4. Test

After developing the features in each sprint, we must have the test to ensure the feature that developed met the user's requirement and good operations. Besides, when testing we will find the problem to solve soon and verify which features pass and fail. Table 4.1. Test Plan will show the testing results of all features of the system.

4.1. Test Plan

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Date | Test Number | Purpose | Process | Expected Result | Actual result | Status | Action Taken |
|  | 1 | Verify that the user can login successfully when they have account | 1. Enter the request information in login form  2. Click login | Notify a message login successful and go to their personal account | As Excepted | Pass | No further action required |
|  | 2 | Verify that the admin can add new account for student, manager, coordinator, guest and admin | 1. The admin will login the system with the admin account  2. go to the account management page and click on the add new account  3. fill all information field and choose the role in the list box for each role  4. Click register | Notify a message register successfully and back to the account management page | As Excepted | Pass | No further action required |
|  | 3 | Verify that admin can add faculty | 1. The admin will login the system with the admin account  2. go to the faculty management and click on the add new faculty  3. fill all information field  4. Click on Add to perform add new faculty | Notify a message add new faculty successfully and back to the faculty management page | As Excepted | Pass | No further action required |
|  | 4 | Verify that admin can update faculty | 1. The admin will login the system with the admin account  2. go to the faculty management and click on the update faculty  3. update the information field that want to update  4. Click on update button to perform add new faculty | Notify a message update faculty successfully and back to the faculty management page | As Excepted | Pass | No further action required |
|  | 5 | Verify that admin can delete faculty | 1. The admin will login the system with the admin account  2. go to the faculty management and click on the delete button to delete faculty | Notify a message delete faculty successfully and back to the faculty management page | As Excepted | Pass | No further action required |
|  | 6 | Verify that admin can add academic year | 1. The admin will login the system with the admin account  2. go to the academic year management and click on the add new academic year  3. fill all information field  4. Click on Add to perform add new academic year | Notify a message add new academic year successfully and back to the academic year management page | As Excepted | Pass | No further action required |
|  | 7 | Verify that admin can update academic year | 1. The admin will login the system with the admin account  2. go to the academic year management and click on the update button to update academic year  3. fill information field that want to update  4. Click on update button to perform update academic year | Notify a message update academic year successfully and back to the academic year management page | As Excepted | Pass | No further action required |
|  | 8 | Verify that admin can delete academic year | 1. The admin will login the system with the admin account  2. go to the academic year management and click on the delete button to delete academic year | Notify a message delete academic year successfully and back to the academic year management page | As Excepted | Pass | No further action required |
|  | 9 | Verify that student can add new article | 1. The student will login the system with the student account  2. Click on the add article  3. Fill all information field  4. Click on add button  5. Accept the term and click submit | The system will notify a message add article successfully and back to the student page | As Excepted | Pass | No further action required |
|  | 10 | Verify that coordinator will receive an email when student in their faculty submit a new contribution | 1. After submitting their new article the system will send an email to the coordinator in their faculty and the coordinator in that faculty will receive a notify email | The coordinator receives the notify email | As Excepted | Pass | No further action required |
|  | 11 | Verify that student can update their contribution | 1. The student will login the system with the student account  2. Click on the edit button in each article to go to the update article page  3. Edit the information field  4. Click update  5. Accept the term and click on submit button | Notify a message update article successfully and back to the student page | As Excepted | Pass | No further action required |
|  | 12 | Verify that student can delete their contribution | 1. The student will login the system with the student account  2. Click on the delete button in each article and the check popup will display  3. Click on the ok button to verify delete | Notify a message delete article successfully | As Excepted | Pass | No further action required |
|  | 13 | Verify that student can update their profile | 1. The student will login the system with the student account  2. Click on the profile management  3. Change the information that want to update  4. Click OK | The system will notify a message update profile successfully | As Excepted | Pass | No further action required |
|  | 14 | Verify that the coordinator can view the student’s contribution | 1. The coordinator will login the system with the coordinator account  2. Click on the list articles to view all the student contribution  3. Click on each article that want to view the information of that contribution | The system will go to the contribution detail page | As Excepted | Pass | No further action required |
|  | 15 | Verify that coordinator can set the status for a contribution | 1. The coordinator will login the system with the coordinator account  2. Click on the list articles to view all the student contribution  3. Click on the edit button to view the list status such as “approve and recheck” lick on the status to set the status for the article | The status of the contribution will be changed | As Excepted | Pass | No further action required |
|  | 16 | Verify that coordinator can statistical the number of contributions in their faculty for each year | 1. The coordinator will login the system with the coordinator account  2. After login succeed the system will navigate to the coordinator page and then click on the  3. filter the academic year to view statistical | The system will show the number of contributions of the faculty | As Excepted | Pass | No further action required |
|  | 17 | Verify that coordinator can manage their profile | 1. The coordinator will login the system with the coordinator account  2. Click on the manage profile item to go to the profile management page  3. Change the information that want to update  4. Click OK | The system will notify a message update profile successfully | As Excepted | Pass | No further action required |
|  | 18 | Verify that manager can view all student’s contribution that approved | 1. The manager will login the system with the manager account  2. After login succeed the system will navigate to the manager page and show all the approved contribution of students | The system shows the list of articles of all students if have and don’t show any article if do not have any contribution | As Excepted | Pass | No further action required |
