# SRS Document



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## 1. Brief Description

In this section, you will have an overview of the topics which will be covered in this SRS document, including but not limited to a brief description of the entire system, the purposes of this document and some details.

### 1.1 Purposes

As a side effect of the development of information technology, Internet had gradually drew people's interest from traditional arts to more modern elements. To figure out a way to maintain our precious ethnic culture heritage is of importance. Fortunately, the application of Internet will also be greatly helpful to build a so called "digital museum" or "on-line gallery", based on these practical ideas, we were able to draw a simple blueprint of an on-line forum which aims to offer both amateurs and pros an easy-to use platform to communicate and exchange their ideas freely.

As we have illustrated in the previous paragraph and the project proposal, this **"Artists' forum & peoples' e-gallery "** mainly aims to build an on-line traditional Chinese art forum with the purpose of providing a platform for art lovers to interact with each other along with letting their minds to freely collide. Apart from that, this forum can also be seen as an e-gallery for the "amateurs" to learn about the traditional Chinese art step by step so that they will be equipped with some basic knowledge of the essence passed down from our ancestors.

Aiming to provide the readers with a detailed description of the functionalities of **Bird Sung Gulley**, this document will mainly cover the essential use case modeling.


## 1.2 Project Scope

The potential scenarios of this system mainly include are as follows: searching for a specific work or artist, writing comments for a topic or a specific work, browsing brief introduction of traditional Chinese art's history or something else that worth a look at, posting your own work and interacting with others who wrote comments for your work, sharing your thoughts and then "lead to" a friendly debate, etc.

Besides, following features are also utilized in this system:

- Running in a networked environment

- Checking users' authentication to ensure secure access to users' personal info and some other sensitive info.

- Using a centralized database and so on.

## 1.3 Glossary

| TERMS | DEFINITION |
| --- | --- |
| **Bird Sung Gulley** | The name of our system, quoted from Wang Wei's work (translation's not official). |
| **Amateur** | This title will be given to every new user of this system. By participating in all kinds of activities, users can earn more points to show their "status" in this system. For example, if your comments on some specific topics or paintings are liked by many other users, you will be able to get lots of points for being helpful to this system. |
| **Pro** | This identity will only be authorized to an user after he/she succeeded in passing identity authentication. For example, if you are a registered member at local painter association, or you were officially acknowledged as a painter at a certain rank. |
| **Column** | A collection of the same type of topic posted in the forum. |
| **Post** | Something you would like to discuss with others or simply you want to share your ideas on something, etc. No matter what your purpose is (as long as it is not hostile), you can write a post to express them. |

| TERMS | DEFINITION |
|---|---|
| **Activities** | The online activity held by the platform, which every user can take part in without any cost. Well, forget it if you value your time as a precious and non-renewable source. |
| **Publicize Activities** | The moderator of the column can make it a sticky post if the activity is permitted by the admin, so that more users will be able to participate in it easily. |
| **Report** | If any user noticed some inappropriate comments or posts, he/she can report it to the admin or moderator of this column. |
| **Profile** | This means basic info of any user of this system, including personal info along with posts and comments they ever made. all users can decide whether other users can browse their profile or not. However, some basic info will be required to remain public, for example, your username, sex, etc. |

## 2. Introduction

### 2.1 Product perspective

This system is a web-based application, including web site and server (We also hope to make it an application to serve the users better). The server runs the database to process requests from every user. The data requested by different roles to server is different, and more detailed information will be introduced in the use case section.

### 2.2 Product features

- Firstly, this system can be accessed only when your device has the Internet connection, no off-line services will be offered in this system (maybe in the future we can develop such functions).

- This system will pay attentions to different users' "power". For example, moderators are able to make sticky posts and featured posts, admin has every right to review any requests to modify personal info and posts about some sensitive topics in order to keep all contents of this system in line with the requirements of network standardization.

- This system will be user-friendly and equipped with beautiful user interface.

- This system aim to provide anyone who is interested in traditional Chinese art with a platform to let them feel free to communicate with each other.

### 2.3 Particpants

There are four types of identities of people using this system: **Amateur, Pro, Moderator, Admin.** Each of these identities plays an irreplaceable role in this system.

- **Visitors:** This system do not allow visitors to interact with others or browsing some info on this platform. If they are really into this, creating an account will not be difficult.

- **Amateur:** This identity will be given to every new user of this system. By participating in all kinds of activities, users can earn more points to show their "status" in this system. For example, if your comments on some specific topics or paintings are liked by many other users, you will be able to get lots of points for being helpful to this system.

- **Pro:** This identity will only be authorized to an user after he/she succeeded in passing identity authentication. For example, if you are a registered member at local painter association, or you were officially acknowledged as a painter at a certain rank.

- **Moderator**: This identity means that this specific user is authorized to feature a post or make a sticky post. Moderator can also try to organize some activities. An user with a certain amount of points (which can be earned including but not limited to ways mentioned above) will be able to apply for being a moderator of a certain column.

- **Admin**: This identity will only be given to a small amount of people for the reason that admins will possess power over major issues, serious problems will occur if they abuse their power. As a consequence, this system will not allow users to apply for Admins to ensure this system will run securely.

