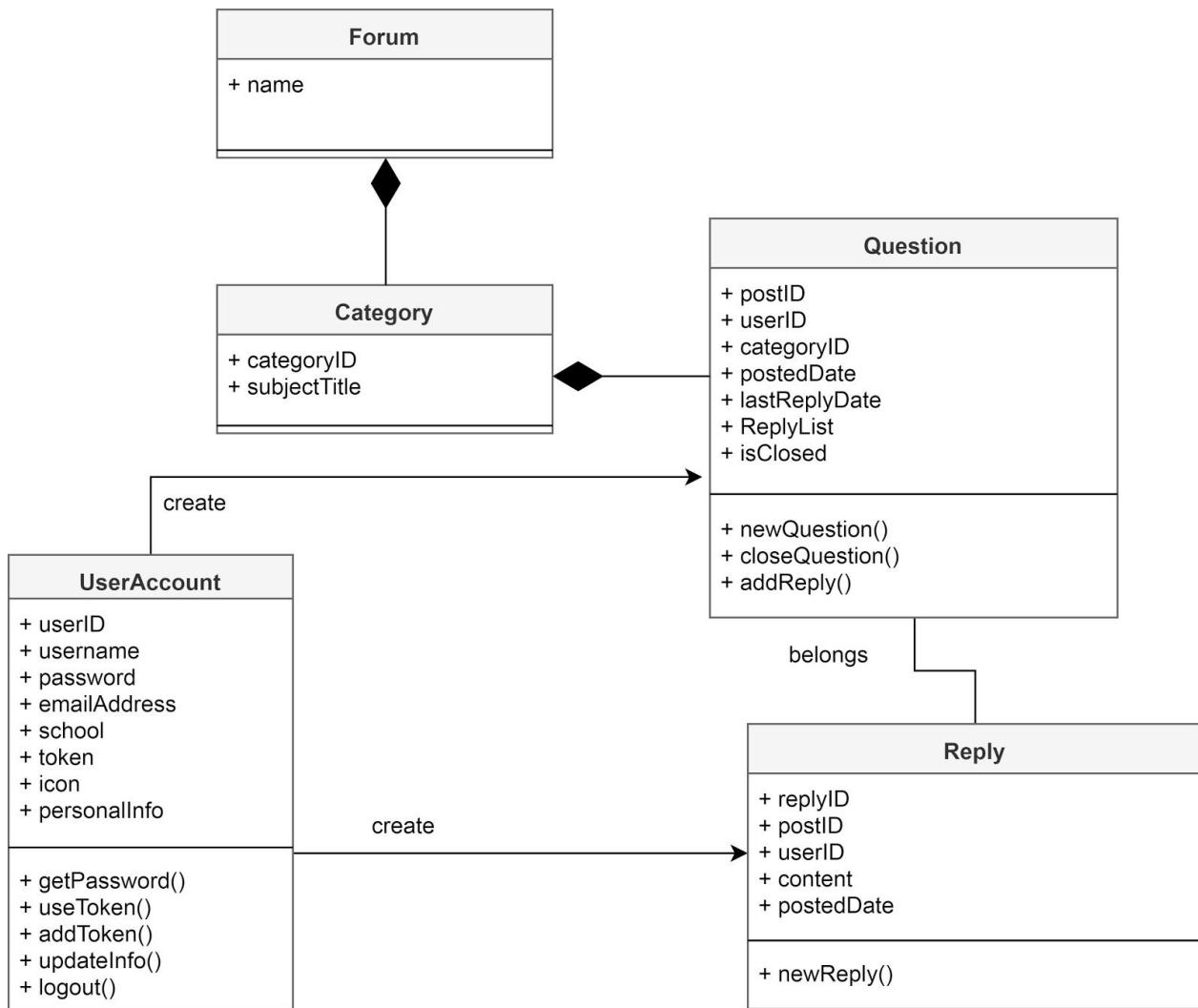
- ❖ **Upload File**, which receives the file input from the user and checks if the type of the file in a proper format. Reject all the improper file and display an error message to the user. For proper format, request the user to categorize the file and upload it with the marking of the user ID and other information into the database.

- ❖ **Search File by tags**, which is a search function receive file tags input and search all matching file.
- ❖ **Preview File**, which displays a part of the file for the user for a preview on the web page before they pay and download the full version of the file.
- ❖ **Download File**, which extracts the selected file from the server and downloads to the machine of the user.
- ❖ **Comment**, which provides user input comment on the file. The comment would be saved and categorized to the file.
- ❖ **Rating**, which provides user gives a rating to the file.

3.3. Component-3: Question Discussion Forum

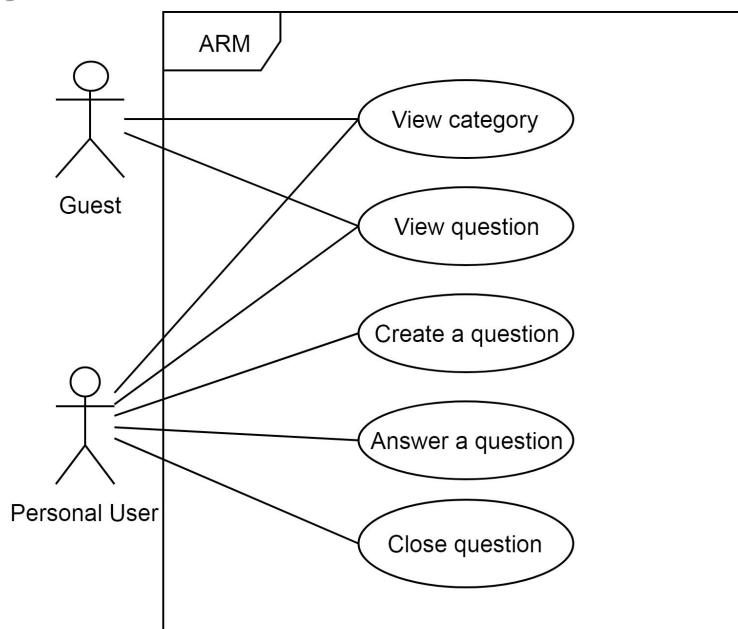
This is a forum like a system for the user to discuss an academic topic, homework, and any and questions. The user could ask a new question, reply to the existing question and grade an answer.

3.3.1. Structural Diagram



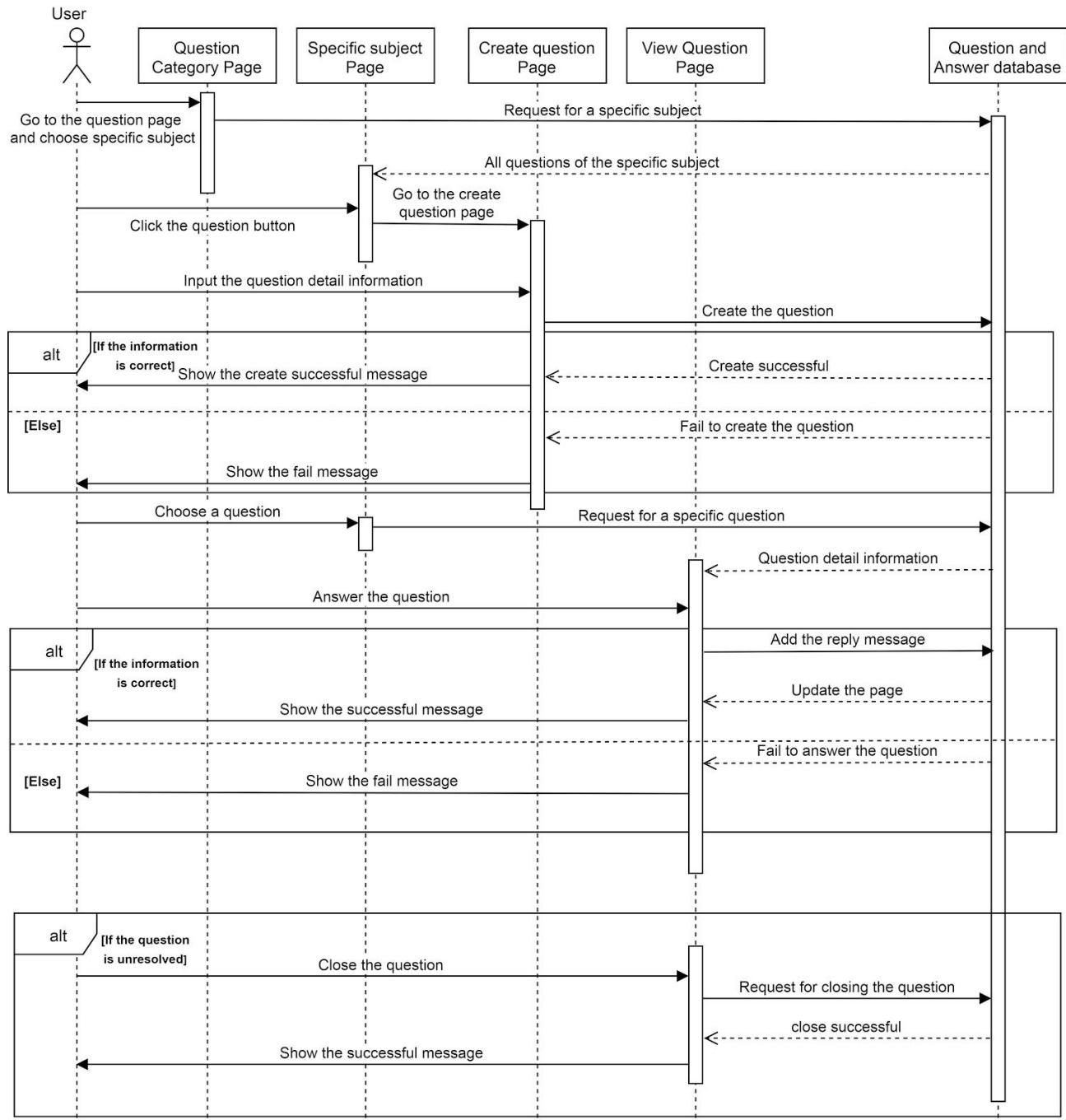
3.3.2. UMLs

3.3.2.1. Use Case Diagram



In this system, functions are limited to a guest, but guests can view a category or view a question. A user can view too, and a user is allowed to create a question or answer a question or close the question if the user is the question creator.

3.3.2.2. Sequence Diagram for Creating a Question and an answer



3.3.3. Functionality

The forum component provides a platform for the user to asking questions or answering questions from other users. It contains view category, view question, creates a question, answers a question, and close question those functions. Everyone (guest and user) can view category, view question. And a user can create a question in the related subject category, and wait for other users answering. Only users are allowed to ask a question or answer a question. If the question creator is satisfied with the answer from other users, he/she can decide to close the topic, which means the question will be closed and everyone can't answer or comment it.

Also, there are some marking for each question. For example, whether it is solved, or whether it is a hot question with a very high view number.

3.3.4. Procedures and Functions

For the front-end part, the system provided view forum, view category, view question and create a question these 4 pages. And the system will display limited functions to guests during an entry.

In view forum, category and question, guests and users are allowed to click inside, viewing the content. When they enter these pages, the server will receive the searching request, and return the required result.

Moreover, a user is allowed to create a question with the create question page. The user is required to fill in the title and contents in the page. Then the whole data set will be sent to the database, and the server will return the success or failure messages. In a question page, a user is allowed to leave an answer of it, and the answer will also be saved into the database. The question creator is allowed to close the question, while other users can't. When a question is closed, the database will mark it.

