ENTERPRISE WEB SOFTWARE DEVELOPMENT

COMP1640

PROJECT DOCUMENTATION

PROJECT NAME: UNIVERSITY MAGAZINE MANAGEMENT

Due: 29th April 2019

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I. INTRODUCTION

This coursework is a report on the development of a magazine and image management website uploaded by students to create an annual university magazine in a large university. The system has decentralized rights defined in the scenario, which makes it easier to manage and use. System development and development is carried out on agile scrum working practices. The following are specific requirements for implementing system features.

a. Marketing coordinator: Managing faculties, answering emails for contributions within 14 days, only manage faculty has been appointed, only entitled to interact with student in faculty they manage.

b. Students: Submit / upload magazine, high quality images, photographs

c. University Marketing Manager: Can view and download contributions, but not edit.

d. Administrator: System data management

e. Guest: Only see appointed reports of faculty

f. Student must agree with the Terms and Conditions to upload the file.

g. After closure date, all contributions will be disable however, update can be done until final closure date.

Based on the requirement analysis of the scenario, my team will easily identify the development of the system's functions. In the next section, we will research and develop the system using Agile Scrum methodology.

II. AGILE SCUM DOCUMENTATION

a. ROLES

The permissions required to carry out Agile Scrum methodology management system development that our team will apply to this coursework:

i. Database designer

ii. Programmer

iii. Tester

iv. Web designer

v. Project manager

b. TOOLS

To develop this website, we use ASP .NET MVC technology. This technology we have learned a lot and has applied to develop many web systems before, so using this technology will help us shorten the study time and limit errors arising in the process to develop system more effective. Database of the system is developed base on Microsoft SQL Server technology. In addition to implementing system-related documents, we also use a number of other support tools. Support tools are listed below:

i. Microsoft Word 2016: create documents for the coursework

ii. Visual Studio 2015: create project

iii. Trello: create task for individuals

c. MEETINGS

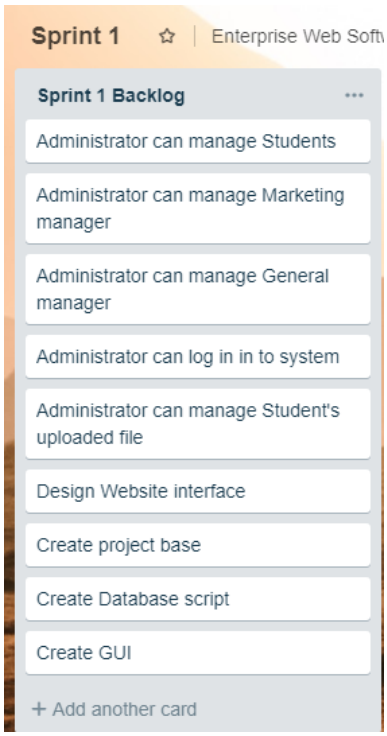
i. **Sprint planning**

Our first meeting took place on March 25th, 2019 at 08:00 am. The meeting is about analyzing the requirements of the scenario, then listing the features needed to develop the project.

In each sprint there will be 5 parts:

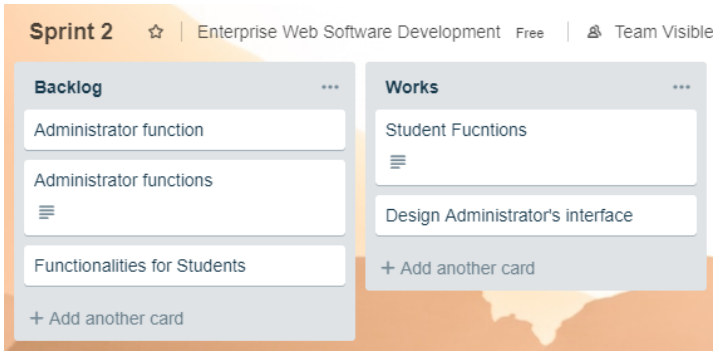
1. Backlog: List what to do
2. Works: List the things to do first
3. In Progress: List the work in progress
4. Review: List the completed work and need the group's assessment before completing
5. Completed: The work has been completed.

The image below is Sprint 1: describes the process of listing the tasks to be done to develop the system. Sprint 1 started on March 25th, 2019.

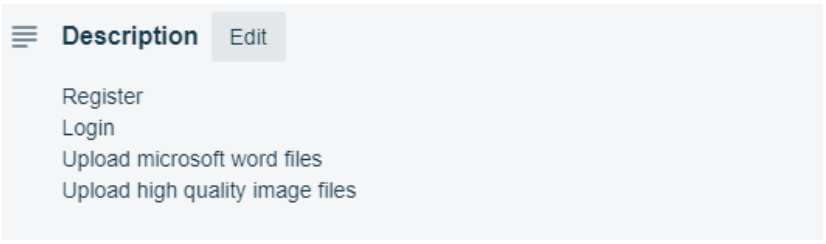


Second meeting was held on April, 1st, 2019 at 08:00 am. In this meeting, we were discussed about developing the most important requirements of this project

The image below is Print 2 describe the development of features for administrator, Student and interface design for these two roles.

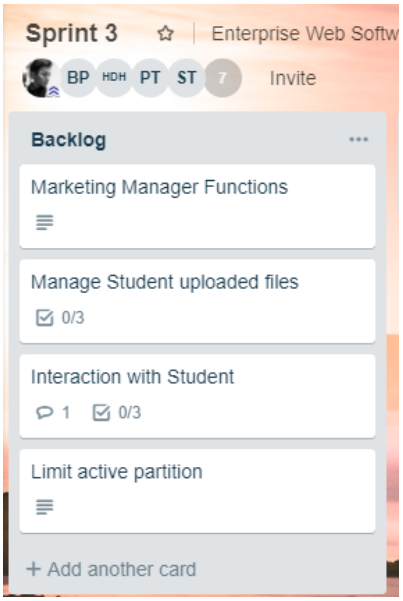


Within each task card, will include detailed request descriptions for that task. Image below is basic task for Student role.

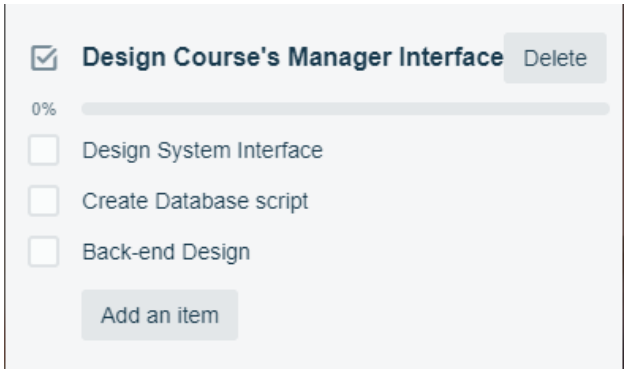


Sprint 3 was held on April 8th, 2019 at 08:00 am. In this Sprint, we discussed and developed functionalities for Marketing manager.

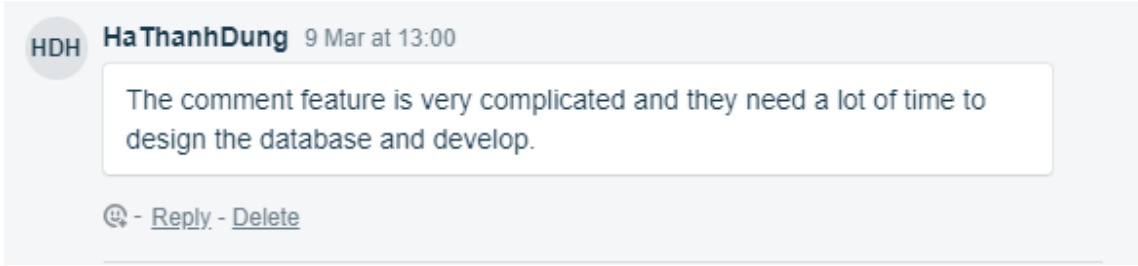
Image below describe work the work we have to do to complete this sprint



In this section, the person who plays the role of programmer must complete the tasks listed. After executing each task, they will tick the task they have completed. For tasks that are not completed, the whole team will meet and provide an alternative solution for the next day.

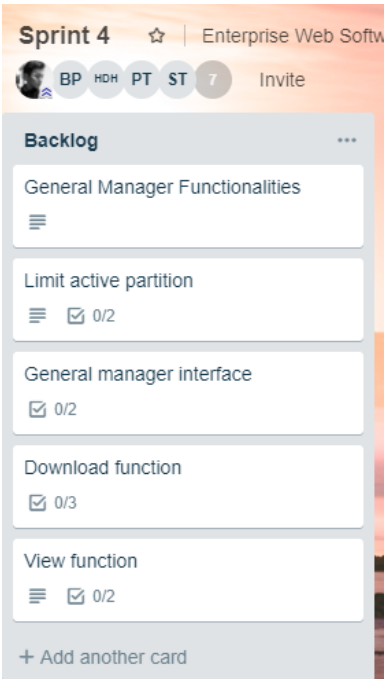


For task that cannot be made, the person who is in charge of the request can leave a comment to inform the group that the task has not been completed.



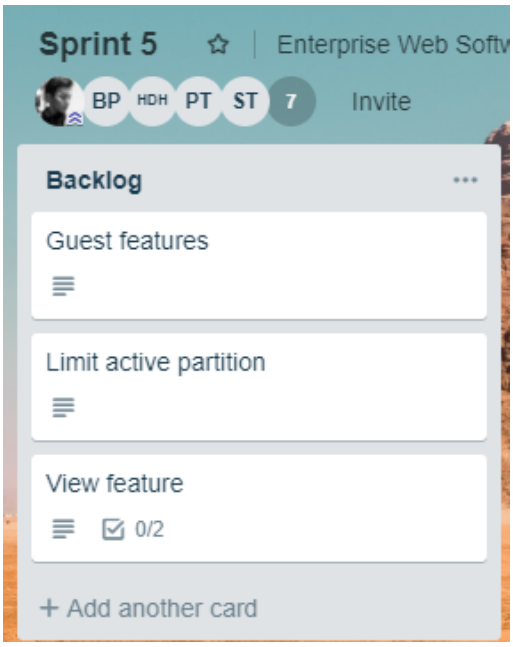
Sprint 4 was held on April 15th, 2019 at 08:00 am. In this sprint, we discuss and present the work needed to develop features for General Manager.

The image below is task to complete for sprint 4



Sprint 5 was held on April 22nd, 2019 at 08:00 am. In this sprint, we discuss and present the work needed to develop functionalities for Guest.

The image below is task to complete.



ii. **Print Review**

This will be done when each sprint is completed, and the team members can give suggestions for modifications or changes needed for the project.

iii. **Sprint Retrospective**

In this process, the team will review the newly completed Sprint and find ways to improve the team workflow, the next sprint or project.

iv. **Daily Scrum**

The whole group will attend a short meeting of about 15 minutes each day to share work progress or difficulties encountered during system development, and to plan or to perform tasks for the next sprint.

d. PRODUCT BACKLOG

Below is a priority list of project features based on the requirements outlined in the introduction. The priority order will be divided into three levels:

i. Very high - Top priority

ii. High - Medium priority

iii. Medium - Lowest priority

PRIORITY	DESCRIPTION	EST HOURS
VERY HIGH		
	Create requirements specification	4
	Create website wireframe and sitemap	7
	Design database	6
HIGH		
	Create database	8
	Design webpage interface	4
	Create authorization	2
	Create login function	1
	Create sample data for database	1
	Create upload function	1
	Create send confirm email function	2

	Create interface for each decentralization in the site	3
	Create an interface and faculty management feature for Marketing coordinator	4
	Creating University Marketing Manager functionalities	4
	Create Guest functionalities	4
	Create feature allow viewing and download contributions but not edit for University Marketing Manager	5
	Create date management features	2
	Create views only interface	3
	Create interface terms and conditions	4
	Create block upload feature	2
	create student registration interface	2
MEDIUM		
	Create data encryption for system	6
	Create a notification form for successful operation	2
	Create a notification form for error or failure manipulation	2
	Create validation and verification for system	6
	Improve the interface for the product	10

After each feature is done, the tester will check that feature to make sure the feature is completed as expected

e. SPRINT BACKLOGS

The detailed plan of each sprint is listed in the Microsoft Excel Sprint Backlog file. In this section I will talk about the results of each sprint.

i. Sprint 1: The basic assigned tasks have been completed, but there are still some uncompleted tasks such as the design of sitemap, wire frame and database for the system. However, these tasks will be planned to complete the following sprint.

ii. Sprint 2: All of the tasks assigned in this sprint have been successfully completed, even those that have not been completed in sprint 1 have been completed in this sprint.

iii. Sprint 3: In this sprint, almost all of the assigned jobs are completed as originally planned. However, the website interface design encountered some difficulties, so it could not catch up with the work schedule. However, we have planned to complete this work in the following sprint.

iv. Sprint 4: At this sprint we have completed the work that remains in the previous sprint and the tasks assigned in this sprint. Work progress is guaranteed and no schedule is delayed.

v. Sprint 5: In this sprint, all website requirements have been completed as scheduled, but the website interface has not been completed yet. For improving the website interface, although this task is not mentioned in user requirements, however, we will still plan to improve the website interface in the best way in the future.

f. PROJECT BRUN DOWN CHART

The chart below is the burndown chart of the project development process. The estimated product development process takes 95 hours to complete within a week, each sprint corresponds to one week. The release project date is April 29th,2019.