|  | 19 | Verify that manager can view the student’s contribution detail that approved | 1. The manager will login the system with the manager account  2. After login succeed the system will navigate to the manager page and show all the approved contribution of students  3. Click on the eye button on each contribution to view contribution detail | The system shows the detail of the contribution | As Excepted | Pass | No further action required |
|  | 20 | Verify that manager can download one student’s contribution | 1. The manager will login the system with the manager account  2. After login succeed the system will navigate to the manager page and show all the approved contribution of students  3. Click on the download button on each contribution to download | The contribution will be download with the zip file | As Excepted | Pass | No further action required |
|  | 21 | Verify that manager can download all student’s contribution | 1. The manager will login the system with the manager account  2. After login succeed the system will navigate to the manager page and show all the approved contribution of students  3. Click on the download all button to download all contribution | All the student’s contribution will be download with the zip file | As Excepted | Pass | No further action required |
|  | 22 | Verify that manager can choose the student’s contribution to public | 1. The manager will login the system with the manager account  2. After login succeed the system will navigate to the manager page and show all the approved contribution of students  3. Click on the public button to public the contribution | The contribution status will be changed to ‘public’ and this contribution will show in home page | As Excepted | Pass | No further action required |
|  | 23 | Verify that admin, manager and guest can statistical the number of contributions of each faculty for each academic year | 1. The manager and admin will login the system with their account  2. After login succeed the system will navigate to their page and then click on the statistical to access to the statistical page  3. filter the faculty and the academic year to view statistical | The system will show the information about the number of the contributions of each faculty for each academic year | As Excepted | Pass | No further action required |
|  | 24 | Verify that admin, manager and guest can statistical the number of contributors of each faculty for each academic year | 1. The manager and admin will login the system with their account  2. After login succeed the system will navigate to their page and then click on the statistical to access to the statistical page  3. filter the faculty and the academic year to view statistical | The system will show the information about the number of the contributors of each faculty for each academic year | As Excepted | Pass | No further action required |
|  | 25 | Verify that admin, manager and guest can statistical the percentage of contributions of each faculty for each academic year | 1. The manager and admin will login the system with their account  2. After login succeed the system will navigate to their page and then click on the statistical to access to the statistical page  3. filter the faculty and the academic year to view statistical | The system will show the information about the percentage of contributions of each faculty for each academic year | As Excepted | Pass | No further action required |
|  | 26 | Verify that admin, manager and guest can statistical the number of contributions without comment of each faculty for each academic year | 1. The manager and admin will login the system with their account  2. After login succeed the system will navigate to their page and then click on the statistical to access to the statistical page  3. filter the faculty and the academic year to view statistical | The system will show the information about the number of contributions without comment of each faculty for each academic year | As Excepted | Pass | No further action required |
|  | 27 | Verify that admin, manager and guest can statistical the number of contributions without comment after 14 days of each faculty for each academic year | 1. The manager and admin will login the system with their account  2. After login succeed the system will navigate to their page and then click on the statistical to access to the statistical page  3. filter the faculty and the academic year to view statistical | The system will show the information about the number of contributions without comment after 14 days of each faculty for each academic year | As Excepted | Pass | No further action required |
|  | 28 | Verify that admin can statistical the pages are viewed the most | 1. The admin will login the system with the admin account  2. After login succeed the system will navigate to admin page and then click on the statistical to access to the statistical page | The system will show the information about the pages are viewed the most | As Excepted | Pass | No further action required |
|  | 29 | Verify that admin can statistical the users are active the most | 1. The admin will login the system with the admin account  2. After login succeed the system will navigate to admin page and then click on the statistical to access to the statistical page | The system will show the information about the users are active the most | As Excepted | Pass | No further action required |
|  | 30 | Verify that admin can statistical the browser being used | 1. The admin will login the system with the admin account  2. After login succeed the system will navigate to admin page and then click on the statistical to access to the statistical page | The system will show the information about the browser being used | As Excepted | Pass | No further action required |
|  | 31 | Verify that new users will be welcomed when they access the system | 1. The user login to the system by their account with the first login | The system will welcome to the new user | As Excepted | Pass | No further action required |
|  | 32 | Verify that the system will remind the user about the last login | 1. The user logout of the system | The system will remind them for the last login | As Excepted | Pass | No further action required |
|  | 33 | Verify that user can change their password account | 1. After user login to the system in their account  2. click on the user list box and click on the password  3. Enter the old password  4. Enter the new password and confirm the new password  5. click Ok button to change | The system will notify a message change password successfully | As Excepted | Pass | No further action required |
|  | 34 | Verify that user can logout of the system | 1. After user login to the system in their account  2. click on the user list box and click on the Logout button | The system will go to the login page | As Excepted | Pass | No further action required |
|  | 35 | Verify that the layout can fix with multiple screen | Run the system with some screen sizes | The system layout will fix with the screen that using | As Excepted | Pass | No further action required |