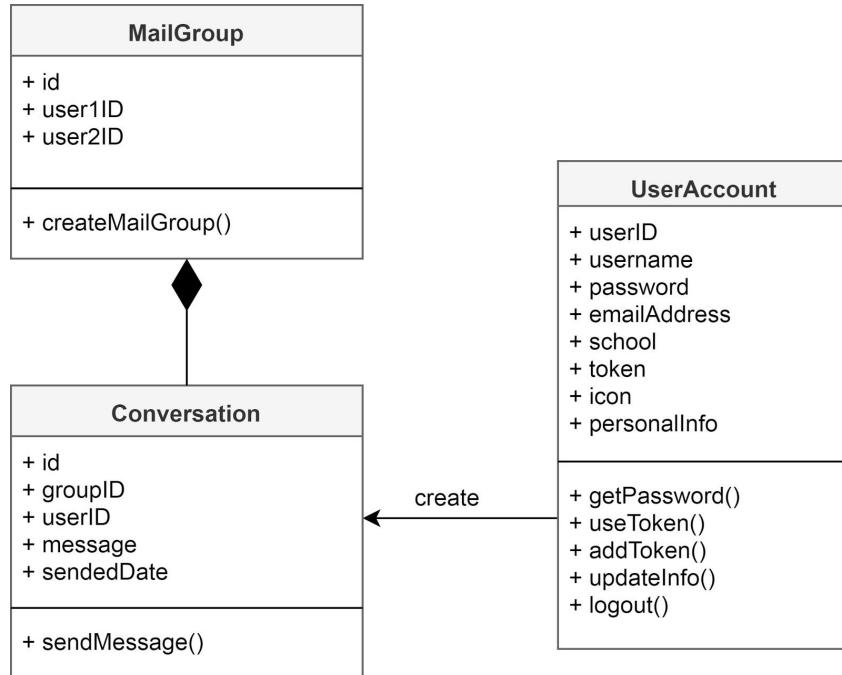
In conclusion, this system contains the following functions:

- ❖ **Create Question**, which is for creating a new question object and save user question related to the chosen categories into the question-answer database.
- ❖ **Search By Question Categories**, which is a search function receive question categories selection input and return all matching question.
- ❖ **Create Answer**, which is for creating a new reply due to a specific question and save into the question-answer database.
- ❖ **Close Question**, which allows user to close the question, which means it will not be able to answer later.

3.4. Component-4: Mailbox

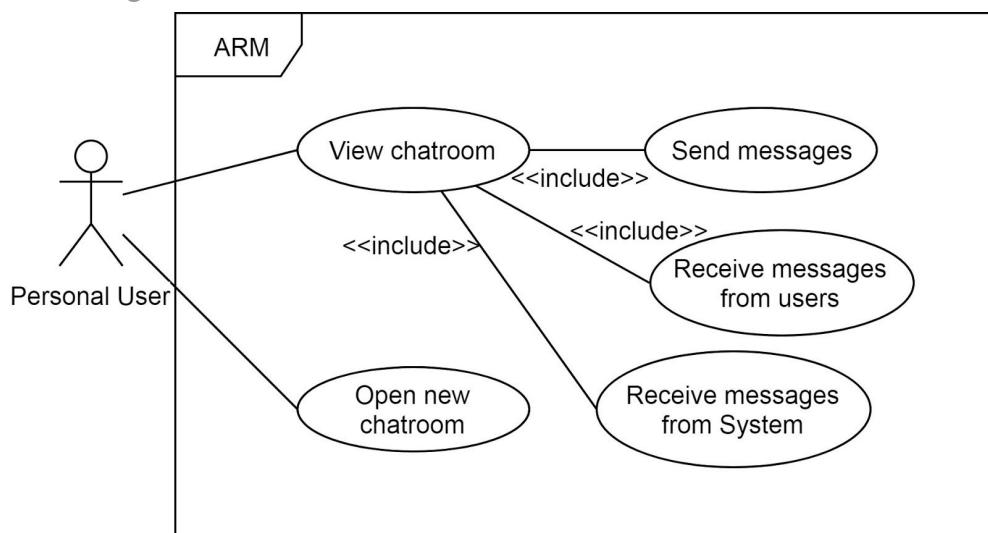
Mail System is a private message system allows the user to exchange messages and retrieve system messages.

3.4.1. Structural Diagram



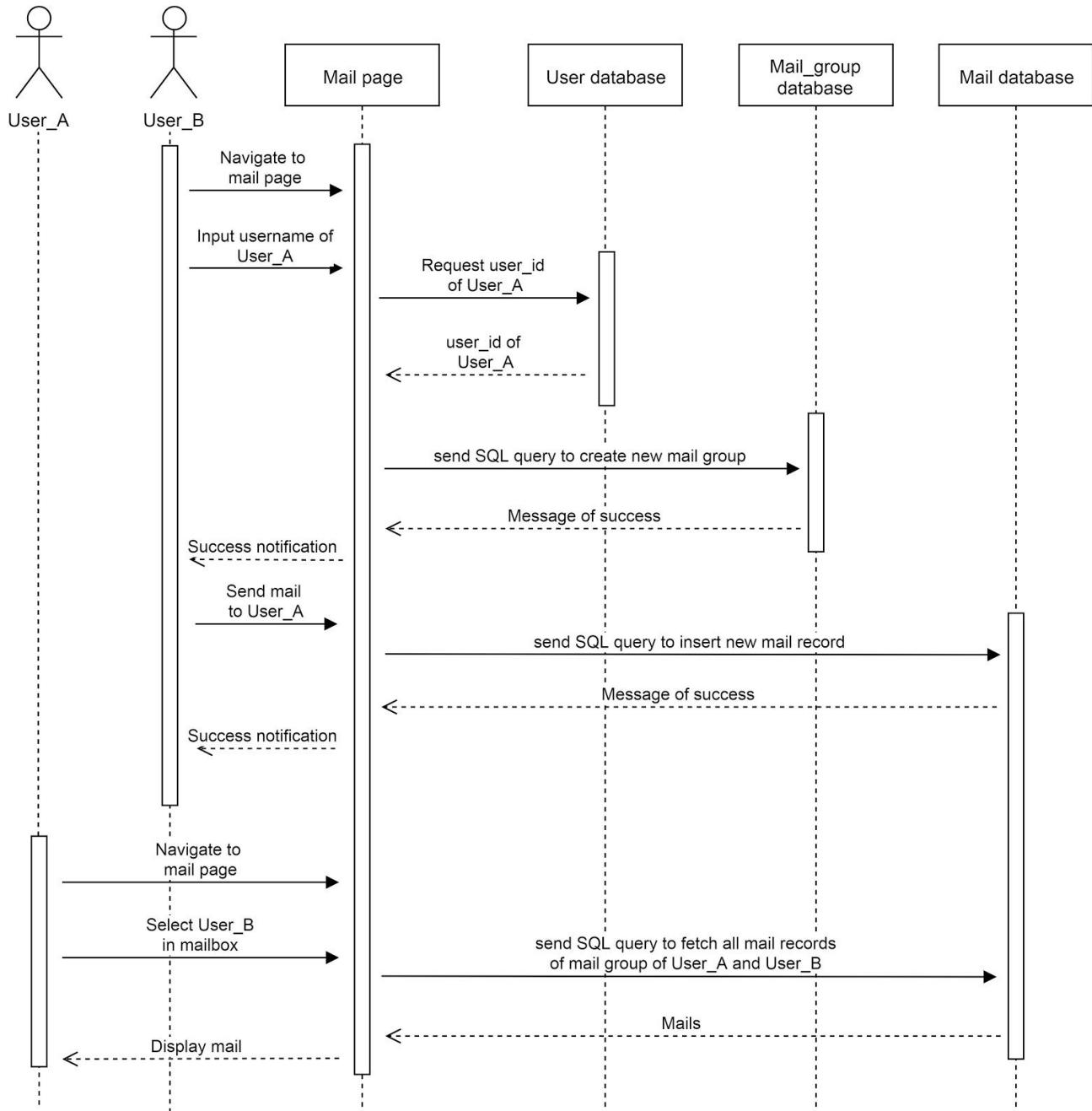
3.4.2. UMLs

3.4.2.1. Use Case Diagram

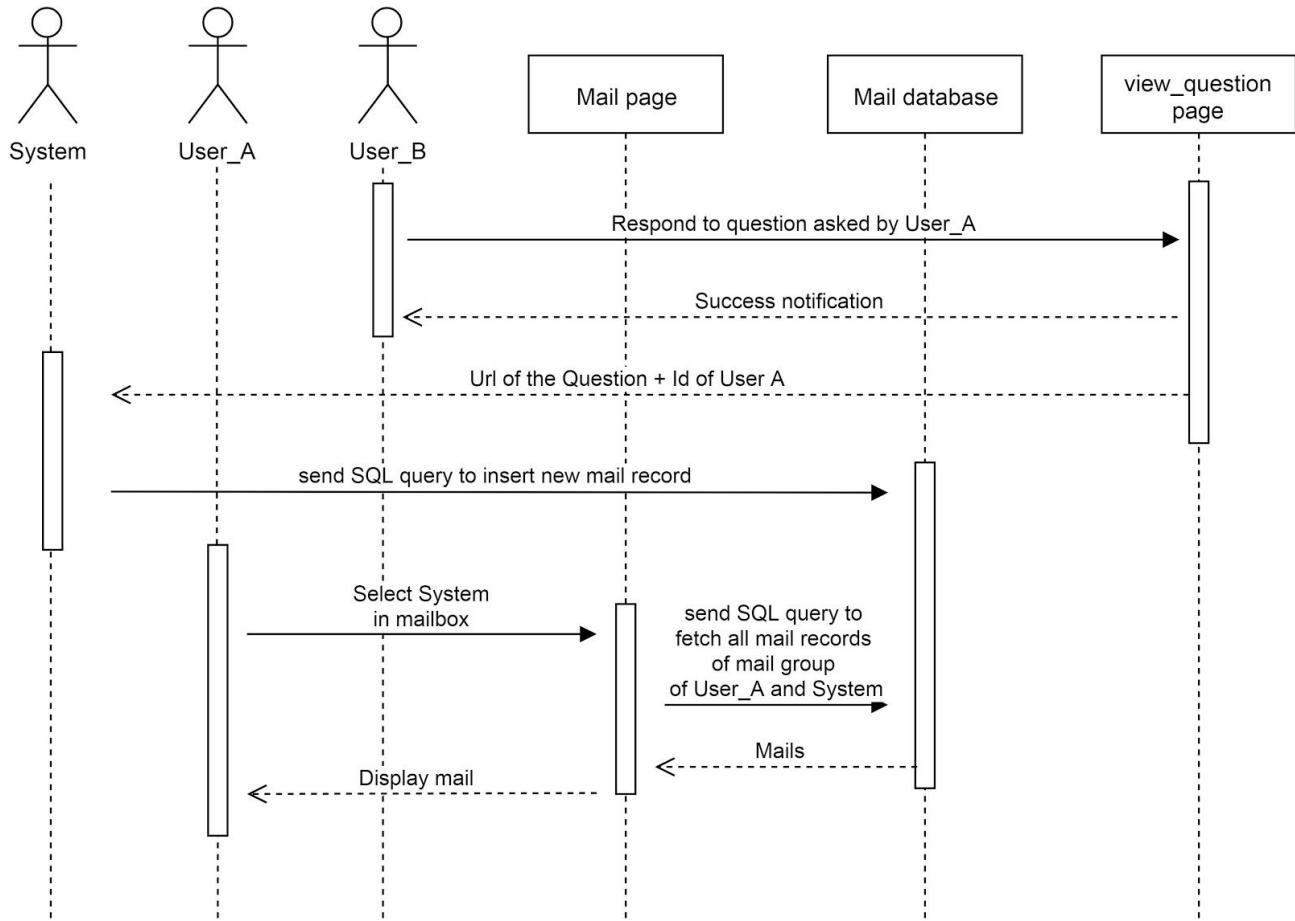


Mailbox is only for users. Users can view their chatroom, which allows them to send messages, receive messages from users, or receive system messages. And they are allowed to open a new chatroom by entering a user's username.