Based on the 25 tasks listed in the product backlog section, I divided 5 tasks per week with the estimated time to complete all those tasks. The chart below shows

the amount of time remaining after each sprint has been completed. For example, after completing the 1st sprint, the group estimates there are 76 hours left to complete the other sprints, but the whole group actually has only 66 hours. Thus, it can be seen that at the 1st sprint, the whole group is behind schedule. What we need to do is speed up the work to keep up with the progress of the project.

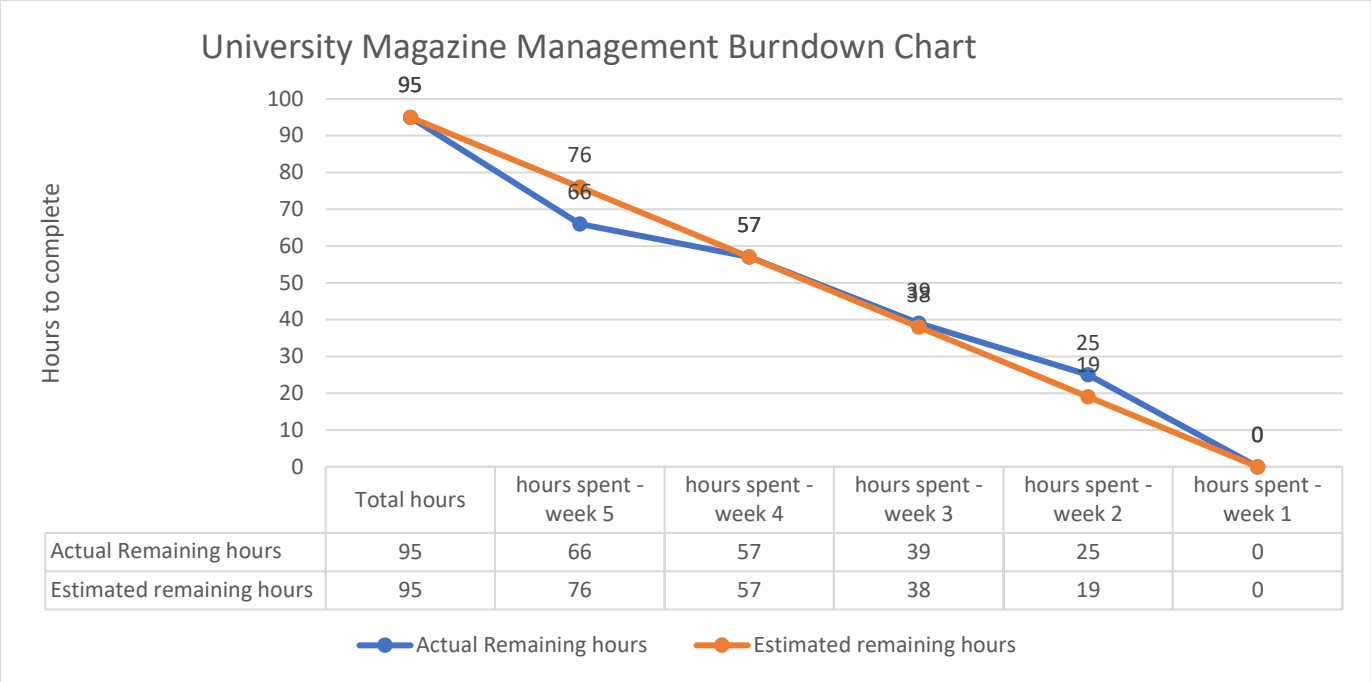
In the next sprint we see the remaining estimated time of 57 hours, coinciding with the actual time. So, it can be said that the group has caught up with the project completion schedule.

At the next two sprints we can see the remaining time to complete the project more than expected time. therefore, it can be said that the whole group completed the 3 and 4 sprints beyond the expected progress.

With the completion of the 3 and 4 sprints beyond expectations, the time to complete the last sprint is much higher than expected, so we have completed the 5 sprints as planned.

Task	Start Hours	hours spent - week 5	hours spent - week 4	hours spent - week 3	hours spent - week 2	hours spent - week 1	Total hours
1	4	2	0	0	0	0	4
2	7	4	0	0	0	0	7
3	6	8	0	0	0	0	6
4	8	10	0	0	0	0	8
5	4	5	0	0	0	0	4
6	2	0	1	0	0	0	2
7	1	0	1	0	0	0	1
8	1	0	2	0	0	0	1
9	1	0	2	0	0	0	1
10	2	0	3	0	0	0	2
11	3	0	0	3	0	0	3
12	4	0	0	5	0	0	4
13	4	0	0	5	0	0	4
14	4	0	0	3	0	0	4
15	5	0	0	2	0	0	5
16	2	0	0	0	3	0	2
17	3	0	0	0	3	0	3
18	4	0	0	0	3	0	4
19	2	0	0	0	2	0	2
20	2	0	0	0	3	0	2
21	6	0	0	0	0	5	6
22	2	0	0	0	0	1	2
23	2	0	0	0	0	1	2
24	6	0	0	0	0	6	6
25	10	0	0	0	0	12	10

Hours to complete	Total hours	hours spent - week 5	hours spent - week 4	hours spent - week 3	hours spent - week 2	hours spent - week 1
Actual Remaining hours	95	66	57	39	25	0
Estimated remaining hours	95	76	57	38	19	0



	Total hours	hours spent - week 5	hours spent - week 4	hours spent - week 3	hours spent - week 2	hours spent - week 1
Actual Remaining hours	95	66	57	39	25	0
Estimated remaining hours	95	76	57	38	19	0

III. DESIGN DOCUMENTATION

a. USE CASE DIAGRAMS

Pre-condition: All user must login first

i. Marketing Manager:

1. Flow of event: Use case start when Marketing manager login successfully. After that, website interface will display all contributions of student from all faculty. Marketing manager can click to download button to download selected student's contribution
2. Post condition: A message will display when marketing manager click download button to make sure that marketing manager didn't activate this function by mistake.

ii. Marketing Coordinator:

1. Flow of event: Use case start when Marketing coordinator login successfully. After that faculty management interface will be displayed. Marketing coordinator can update faculty information, view student's upload, approve contributions uploaded by student, comment on student contributions and receive notification email when student upload their contributions successfully.
2. Post condition: a notification message will display after every action of marketing coordinator in the website.

iii. Administrator:

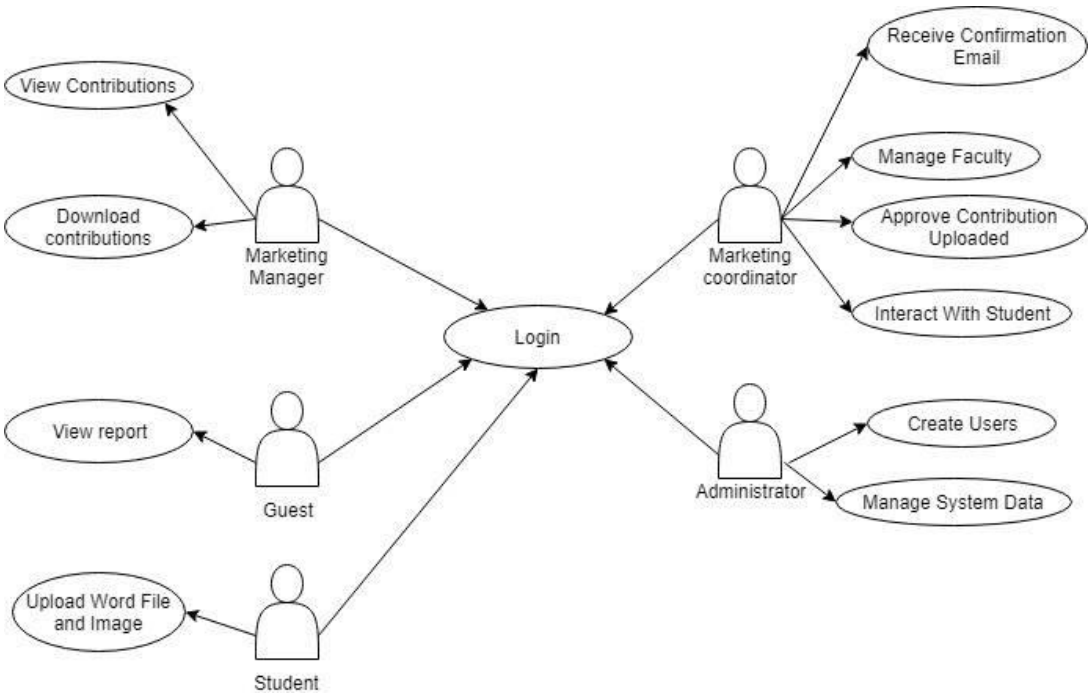
1. Flow of event: Use case start when administrator login successfully. After that website interface will display system management functions. Administrator can modify system data such as deadline of contributions submission or information of users account.
2. Post condition: a notification message will display after every action of administrator in the website.

iv. Guest:

1. Flow of event: Use case start when Guest login successfully. After that report of student's contributions submission will be displayed on the website interface.
2. Post condition: None

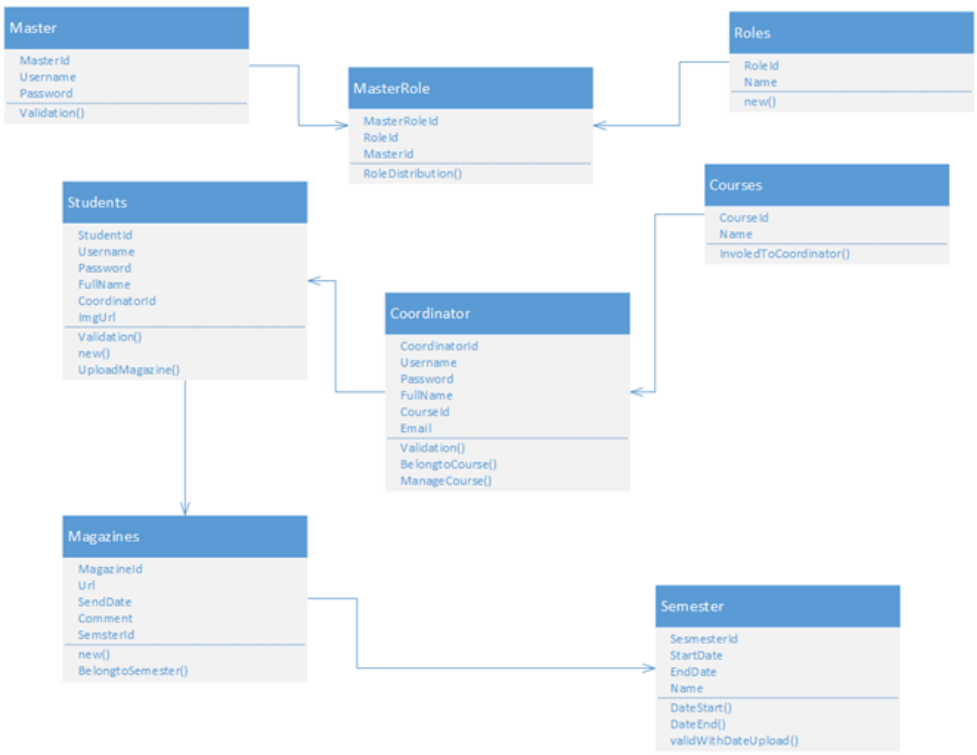
v. Student:

1. Flow of event: Use case start when student login successfully. After that website will display upload function for student to upload their contributions.
2. Post condition: a notification message display after they click upload button.



b. CLASS DIAGRAM

Web applications were developed with the requirements of decentralization for different members such as students, marketing moderator, university marketing manager, administrator, guest. With each right, users can use different functions. Administrator will manage all the above rights including user authorization function. Students will be allowed to register for an account and log in as an access to the system and upload contributions to the web application. With marketing coordinator permission, they will manage all the contributions that students upload, through which they will leave comment on each contribution. Each faculty will have different marketing coordinator and will be responsible for managing their students. with University marketing manager, they can download contributions from students to files into zip files. In addition, in web applications that require different roles, access to the web with different permissions makes each role have a unique function. Therefore, creating authorization tables in the database helps users access the system with separate roles.