4.2. Scope

The website is developed to use managing and collection the contribution of the student and articles for an annual university magazine in a large university.

4.3. Test log

|  |  |
| --- | --- |
| **Student Functionalities** | |
| **Feature** | **Description** |
| Login | The student can login to the system by the account that provided before |
| Reset password | The student can reset their password when they forget |
| Add new contribution and image thumbnail | The student can upload a file word document and an image thumbnail file to make a new contribution |
| Accept the term condition when submit or update the contribution | The student must accept the term condition when they want to submit or update their contribution |
| Update the contribution and image thumbnail of the contribution that add before | The student can update the information of the contribution that add before |
| Delete the contribution | The student can delete their contribution |
| Profile management | The student can manage their profile, they can change their profile information |
| Logout | The student can logout of the system |
| **Marketing Coordinator** | |
| **Feature** | **Description** |
| Login | The coordinator can login to the system by the account that provided before |
| Reset password | The student can reset their password when they forget |
| View the student’s contribution | The coordinator can view the article contribution of the student in their faculty |
| Comment feedback to the student’s contribution | The coordinator can comment their feedback to the contribution of the student in their faculty |
| Update the comment in the contribution | The coordinator can update their comment on the contribution of the student in their faculty |
| Delete the comment in the contribution | The coordinator can delete their comment on the contribution of the student in their faculty |
| Change the student’s contribution status | The coordinator can change the status of the contribution of the student in their faculty. For example, they can change the status of the article contribution to “Approved” or “Recheck” |
| Profile management | The coordinator can manage their profile to change some information in their project |
| View statistical about the number of contributions | The coordinator can view the report and statistical about the number of contributions in their faculty |
| Logout | The coordinator can logout of the system |
| **Marketing Manager** | |
| **Feature** | **Description** |
| Login | The manager can login to the system by the account that provided before |
| Reset password | The student can reset their password when they forget |
| View all the selected contribution | The manager can view all the contribution of all faculties |
| Decide to public the contribution to article | The manager can make decision that the student’s contribution can be public or not |
| View all the article | The manager can view all the article in the system |
| Download one or all article | The manager can download one or all articles |
| Statistical the number of contributions | The manager can statistical the number of contributions in each faculty in each year |
| Statistical percentage of contributions | The manager can statistical percentage of contributions by each Faculty for any academic year |
| Statistical the number of contributors | The manager can statistical the number of contributors within each Faculty for each academic year |
| Statistical the contributions without a comment | The manager can statistical the contributions without a comment |
| Statistical the contributions without a comment after 14 days | The manager can statistical the contributions without a comment after 14 days |
| Profile management | The manager can manage their profile, they can change their profile information |
| Logout | The manager can logout of the system |
| **Admin** | |
| **Feature** | **Description** |
| Login | The admin can login to the system by the admin account |
| Reset password | The admin can reset their password account when they forget |
| Register account | The admin can create account for student, manager, coordinator, guest, and for new admin |
| Faculty management | The admin can manage the faculty. They can view, add, update and delete faculty |
| Academic year management | The admin can manage the academic year. They can view, add, update and delete academic year |
| Statistical the number of contributions | The admin can statistical the number of contributions in each faculty in each year |
| Statistical percentage of contributions | The admin can statistical percentage of contributions by each Faculty for any academic year |
| Statistical the number of contributors | The admin can statistical the number of contributors within each Faculty for each academic year |
| Statistical the contributions without a comment | The admin can statistical the contributions without a comment |
| Statistical the contributions without a comment after 14 days | The admin can statistical the contributions without a comment after 14 days |
| Statistics the pages are viewed the most | The admin can statistics the pages are viewed the most |
| Statistical the which users are active the most | The admin can statistics the users are active the most |
| Statistical the browser being used | The admin can statistics the browser being used |
| Profile management | The admin can manage their profile, they can change their profile information |
| Logout | The admin can logout of the system |
| **Guest** | |
| **Feature** | **Description** |
| Login | The guest can login to the system by the guest account |
| Reset password | The guest can reset their password account when they forget |
| View all public article | The guest can view all the articles that public |
| Logout | The guest can logout of the system |
| **General website features** | |
| New users will be welcomed when they access the system | The website will create the welcome animation to welcome to the new user |
| Remind the user about the last login | The website will remind the user in the last logout |
| Responsive | The website can be used on multiple devices and can adapt to a suitable layout on different screen sizes |
| Password security | The password of each account should be at least 8 characters with at least one upper letter and the step to login avoid SQL injection |