3.4.2.2. Sequence Diagram for Sending message



3.4.2.3. Sequence Diagram for System message



3.4.3. Functionality

The mailbox allows a user to send a private message to other users. Also, users can retrieve system messages through the mailbox. When someone answers a question, the question creator will retrieve a system message, which is “Someone has replied your question. Click here to check.” with a link of the question. A user is allowed to check all messages in the same place conveniently.

3.4.4. Procedures and Functions

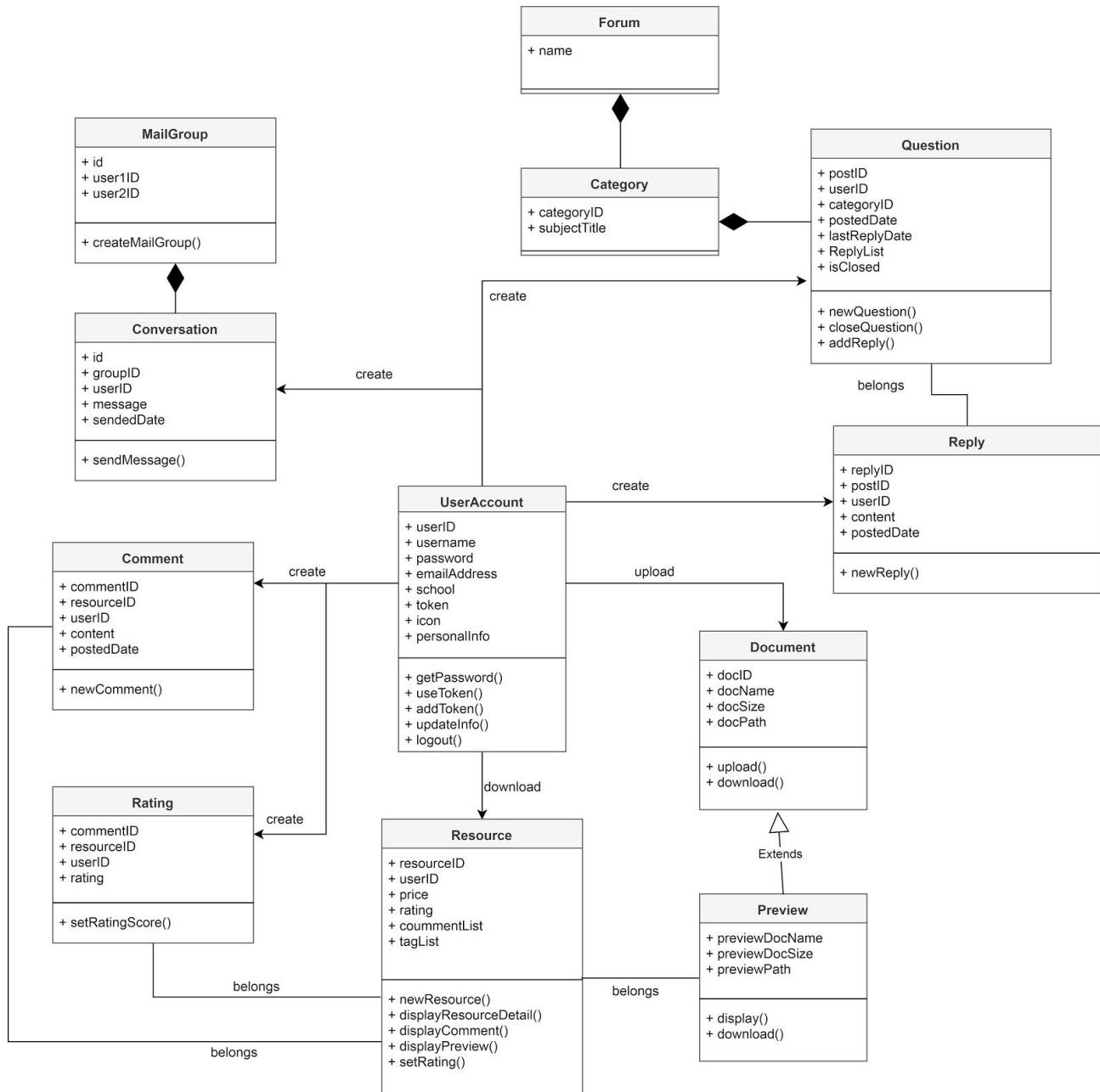
Users can check their mailbox in the mailbox page. If they want to send a private message to another user, they need to add the user into their mailbox first. The system will check whether the user existed after a user is added into a mailbox. If a user sends a private message to another user, the data will be sent to the database and recorded.

In the mailbox page, users are allowed to select the name, to check the messages came from other user or system.

In conclusion, this system contains the following functions:

- ❖ **Send Mail**, which reads user ID(s) and message content as user input and records the message content into the mail database refer to the user ID.
- ❖ **Retrieve Mail**, which reads a user ID, access into the mail database and returns the content inside refer to the user ID.

3.5. Overall Class Diagram



4. User Interface Design

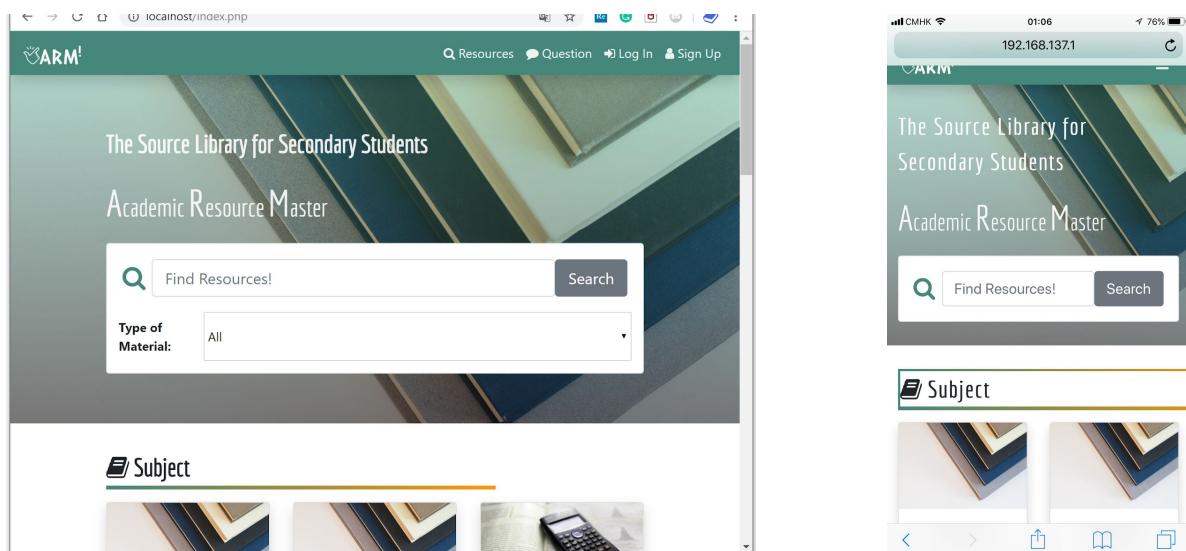
4.1. Description of the User Interface

4.1.1. Interaction style

The User Interface of ARM should be easily controlled by the user. Therefore, we implement the interaction style of ARM by using form-filling and menu selection. Menu selection style can satisfy the novice and intermittent users, we mainly use the iconic menus to provide the selection with users instead of text menus since users can quickly know the meaning or metaphor of the element of selection lists. Form-filling style can accurately and efficiently receive the input from the user. For example, we implement it in the account registration and uploading file parts.

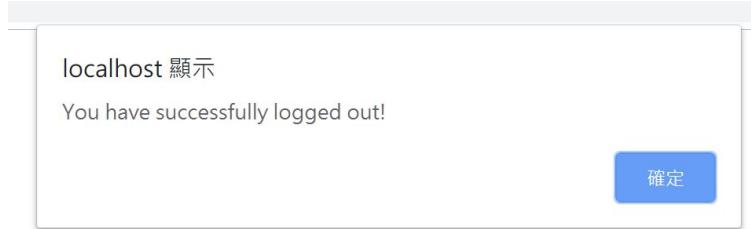
4.1.2. Golden rules of UI Design

First, designing UI should strive for consistency that the color, layout, and style should be consistent. In our design, we adopt dark cyan as the main color of all the page. we import the bootstrap library in our page design to make a good alignment style in our website pages.



Second, designing UI should contain universal usability. We notice that the user may use ARM in different devices such as computer and smartphone. We import the Bootstrap library that can align the layout of the website in different devices. By transforming the UI format, we make sure that every user can use our website in different places.

Third, the Application should give information feedback to users. For every action of users, the UI should provide feedback. For example, it will pop-up an alert window to show users have already signed out if they click the logout button.



When user register for creating a new account and enter the password of the account, it gives the information feedback that instructs the rule of the password.

Password *

Please enter your Password

Must contain at least one number and one uppercase and lowercase letter, and at least 8 or more characters

Fourth, the Application should prevent an error that users may make. The main mistake that users make is typing mistakes. For example, when creating an account, the user may type the password wrong. They will fail in login because of the mistake of the password. To prevent that, we add an input bar of confirming password.

Password *

Please enter your Password

Confirm Password *

Confirm your Password

Choose your school *

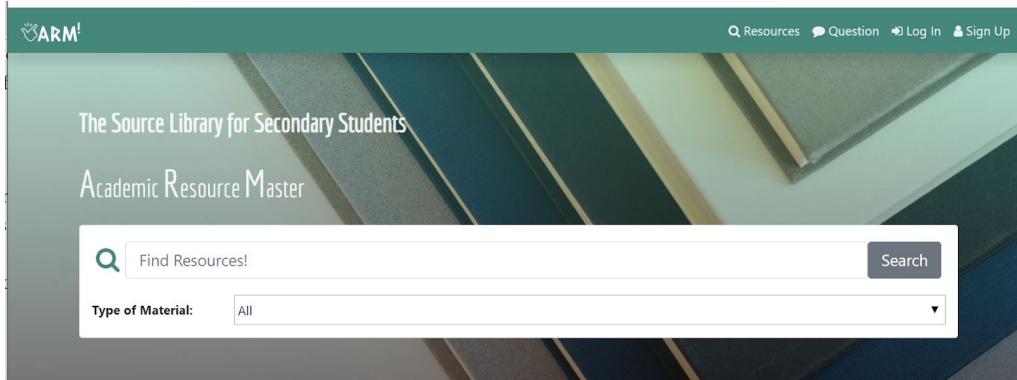
Please enter your school's name

By creating an account you agree to our
[Terms & Privacy](#).