My application will be divided into two objects for analysis as the decentralized system and application system. With the decentralization system includes class such as Master, Mater Role and Roles:

i. Class Roles will provide the system with the right to know when the user accesses the system.
ii. Class Masters, it will be used to store user information in the account name and password to access the system.
iii. Class Master Roles, it is seen as a table linked to Roles and Masters to determine which users have access.
iv. With the app system with tables Students, Marketing Coordinator, Courses, Magazines and Semesters:
v. Class Courses will be the table that helps the system know which faculty departments will be in the database system.
vi. Class Semesters will be the help panel for the semester management system including start time, end time.
vii. Class Coordinator will be the board to help the coordinator management system who will manage Students table. And here the class are linked to the class Courses and the class Students. Because it will determine which department the Marketing Coordinator belongs to and which faculty they will manage. This class will include personal information of Marketing Coordinator such as account, password to access. More importantly, they will not be able to register an account but will be granted by the administrator of the application.
viii. Class Students helps student information management system include attributes such as access account and personal information. And this table is linked to the class Coordinator because each Marketing Coordinator will have many different students under the management of Marketing Coordinator.

ix. Class magazine will be the magazine information management. For each student, it will be possible for them to upload different magazines and when uploading successfully, the mail system will notify the student management department.

Advantages: With the classes used in the current project, the system can fully automate the data conversion process. The functions listed in the class diagram will easily manipulate the database without being hindered by any exception errors.

Disadvantages: If there is any data conversion required by the developer, this is impossible for the system as well as the application. Moreover, the use of self-synchronization also means that we cannot extend any function that may need improvement in the future.

Summary:

The data types in class diagram include Id of tables which are all integer because they are compatible with Microsoft SQL server special database. Since the SQL server has specified Id as auto-increment and is an integer type, data synchronization is easier. If we don't do that, the data type will be disturbed and we have to perform an extra step to convert the data type to the correct data type.

In addition, I also use the date time data type to help us determine the time and compare the time when student submit contributions to the database. If we use the data type as string, it will be very troublesome in the process of converting data types so that the system can synchronize all.

c. DATABASE DESIGN

i. System Entity Relationship Diagram:

ERD diagram designed based on database from the system. With different tables, the system will store data with different types. With the Course table, we will have faculty departments in the system with the primary keys Id and Name. I choose Id as the primary key with integer and auto-increment data type, which will make the system searchable data on the primary key. Of course, we can use data not belonging to the primary key to search, but in the case of similarities between the two data sources then ID is the best solution, each key is different, so the primary key will solve the problem of finding duplicate data. On the Course table, it will have a connection with the Coordinator table because as required by coursework, each course will have their own Marketing Coordinator to manage.

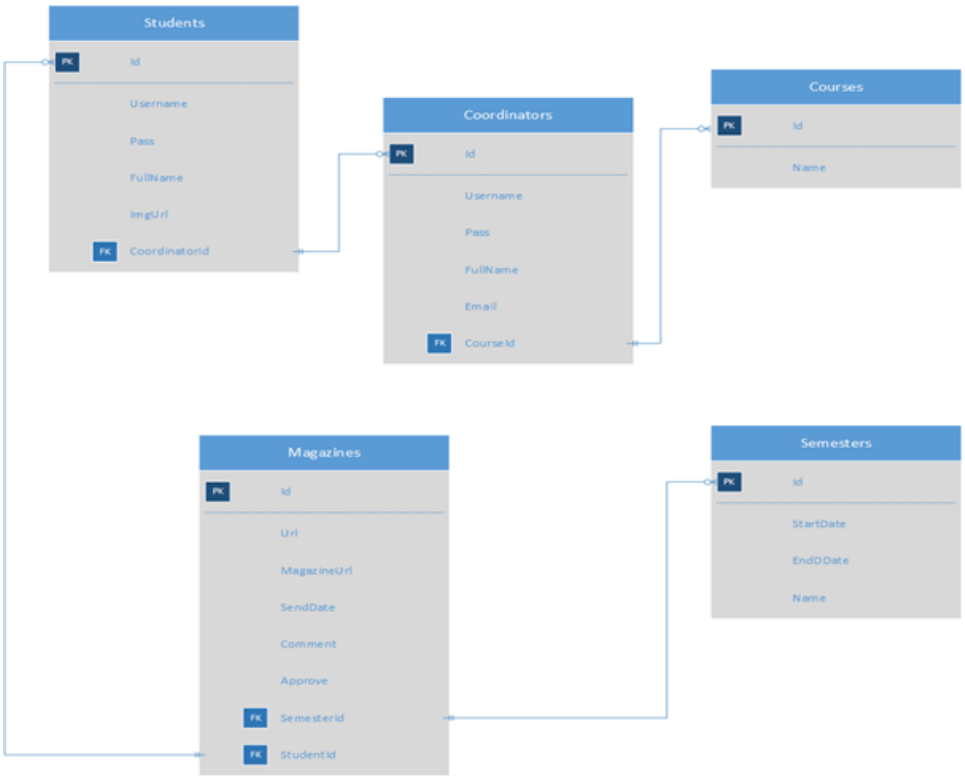
With the Coordinator table, there will be the necessary information, as the primary key is still Id, which is useful for finding data in the database. Because the Coordinator table has a relationship with the Course table because it acts as a coordinator for the related tables, the Coordinator table will have a Coordinator ID field that will act as the foreign key.

For Semester tables, it helps the system determine the duration of a term in a course. Therefore, this table will play some role as a time column to set the start and end of the course. In addition, this table also needs to have the primary key as Id, which is useful for finding the necessary data. In addition, the semester table will have one-many-relationship with magazines table.

With relationships with the semester table, magazines table will help students to post all related articles and images to the server of the system. In the tables in addition to the basic data, there are foreign ones. The key is Semester Id to help determine if the post is valid when posted. Moreover, the system will determine the submission time starting at the beginning of

the course and when the posting time exceeds the allowed time, it will not allow uploading contributions. The system will report errors to users. In addition to having relationship with the semester table, the magazine table has one-to-one relationship with students table.

In addition, table student is the table that will store student information including the app's upload permission confirmation. With the one-to-one relationship with the magazines table, we will identify which article belong to which student.

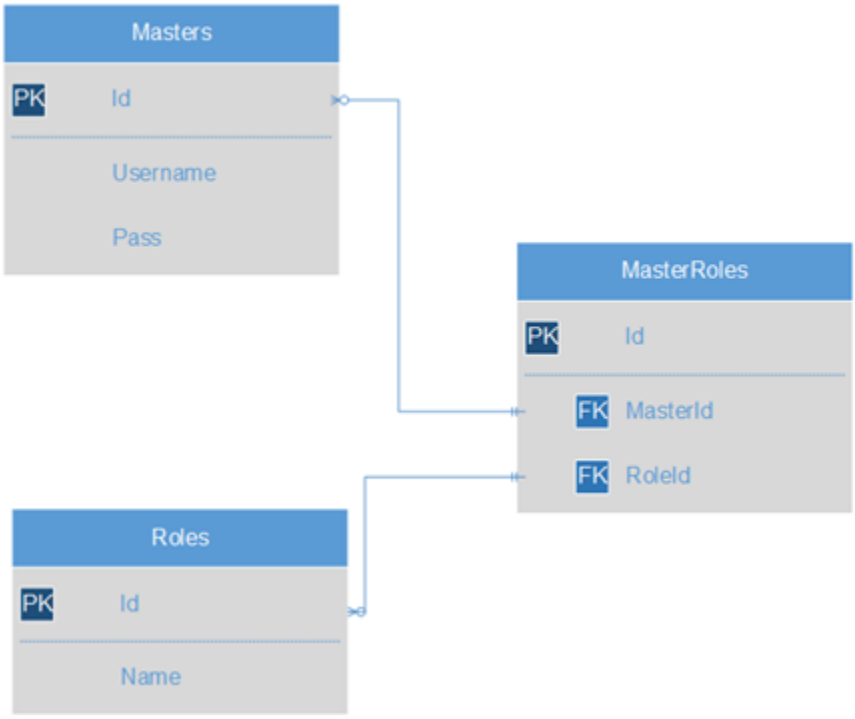


ii. **Role management Entity Relationship Diagram:**

With this diagram, we will have different tables such as master, role and master Role. With the master table, we will store user information and user's access information. As for the primary key Id will be provided automatically and it will make searching easier

The Role table is the table that will provide different permissions to help the system determine the system participation permissions.

Master Role is a table that will have one-to-many relationship with Master and Role tables. The system will search for users who have the necessary permissions to access the application. I choose two sub-keys to determine user permissions and those two sub-keys will link to the two primary keys of the other two tables.



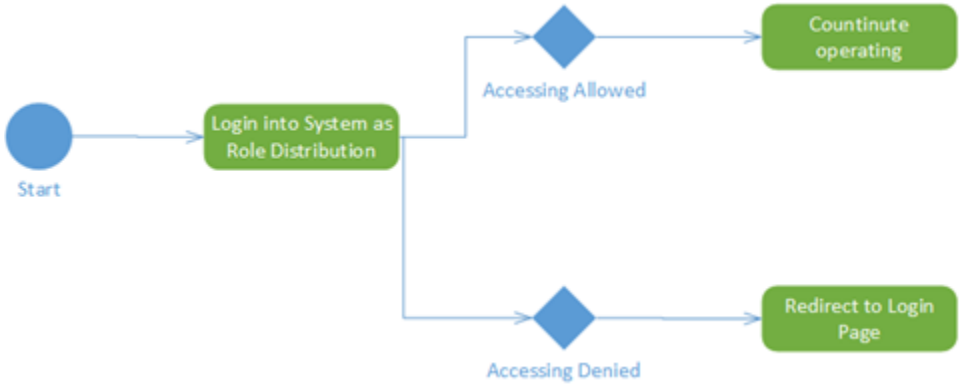
Evaluation:

With the above ERD design, I was able to perfect the application as required but they still need to be improved in the future. For example, the keys themselves must encrypt the entire data to be able to secure the information to avoid the virus attacks the database to exploit data.

d. ACTIVITY DIAGRAM

i. Role distribution process:

With this diagram we will have the decentralization structure in the application system. When a user logs into the system, then the system will check the validity of the information entered and when this step passes, it will lead to access to the authorization system database to validate permissions.



ii. Email notification process

Work-flow from the email system in the application, when students successfully login and choose to upload contributions to the database, then the system will search for the student manager in the system and sent notification email to Marketing Coordinator.

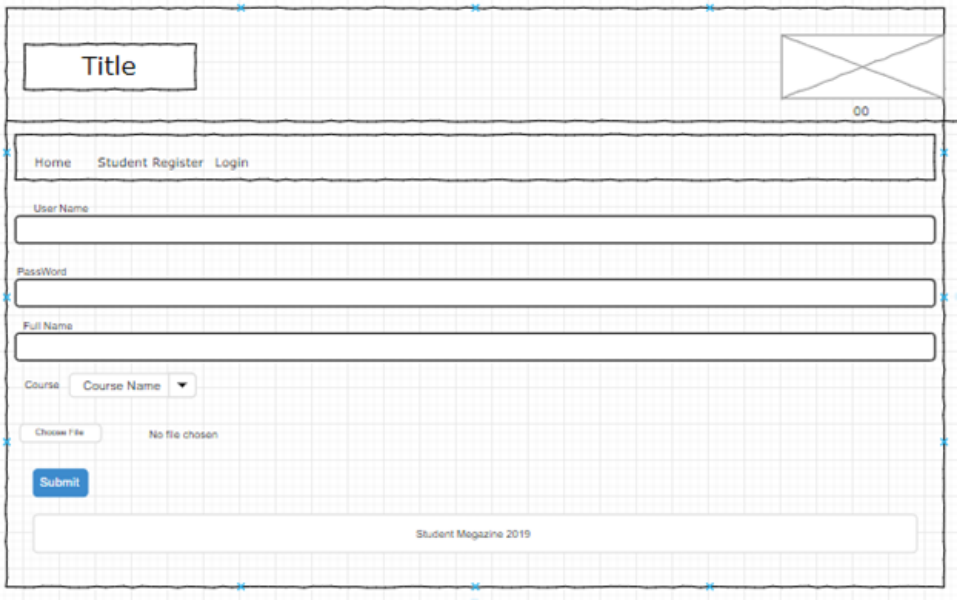
In Conclusion, my database design was able to meet the basic requirements from customers. In addition, I also added data tables to help the application decentralize to users. And this is independent of other tables in the database. The advantage of developing a decentralization system is helps users determine their role. Moreover, we can maintain the application or develop on each different version.

e. WEBSITE DESIGN

i. Website Wireframe

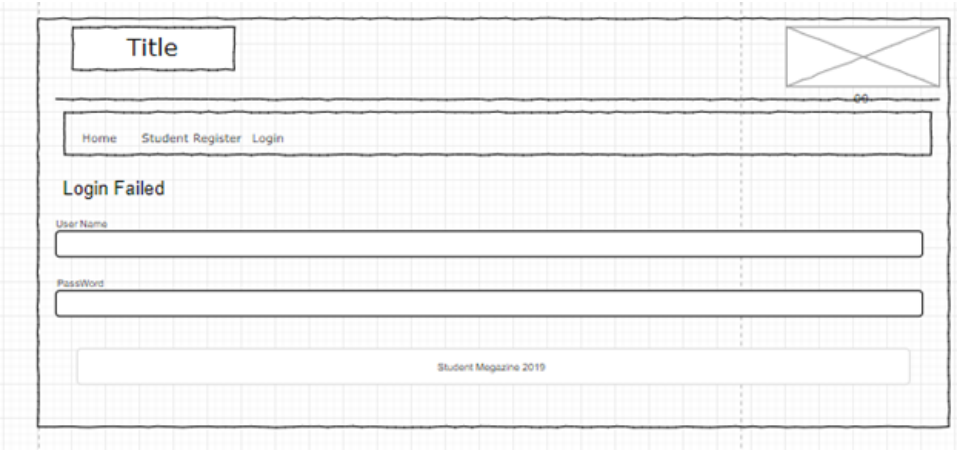
1. Student Register

This is the login page showing the option for student to enter their personal information to create an account. After students enter all the valid information and click submit button, the website will notify the student at this time: "Create a successful account ".