4.4. Sufficient

After developing the system, to ensure the features of the system will meet all the user requirements and the system operating well. We performed testing all the functionalities which had been implemented. Besides, we added the sample data was populated with 100 magazine contributions, each belonging to one of 150 users and each role will be performed each certain feature. Furthermore, using produced data not only ensured that different functions could be tested but also made it possible to analyze how well the system would work as the size of the data sets increased. The table below is the table with all accounts with each different role created to test the system.

|  |  |  |
| --- | --- | --- |
| Role | Username | Password |
| Marketing Manager | manager | Admin@123 |
| Marketing Coordinator – Information Technology | coordinator-it | Admin@123 |
| Marketing Coordinator - Business | coordinator-bus | Admin@123 |
| Marketing Coordinator – Design | coordinator-des | Admin@123 |
| Student – Information Technology | student-it | Admin@123 |
| Student - Business | student-bus | Admin@123 |
| Student - Design | student-des | Admin@123 |
| Guest – Information Technology | guest-it | Admin@123 |
| Guest - Business | guest-bus | Admin@123 |
| Guest - Design | guest-des | Admin@123 |
| Admin | admin | Admin@123 |

5. Agile Methods Followed

5.1. Code Repository

In this project, my team will use GitHub to control and save the code of the project. GitHub is a web-based tool and used for software project collaboration and version management. With an internet connection, we may collaborate on projects from any location. It provides tools for us to host, review, and manage code, as well as to track and resolve issues or bugs. With GitHub, we will be easy to manage and maintain the code. (coursera, 2024)

5.2. Development tools

5.2.1. Design diagram tools

Miro is an online tool that allows users to create and share drawings, diagrams, and charts easily and flexibly. Developed based on cloud technology, Miro provides a multi-user working environment, enabling team members to interact and collaborate online from anywhere in the world, at any time. The flexibility of Miro enables users to create wireframes, mind maps, architectural drawings, and various types of documents, from initial ideas to detailed designs. One of Miro's strengths is its ability to integrate with other tools such as Google Drive, Dropbox, and Slack, making sharing and accessing documents more convenient. (Miro, 2024)

Our team chose to use Miro to draw wireframes and design the website of the project due to its flexibility, ease of use, and collaborative capabilities. The combination of drawing tools and sharing features of Miro has helped us create drawings and charts efficiently, while optimizing the team workflow and keeping all members updated with the project progress.