# 3. Use Case Modeling

## 3.1 Global view on use case
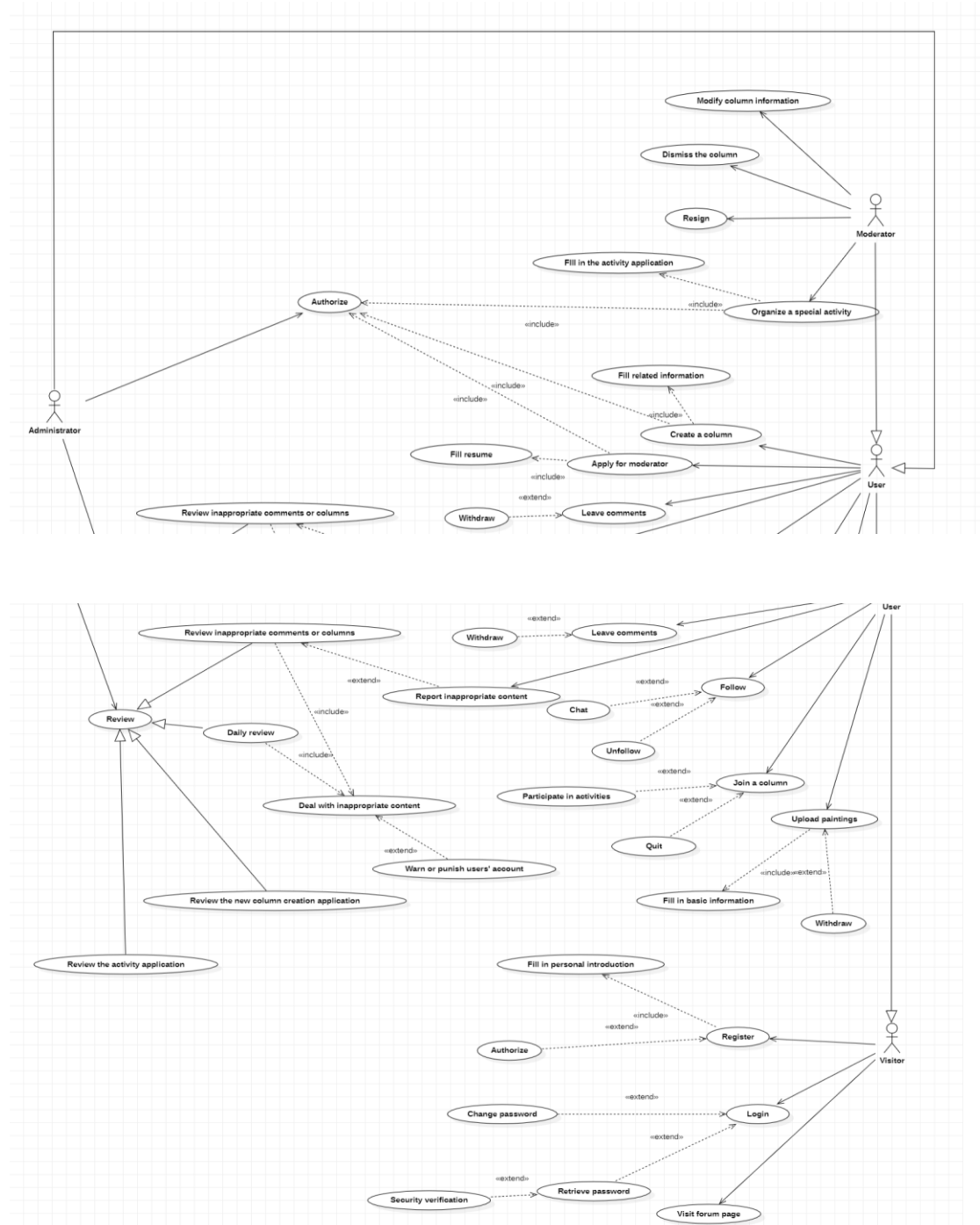
## 3.2 Register & Login System

### Use Case Diagram



visitor login & register system
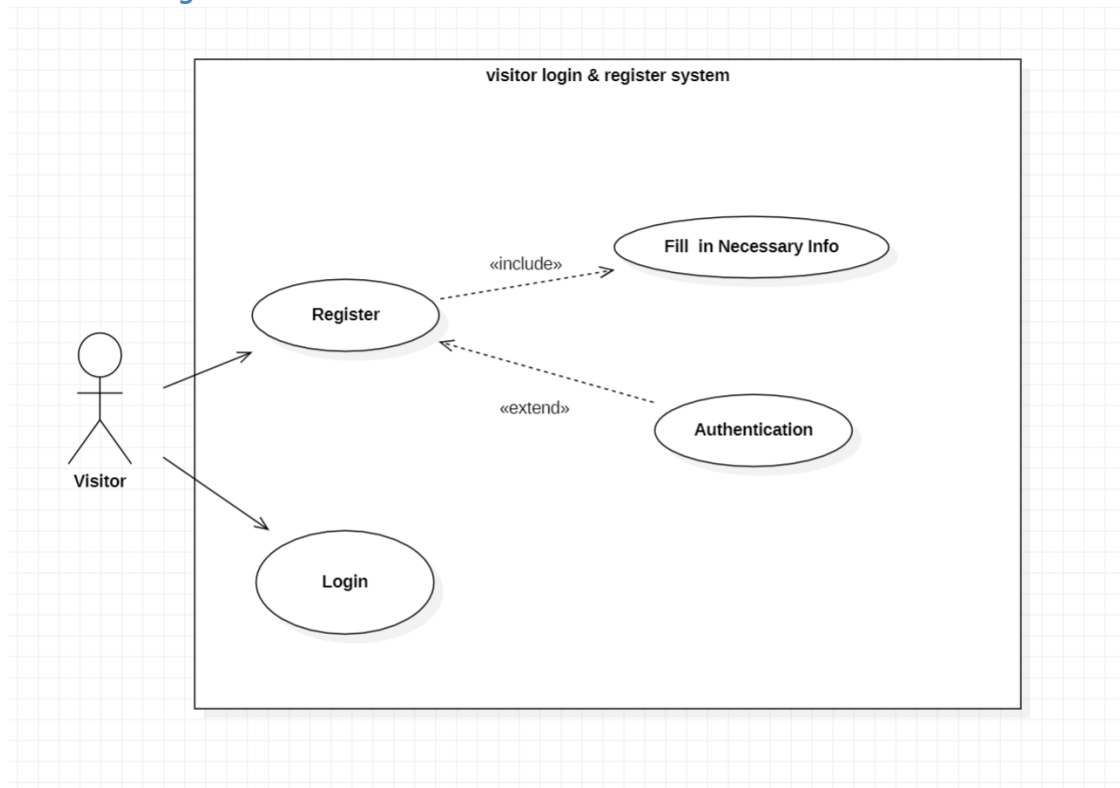
*Usecase_LoginRegister*

### Detailed Specification for Use Case

Use Case: Register and Authentication

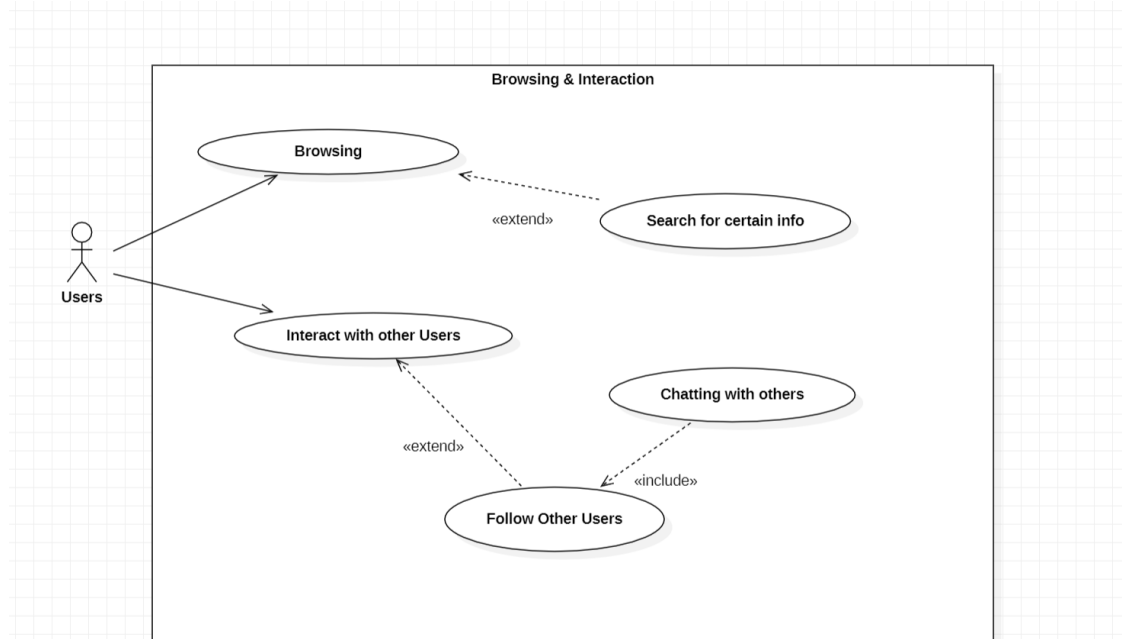| USE CASE | REGISTER AND AUTHENTICATION |
| --- | --- |
| **ID** | **UC 01** |
| **Specification** | 1.Visitors register their own account and fill their own basic information.<br>2.System will ask whether the new user would like to have an authentication or not. 3.System give the authorization according to users' choice. |
| **Actors** | **Visitors** |
| **Pre-condition** | Visitors enter the login webpage for the first time and click "sign in". |
| **Basic Path** | 1.Visitors enter the website.<br>2.Visitors click "sign up" to register.<br>3. Visitors fill in their basic information.<br> 3.1 Visitors choose between cellphone number and email address to let the system verify. |

3.2 Visitors set their own username and password. The system will then check them to make sure that both of them are legal.
4. Visitors click "send verification code" and fill the code from text or email.
5. System then check the verification code, if it is right, the visitors will successfully created his/her own account.
6. After creating this new account, system will show notification:"Do you want to complete authentication or skip it?
6.1. Users(who visitors have become) can choose whether to complete authentication or not. If Users want to complete it at that moment, by clicking "Get Authenticated Now!", Users will be led to a new page to upload necessary info to get authenticated. These requests will be sent to Admin, they will check all the essential materials uploaded to carefully decide on granting Users the authentication.
6.2 If Users do not want to get authenticated at that time, by clicking "Not Now", Users can start to use this system from that moment on. Later on, the system will send messages to Users to remind him/her that no authentication has been offered to him/her so far. Following steps will be just the same as what was mentioned above.
6.3 If Users actually cannot be authenticated, by clicking "Skip It",there won't be any problems. When Users want it, he/she can find it in his/her own personal info, the system will lead them to that page mentioned just above.

| **Alternative Path** | 1. Visitors wanted to exit the webpage during information filling, The system will show notification:"Information filling incomplete,do you still want to exit ?"<br>2. Some potential mistakes during registering:<br>2.1 Visitors input illegal cellphone number\email.<br> The system will show notification:"Sorry, illegal cellphone number\email address, please check again."<br>2.2 Visitors cannot receive verification code.<br> The system will allow Visitors to ask to resend the verification code after 60s countdown.<br>2.3 Visitors input wrong verification code.<br> The system will show notification:"Sorry, wrong verification code, please try again."<br>2.4 Visitors input duplicate/illegal username or password.<br> The system will show notification:"Sorry, username has been taken/username was illegal/password was illegal, please try again."<br>2.5 Visitors did not fill in all the necessary info when requesting authentication. |
|---|---|

| USE CASE | REGISTER AND AUTHENTICATION |
|---|---|
| | The system will show notification:"Sorry, not all necessary info were inputted, please check again." |
| **Post - condition** | Visitors get their own account, authentication request sent to admin or Users choose other ways. |