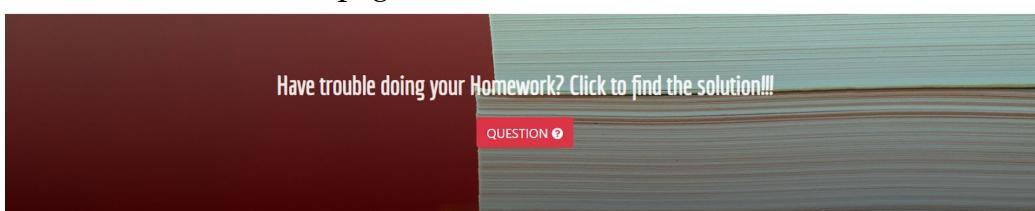
4.2 Screen Images

4.2.1. Homepage

The top of the homepage:



The bottom of the homepage:



Q What other people ask

Latest question	Category	Hot question	Category
[Solved]This is a testing question		[Unsolved]HELP!, how to speak Help in Chinese??	
[Unsolved]This is a testing question		[Solved]This is a testing question	
[Unsolved]This is a testing question		[Unsolved]This is a testing question	
[Unsolved]HELP!, how to speak 3100 in Chinese??		[Unsolved]This is a testing question	
[Solved]QAQ		[Unsolved]HELP!, how to speak 3100 in Chinese??	

ABOUT US

HELP

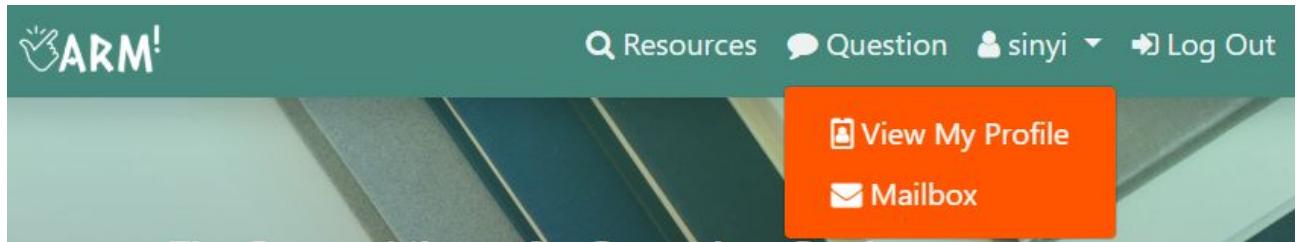
CONTACT

REFERENCE

4.2.2. Menu Bar (Without Login)



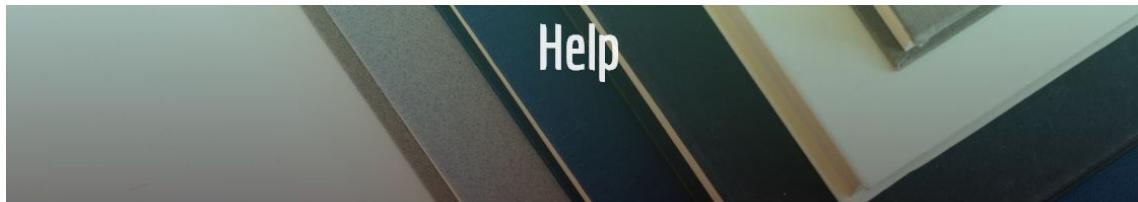
4.2.3. Menu Bar (Login)



4.2.4. About Us

A screenshot of the 'About Us' page. The top navigation bar is identical to the previous screenshots. The main content features a large image of a book with the text 'About us' overlaid. Below the image is the 'ARM!' logo. To the right of the logo is a paragraph about the group and their members. At the bottom are links for 'ABOUT US', 'HELP', 'CONTACT', and 'REFERENCE'. A footer bar at the very bottom contains the copyright notice '© 2019 Project: CSCI3100-Software Engineering'.

4.2.5. Help



We are the CSCI3100 project team 15. This is an online learning platform. You can find those learning materials, exercise or exam paper.



Our group member:
Wong Sin Yi(1155110677)
Cheung Kam Ho(1155092634)
Cheung Chi Hang Calvin(1155110302)
Cheung Tsz Ho(1155102444)
Yuen Ching Yin(1155110657)

[ABOUT US](#) [HELP](#) [CONTACT](#) [REFERENCE](#)

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4.2.6. Reference



[Bootstrap 4](#)
[W3School](#)
[TCPDF](#)
[jQuery](#)
[PHP image magician](#)
[Basic Forum Tutorial](#)
[Search bar Tutorial](#)
[Footer Tutorial](#)

[ABOUT US](#) [HELP](#) [CONTACT](#) [REFERENCE](#)

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4.3. Object and Action

4.3.1. Homepage of ARM

The homepage shows the main functions of ARM: Searching the materials(Resources), Forum(Question). For finding resources, ARM allows the user to search them by typing keywords or selecting the categories.

In the Bottom of the homepage shows the topic of the forum. Users can click the “question” button to ask a question and view other questions.

The screenshot shows the homepage of the Academic Resource Master (ARM) website. At the top, there is a navigation bar with the ARM logo, a search icon, and links for Resources, Question, Log In, and Sign Up. Below the navigation bar, the page features a large banner with the text "The Source Library for Secondary Students" and "Academic Resource Master". Overlaid on the banner is a search bar with a magnifying glass icon and the placeholder text "Find Resources!". To the right of the search bar is a "Search" button. Below the search bar, there is a dropdown menu labeled "Type of Material:" with "All" selected. The main content area is titled "Subject" and contains four cards, each representing a subject: Chinese, English, Mathematics, and Mathematics. Each card includes a thumbnail image of books or study materials, the subject name, and a "Learn more..." button.

4.3.2. Registration

To create an account, users only select the identity, then fill the email address, username, password, and school.

The screenshot shows the ARM website's registration page. On the left, there is a 'Welcome back!' section with a 'Register now for FREE' button and a list of benefits: 'Get the latest resources', 'Ask question about your academic', and 'Share your paper'. On the right, the 'Sign Up' form is displayed. It includes a heading 'Join ARM with over 10000 students!', a sub-instruction 'Create a free account and start now.', and a radio button selection for 'I am current a' (Student is selected). The form fields require input for 'Email Address *', 'Username *', 'Password *', 'Confirm Password *', and 'Choose your school *'. A note at the bottom states 'By creating an account you agree to our Terms & Privacy.' A green 'Register' button is at the bottom right.

4.3.3. Login

Fill in the username and password.

The screenshot shows the ARM website's login page. On the left, there is a 'Welcome back!' section with a 'Register now for FREE' button and a list of benefits: 'Get the latest resources', 'Ask question about your academic', and 'Share your paper'. Below this is a red button labeled '(R) Register Now!'. On the right, the 'User Log In' form is displayed. It has fields for 'USERNAME' (with placeholder 'sinyi') and 'PASSWORD' (with placeholder '.....'). At the bottom of the form are 'Submit' and 'Forgot Password' buttons. Below the form, there are navigation links for 'ABOUT US', 'HELP', 'CONTACT', and 'REFERENCE'. The footer contains the copyright notice '© 2019 Project: CSCI3100-Software Engineering'.

4.3.4. Profile

It is the personal information of the user account. It shows the token the user has and the history of question thread that the user created. Also, User can change their profile such as icon, email address. Tokens can be refilled as well.

The screenshot shows the user profile page for 'sinyi'. At the top, there is a navigation bar with links for 'Resources', 'Question', 'sinyi', and 'Log Out'. A large button labeled 'View My Profile' is prominently displayed. Below the navigation bar, a welcome message 'Welcome Back, sinyi' is shown, followed by a placeholder for a profile picture with the text 'Click to change Icon' and a sample image of a blue and green abstract pattern. To the right, there are three input fields: 'Username : sinyi', 'Email Address : sinyi@angry.com' with a pencil icon, and 'Tokens : 9969 +' with a plus sign icon. Below these fields is a section titled 'Personal Information : I am presenting' with a pencil icon. The main content area is titled 'My Questions' and lists three entries: '[Unsolved]HELP!, how to speak Help in Chinese??' posted on 2019-04-12, '[Unsolved]This is a testing question' posted on 2019-04-12, and '[Solved]This is a testing question' posted on 2019-04-12.

4.3.5. Forum

User clicks the “Question” button at the top of the homepage. Then it lists the thread of the forum that grouped by subject. Users can select the subject(Chinese, English, Mathematics) that they want.

The screenshot shows the forum's main page. At the top, there is a navigation bar with the logo "ARM!", search, user profile, and log out options. Below the header, a banner says "Find a solution or Ask a question HERE!!!". The main content area is titled "Subject" and displays three categories:

Subject	Description	Latest post
Chinese language Discussion related to Chinese language		This is a testing question 2019-04-12 by sinyi
English language Discussion related to English language		no post here
Mathematics Discussion related to Mathematics(core)		no post here

At the bottom, there are links for "ABOUT US", "HELP", "CONTACT", and "REFERENCE".

The screenshot shows the "Chinese language" forum thread. The title "Chinese language" is displayed above the posts. A red button labeled "ASK A QUESTION ?" is visible. The thread contains three posts:

- [Solved] This is a testing question
Ask by sinyi | Last post at 2019-04-12
View 5 | Reply 0
- [Unsolved] This is a testing question
Ask by sinyi | Last post at 2019-04-12
View 4 | Reply 0
- [Unsolved] This is a testing question
Ask by hihi | Last post at 2019-04-12
View 4 | Reply 1

In the question page, users can see others' comment. They can also reply to the question.

The screenshot shows a question page with a header "This is a testing question". On the left, there's a user profile for "User sinyi" with a green and blue pixelated icon. The main content area shows a comment #1 from "sinyi" posted on 2019-04-12 at 20:23:12. The comment text is "HI". Below the comment, there's a text input field labeled "Reply Content :" and a "Reply" button.

4.3.6. Mail Box

User can privately chat with other users.

The screenshot shows the "Your Mail Box" interface. At the top, there's a search bar with the placeholder "Type something" and a red "ASK A QUESTION!" button. The main area lists messages:

- A message from "sinyi:" with the text "HI;) Free rider". It includes a "Confirm" button and a note: "You are chatting with s1155110302 Please refresh manually for receiving new!"
- A message from "calvin0630" with the text "Respond to me".
- A message from "s1155110302" with the text "Sorry for being late!".

At the bottom, there's a message input field with "Bye" typed in, and a "送出" (Send) button.

4.3.7. Materials Searching

Users can type the keywords for searching. Also, they can select the type of material. Also, users can choose the subject to all related materials.

The Source Library for Secondary Students
Academic Resource Master

Type of Material: Exercise Pastpaper Notes Reading Textbook

I want to upload files

Find Resources!

Type of Material:

You searched for *Math*

6 results found !

Exercise Math Ex 1.2 5	Notes ENGG2440L1 5	Exercise ENGG2440L2 5	Reading ENGG2440L3 5	Textbook ENGG2440L4 5	Notes ENGG2440L5 5
--	--	---	--	---	--

[ABOUT US](#) [HELP](#) [CONTACT](#) [REFERENCE](#)

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4.3.8. View and Download the materials

When users select the file that they want, they can preview the document that only shows the first six pages of the whole document and the watermark is added in each preview pages. For full version download, if it is priced material, users need to pay the tokens.