5.2.2. Back-end development tools and techniques

In this project, we used the ASP.Net Web API framework to support we develop features for the system. Microsoft created the ASP.NET Web API framework to enable developers to create HTTP services that are accessible to a range of clients, such as desktop programs, mobile apps, and web browsers. It is a component of the larger ASP.NET framework, which is utilized to create services and online apps using the.NET platform. In addition, with the ASP.Net framework a lot of libraries to help us easily in developing. (microsoft, 2024)

C# is a programming language developed by Microsoft and is part of the .NET framework. It is a high-level, object-oriented programming language made for creating a variety of applications, including web applications, desktop applications, mobile apps, cloud-based services, and games. (microsoft, 2024)

The tools that we use to support for developing back-end is Visual Studio. Visual Studio is an integrated development environment (IDE) for creating a variety of software applications. It offers an extensive feature set and tool set to assist every step of the software development lifecycle, from testing, deployment, and maintenance to developing and debugging code. Developers create programs for Windows, the web, mobile devices, cloud, and other platforms using Visual Studio on a regular basis (microsoft, 2024)

5.2.3. Front-end development tools and technologies

In this project, we used the Angular development platform with Type script to support us in developing the interface of the system. Angular web application framework developed and maintained by A group of engineers from Google and others maintain the open source. It is built using TypeScript, which is a superset of JavaScript, and is used to create dynamic single-page web applications (SPAs). A wide range of tools and frameworks, including data binding, dependency injection, routing, and other functionalities, are available with Angular for creating contemporary online applications. In addition, Angular is easy to use and controls the code. Moreover, Angular supports a lot of libraries, that make us easy to develop the interface of the system. (angular, 2024)

The tools that we use to support for developing front-end is Visual Studio Code. Visual Studio Code (VS Code), a cross-platform, free, open-source source code editor is created by Microsoft. It offers a robust yet lightweight environment for editing and debugging code on a variety of platforms and programming languages (Microsoft, 2024)

5.3. Scrum Plan

To guarantee that deadlines are fulfilled within a certain time frame, the scrum master (Duy) developed the sprint and scrum plans. The development team decided what was needed during the longer sprints, which lasted one week, in order to guarantee that a reasonable task was established and met. The scrum master (Duy) scheduled weekly meetings during each sprint to go over progress and come up with ideas for fixing any problems that came up. A sprint review was conducted following the one-week timeframe to evaluate the team's performance and the sprint methodology. After every sprint, the prototype was also shown to the members of the team, which helped determine what might be accomplished in the following sprint and how to go about doing it.

5.4. Burndown Chart

- Sprint 1:

A screenshot of a computer

Description automatically generated

A graph with green and blue lines

Description automatically generated

- Sprint 2:

A screenshot of a computer

Description automatically generated

A graph with a line and a line

Description automatically generated with medium confidence

- Sprint 3:

A screenshot of a computer

Description automatically generated

A graph with green and blue lines

Description automatically generated

- Sprint 4:

A screenshot of a computer

Description automatically generated

A graph with a line and a line

Description automatically generated with medium confidence

- Sprint 5:

A close up of a document

Description automatically generated

A graph with green and blue squares

Description automatically generated

- Sprint 6:

A screenshot of a computer screen

Description automatically generated

5.5. Minutes of Meetings

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Meeting No** | **Date** | **Minutes of meeting** | **What was discussed** | **Tasks Achieved:** | **Member present:** |
| 1 | 26/2/2024 | 120 | 1. Discussed technologies to use 2. Github tutorial 3.Created User Stories | 1. Choose ASP.Net Web API, SQL Server, Boostrap, CSS, Html, Angular 2. Create github 3. Finish all user stories | Khoi, Kiet, Thai, Huynh, Duy |
| 2 | 29/2/2024 | 120 | 1. Progress reports of sprint 1 2. Review the system with the user about the register and login features | 1. Not complete all task of the sprint 1 with one feature reset password and set this feature to sprint 2 2. Presented the features that completed of the sprint 1 to the user | Khoi, Kiet, Thai, Huynh, Duy, User |
| 3 | 03/01/2024 | 120 | 1. Evaluate the strength and weakness of team member 2. Solve the problem (if any) | 1. Completed the sprint 1 on time and don’t have any issue | Khoi, Kiet, Thai, Huynh, Duy |
| 4 | 03/04/2024 | 120 | 1. Discussed about the task and assign work to members | 1. Completed the tasks assigning for each member in sprint 2 | Khoi, Kiet, Thai, Huynh, Duy |
| 5 | 03/08/2024 | 120 | 1. Progress reports of sprint 2 2. Review the system with the user about the reset password and faculty and academic year management features and the articles management with of student | 1. Completed all task of the sprint 2 2. Presented the features that completed of the sprint 2 and the reset password feature that's late from sprint 1 to the user | Khoi, Kiet, Thai, Huynh, Duy, User |
| 6 | 8/3/2024 | 120 | 1. Evaluate the strength and weakness of team member 2. Solve the problem (if any) | 1. Completed the sprint 2 on time and don’t have any issue | Khoi, Kiet, Thai, Huynh, Duy |
| 7 | 11/3/2024 | 120 | 1. Discussed about the task and assign work to members | 1. Completed the tasks assigning for each member in sprint 3 | Khoi, Kiet, Thai, Huynh, Duy |
| 8 | 14/3/2024 | 120 | 1. Progress reports of the sprint 3 2. Review the system with the user about the comment management feature of coordinator role and choose the contribution of the student to approve or reject feature. In addition, report about the view contribution that approved of manager | 1. Completed all task of the sprint 3 2. Presented the features that completed of the sprint 3 to the user | Khoi, Kiet, Thai, Huynh, Duy, User |
| 9 | 15/3/2024 | 120 | 1. Evaluate the strength and weakness of team member 2. Solve the problem (if any) | 1. Completed the sprint 3 on time and don’t have any issue | Khoi, Kiet, Thai, Huynh, Duy |
| 10 | 18/3/2024 | 120 | 1. Discussed about the task and assign work to members | 1. Completed the tasks assigning for each member in sprint 4 | Khoi, Kiet, Thai, Huynh, Duy |
| 11 | 21/3/2024 | 120 | 1. Progress reports of the sprint 4 2. Review the system with the user about the download all approved contributions of manager role and view the statistical report about the contributions in their faculty of coordinator role and statistical about the number of contributions and contributor within each Faculty for each academic year and the percentage of contributions by each Faculty for any academic year. | 1. Completed all task of the sprint 4 2. Presented the features that completed of the sprint 4 to the user | Khoi, Kiet, Thai, Huynh, Duy, User |
| 12 | 22/3/2024 | 120 | 1. Evaluate the strength and weakness of team member 2. Solve the problem (if any) | 1. Completed the sprint 4 on time and don’t have any issue | Khoi, Kiet, Thai, Huynh, Duy |
| 13 | 25/3/2024 | 120 | 1. Discussed about the task and assign work to members | 1. Completed the tasks assigning for each member in sprint 5 | Khoi, Kiet, Thai, Huynh, Duy |
| 14 | 28/3/2024 | 120 | 1. Progress reports of the sprint 4 2. Review the system with the user about the contributions without a comment and the contribution without comment after 14 days | 1. Completed all task of the sprint 5 2. Presented the features that completed of the sprint 5 to the user | Khoi, Kiet, Thai, Huynh, Duy, User |
| 15 | 29/3/2024 | 120 | 1. Evaluate the strength and weakness of team member 2. Solve the problem (if any) | 1. Completed the sprint 5 on time and don’t have any issue | Khoi, Kiet, Thai, Huynh, Duy |
| 16 | 1/4/2024 | 120 | 1. Discussed about the task and assign work to members | 1. Completed the tasks assigning for each member in sprint 6 | Khoi, Kiet, Thai, Huynh, Duy |
| 17 | 5/4/2024 | 240 | 1. Review all features of the system 2. Review document report 3. Unify and close project | 1. Completed all of the features of the system 2. Copleted the document report 3. Hand over the system to users | Khoi, Kiet, Thai, Huynh, Duy, User |

5.6. User stories

As an admin, they can create a new account for manager, coordinator, student, guest, and admin

As a user, they can login to the system with their account that created before by admin

As a user, they can reset their account password when they forgetting

As a user, they can change their account password

As a user, they can manage their profile to change their information

As a user, they can logout of the system

As a student, they can add, view, update, and delete their contribution

As a student, they can reply the coordinator’s comment on their contribution

As a coordinator, they can view all the student’s contributions in their faculty

As a coordinator, they can comment the feedback to the student’s contribution

As a coordinator, they can make decisions to approve or reject the student's contribution

As a coordinator, they can view the statistical of the number of contributions in their faculty

As a manager, they can view all the approved contributions

As a manager, they can download one or more approved contributions

As a manager, they can make decisions to public and private with the approved contributions

As a manager, administrator and guest, they can view the statistical about the number of contributions and contributions in each faculty for each academic year

As a manager, administrator and guest, they can view the statistical about the number of contributions without comment in each faculty for each academic year

As a manager, administrator and guest, they can view the statistical about the number of contributions without comment after 14 days in each faculty for each academic year

As a guest and manager, they can view all the articles that have in the system

As a guest and manager, they can view all the articles detail that have in the system