Use Case: Login

| USE CASE | LOGIN |
|---|---|
| **ID** | **UC 02** |
| **Specification** | Visitors type their account ID and password to login the account. System provides extend services such as retrieving password. |
| **Actors** | **Visitor** |
| **Pre-condition** | Visitors have their own authorized account. |
| **Basic Path** | 1. Visitors enter the website.<br>2. Visitors click "login".<br>3. Visitors fill username and password into the webpage blanks.<br>4. Login succeeded. |
| **Alternative Path** | 1. Visitors input wrong account information:<br> 1.1 If Visitors input invalid account ID:<br> The system will reject login, show notification:"Sorry, this account doesn't exist, please try again".<br> 1.2 If Visitors input wrong password:<br> The system will reject login, show notification:"Sorry, wrong password, please try again".<br> 1.3 If Visitors input wrong password for 10 times, system will ban visitors from logging in for 5 minutes.<br>2. Visitors click "forget password?"<br> The system will handle the request, send a verification code base on the account's cellphone number or email. Visitors can input the verification code to reset the password. Following steps will be mostly the same with the very first time you set your password.(However, if your new password is just the same as the old one, the system will not allow this change. Although this scenario sounds quite rare, but as for myself it did happened many times. In order to avoid this... Actually if I knew how to avoid it, how could it happen many times? Hope you guys won't run into such circumstances. TOT) |
| **Post-condition** | Visitors successfully enter the system, become users and can access users' operations. |

## 3.3 Gallery System

### Use Case Diagram



*Usecase_GalleryandInteraction*

### Detailed Specification for Use Case

### Use Case: Browsing E-Gallery

| USE CASE | BROWSING E-GALLERY |
|---|---|
| **ID** | **UC 03** |
| **Specification** | Users can browse this e-gallery freely or searching for a specific work or even a topic. By typing the name of an artist, a painting, a topic, etc. Users will be led to a new page which contains the results they would like to see. |
| **Actors** | **Users** |
| **Pre-condition** | Users have successfully logged in the system. |
| **Basic Path** | 1.Users click "e-gallery"<br>2.Users type in what they want to search in this e-gallery or simply take a look at it.<br> 2.1 If Users want to search for something, after typing in keywords and click "Search", Users will be led to a new page and being able to browsing the info they would like to learn about.<br> 2.2 Otherwise, Users can choose to take a look at what's recommended by the system today. By clicking the topics offered. |
| **Alternative Path** | 1. No results from what Users input.<br>   The system will show notification:"No results available were |

| USE CASE | BROWSING E-GALLERY |
| --- | --- |
| | found, Please change another keyword." |
| **Post-condition** | Users are able to browse info they would like to see. |

## 3.4 Users' Interaction System

### *Use Case Diagram*

Please refer to 3.3.

### *Detailed Specification for Use Case*

Use Case: Users' interaction

| USE CASE | USERS' INTERACTION |
| --- | --- |
| **ID** | **UC 04** |
| **Specification** | Users can interact with each other. By following other Users, you can receive his/her latest update such as new posts, new paintings uploaded, new comments, etc. Besides, Users are allowed to have private conversations with others via this platform after they followed him/her. However, the system will remind Users to pay extra attention to what others say to prevent them from being defrauded. |
| **Actors** | **Users** |
| **Pre-condition** | Users have successfully logged in the system. |
| **Basic Path** | 1. Users found someone they would like to follow by reading their comments or simply searched for him/her.<br>2. Click the "follow" to follow that specific User.<br>3. Users will receive latest update of them.<br>4. Users want to have private conversation with who they followed.<br>5. By clicking "Chat", they will be able to chat with each other. |
| **Alternative Path** | / |
| **Post-condition** | Users can interact with each other. |

## 3.5 Forum System

### Use Case Diagram
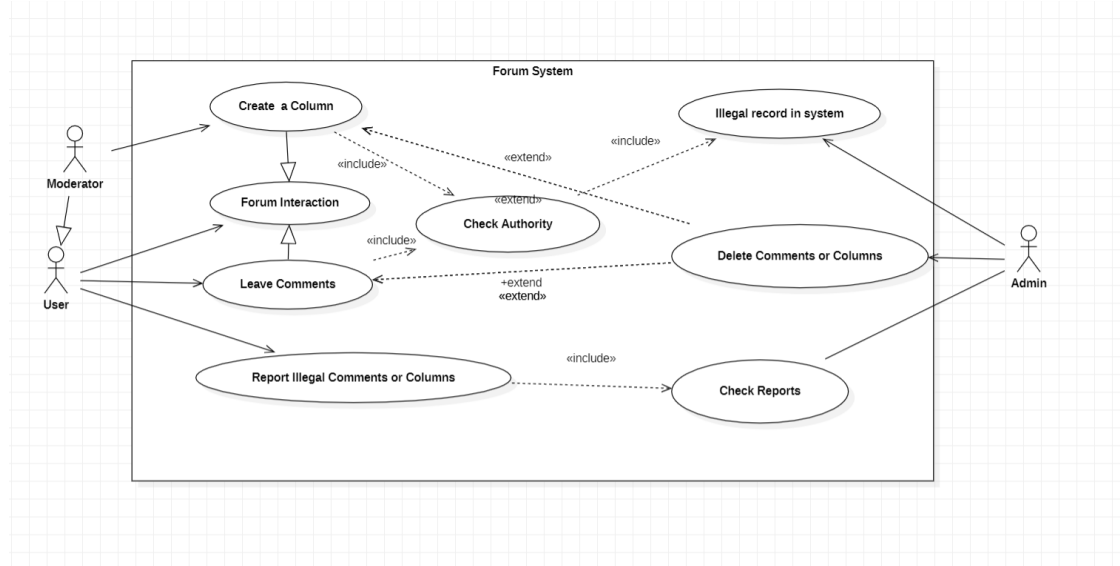


### Detailed Specification for Use Case

#### Use Case: Upload Paintings

| USE CASE | UPLOAD PAINTINGS |
| --- | --- |
| **ID** | **UC 05** |
| **Specification** | Users want to upload paintings(originated/existed) |
| **Actors** | **Users, Admin** |
| **Pre-condition** | Users successfully login and have access to upload paintings. |
| **Basic Path** | 1.User fills in the basic information of the painting<br> 1.1User fills in the author of the paintings<br> 1.2User fills in the type of the paintings<br> 1.3User check if the paintings are existing or original<br>2.The system submits the uploaded painting to the admin<br> 2.1If the information is valid, the work information will be transferred to the database<br>3.User receives a message that the upload is successful |
| **Alternative Path** | 1.If user logs out during the process of filling in the information, the content will remain<br>2.Club member doesn't fill in key information<br> 2.1. Club member will receive the error message<br> 2.2. Club member will fill in the information again<br>3. user leader leaves the page during the process of filling in the information<br> 3.1. user leader will receive the message on whether save the |

| USE CASE | UPLOAD PAINTINGS |
|---|---|
| | content |
| | 3.2. If user leader chooses to save, the upload will be saved automatically |
| Post-condition | Admin can receive the upload and review it. |

| USE CASE | LEAVE COMMENTS |
|---|---|
| **ID** | **UC 06** |
| **Specification** | Users leave comments base on their own opinion;<br>Admin delete illegal content<br>System check users' authority and ban illegal users' operations. |
| **Actors** | **Users, Admin** |
| **Pre-condition** | Users successfully login and has authority to leave comments . |
| **Basic Path** | 1.include(check authority)<br>2.Users click "leave your comment".<br>3.Administrator check the users' authority.<br>4.Users gain authorization.<br>5.Users type comment in the talk box.<br>6.Users click "publish comment"<br>7.Users successfully leave a comment. |
| **Alternative Path** | 1.Users exit the system.<br>2.Users doesn't get authorization<br> 2.1 When system find illegal record in users' forum history,system will ban users operation.<br>3.Users exit the platform or log out while editing the comment content in step 5 show notification:"You are still editing your comment,do you really want to exit?"<br>4.Club union supervisor detect the comments of users<br> 4.1 if users' comment cause bad social influence and is reported by other users -<br> 4.2when caused severe social influence,admin update illegal record to the system, -then the system will ban users' operation of using the forum. |
| **Post-condition** | None |