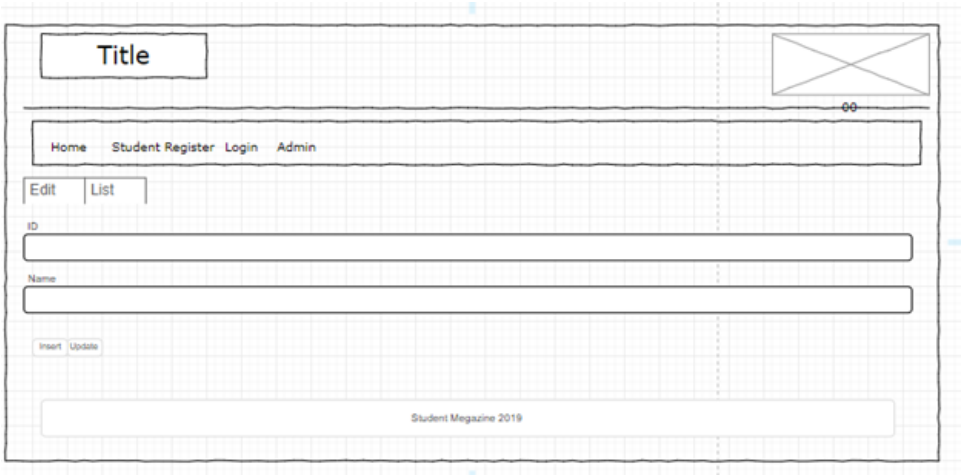
2. Login

This is the login interface, when the user logs in to his account if he has entered the correct username and password, the interface will change and report that the login is successful, and if the user enters a mistake, the project will Notify "Login Failed" website require user to input valid data.


Title
Home
Student Register
Login
Login Failed
User Name
PassWord
Student Megazine 2019

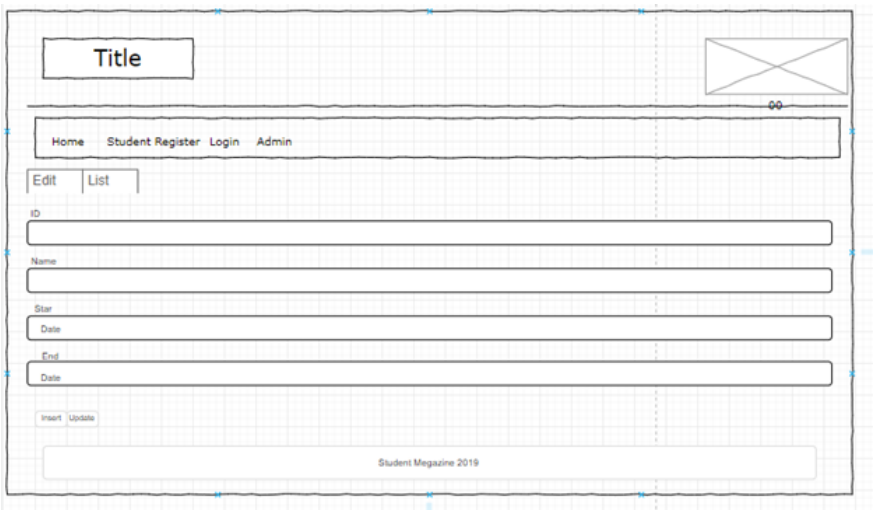
3. **Course Management**

This is the interface page showing the functions of the University Marketing Manager including 2 Edit and List buttons, this interface shows the function of account inserting and account information viewing.



4. **Semester Management**

The interface of the Semester Management includes 2 "Edit" and "List" buttons After entering the semester name and the start and end time, user click on insert button to insert new semester and user can update the available information in List button.

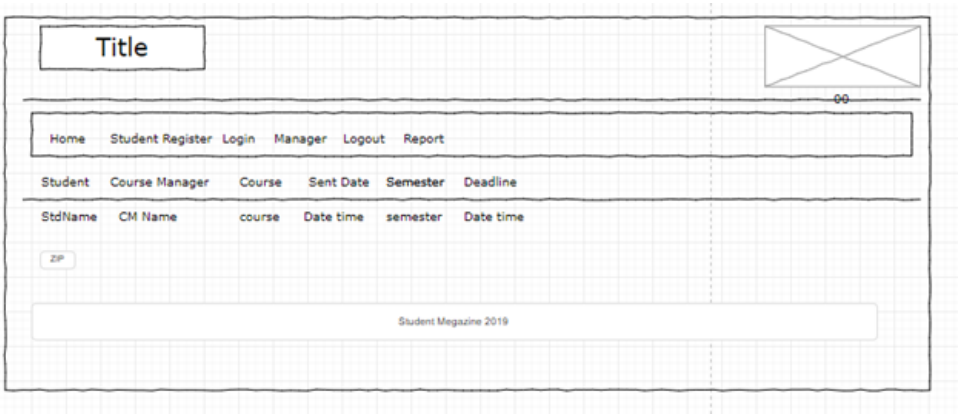


5. **Student Management**

This interface page is the student management page after entering all the valid information, user click "Insert" to insert information and in list interface website will list all student information stored in database.

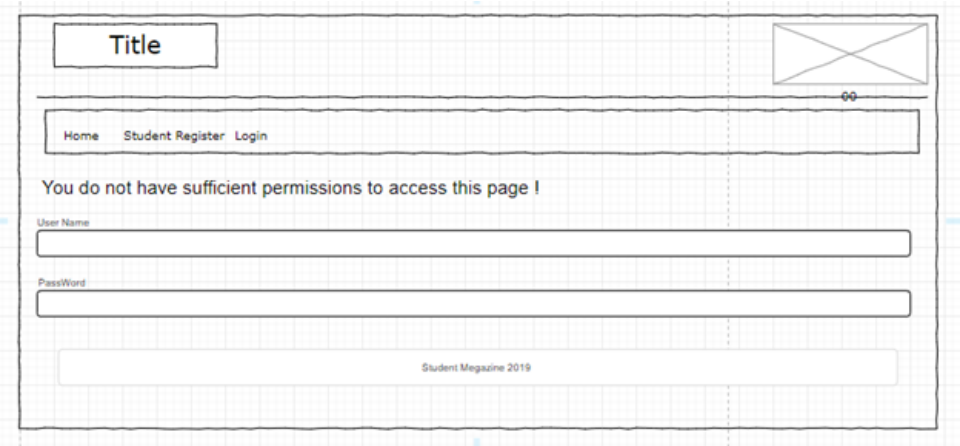
6. **University Marketing Manager interface**

This interface shows the function of the University Marketing Manager and can download student magazines, If the manager wants to download, they can click on the button "Zip" to download the magazine.



7. **Login Failed**

This interface page handles the function when the user wants to use any of the functions available in the project and must log in with the correct account and password. If you do not log in, then the project will show you that your account is not provided with permission and cannot access this page.

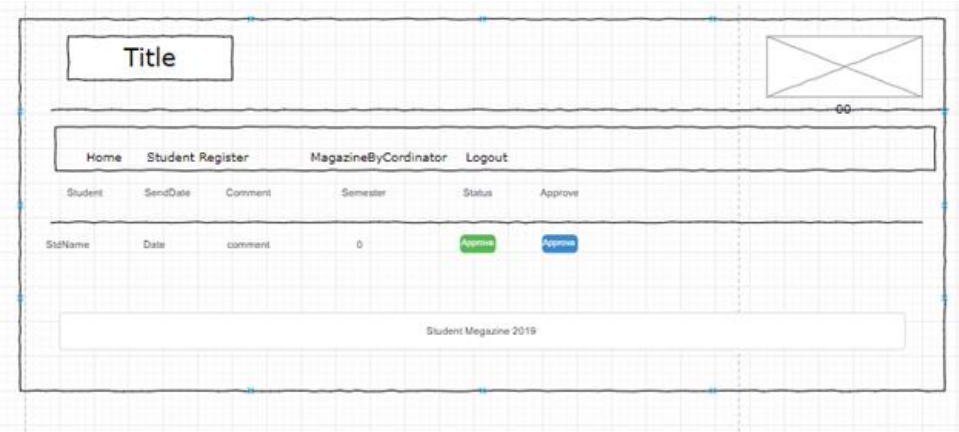


8. **Report for contributions uploaded**

When the University Marketing Manager login successfully, they can view the reports of uploaded contributions.

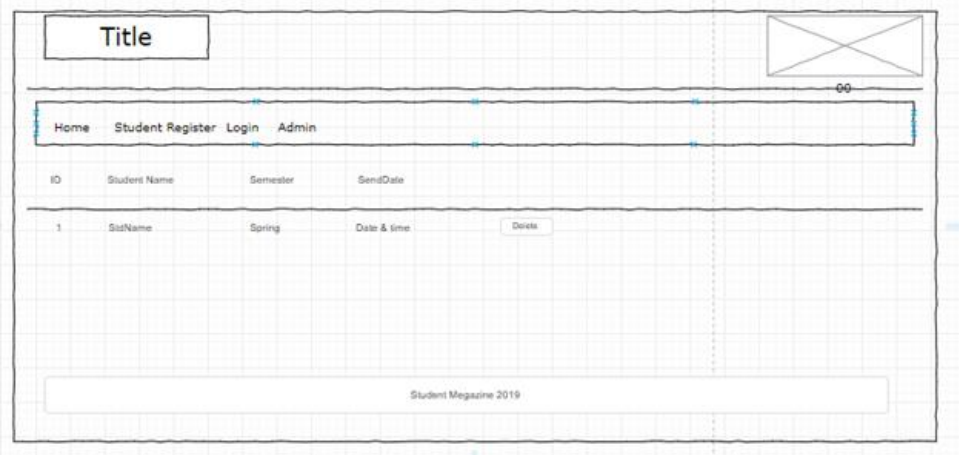
9. **Marketing Coordinator Management**

On this interface page is the magazine management page, which can then review and Approve the magazines into the system



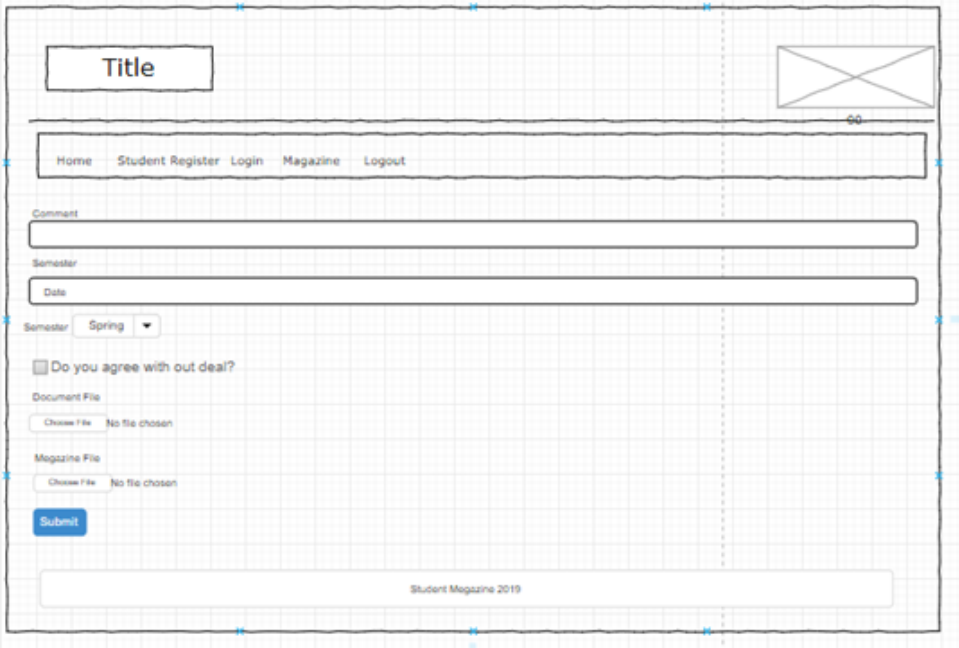
10. **Magazine Management**

After Approved the contribution, this interface is the interface page that Admin can view and delete items that do not comply with the information that the project requires.