Also, Users can rate the material and leave a comment on the materials.

Preview

Name: ENGG2440L2	Type: exercise	Uploaded by: sinyi	Rating: 0
---------------------	-------------------	-----------------------	--------------

Download

Comment

★★★★☆

Content	User	Post date
I think it is a good exercise. I know how to write a proof now! Thanks.	sinyi	2019-05-04 18:17:12

Comment :

Reply

When Download the Full version of priced materials, it shows the message of payment success!

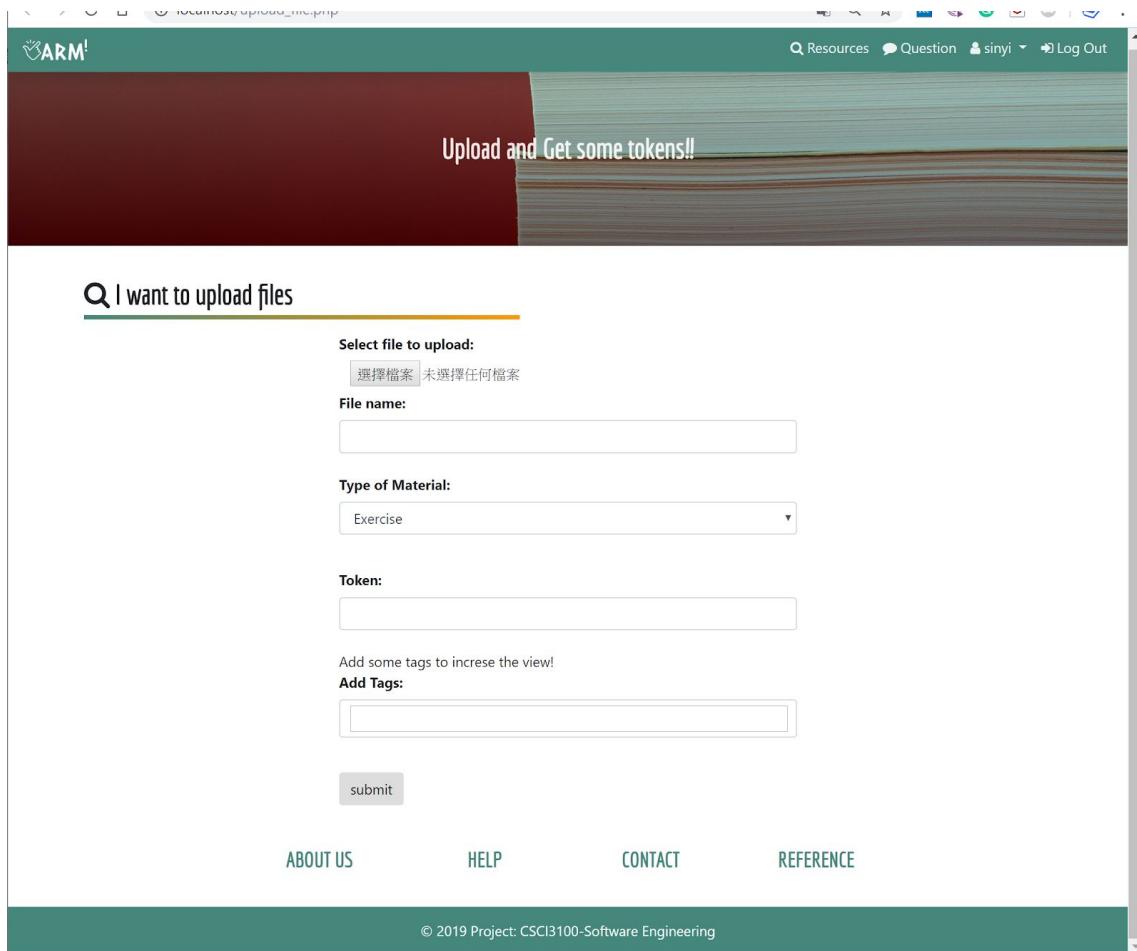
localhost 顯示

Payment Success!

確定

4.3.9. Upload the file.

User can upload files and enter the information of the file.



The screenshot shows a web-based application interface for uploading files. At the top, there is a navigation bar with the ARM logo, a search icon, 'Resources', 'Question', a user profile icon ('sinyi'), and 'Log Out'. Below the navigation bar, a large banner features a stack of books and the text 'Upload and Get some tokens!!'. The main content area has a header 'I want to upload files' with a magnifying glass icon. It contains several input fields and dropdown menus:

- Select file to upload:** A button labeled '選擇檔案' (Select File) with the subtext '未選擇任何檔案' (No file selected).
- File name:** An input field with a placeholder text area below it.
- Type of Material:** A dropdown menu currently set to 'Exercise'.
- Token:** An input field with a placeholder text area below it.
- Add Tags:** A text input field for adding tags.

At the bottom of the form are a 'submit' button and links for 'ABOUT US', 'HELP', 'CONTACT', and 'REFERENCE'. A copyright notice at the very bottom reads '© 2019 Project: CSCI3100-Software Engineering'.

5. Test

5.1. Overview and plan

The system can be separated into four major components: Register/login + personalInfo, Material List and search, Forum and Mailbox. All components are test independently with set of test cases. This ensure all user activity would be tested, under condition that four major component are not in cohesion.

5.2. Register/login + personalInfo

5.2.1. purpose

This part of test case is to test the correctness of user authentication and registration components. We will test user authentication and registration separately since two are mutually exclusive to each other. We will test each component by three goals, pass, fail and also boundary cases.

5.2.2. Inputs

5.2.2.1. Login Page:

Case 1: sinyi, !Abc1234 (correct pair)

Case 2: (empty), !Abc1234 (Not filled in)

Case 3: sinyi, (empty) (Not filled in)

Case 4: sinyi, 12345678 (wrong password format)

Case 5: 123, (empty) (wrong username format)

5.2.2.2. Registration Page:

Case 1 : 1234@gmail, cal, 12345678 , 12345678, school) (wrong) (Register suggestion) (one by one)

Case 2 : wrong email “1234”, “1234@gmail.” correct: “1234@g.com”

Case 3 : wrong username “cal”, correct: “calvin”

Case 4 : wrong password “12345678”, “abcdefg”, “ABCDEFGHI”,“1234” correct: “!Abc1234”

Case 5 : wrong school “school” , “test” correct “Chinese University HongKong”

Case 6: 1234@g.com, calvin, !Abc1234, Chinese University Hong Kong

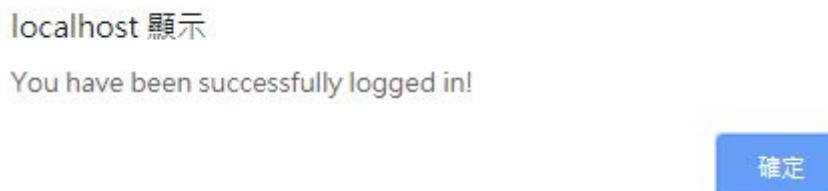
5.2.3. Expected Outputs & Pass/Fail Criteria

5.2.3.1 Login page:

These cases are supposed to observe the login system work in correct way. A user only can log in with a correct pair of username and password. And the system will give a warning that the user haven't filled in all or the format is incorrect.

The test results are following.

Case 1 (pass)



A user has been successfully logged in with a correct pair of username and password.

Case 2 (pass)

A screenshot of a "User Log In" form. It has two input fields: "USERNAME" and "PASSWORD". The "USERNAME" field is empty and highlighted with a blue border. A yellow warning box with an exclamation mark is positioned above it, containing the text "請填寫這個欄位。". The "PASSWORD" field contains a masked password "....." and has a lock icon. At the bottom are two buttons: "Submit" and "Forget Password".

A warning has been shown when the user has not filled in the username field.

Case 3 (pass)

User Log In

USERNAME

PASSWORD

Submit**Forget Password**

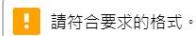
A warning has been shown when the user has not filled in the password field.

Case 4 (pass)

User Log In

USERNAME

PASSWORD



Must contain at least one number and one uppercase and lowercase letter, and at least 8 or more characters

A warning has been shown when the user has filled in a password with wrong format.

Case 5 (pass)

User Log In

USERNAME

PASSWORD

**Submit****Forget Password**

A warning has been shown when the user has filled in a username with wrong format.

5.2.3.2 Registration page:

These cases are supposed to observe the registration system work in correct way. User should fill in valid information otherwise the system will give a warning that user filled in all or the format is incorrect.

Case 1 (pass):

Email Address *

Please enter your Email

Username ! 請填寫這個欄位。

Please enter your username

Case 2 (pass):

1234@gmail.com

Username ! 請符合要求的格式。

Case 3 (pass):

Username *

cal

Password ! 請符合要求的格式。
At least 4 character

Case 4 (pass):

Password *

.....

! 請符合要求的格式。
Must contain at least one number and one uppercase and lowercase letter,
and at least 8 or more characters

.....

localhost 顯示

Password not matched

確定

Case 5 (pass):

Choose your school *

CUHK

By  請符合要求的格式。
Please fill the fullname of School

Case 6 (pass)

Sign Up

Join ARM with over 10000 students !

Create a free account and start now.

I am current a Student Publisher**Email Address ***

1234@g.com

Username *

calvin

localhost 顯示

Welcome calvin
Your may now login**Password ***

.....

Confirm Password *

.....

Choose your school *

Chinese University Hong Kong

By creating an account you agree to our
[Terms & Privacy](#).**Register**

確定

5.3. Material List and search**5.3.1. purpose**

Material part contains three main feature, which are upload, search and purchase. Testing in this part is to ensure each feature could work well and supporting each other. The best scenario are material could be well uploaded, then could be searched refer to the tag and be purchased related to its set price. Test cases is individually designed for three part.

As upload material could gain 5 tokens for each upload. Therefore, this test observe the change of token number of user.

5.3.2. Upload Material

5.3.2.1. Inputs

In upload material, three test cases simulated two users uploading total three files with different categories. Input of test cases are the following.

Case 1 : Chinese, Exam Paper, 0 price ,user: s1155110302)

Select file to upload:

HKDSE2012Chi..._paper1.pdf

File name:

HKDSE2012Chinese_paper1

Type of Material:

Exam Paper

Token:

0

Add some tags to incréase the view!

Add Tags:

Chinese
HKDSE
Pastpaper
2012

x
x
x
x

submit

(Case 2 : English, Reading, 10 price, user: s1155110302)

Select file to upload:

English_reading.pdf

File name:

English_reading

Type of Material:

Reading

Token:

10

Add some tags to incréase the view!

Add Tags:

English
PDFGuidelines

x
x

submit

(Case 3 : Math, Notes, 20 price, user: sinyi)

Select file to upload:

選擇檔案 1.4notes1.pdf

File name:

1.4notes1.pdf

Type of Material:

Notes



Token:

20

Add some tags to increase the view!

Add Tags:

Math



CSCI4230



A

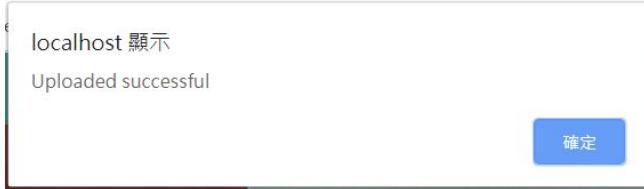
submit

5.3.2.2. Expected Outputs & Pass/Fail Criteria

Three cases are supposed to observe “Uploaded successful” message after submitted and redirected to the material preview page. The expected content in the preview page should have correct file name, type of material, uploader and price. The watermark of “Download the FULL Version with Token NOW!” should also locate on the PDF version to show a preview PDF is generated.