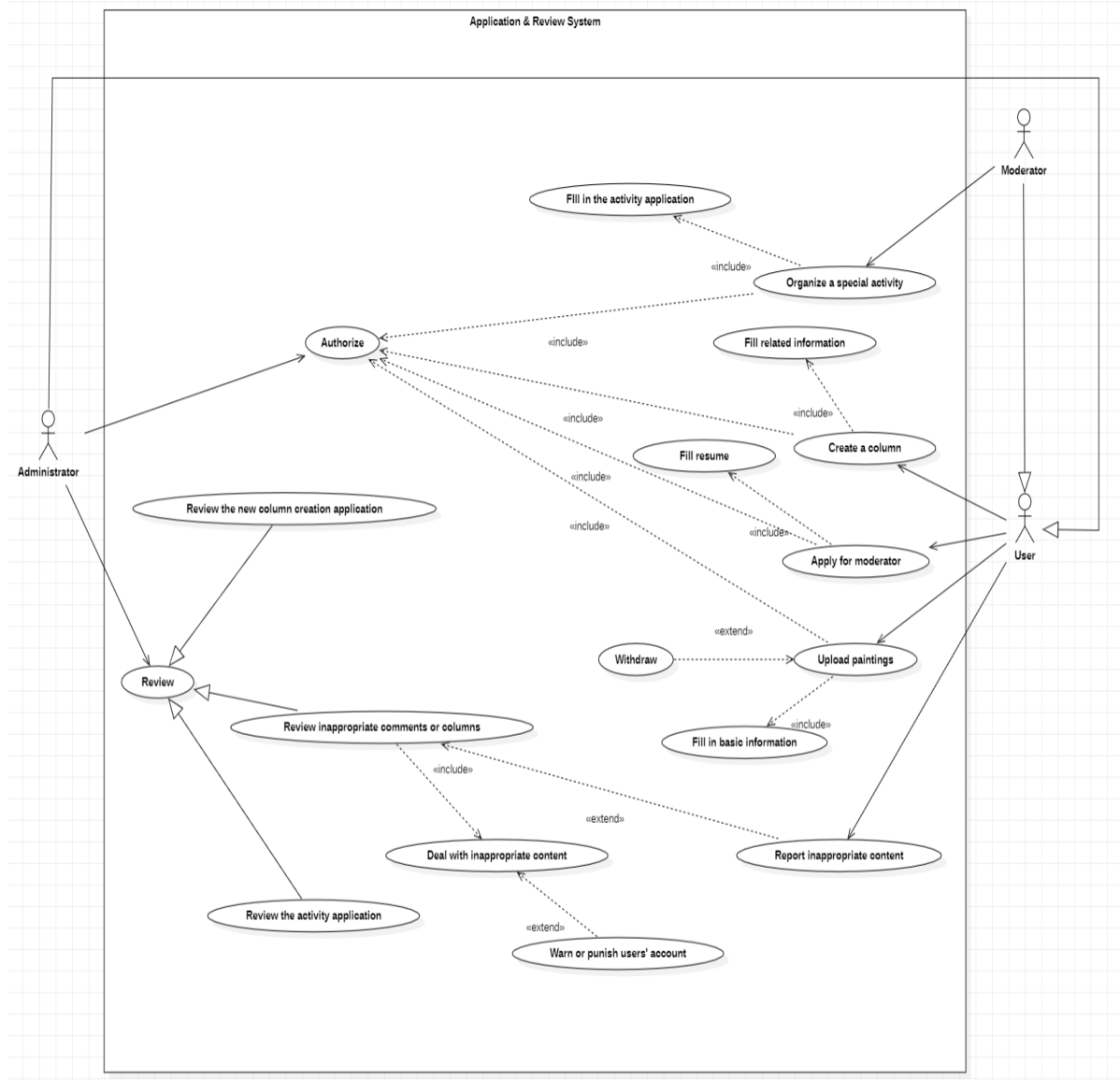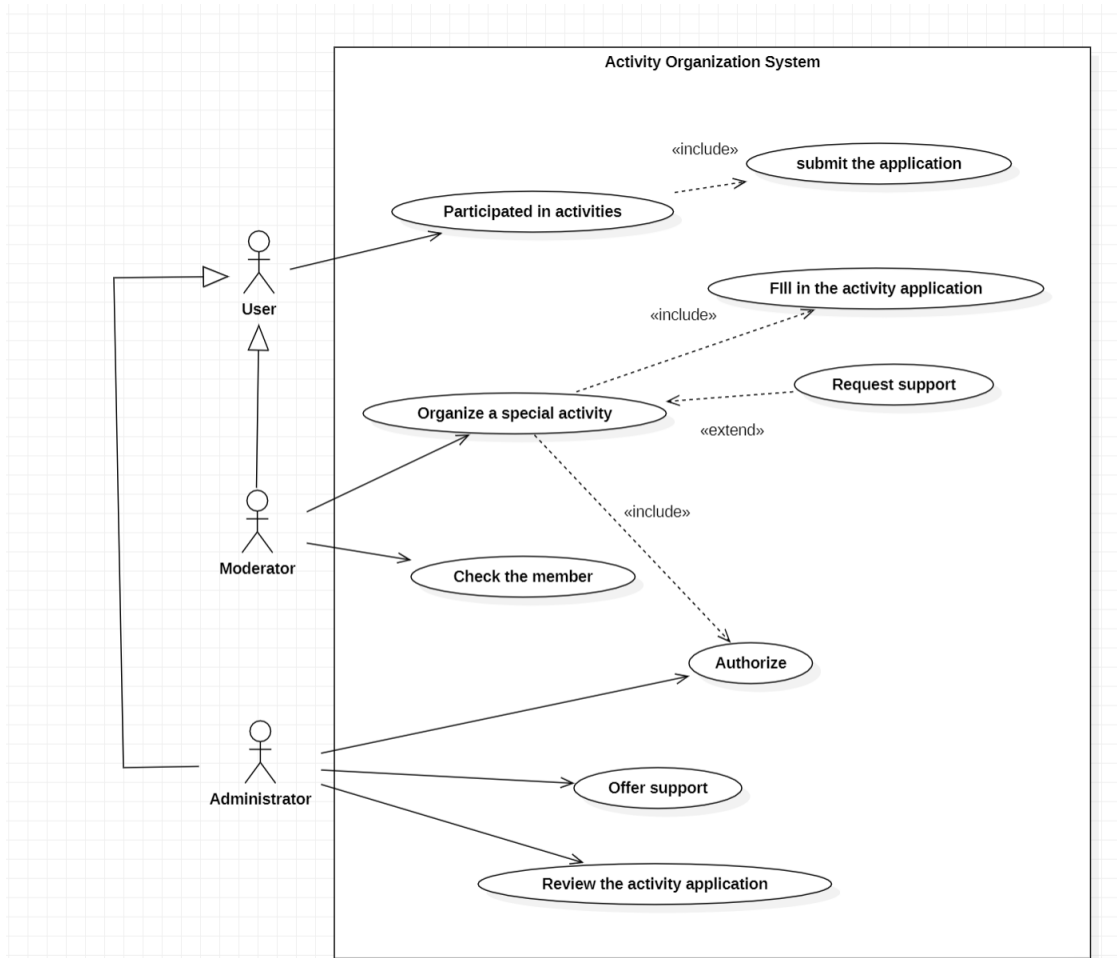| USE CASE | CREATE A COLUMN |
|---|---|
| **ID** | **UC 07** |
| **Specification** | Users apply to the admin for a topic column |
| **Actors** | **Users, Admin** |
| **Pre-condition** | Users successfully login. |
| **Basic Path** | 1.User selects a topic<br>2.User submits an application to the administrator to create a column on thje related topic<br>3. Admin reviews the application<br>4. Admin create the column<br>4. User gains the authorization and becomes moderator. |
| **Alternative Path** | 1.User doesn't get authorization<br> 1.1 When system find illegal record in users' forum history,system will ban users' operation.<br> 1.2 When column topics are repeated or illegal<br>2.Admin detect the contents of moderator's column<br> 2.1 if contents cause bad social influence and is reported by other users -<br> 2.2when caused severe social influence,admin update illegal record to the system, -then the system will ban users' operation of using the forum. |
| **Post-condition** | User becomes moderator |

## 3.6 Management System

### Use Case Diagram



Application & Review System

Moderator

Fill in the activity application

«include»