11. **Contributions upload interface**

On this interface page, student can upload their contributions to the system by approve term and conditions, selecting Semester and selecting contribution file. After filling in the information required by the system, student click Submit button to upload their contribution.



Summary

In short, this is my project's low-fidelity design and in the next process we the design high-fidelity. We will implement the project in the best way, and we can improve it better than the low-fidelity version.

ii. **Sitemap**

As required, we have to design web-site as follows:

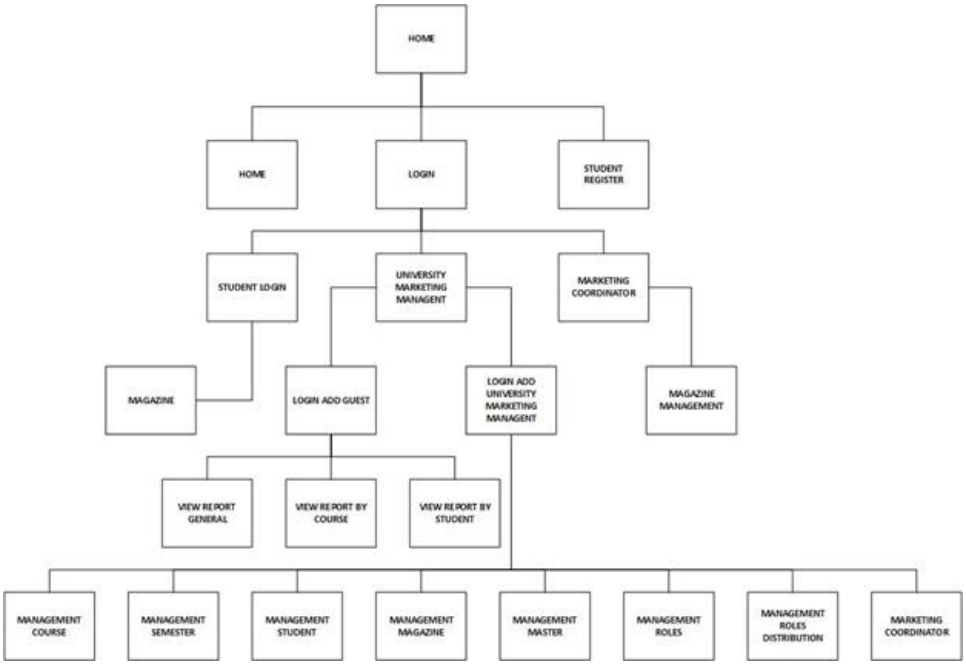
1. The "Home" site responsible for returning to the home page every time users access other sites.
2. The Student Register site will allow students to enter their personal information to create a login account. There will be a complete

section for students to fill out and select the industry (ex: IT, Business, etc.).

3. When logging in with the "Student" access, you can select the magazine file to upload, the system will update the specific time details when students upload the magazine file.
4. When logging in with access as "Guest" website will display the "Report" site, in this site will have 3 parts (General, By Course, By Student):
    a. The page "General" page will show information of Number of Contribution, Contribution of Spring Semester, Contribution of Summer Semester, Contribution without Comment.
    b. The page "By Course" page will show the display with a pie chart with the percentage statistics of the number of contributions divided by faculties.
    c. The page "By Student" page will show the display with a pie chart with the percentage statistics of each student when uploading files more or less.
5. When logging in with "University Marketing Manager" access, users will be able to download files that students upload on the website as a .zip file when downloading.
6. When logging in with "Administrator" access, website will display many different pages with different site to help admin can manage the data information of the website of those sites (Course, Semester, Student, Magazine, Master, Roles, Roles Distribution, Marketing Coordinator), the following will be the main tasks of the pages listed above:

a. The page "Course" page will allow admin to manage and add any industry and can customize the entered industries by editing or delete.
b. The page "Semester" page will allow the admin to manage and add any period and can customize those periods by editing or delete.
c. The page "Student" page, the administrator will be able to manage and create more accounts for any student and can edit any information to help students when there is a new change.
d. The page "Magazine" page, the admin can see the information displayed by the students. Details of the personal information of the file upload period and the specific time will be displayed on this page and admin will also have the right to delete. any student
e. The page "Master" page will allow the admin to manage and add any master if the admin want and admin can also change the information of each master and delete the master.
f. On "Roles" page will allow admin to manage username list and add any username if admin wants.
g. On the page "Roles Distribution" will allow admin can manage the list of roles distribution where admin can choose any master account and grant permission to display exactly to each selected master account, also for Users can update the permissions and edit the display information if desired.

Summary: This is the idea to implement the website with all the interfaces for the site's features. However, during the development process, we will improve the sitemap so that the site has an optimal sitemap.



IV. IMPLEMENTATION

a. LIST OF FILES CREATED AND ROLES

Below are the files created to implement the site's features

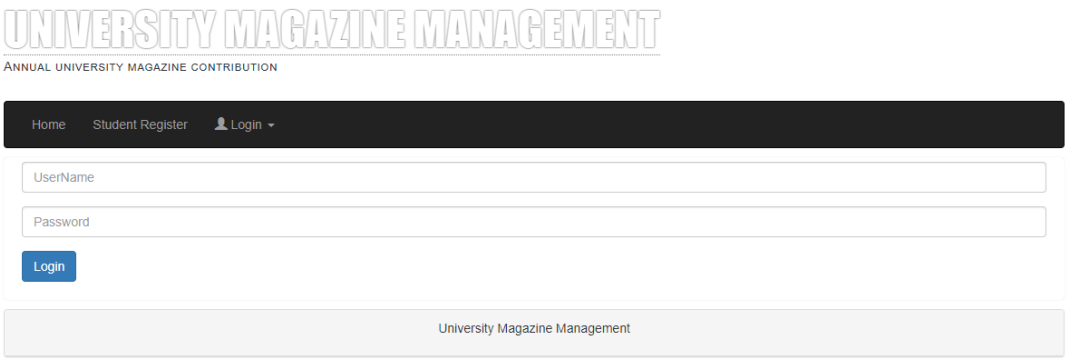
Type	File	Role
AdminController	AdminController.cs	Admin business logic
CoordinatorController	CoordinatorController.cs	Coordinator business logic
CoordinatorManagerController	CoordinatorManagerController.cs	Coordinator Management business logic
CourseManagerController	CourseManagerController.cs	Course Management business logic

HomeController	HomeController.cs	Home business logic
MangerController	MangerController.cs	Manager business logic
MasterManagerController	MasterManagerController.cs	Master Manager business logic
MasterRoleManagerController	MasterRoleManagerController.cs	Master Role business logic
MegazineController	MegazineController.cs	Magazine business logic
ReportController	ReportController.cs	Report business logic
RoleManagerController	RoleManagerController.cs	Role Manager business logic
SemesterManagerController	SemesterManagerController.cs	Semester Manager business logic
StudentController	StudentController.cs	Student business logic
StudentManagerController	StudentManagerController.cs	Student Manager business logic
MegazineManagerController	MegazineManagerController.cs	Magazine Manager business logic
AdminView	Index.cshtml	Admin main interface
AdminView	Login.cshtml	Admin login interface
CoordinatorView	Index.cshtml	Coordinator main interface
CoordinatorView	Login.cshtml	Coordinator login interface
CoordinatorView	MagazineByCordinator.cshtml	Magazine by student interface
CoordinatorManagerView	Index.cshtml	Admin's Coordinator Manager interface
CourseManagerView	Index.cshtml	Admin's Course Manager interface

MangerView	Index.cshtml	Manager main interface
MasterManagerView	Index.cshtml	Admin's Master Manager interface
MasterRoleManagerView	Index.cshtml	Admin's Master Role Manager interface
MegazineView	Index.cshtml	Magazine upload interface
MegazineManagerView	Index.cshtml	Admin's Magazine Manager interface
ReportView	Index.cshtml	Report interface
RoleManagerView	Index.cshtml	Admin's Role Manager interface
SemesterManagerView	Index.cshtml	Admin's Semester Manager interface
StudentView	Register.cshtml	Student Register interface
StudentView	Login.cshtml	Student Login interface
StudentManagerView	Index.cshtml	Student Manager interface

b. SCREEN SHOTS OF SYSTEM IN OPERATION

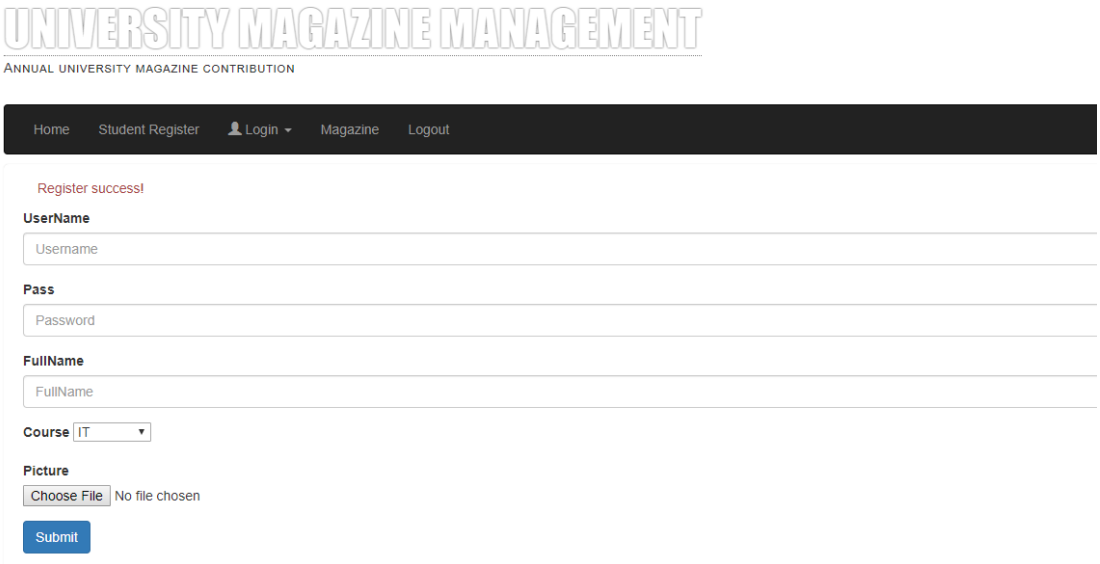
Login interface is the first interface when accessing the website.



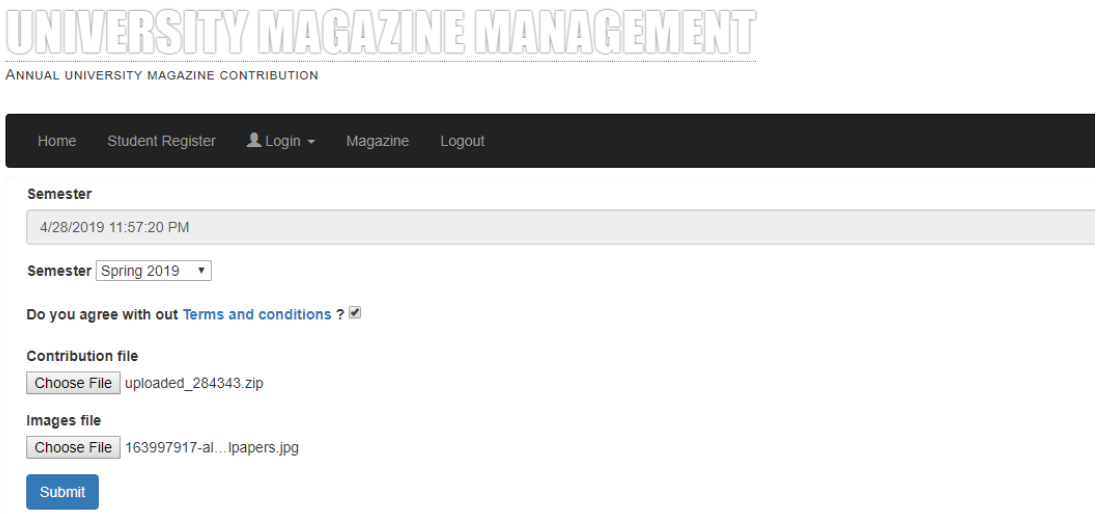
Below is the student registration. Students need to fill in the registration form including username, password, full name, courses and add picture.

The system will warn students if they do not fill in the registration form.