The test results are following.

Case 1 (Pass)



Preview

The screenshot shows a document preview interface. At the top, there is a header with the file name "55_HKDSE2012Chine..." and page number "1 / 7". Below the header, there is a red oval highlighting the following metadata:

- Name: HKDSE2012Chinese_paper1
- Type: exam paper
- Uploaded by: s1155110302
- Rating: 0

A large red oval also highlights the text "Download the FULL Version with Token NOW!" located below the header. A black arrow points from the text "Full Version Download(FREE)" in the "Comment" section on the right towards this highlighted text.

Download

A blue rectangular button with a white eye icon and the text "Download Preview". Below it is a green button with the text "Full Version Download(FREE)". This green button is also highlighted with a red oval.

Comment



Content User Post date

Comment :

Reply

File name : Correct

File type : Correct

Uploader: Correct

Price : Correct

Preview watermark : Yes

Case 2 (Pass)

A modal dialog box with a dark blue header containing the text "localhost 顯示". The main body of the dialog box contains the text "Uploaded successful" and a blue "確定" (Confirm) button at the bottom right.

Preview

The screenshot shows a PDF preview interface. At the top, there is a header with four fields: Name: English_reading, Type: reading, Uploaded by: s1155110302, and Rating: 0. The 'Name' field is circled in red. Below the header, the PDF title is 55_English_reading_p... and the page number is 1 / 4. A download icon and a print icon are also present. A large red oval highlights the text 'Download the FULL Version with Token NOW!' located below the title. The watermark 'KB' is visible across the page. At the bottom, there is a 'PDF Guidelines' section with the heading 'Recommendations for the creation of PDF files for long-term preservation and access'. A small table provides details about the PDF's author, current version, and change history.

Author	Judith Rog (Judith.rog@kb.nl) Koninklijke Bibliotheek (http://www.kb.nl) Digitale Duurzaamheid (digitalpreservation@kb.nl)
Current version	1.7
Change history	1.7 Updated current Adobe Acrobat version, minor textual changes 1.6 Correction on XMP metadata 1.5, October 2006, Added notes on PDF/A-1 conformance

Download



Comment



Content User Post date

Comment :

Reply

File name : Correct

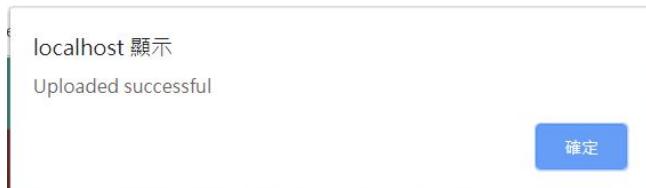
File type : Correct

Uploader: Correct

Price : Correct

Preview watermark : Yes

Case 3 (Pass)



Preview

Name: 1.4notes1.pdf	Type: notes	Uploaded by: sinyi	Rating: 0
---------------------	-------------	--------------------	-----------

40_1.4notes1.pdf_pre... 1 / 1

Download the FULL Version with Token NOW!

Course: Computational Learning Theory
Lecturer: Siu On Chan Spring 2019

Notes 1: Introduction; Learning Models
Textbook: *An Introduction to Computational Learning Theory*, Michael J. Kearns and Umesh V. Vazirani

This course (and notes) will mostly follow Servetlić's, Diakonikolas', and Kanade's Theory course — homeworks & exams about proofs; no programming Pre-requisite: Discrete Math, Probability, math maturity

1. INTRODUCTION
This course focuses on (binary) classification problem in supervised learning

Input: training samples $(x^1, y^1), \dots, (x^n, y^n)$
Output: hypothesis $h \subseteq X$

x^i : an instance/features; $y^i \in \{0, 1\}$: category (instance result)
e.g. x^i are emails; $y^i \in \{\text{spam, not spam}\}$
e.g. x^i are documents; $y^i \in \{\text{English, not English}\}$

samples x^i belong to **instance space X** (typically $X = \{0, 1\}^n$ or \mathbb{R}^n)
assume samples are classified according to unknown **concept $c \subseteq X$** i.e. $y^i = \mathbb{1}(x^i \in c)$
 c belongs to known **concept class \mathcal{C}** (some collection of subsets of X)
Want output hypothesis h to be close to unknown concept c
Will also think of c and h as $X \rightarrow \{0, 1\}$ (indicator functions)

2. EXAMPLES OF PROBLEMS (CONCEPT CLASSES)
2.1. **k -DNF (disjunctive normal form) formulae.**
boolean variables x_1, x_2, \dots, x_n
Literals $x_1, \bar{x}_1, x_2, \bar{x}_2, \dots, x_n, \bar{x}_n$ (a variable or its negation)
 k -DNF formula: disjunction of terms, each term being conjunction of at most k literals
3-DNF e.g. $(x_1 \wedge x_3 \wedge x_5) \vee (x_2 \wedge x_7 \wedge x_8)$
1-DNF (also called disjunction) e.g. $x_1 \vee \bar{x}_3 \vee \bar{x}_4 \vee x_2$

2.2. **k -term DNF formulae.**
 k -term DNF formula: disjunction of k terms, each being conjunction of (any number of)
2-term DNF e.g. $(x_1 \wedge x_2 \wedge \bar{x}_3 \wedge x_4) \vee (\bar{x}_2 \wedge x_6 \wedge \bar{x}_7)$

2.3. **k -CNF (conjunctive normal form) formulae.**
 k -CNF formula: conjunction of terms, each term being disjunction of at most k literals
1-CNF (also called conjunction) e.g. $x_1 \wedge \bar{x}_3 \wedge \bar{x}_4 \wedge x_2$
3-CNF e.g. $(x_1 \vee \bar{x}_3 \vee \bar{x}_5) \wedge (\bar{x}_4 \vee x_7 \vee x_8)$
Every k -term DNF is equivalent to k -CNF, because \vee distributes over \wedge , i.e.
 $(u \wedge v) \vee (x \wedge y) = (u \vee x) \wedge (u \vee y) \wedge (v \wedge x) \wedge (v \wedge y)$
But some k -CNF has no equivalent k -term DNF when $k \geq 2$

Download

Download Preview

Full Version Download(20 HKD)

Comment



Content User Post date

Comment :

Reply

File name : Correct

File type : Correct

Uploader: Correct

Price : Correct

Preview watermark : Yes

Token number of user s1155110302 before and after test :



Token number of user sinyi before and after test:



As expectation, file with different categories and price can be well record to the database. The preview PDF is generated properly. Resource page read each material in database correctly. 10 tokens increase for user s1155110302(2 files upload) and 5 tokens increase for user sinyi (1 file upload) is well observed.

5.3.3. Purchase material

5.3.3.1. Inputs

Tests in this part tends figure out purchase function work under all conditions which are free resources and priced resources. Test cases is designed in user facing zero cost, enough tokens and not enough tokens conditions. The testing environment runs under user account s1155110302, which is default with 19 tokens.

The purchase material are the files uploaded in 5.2.

Case 1

Material name : HKDSE2012Chinese_paper1

Price : 0/Free

Case 2

Material name : 1.4notes1

Price : 20

Case 3

Material name : English_reading

Price : 10

5.3.3.2 Expected Outputs & Pass/Fail Criteria

Case 1 : Download success without token reduce

Result :

Case 1 (Pass)

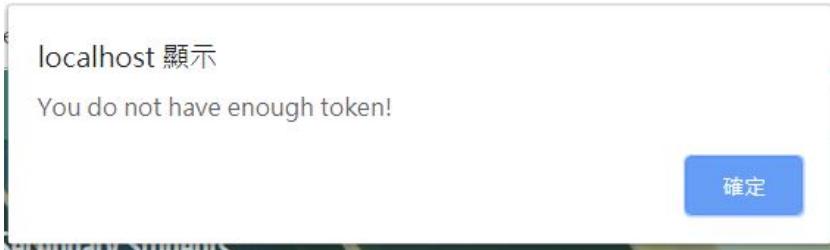


Full version directly access and download



Token number unchange

Case 2 (Pass)

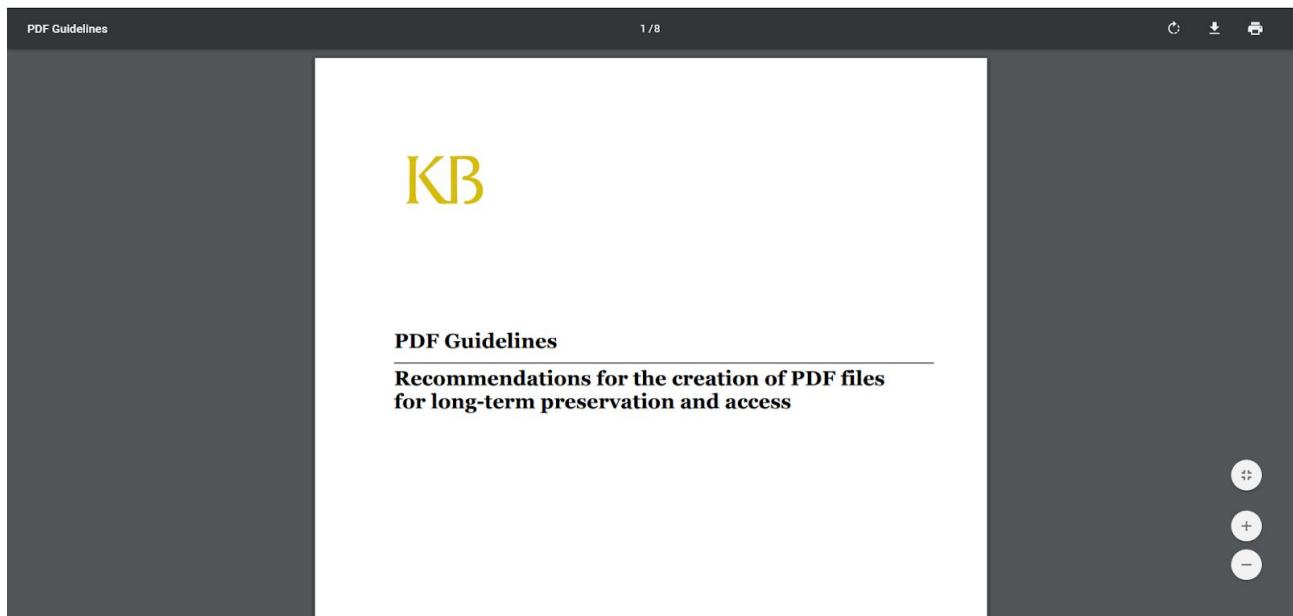


Designed purchase unsuccessful message

Case 3 (Pass)



Payment success message



Full version directly access and download



Token number reduced by 10 (price in case 3)

5.3.4. Search Material

5.3.4.1. Inputs

Search function should face many probabilities. Test cases try to simulate all the combination could appear and make sure the result and result counter works.

Case 1 : All the material in resource database

A screenshot of a search interface. It features a search bar with a magnifying glass icon and the placeholder "Find Resources!". To the right of the search bar is a "Search" button. Below the search bar is a dropdown menu labeled "Type of Material:" with "All" selected. The entire interface is contained within a light gray box.