Organize a special activity

Authorize

«include»

Fill related information

«include»

Fill resume

Create a column

«include»

«include»

Review the new column creation application

«include»

Apply for moderator

User

Administrator

Review

«extend»

Withdraw

Upload paintings

Review inappropriate comments or columns

«include»

Fill in basic information

«include»

Deal with inappropriate content

«extend»

Report inappropriate content

Review the activity application

«extend»

Warn or punish users' account

Activity Organization System

## Use Case: Apply for Moderator

| USE CASE | APPLY FOR MODERATOR |
|---|---|
| **ID** | **UC 08** |
| **Specification** | Users can apply to become administrators if certain conditions are met |
| **Actors** | **Users** |
| **Pre-condition** | A moderator position for an existing column is vacant OR you are the the initiator of a new column |
| **Basic path** | 1.User selects application section<br>2.User views the column information<br>3.User chooses the column that he/she want to apply for the moderator<br>4.User fills in personal information<br>5.User submits the application<br>6.User receives the message including the result of application |
| **Alternative** | 1.If the user is not a member of a existing column, he/she should |

| USE CASE | APPLY FOR MODERATOR |
|---|---|
| Path | follow the column first to apply for the position of Moderator.<br>2.User leaves the page during the process of filling in the information.<br> 2.1 User will receive the message on whether submit or save the content.<br> 2.2 If User chooses to submit, the application will be submitted automatically the content.<br> 2.3 Otherwise, the application will not be saved and user will leave the page<br>3. If user logs out during the process of filling in the information by accident,the content will remain.<br>4.User doesn't fill in key information<br> 4.1 User will receive the error message.<br> 4.2 User will be required to input the key information. |
| Post-condition | The administrator can receive the application and review it. |

Use Case: Organize a Special Activity

| USE CASE | ORGANIZE A SPECIAL ACTIVITY |
|---|---|
| ID | UC 09 |
| Specification | Column moderator can apply for holding club activities |
| Actors | Moderator |
| Pre-condition | None |
| Basic path | 1.Column moderator chooses to hold the activity<br>2.Column moderator fills in the activity application<br> 2.1 Column moderator fills in the ID, name and phone number.<br> 2.2 Column moderator provide a description of the activity<br> 2.3 Column moderator applies for the platform support(financial,resources,etc.)<br>3.Column moderator submits the application to the administrator<br>4.Column moderator receives the message including the result of application |
| Alternative Path | 1. Column moderator doesn't log in to apply for holding the activity, the system should turn to the login interface<br>2. If Column moderator logs out during the process of filling in the information,the content will remain<br>3. Column moderator accidentally leaves the page during the process of filling in the information.<br> 3.1 Column moderator will receive the message on whether save the content.<br> 3.2 If column moderator chooses to save, the application will be saved automatically by the system.<br> 3.3 Otherwise, the application will not be saved and user will |

| USE CASE | ORGANIZE A SPECIAL ACTIVITY |
|---|---|
| | leave the page<br>4.Column moderator doesn't fill in key information<br> 4.1 Column moderator will receive the error message<br> 4.2 Column moderator will be required to input the key information |
| **Post-condition** | The administrator can receive the application and review it. |

| USE CASE | **DAILY REVIEW** |
|---|---|
| **ID** | **UC 10** |
| **Specification** | **Administrator can review the contents of columns he/she is responsible for and deal with inappropriate post accordingly** |
| **Actors** | **Admin** |
| **Pre-condition** | None |
| **Basic path** | 1.Administrator chooses the review section<br>2.Administrator browses the contents of the column and find the inappropriate post<br>3.Deal with inappropriate post accordingly<br> 3.1 Delete the inappropriate post<br> 3.2 Warn or punish users' account based on the severity of the problem<br>4.Report the specific situation on system log |
| **Alternative Path** | 1. If Administrator logs out during the process of reviewing,the content will remain<br>2. Administrator doesn't log in to begin daily review, the system should turn to the login interface |
| **Post-condition** | The status of the client and the existence of appropriate post changed |

| USE CASE | REVIEW THE ACTIVITY APPLICATION |
|---|---|
| **ID** | **UC 11** |
| **Specification** | Administrator can review the activity application and give comments for it |
| **Actors** | **Admin** |
| **Pre-condition** | Column moderator submit the activity application |

| USE CASE | REVIEW THE ACTIVITY APPLICATION |
| --- | --- |
| **Basic path** | 1.Administrator chooses the review section<br>2.Administrator views the activity application<br> 2.1 Administrator views the activity content<br> 2.2 Administrator determines the need of the application is reasonable or not<br>3. Administrator reviews whether this application passed<br> 3.1 Administrator explains the reason and gives advice when the application not passed<br> 3.2 Administrator saves the activity information when the application passed<br>4. Administrator send message to the column moderator in order to give feedback |
| **Alternative Path** | 1. If Administrator logs out during the process of reviewing,the content will remain<br>2. Administrator doesn't log in to begin review, the system should turn to the login interface |
| **Post-condition** | The status of the activity application has changed (passed or not) |

Use Case: Review the New Column Creation Application

| USE CASE | REVIEW THE NEW COLUMN CREATION APPLICATION |
| --- | --- |
| **ID** | **UC 12** |
| **Specification** | Administrator can review the new column application and give comments for it |
| **Actors** | **Admin** |
| **Pre-condition** | User submit the new column creation application |
| **Basic path** | 1.Administrator chooses the review section<br>2.Administrator views the new column creation application<br> 2.1 Administrator views the description of the column<br> 2.2 Administrator analysis the application is reasonable or not<br>3. Administrator reviews whether this application passed<br> 3.1 Administrator explains the reason and gives advice when the application not passed<br> 3.2 Administrator set the applicant of the new column as moderator<br> 3.2 Administrator saves the column information when the application passed<br>4. Administrator send message to the applicant in order to give feedback |
| **Alternative Path** | 1. If administrator logs out during the process of reviewing,the content will remain |

| USE CASE | REVIEW THE NEW COLUMN CREATION APPLICATION |
|---|---|
| | 2. Administrator doesn't log in to begin review, the system should turn to the login interface |
| Post-condition | The status of the application has changed (passed or not) and a new column have been created |

Use Case: Report Inappropriate Comments Or Columns

| USE CASE | REPORT INAPPROPRIATE COMMENTS OR COLUMNS |
|---|---|
| ID | **UC 13** |
| Specification | User decides the comments or columns that may cause bad social influence,reports them with proper report reasons |
| Actors | **Users** |
| Pre-condition | User successfully login |
| Basic path | 1.User finds the inappropriate comments or posts during browsing<br>2.User chooses the report section<br>3.User sends report request to administrator<br> 3.1 User provides a description or evidence about the inappropriate comments<br>4. Administrator send message to the applicant in order to give feedback |
| Alternative Path | 1.If user logs out during the process of reporting,the content will remain<br>2.User doesn't log in to begin review, the system should turn to the login interface |
| Post-condition | User report the situation to the administrator successfully. |

Use Case: Review Inappropriate Comments Or Columns

| USE CASE | REVIEW INAPPROPRIATE COMMENTS OR COLUMNS |
|---|---|
| ID | **UC 14** |
| Specification | Administrator handles the report request from users and deal with inappropriate post accordingly |
| Actors | **Admin** |
| Pre-condition | User report the inappropriate situation successfully |
| Basic path | 1.Administrator chooses the review section<br>2.Administrator check report content and react to the report<br>3.Administrator deal with the report<br> 3.1 If the report is valid,delete the inappropriate post<br> 3.2 Warn or punish users' account based on the severity of the problem |

|  |  |
|---|---|
|  | 3.3If there is insufficient evidence in the report,reject the report<br>4.Administratorr send results to the users who report the content<br>5.Administrator report the specific situation on system log |
| **Alternative Path** | 1. If administrator logs out during the process of reviewing,the content will remain<br>2. Administrator doesn't log in to begin review, the system should turn to the login interface |
| **Post-condition** | The status of the client and the existence of appropriate post changed |