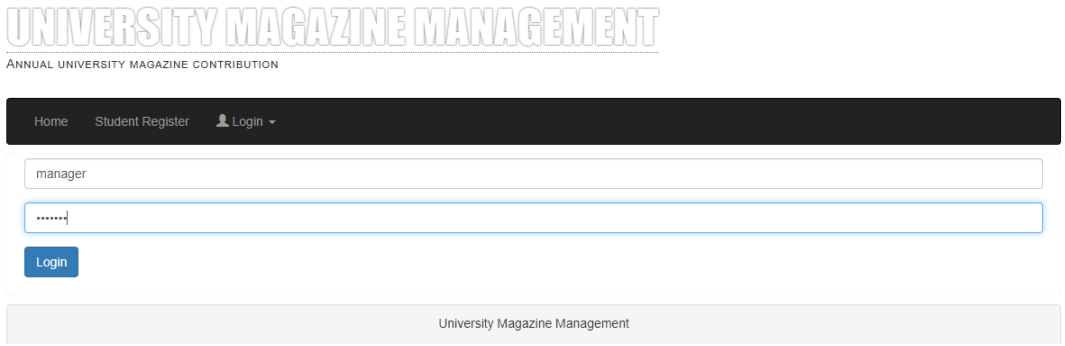
When registration is complete, the system will announce the Registration success



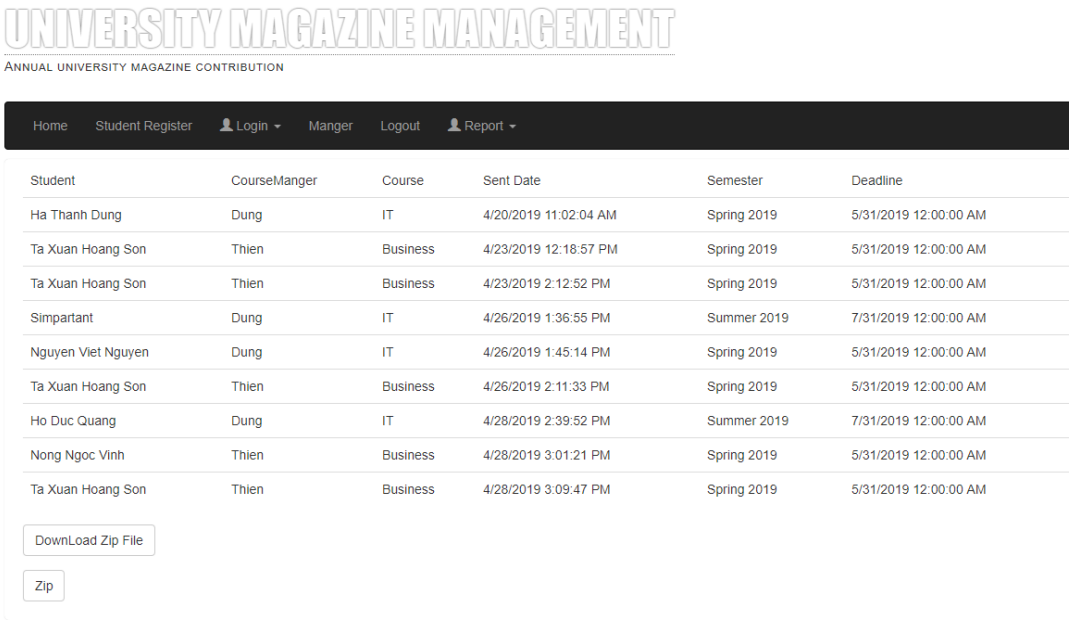
Below is the interface for students to upload student. In this interface students need to select semester and upload the document file, image. If semester has expired, the system does not allow students to upload files.



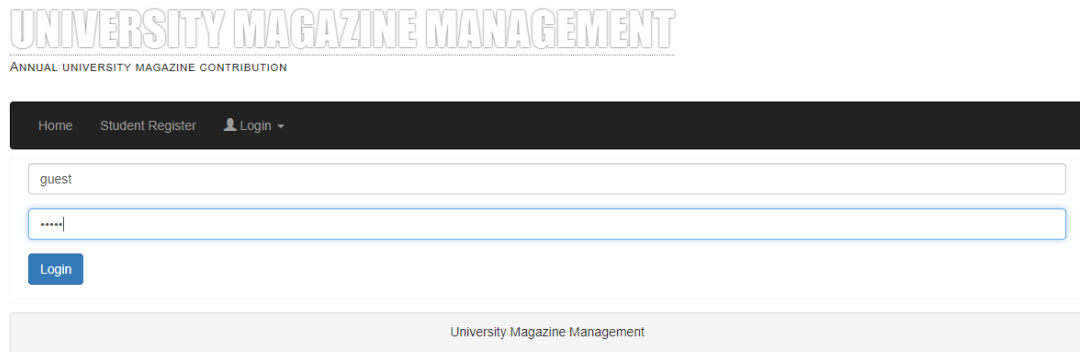
Below is the manager login interface.



The Manager can view the Post report that was sent by the student. And the manager can Zip and download the zip on their PC.



Below is the interface for Guest. At this interface guests can view the types of report contribution uploaded by students



UNIVERSITY MAGAZINE MANAGEMENT

ANNUAL UNIVERSITY MAGAZINE CONTRIBUTION

Home Student Register Login Manger Logout Report

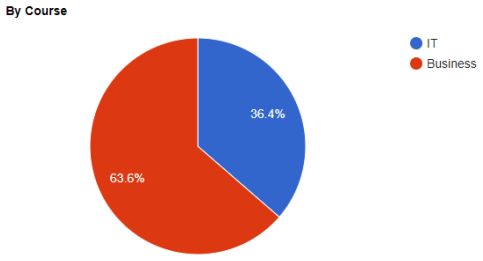
Number Of Contribution	Contribution of Spring Semester	Contribution of Summer Semester	Commentation	Contribution of IT	Contribution of Bussiness
11	9	2	0	4	7

University Magazine Management

UNIVERSITY MAGAZINE MANAGEMENT

ANNUAL UNIVERSITY MAGAZINE CONTRIBUTION

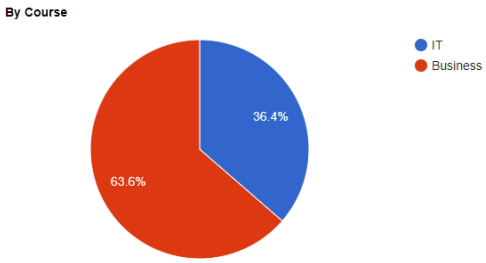
Home Student Register Login Manger Logout Report



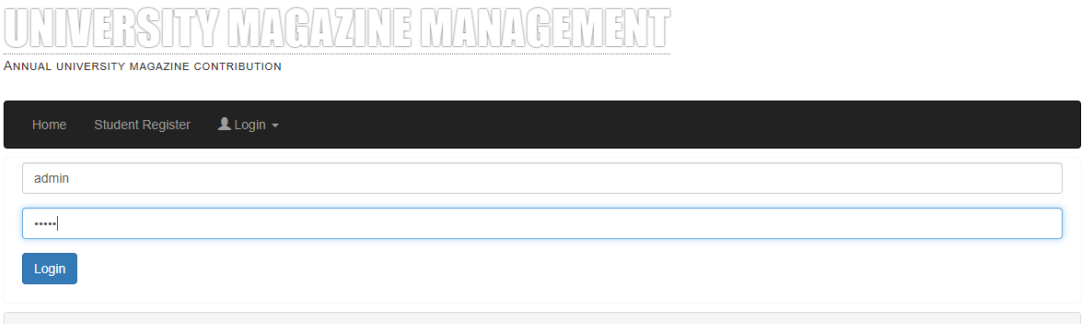
UNIVERSITY MAGAZINE MANAGEMENT

ANNUAL UNIVERSITY MAGAZINE CONTRIBUTION

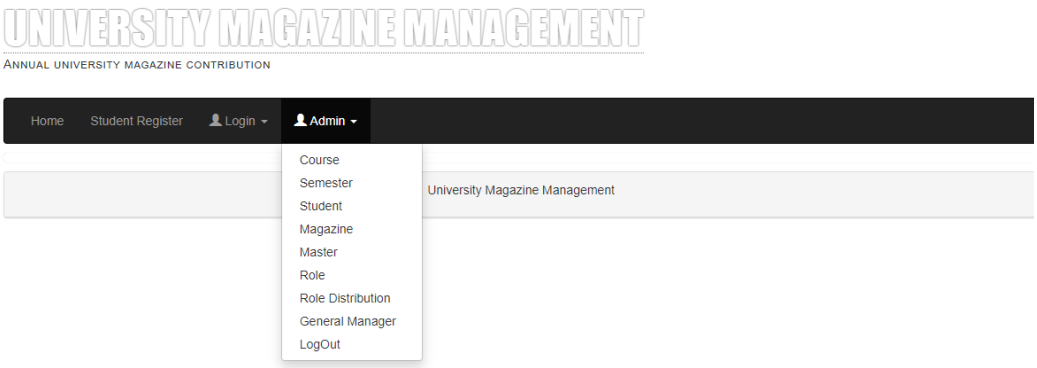
Home Student Register Login Manger Logout Report



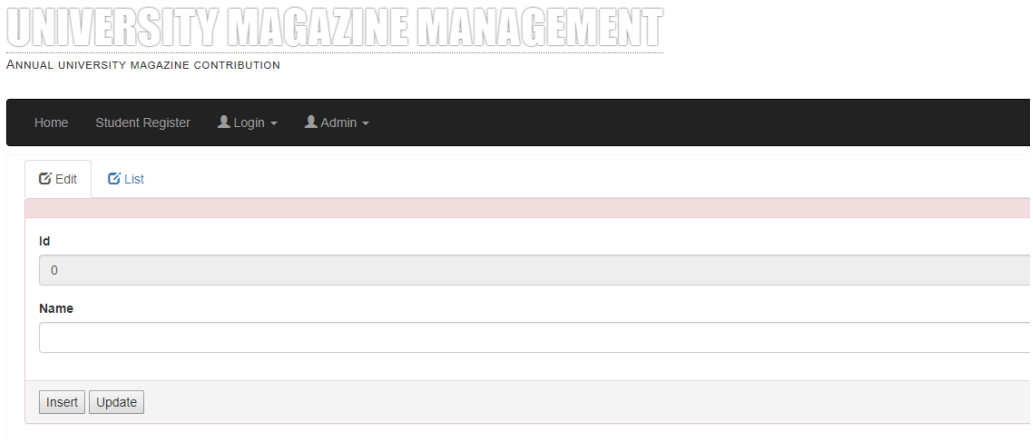
Below is the University Marketing Manager (admin) login interface

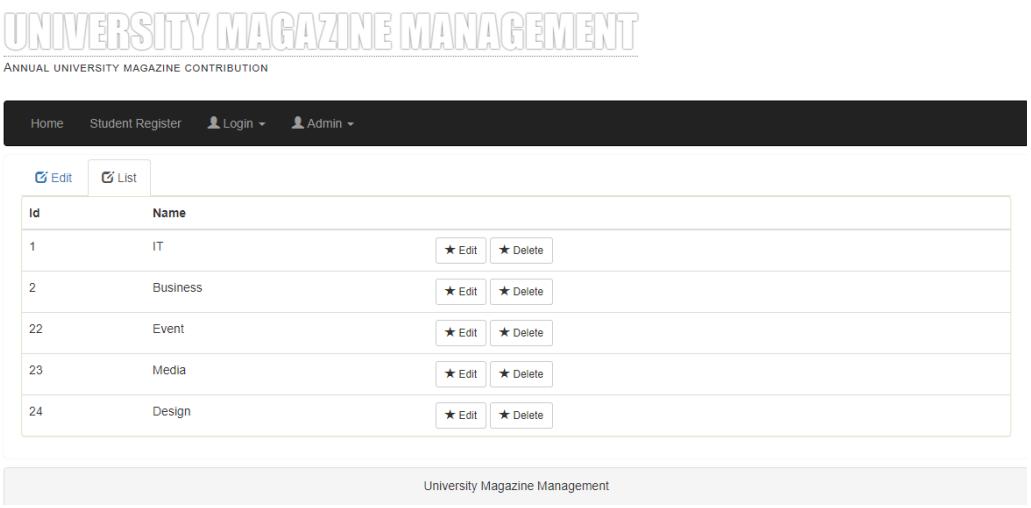


This is the roles that admin manages.