Case 2 : All the “Notes” in resource database

A screenshot of a search interface similar to the previous one. It has a search bar with "Find Resources!", a "Search" button, and a dropdown menu for "Type of Material:". In this case, "Notes" is selected in the dropdown menu. The entire interface is contained within a light gray box.

Case3 : Single keyword

Case 4 : Single keyword (different keyword)

A screenshot of a search interface. At the top is a search bar with a magnifying glass icon containing the text "Math". To the right of the search bar is a dark grey "Search" button. Below the search bar is a dropdown menu labeled "Type of Material:" with the option "All" selected. A small downward arrow is at the end of the dropdown menu.

Case 4 : Single keyword (different keyword)

Case 5 : More than one keyword

A screenshot of a search interface. At the top is a search bar with a magnifying glass icon containing the text "chinese". To the right of the search bar is a dark grey "Search" button. Below the search bar is a dropdown menu labeled "Type of Material:" with the option "All" selected. A small downward arrow is at the end of the dropdown menu.

Case 5 : More than one keyword

Case 6 : Double keyword and chosen resource type

A screenshot of a search interface. At the top is a search bar with a magnifying glass icon containing the text "math csci". To the right of the search bar is a dark grey "Search" button. Below the search bar is a dropdown menu labeled "Type of Material:" with the option "All" selected. A small downward arrow is at the end of the dropdown menu.

Case 6 : Double keyword and chosen resource type

Case 7 : No match resource result

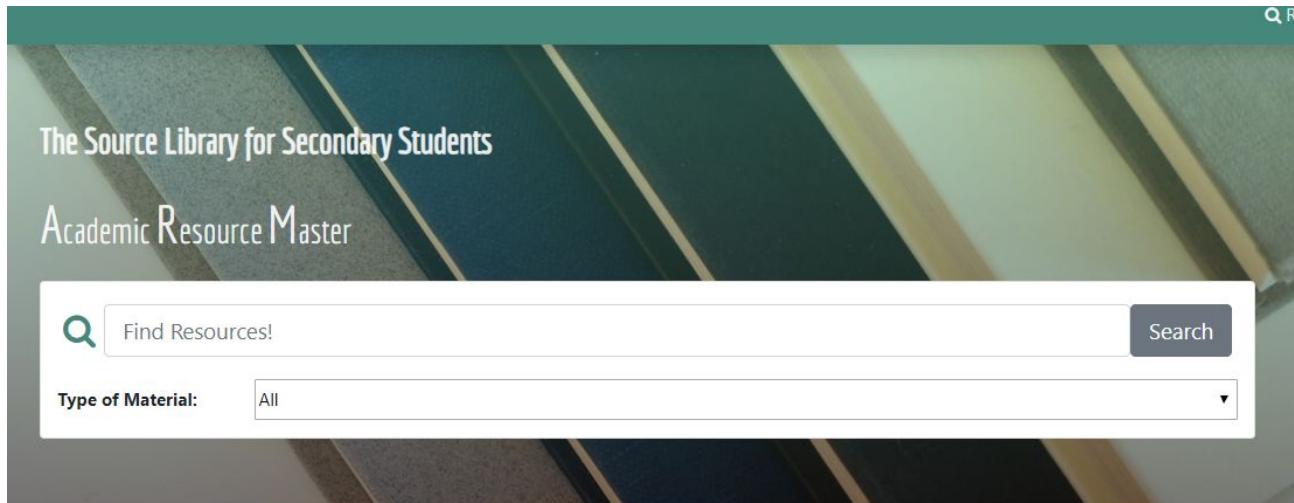
A screenshot of a search interface. At the top is a search bar with a magnifying glass icon containing the text "Global business". To the right of the search bar is a dark grey "Search" button. Below the search bar is a dropdown menu labeled "Type of Material:" with the option "Notes" selected. A small downward arrow is at the end of the dropdown menu.

Case 7 : No match resource result

5.3.4.2. Expected Outputs & Pass/Fail Criteria

A success search should display all the matched result and count the total number. Each result box should have the type of the resource, file name and its rating. all the boxes must capable to redirect its material page.

Case 1 (Pass)



You searched for

5 results found !

Exercise Math Ex 1.2  3	Pastpaper HKDSE2012Chinese_paper1  0	Reading English_reading  0	Notes 1.4notes1.pdf  0	Notes 1.4notes2.pdf  4
--	---	---	---	---

Math Ex 1.2
<http://localhost/csci3100/view.php?fid=22>

[ABOUT US](#)

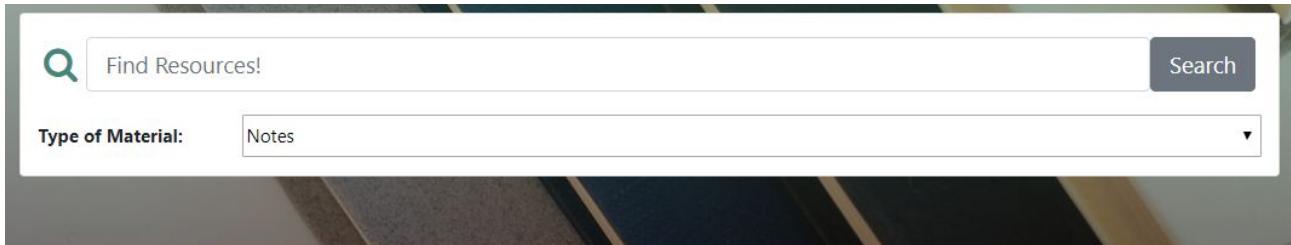
[HELP](#)

[CONTACT](#)

[REFERENCE](#)

5 results is found with all correct type and file details. Hyperlink works well.

Case 2 (Pass)



You searched for

2 results found !

Notes	Notes
1.4notes1.pdf 0	1.4notes2.pdf 4

1.4notes1.pdf
http://localhost/csci3100/view.php?fid=27

ABOUT US

HELP

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All “Notes” type result is displayed

Case 3,4 (Pass)

A screenshot of a web-based search interface. At the top, there is a search bar with a magnifying glass icon containing the word "Math". To the right of the search bar is a "Search" button. Below the search bar is a dropdown menu labeled "Type of Material" with "All" selected. The main area shows a blurred background image of a room with wooden beams. Below the image, the text "You searched for *Math*" is displayed.

You searched for *Math*

2 results found !

- | | |
|-------------------------------|-------------------------------|
| Notes | Notes |
| 1.4notes1.pdf | 1.4notes2.pdf |
| 0 | 4 |

[1.4notes1.pdf](http://localhost/csci3100/view.php?fid=27)
http://localhost/csci3100/view.php?fid=27

ABOUT US

HELP

CONTACT

REFERENCE

A screenshot of a web-based search interface. At the top, there is a search bar with a magnifying glass icon containing the word "chinese". To the right of the search bar is a "Search" button. Below the search bar is a dropdown menu labeled "Type of Material" with "All" selected. The main area shows a blurred background image of a room with wooden beams. Below the image, the text "You searched for *Chinese*" is displayed.

You searched for *Chinese*

1 results found !

- | |
|---|
| Pastpaper |
| HKDSE2012Chinese_paper1 |
| 0 |

ABOUT US

HELP

CONTACT

REFERENCE

Single keyword search success

Case 5 (Pass)

A screenshot of a web-based search interface. At the top, there is a search bar with a magnifying glass icon containing the text "math csci". To the right of the search bar is a "Search" button. Below the search bar, there is a dropdown menu labeled "Type of Material" with the option "All" selected. The main area shows a search result for "math csci" with two items listed:

Notes
1.4notes1.pdf
0

Notes
1.4notes2.pdf
4

You searched for *math csci*

2 results found !

Notes

[1.4notes1.pdf](#)

0

Notes

[1.4notes2.pdf](#)

4

[ABOUT US](#)

[HELP](#)

[CONTACT](#)

[REFERENCE](#)

Multiple keywords search success

Case 6 (Pass)

A screenshot of a web-based search interface. At the top, there is a search bar with a magnifying glass icon containing the text "math ai". To the right of the search bar is a "Search" button. Below the search bar, there is a dropdown menu labeled "Type of Material" with the option "All" selected. The main area shows a search result for "math ai" with one item listed:

Notes
1.4notes1.pdf
0

You searched for *math ai*

1 results found !

Notes

[1.4notes1.pdf](#)

0

[ABOUT US](#)

[HELP](#)

[CONTACT](#)

[REFERENCE](#)

Multiple keywords in selected type search success

Case 7 (Pass)

You searched for *Global business*

Sorry, there are no matching result for **Global business**.

[ABOUT US](#)

[HELP](#)

[CONTACT](#)

[REFERENCE](#)

Correct no matching result

5.4. Question Discussion Forum

5.4.1. purpose

Forum is an open system but function and display is various user identity. The purpose of testing in question forum is to evaluate the forum pages variation due to a different user and to validate the performance of the function in the forum system. Pass or fail of the test is judged by comparing all the responses of different identities.

5.4.2. Question Category

5.4.2.1. Inputs

This part of testing only focus on the display, the update of the category page refer to identity will be evaluated in other testing parts.

Case 1 : Guest user

Case 2 : Locked in user

5.4.2.2. Expected Outputs & Pass/Fail Criteria

Both case 1 and case 2 should have given same display result.

Case 1 :

Subject	Description	Latest post
中國語文	Discussion related to Chinese language	This is a testing question 2019-04-12 by sinyi
English	Discussion related to English language	Why 2019-05-04 by s1155110302
Mathematics	Discussion related to Mathematics(core)	no post here

What are other people asking?

View 13	Reply 0	[Solved] This is a testing question Ask by sinyi Last post at 2019-04-12
View 5	Reply 0	[Unsolved] This is a testing question Ask by sinyi Last post at 2019-04-12
View 4	Reply 1	[Unsolved] This is a testing question Ask by sinyi Last post at 2019-04-12
View 4	Reply 1	[Unsolved] HELP! how to speak 3100 in Chinese?? Ask by sinyi Last post at 2019-04-12
View 3	Reply 0	[Solved] QAQ Ask by sinyi Last post at 2019-04-12

Page: 1 2

Case 2:

The screenshot shows a forum interface with a dark header bar containing the logo "ARM!" and navigation links for "Resources", "Question", "User ID s1155110302", and "Log Out". Below the header is a search bar with the placeholder "What are other people asking?". A large banner at the top says "Find a solution or Ask a question HERE!!!". On the left, there's a sidebar titled "Subject" with three categories: "Chinese language", "English language", and "Mathematics(core)". Each category has a small thumbnail image and a brief description. To the right, a list of questions is displayed in a grid format. Each question card includes a "View" button, a "Reply" button, and a status indicator (e.g., [Solved], [Unsolved]). The first question is "[Solved] This is a testing question" posted by "sinyi" on "2019-04-12". The second question is "[Unsolved] This is a testing question" posted by "sinyi" on "2019-04-12". The third question is "[Unsolved] This is a testing question" posted by "sinyi" on "2019-04-12". The fourth question is "[Unsolved] HELP! how to speak 3100 in Chinese???" posted by "sinyi" on "2019-04-12". The fifth question is "[Solved] Q&A" posted by "sinyi" on "2019-04-12". At the bottom of the page, there are links for "Page: 1 2".

Case 1 and case 2 show all the details well without error, question categories page pass the test.