## 4. Activity Diagram

### 4. 1 Login & Register
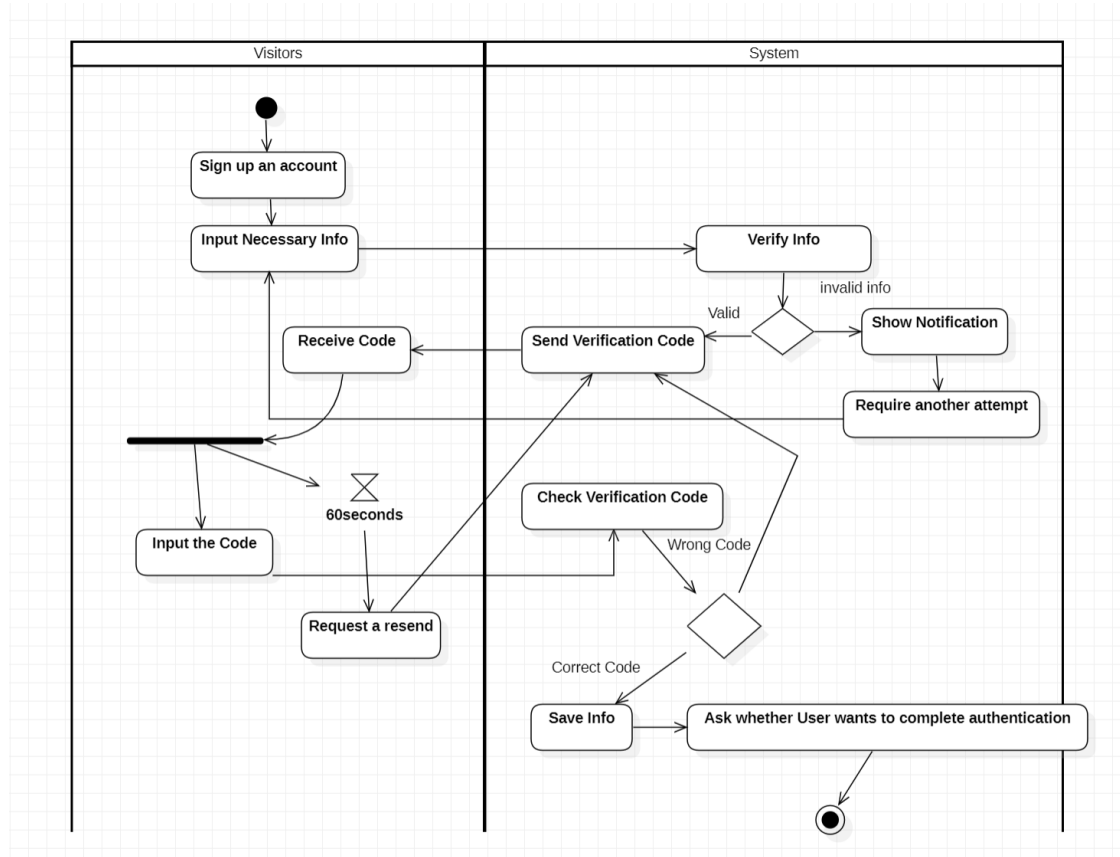


- The visitor fills in necessary info, and the system sends a verification code after verifying the information. After receiving the verification code, the visitors filling the form and the system checks whether the code is entirely

correct. If so, the system saves the information and ask whether Users want to complete authentication or not.
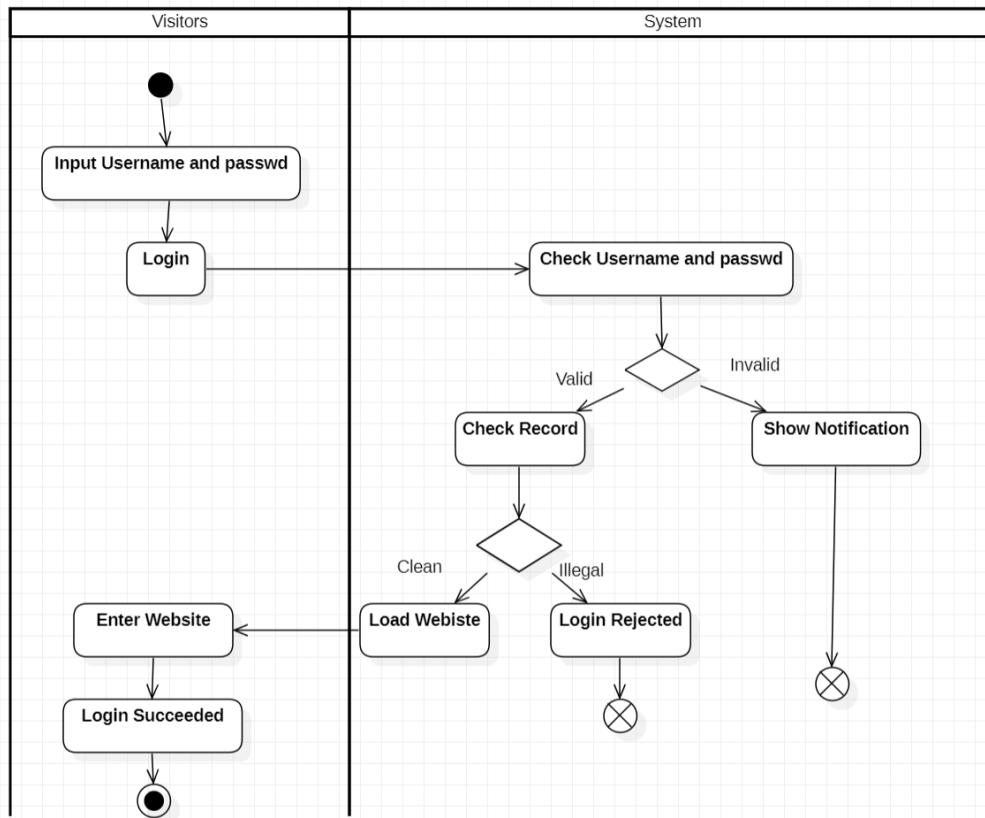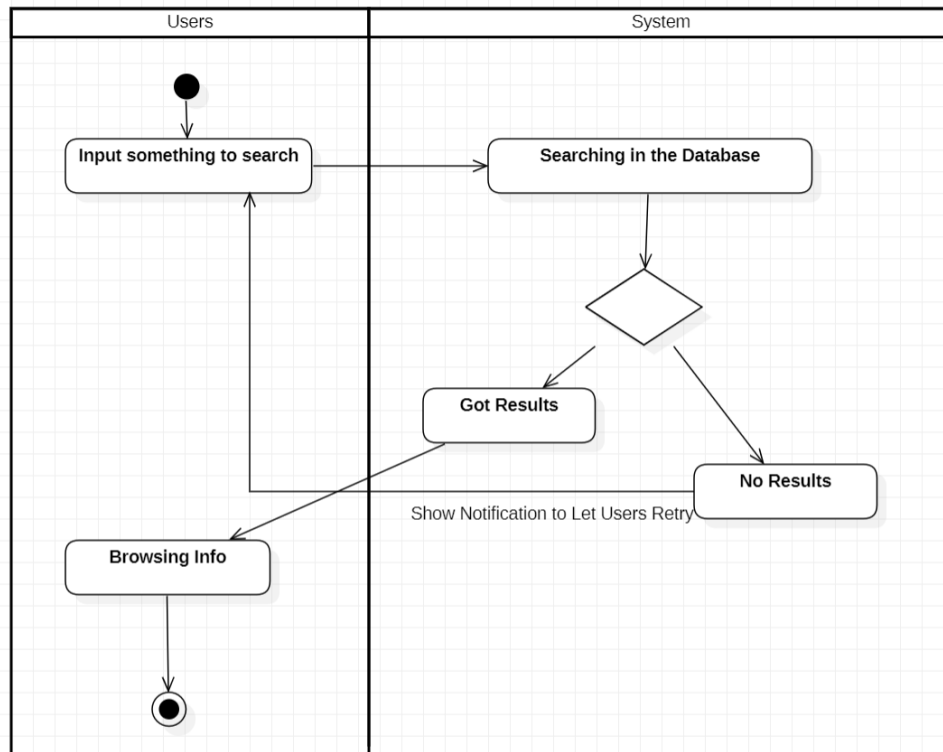


*image-20220414134607950*

- According to the user registration information, the system identifies the identity of visitors, and provides visitors with the required page to let them log in.