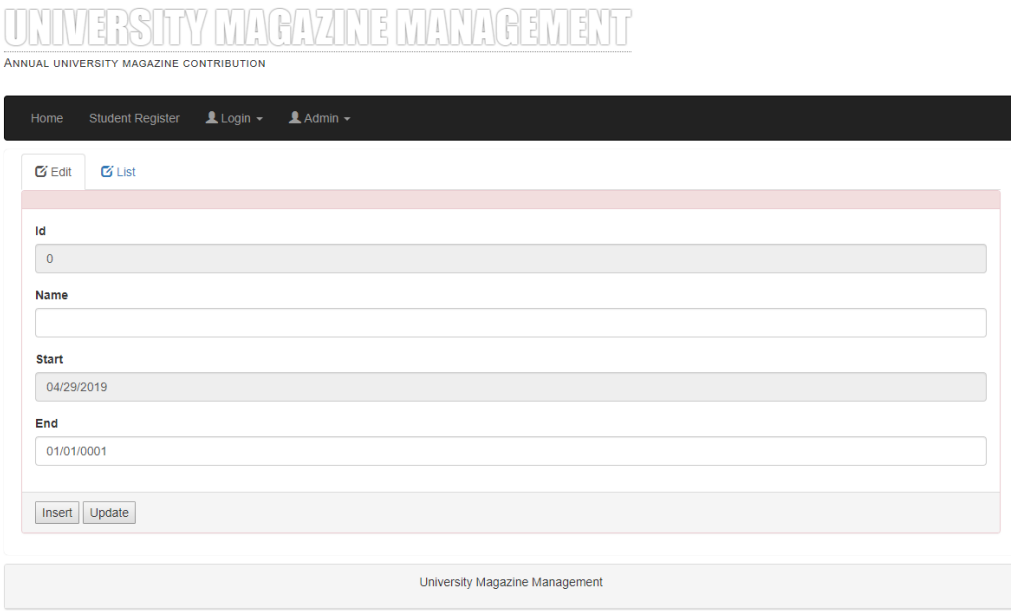


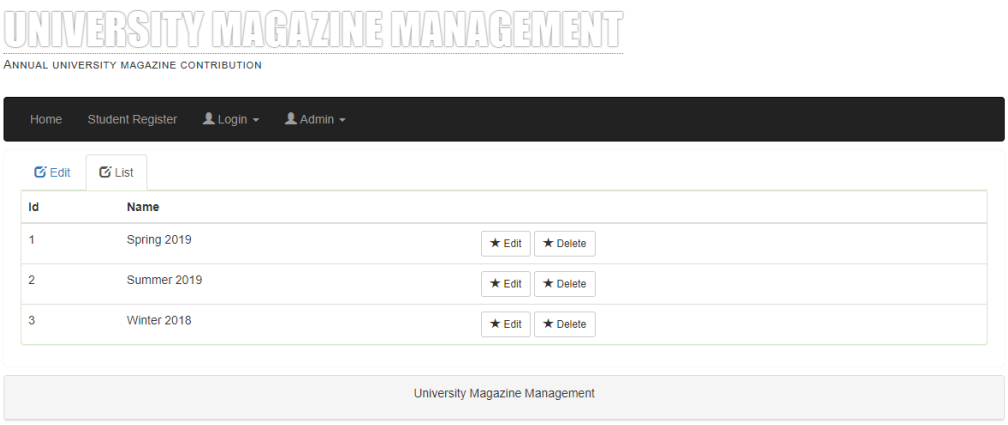
The University Marketing Manager Interface (Admin) can add and update information about the course and system Information



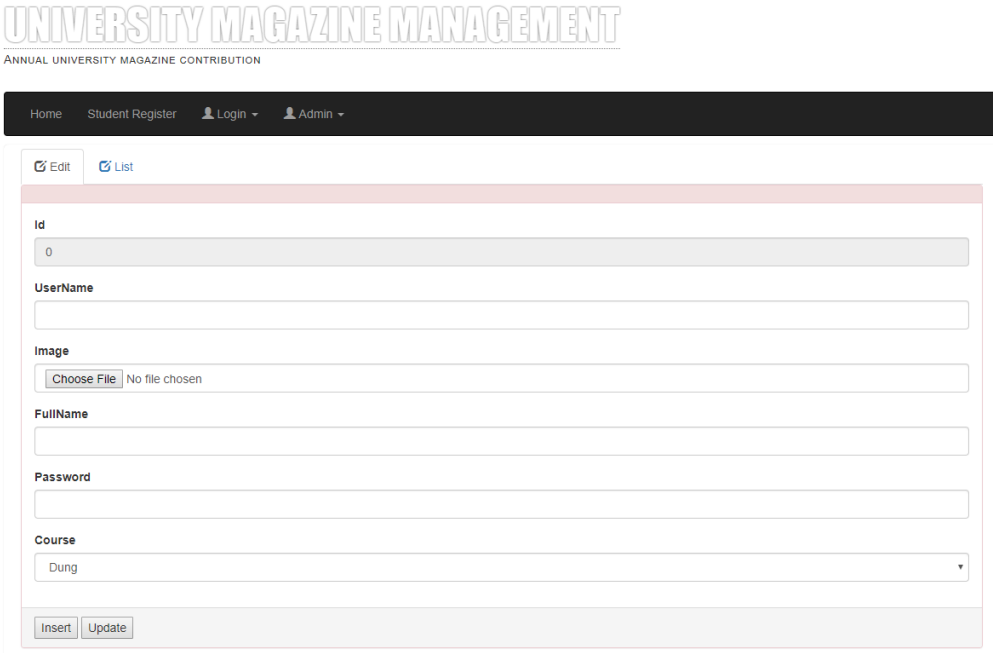


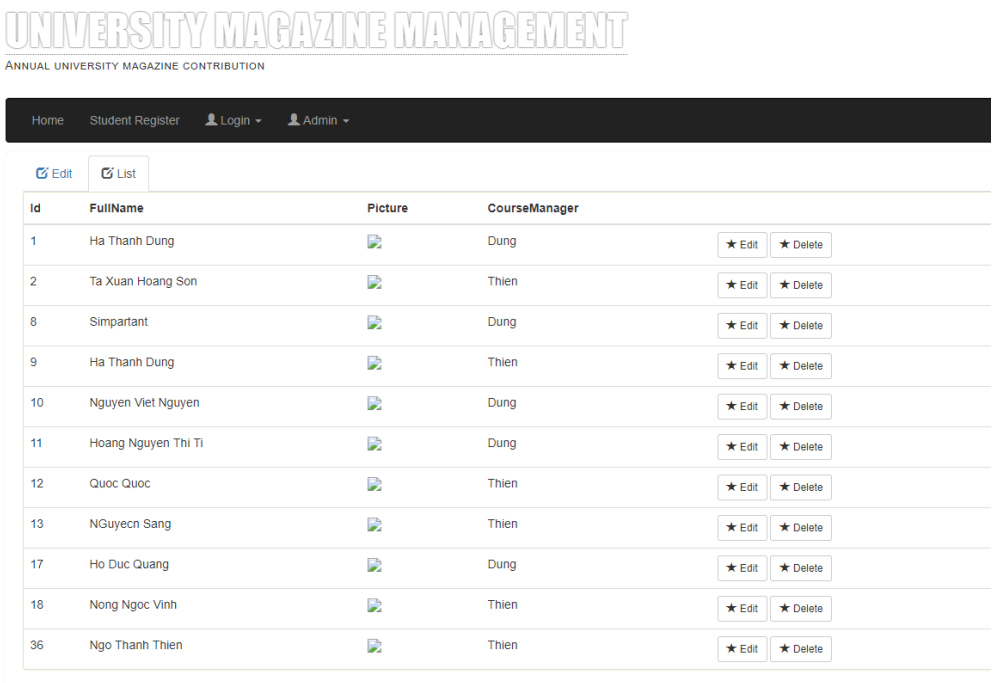
The University Marketing Manager (Admin) interface can add and update information about semester and system Information.



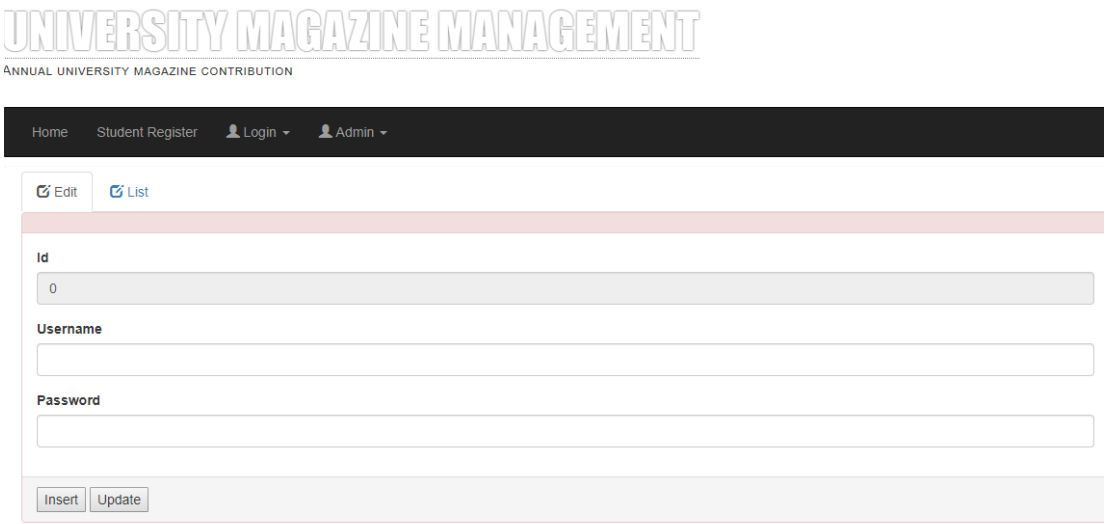


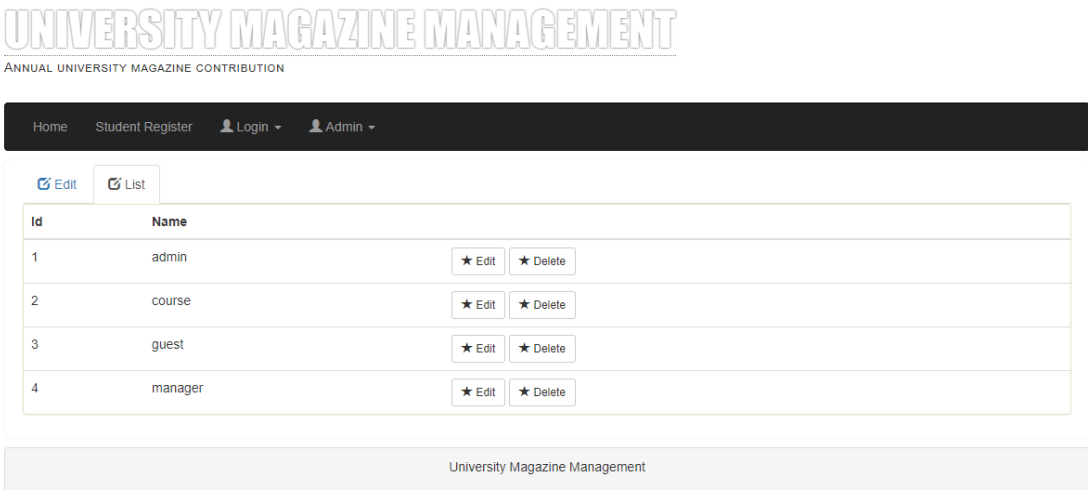
The University Marketing Manager Interface (Admin) can add and update information about student and system information.



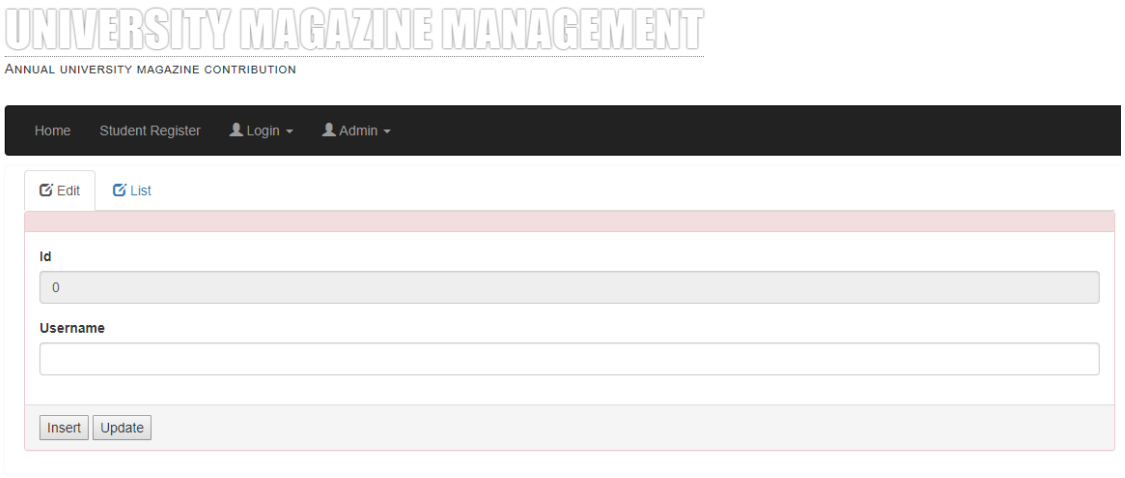


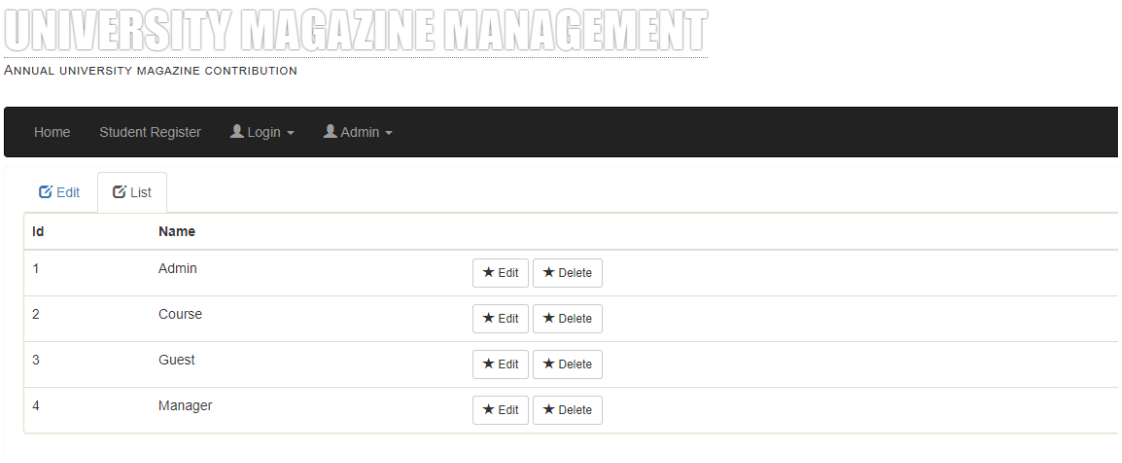
The University Marketing Manager Interface (Admin) can add and update information about master and system Information.