5.4.3 View Question

5.4.3.1. Inputs

Case 1 : Guest user

Case 2 : My question

Case 3 : Others question

5.4.4.2. Expected Outputs & Pass/Fail Criteria

Case 1 :

Guest user access is expected for all the post related to the question. There should be a message "You can reply after you logged in." on the top of all post and no answer box afterward. The access should also be seen as visit and update the view in category page.

The image contains two side-by-side screenshots of the forum. Both screenshots show a question titled "This is a testing question" with the message "You can reply after you logged in." circled in red. The left screenshot is for a guest user, showing a blank user profile picture. The right screenshot is for a logged-in user named "sinyi", showing a user profile picture with a smiling face. At the bottom of each screenshot, there are navigation links: "ABOUT US", "HELP", "CONTACT", and "REFERENCE".

Q What are other people asking?

View 14	Reply 0	[Solved] This is a testing question Ask by sinyi Last post at 2019-04-12
View 5	Reply 0	[Unsolved] This is a testing question Ask by sinyi Last post at 2019-04-12
View 5	Reply 1	[Unsolved] This is a testing question Ask by Last post at 2019-04-12
View 4	Reply 1	[Unsolved] HELP!, how to speak 3100 in Chinese?? Ask by Last post at 2019-04-12
View 3	Reply 0	[Solved] QAQ Ask by Last post at 2019-04-12
View 15	Reply 0	[Solved] This is a testing question Ask by sinyi Last post at 2019-04-12
View 5	Reply 0	[Unsolved] This is a testing question Ask by sinyi Last post at 2019-04-12
View 6	Reply 1	[Unsolved] This is a testing question Ask by Last post at 2019-04-12
View 4	Reply 1	[Unsolved] HELP!, how to speak 3100 in Chinese?? Ask by Last post at 2019-04-12
View 3	Reply 0	[Solved] QAQ Ask by Last post at 2019-04-12

Case 2 :

Enter my question is expected for close button when a unsolved question and answer box. Question asker can close the question and end all conversation for everybody. Close function should also update the category page and mark the question as solved".

Close	User s1155110302	#1	Tell me why
Reply Content :	<div style="border: 1px solid black; height: 100px;"></div>		
Reply			

View 4	Reply 0	Close	[Unsolved] Why no english post? Ask by s1155110302 Last post at 2019-05-04
View 5	Reply 0	Close	[Solved] Why no english post? Ask by s1155110302 Last post at 2019-05-04

Case 3:

The display of enter others question is similar to my question, without the close function button.

Whatever your access identity, the entry should be count as visit and update the category page. Reply function should work well to obtain user's reply content, date and display the in page with correct replier id.

The image displays three screenshots of a question and answer system interface, illustrating how different access identities affect the count of views and replies.

Screenshot 1: [Solved] This is a testing question

- User: sinyi (Profile picture)
- Post ID: #1
- Content: HI
- View Count: 17
- Reply Count: 0
- Status: Solved

Screenshot 2: [Unsolved] This is a testing question2

- User: sinyi (Profile picture)
- Post ID: #1
- Content: HI
- View Count: 18
- Reply Count: 1
- Status: Unsolved

Screenshot 3: This is a testing question2

- User: sinyi (Profile picture)
- Post ID: #1
- Content: HI
- View Count: 18
- Reply Count: 1
- Status: Unsolved

Annotations:

- A red circle highlights the user profile picture in the first screenshot.
- A large red oval highlights the entire first screenshot.
- A red circle highlights the user profile picture in the second screenshot.
- A red circle highlights the reply count '0' in the first screenshot.
- A red circle highlights the reply count '1' in the second screenshot.
- A red circle highlights the reply content 'HI' in the second screenshot.
- A red circle highlights the user profile picture in the third screenshot.
- A red circle highlights the reply count '0' in the third screenshot.
- A red circle highlights the reply count '1' in the third screenshot.
- A red arrow points from the first screenshot to the second one.

Compare three cases, answer page work accurate with each access identity and correctly update the category pages. The view question pass the test.

5.4.4 Ask Question

5.4.4.1. Inputs

Case 1: Guest user

Case 2 : Locked in user (ask a question in mathematics)

5.4.4.2. Expected Outputs & Pass/Fail Criteria

Case 1 :

Guest user with no right to ask question and error message should alert.



Case 2:

Ask question function is expected a result of saving the question form into server according to the question topic, content and date. Message to announce the declar successful or failure after kicking submission button.





Ask A Question!

Topic:

PLEASE!!!!!! What is prior and posterior probability?

Content:

Find someone teach me prior and posterior probability. I dont want to get a F in ENGG2430 荚

Submit

localhost 顯示

Posted successful

確定

localhost 顯示

Please fill in the topic and the content.

確定

PLEASE!!!!!! What is prior and posterior probability?

Close

[Go back to question catagory](#)

User
s1155110302

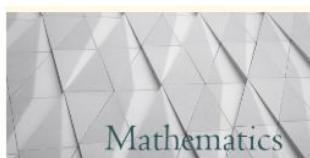


#1

Posted on Date: 2019-05-04

Find someone teach me prior and posterior probability. I dont want to get a F in ENGG2430

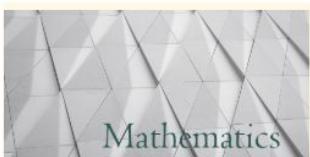
Reply Content :



Mathematics(core)

Discussion related to Mathematics(core)

no post here



Mathematics(core)

Discussion related to Mathematics(core)

PLEASE!!!!!! What is prior and posterior probability?

2019-05-04 by s1155110302

Q What are other people asking?

[View
1](#)

[Reply
0](#)

[Unsolved] PLEASE!!!!!! What is prior and posterior probability?

Ask by s1155110302 | Last post at 2019-05-04

Page: 1

[Go back to subjects](#)

The above capture figure all the record and update function work along with its specification. Therefore, the answer function is judged as pass.

5.5 Mailbox

5.5.1. purpose

The purpose of testing mail function is evaluating the correctness of user private communication perform and function are working designate.

5.5.2. Inputs

There are two set of simulation, test 1 as a new account get start of using mail and search set up contact and test 2 is two users mail each other. The testing environment is user accounts "s1155110302", which is completely new in mail database in windows, and "sinyi", which is already recorded inside the mail system in IOS.

Test 1 : Check linkage form between valid user

Step1 : "s1155110302" search for user "emmil" which is not inside the user database.

Step2 : "s1155110302" search "sinyi" and automatically add into contact.

Step3 : Check whether "s1155110302" is in "sinyi"s contact.

Test 2 : Message by two-side

Step1 : "s1155110302" send message "Hi,sinyi Calvin again" to "sinyi".

Step2 : "sinyi" reply with message "What!??? this is your third account".

5.5.3. Expected Outputs & Pass/Fail Criteria

Test 1 : Error and successful message alert properly

Q Your Mail Box

emmil

[Confirm](#)

Click a user 's name to find Someone?

localhost 顯示

User not exist. Please retry

[確定](#)

Q Your Mail Box

sinyi

[Confirm](#)

Click a user 's name to find Someone?

localhost 顯示

A new user has added to your mail box

[確定](#)

Test 2 Mail sent and show on both users run well



The screenshot shows the ARM platform interface. At the top, there's a navigation bar with links for Resources, Question, and Log Out. Below the navigation bar is a large image of a stack of books. A red banner across the top says "Type something" and "ASK A QUESTION!".

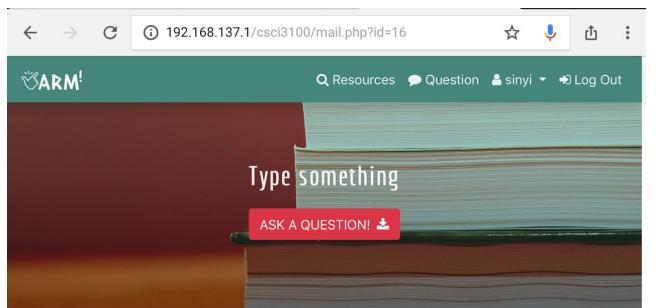
The main area is titled "Your Mail Box". It shows a conversation between two users:

- User 1 (sinyi):** Someone you want to c
Confirm
- User 2 (s1155110302):** You are chatting with sinyi
Please refresh manually for receiving new!
- User 2 (s1155110302):** Hi,Sin Yi Calvin again !

Below the conversation, there's a message input field labeled "Message:" and a "送出" (Send) button.

At the bottom, there's a keyboard and a status bar showing the URL 192.168.137.1/csci3100/mail.php?id=16.

Second Screenshot:

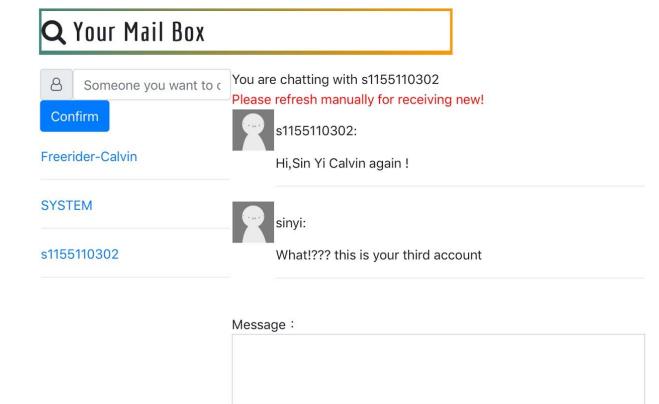


This screenshot shows the same conversation from the previous screen, but with different user names:

- User 1 (Freerider-Calvin):** Someone you want to c
Confirm
- User 2 (s1155110302):** You are chatting with s1155110302
Please refresh manually for receiving new!
- User 2 (s1155110302):** Hi,Sin Yi Calvin again !

Below the conversation, there's a message input field labeled "Message:" and a "送出" (Send) button.

Third Screenshot:



This screenshot shows the same conversation again, with different user names:

- User 1 (s1155110302):** Someone you want to c
Confirm
- User 2 (Freerider-Calvin):** You are chatting with s1155110302
Please refresh manually for receiving new!
- User 2 (Freerider-Calvin):** Hi,Sin Yi Calvin again !
- User 1 (sinyi):** s1155110302:
What!?? this is your third account

Below the conversation, there's a message input field labeled "Message:" and a "送出" (Send) button.

6. Lesson Learned

Throughout the whole project, we have gone through almost the whole development cycle. We try to apply the waterfall model in this project. In the beginning, we decide to develop an online learning system for the students to find and share the learning materials. And we submit the initial design outline which includes the requirement and design steps. Then we break the system down into modules and produce the actual code based on the initial design. We tested the modules individually and it is an implementation step of the waterfall model. After module testing, we integrated the modules and tested the whole system. Finally, we write this report as a verification part.

If we have can re-do this project again, we would like to focus on increasing the reusability of code, like using more functional programming or even OOP. There are numbers of code are repeated, but, as we using inline coding at that part, codes cannot be reused easily. OOP would definitely provide much higher reusability, and more flexible for further upgrade.

The system is currently on version1.1, which stated that there are rooms for improvement. If we have the chance to continue developing this system, our goal would be improving the GUI design with animation and using more OOP.

7. Conclusion

The aim of the ARM is providing an online platform for the students to get learning materials with a lower cost. The ARM supports distinctive functions which allow students to learn more through the question and answer forum and to communicate with other users via the mailbox. The implementation of ARM is performed with respect to the system architecture, UML and user interface design. The ARM has been tested successfully with various cases. Overall, our ARM is user-friendly, reliable, and functional.