## 4. 2 Gallery



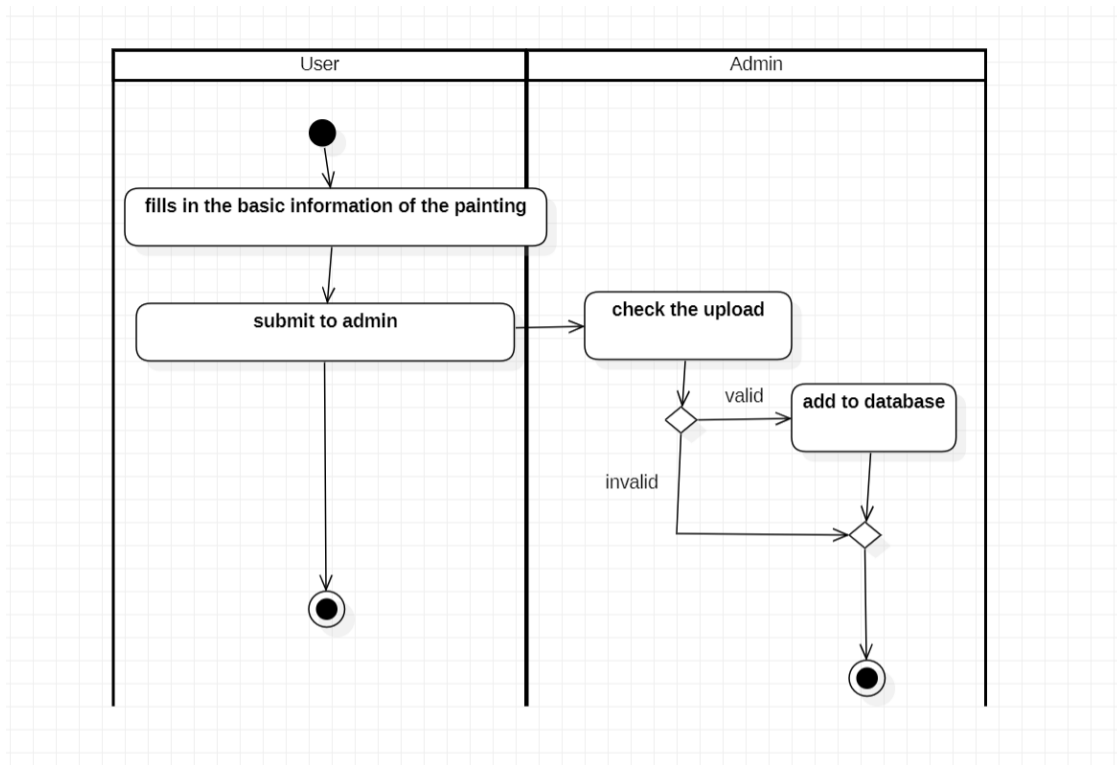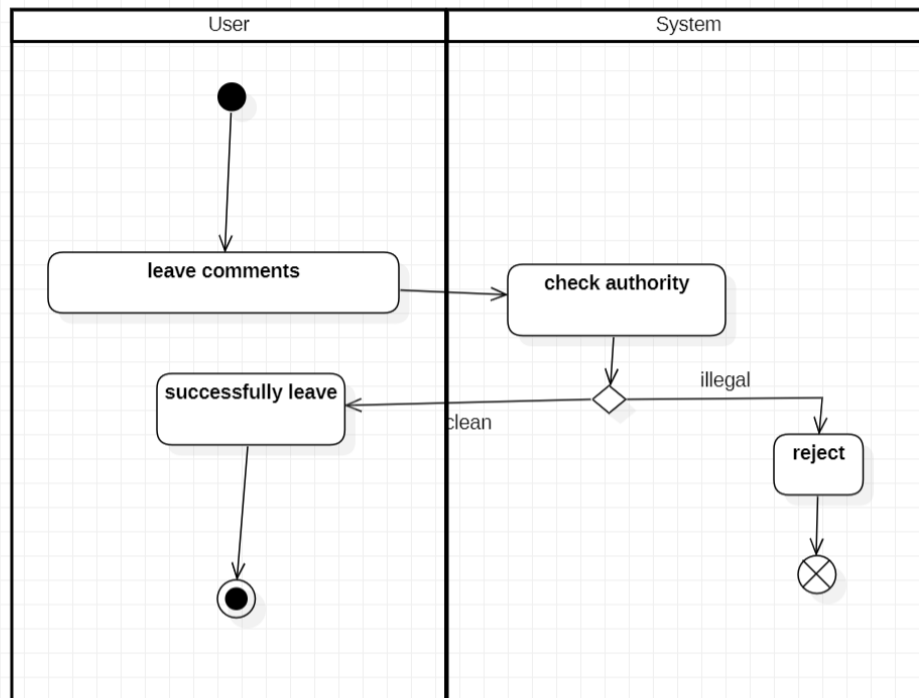- This one is rather obvious. Life is that short, so let's spend our time on other parts.

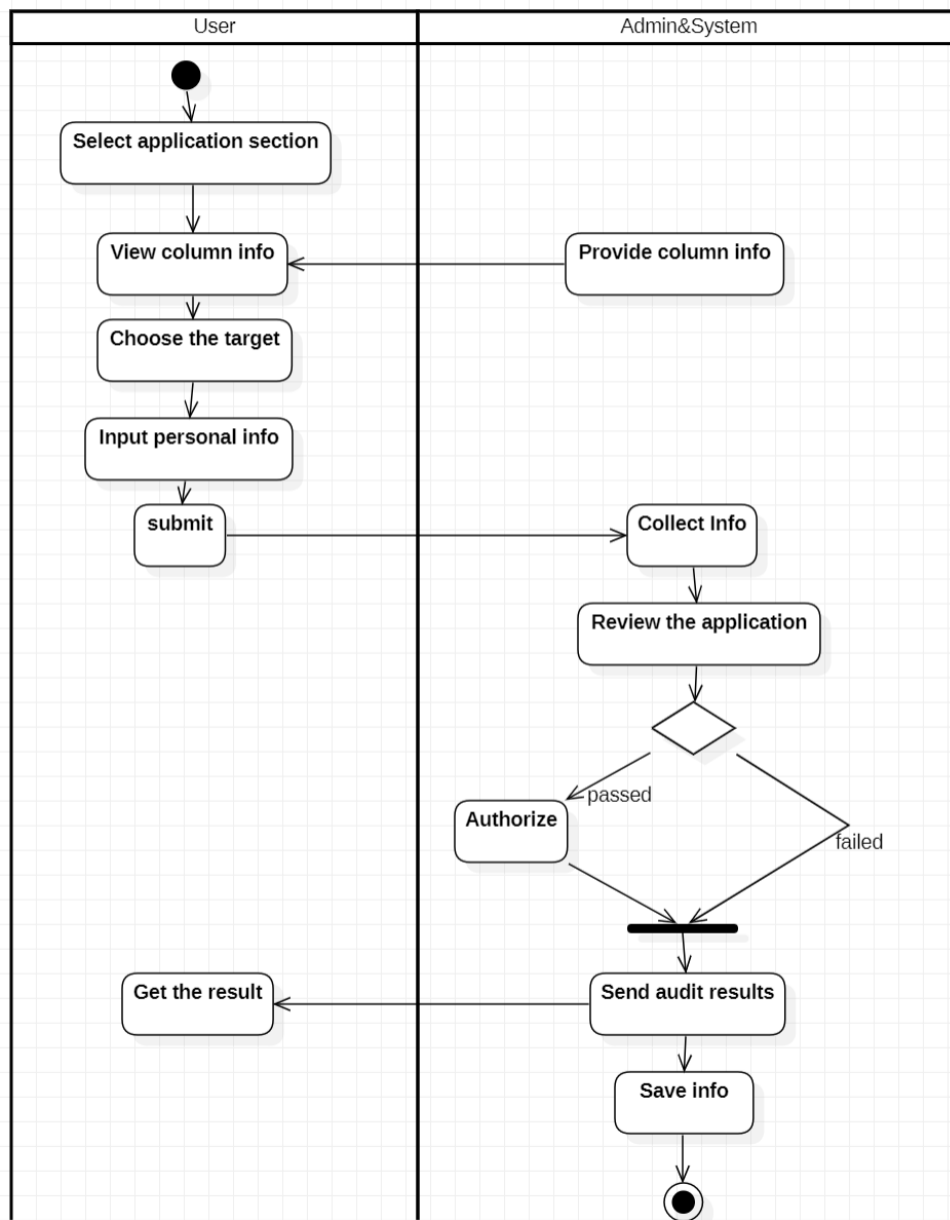## 4.3 Forum



*image-20220414135603836*

- Users are allowed to upload some paintings regardless of whether it's original or not. However, Admin must pay extra attention on those works to ensure that no copyright issues and no violations shall occur.