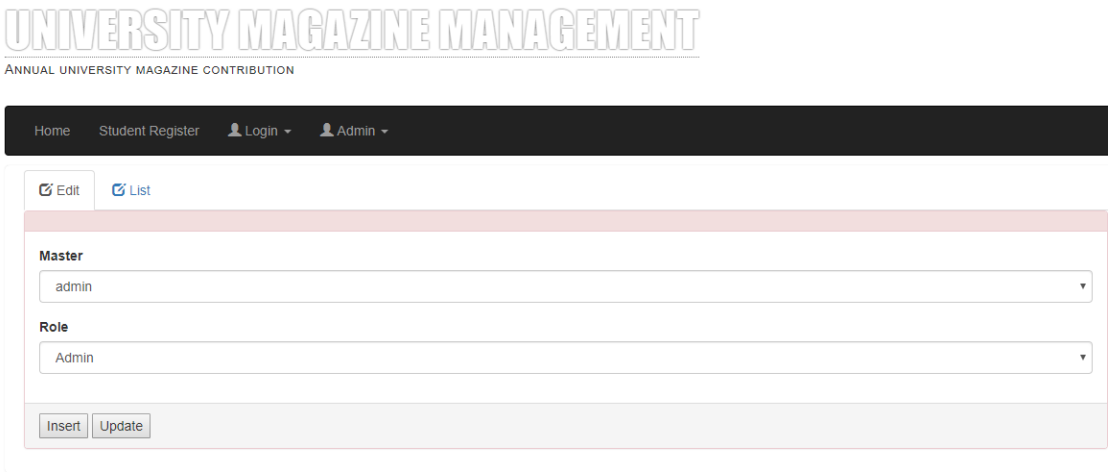


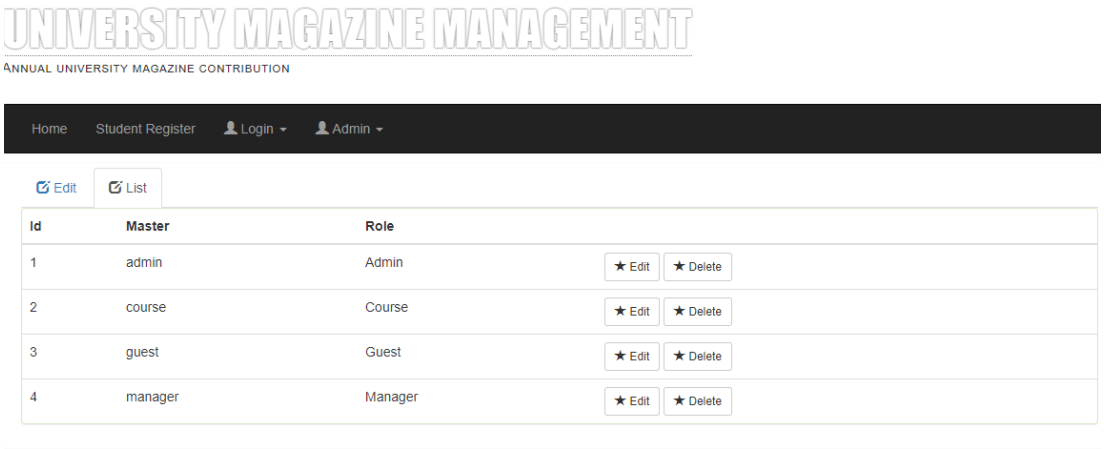
The University Marketing Manager Interface (Admin) can add and update information about the role and system information.



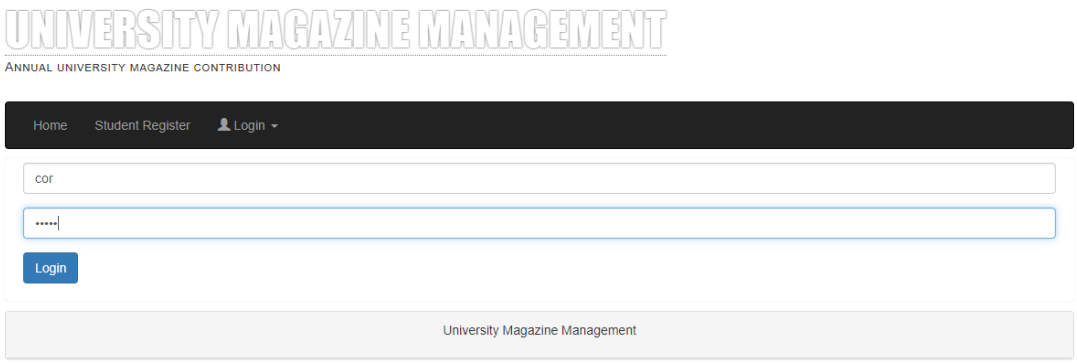


In this interface University Marketing Manager (Admin) can provide rights to use the features of the website.

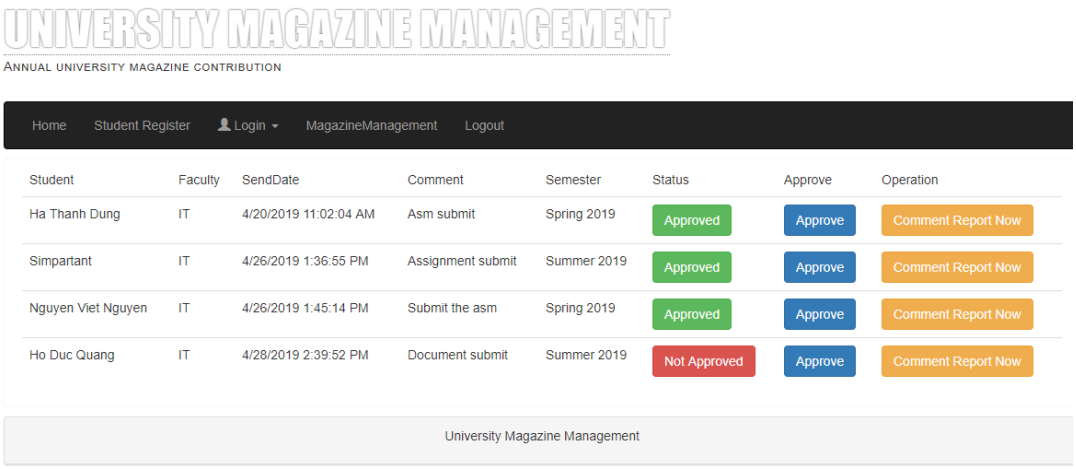




This is the login interface of Coordinator



In this interface coordinator can approve uploaded file by students and can leave a comment for the file uploaded.



V. TESTING

a. TEST PLAN

i. Scope

The goal of this document is to provide information about the plan to check the functions of the website, to ensure that all features work as expected.

ii. [TC01] User Registration

[ID] Name	[TC01] User Registration
Summary	The user creates a new account
Items to be tested	Registration
Users	All users except University Marketing Manager
Pre-conditions	None

Basic Course of Events	1. user browses to the website 2. website shows home interface 3. user clicks the register button 4. user input their information 5. user click submit button 6. website return to home page
Alternative Paths	1. In Step 5 the user information returns errors after the validation. In this case: ● The website display error and require user to input valid information ● Once user input valid information, website move to step 6
Post-conditions	The website created new account

iii. **[TC02] User Login**

[ID] Name	[TC02] User Login
Summary	The user logs in to the website
Items to be tested	Login
Users	All users
Pre-conditions	The user has resisted an account using the website

Basic Course of Events	1. The user browses to the website 2. The user clicks sign in button 3. The website presents the user with a login screen with the password field will show asterisk characters only 4. User input their account information 5. User click login button 6. The website navigates to home page
Alternative Paths	1. In Step 5 the password or the username doesn't match the system records. Website will display error and require user to input again
Post-conditions	The user is authenticated and has access to the website functions

iv. **[TC03] Student upload contributions**

[ID] Name	[TC03] Student upload contributions
Summary	The user upload contributions
Items to be tested	Upload contributions
Users	Student
Pre-conditions	Student must login first

Basic Course of Events	1. The student login to website 2. The student select file to upload 3. The student clicks upload button 4. The website display success notification
Alternative Paths	1. In Step 3 the student upload invalid file, website will display error
Post-conditions	The student uploaded contributions successfully

v. **[TC04] Receiving email**

[ID] Name	[TC04] Receiving email
Summary	Marketing coordinator receive notification email after student uploaded their contributions.
Items to be tested	Receive email
Users	Marketing coordinator
Pre-conditions	None
Basic Course of Events	1. Marketing coordinator get email notification 2. Marketing coordinator open email 3. Marketing coordinator click confirm link 4. Contributions of student has been approved

Alternative Paths	None
Post-conditions	Home page of website will be displayed

vi. **[TC05] Comment**

[ID] Name	[TC05] Comment
Summary	Marketing coordinator leave comment on student contribution
Items to be tested	Comment
Users	Marketing coordinator
Pre-conditions	Marketing coordinator must login first
Basic Course of Events	1. Marketing coordinator browse to student's contributions upload 2. Marketing coordinator click on comment box 3. Marketing coordinator input comment 4. Marketing coordinator click submit button 5. Website display Marketing coordinator's comment
Alternative Paths	None
Post-conditions	Marketing coordinator's comment displayed under student's contributions

vii. **[TC06] Download Contributions**

[ID] Name	[TC06] Download contributions
Summary	University Marketing Manager download student's contributions
Items to be tested	Download
Users	University Marketing Manager
Pre-conditions	The University Marketing Manager must login first
Basic Course of Events	1. University Marketing Manager browse to student's contribution 2. University Marketing Manager view contribution 3. University Marketing Manager click download button 4. University Marketing Manager download contributions successfully
Alternative Paths	None
Post-conditions	None

viii. **[TC07] Report production**

[ID] Name	[TC07] Report production
Summary	Website produce report from student's contributions
Items to be tested	Report production

Users	University Marketing Manager, Guest
Pre-conditions	The University Marketing Manager and Guest must login first
Basic Course of Events	1. University Marketing Manager and Guest browse to student's contribution 2. University Marketing Manager and Guest click view report button on selected report 3. Website display report
Alternative Paths	In step 2, Guest can only view report from their faculty
Post-conditions	Report displayed

b. TEST REPORT

Description		Reason
The total of Test Case	7	
The total steps of Test Case	32	
Number of steps are **PASS**	**32**	
Number of steps are **NOT PASS**	**0**	
Number of steps **still not test**	**0**	
Number of steps **don't test**	**0**	
The Test-Release rate is PASS	**100%**	
The Test-Release rate is NOT PASS	**0%**	
The test result:	**PASS**	

c. Summary

In this section, I have presented plans to test the system's features. As a result, the system successfully passes all tests. Based on the results, it can be said that our website has met all the requirements given.

VI. CONCLUSION

With the group's efforts combined with the application of the scrum model in the process of system development, the whole team has successfully completed the system and all related documents were completed. It can be said that the scrum model helps us keep track of the progress of the work and complete the work as expected. Although there are still some tasks that have not been completed as planned, however the scrum model helps us to adapt to the problems that occur during the development of the system quickly. Most importantly, the scrum model helps all members of the group to demonstrate transparency in the work process, transparency in the work progress. This is very valuable because it helps the whole team to accurately understand the progress of the work and can adapt to incidents happening quickly. In addition, meetings take place daily to help the group understand each other, the difficulties in the development process are presented in a comfortable way and the whole team can work together to solve those problems in a fast way. Finally, by using a scrum model, we learn a lot about teamwork skills such as communication skills, negotiation skills, problem solving skills, teamwork skills, and so on. These experiences are invaluable to us, and these knowledges will be very helpful to us and it can be an effective tool to help us develop ourselves and be able to adapt well in real working environment.