*Act_comments*

- Leave comments is necessary for a forum, but it is also important to check whether these words are offensive or hostile or "dangerous". Admin should do their job perfectly.

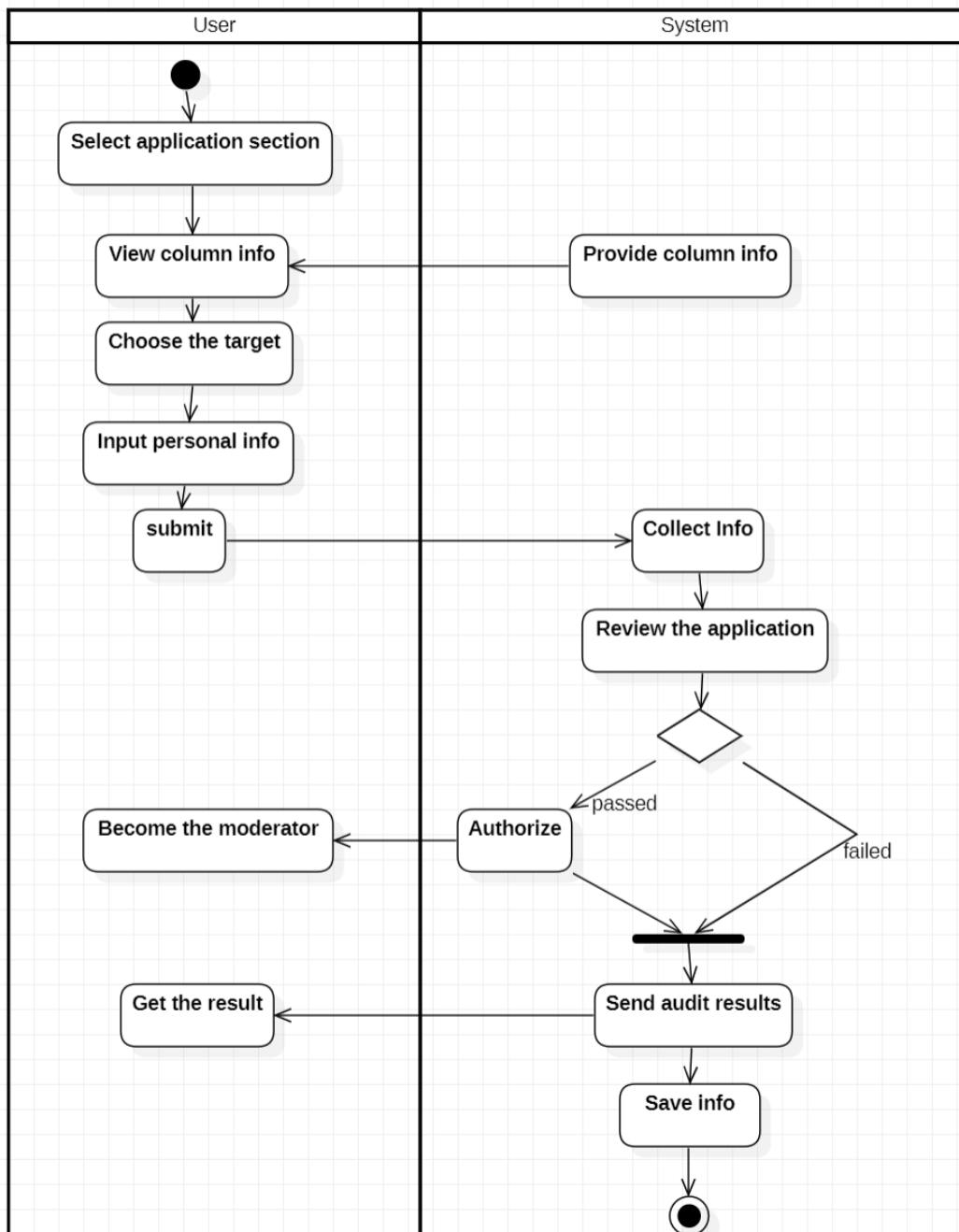| User | Admin&System |
|------|--------------|
| Select application section | |
| View column info | Provide column info |
| Choose the target | |
| Input personal info | |
| submit | Collect Info |
| | Review the application |
| | passed / failed |
| | Authorize |
| Get the result | Send audit results |
| | Save info |

*Act_Application*

- To create a column is of vital importance for a forum for the reason that this will be the key element of this entire system. Admin should seriously consider these requests to avoid repeated job.

## 4.4 Management
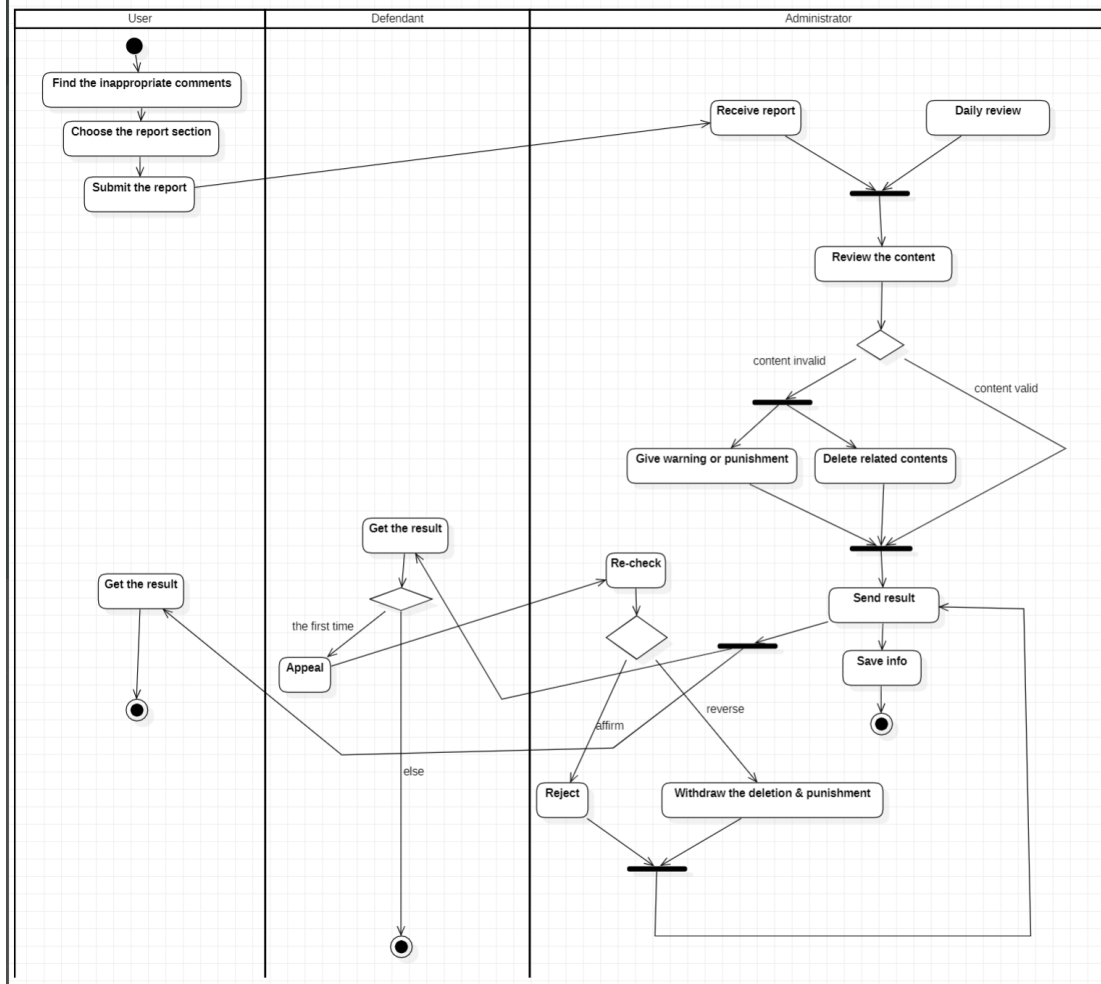


*Act_report*

- In order to maintain a good environment for Users, Admin should work diligently to check Users' comments and posts. This is also mandatory for an on-line forum system. As we always put it, Internet shall be under guidance and any illegal actions shall be punished.

| User | System |
|---|---|
| ● (start) | |
| Select application section | |
| View column info ← | Provide column info |
| Choose the target | |
| Input personal info | |
| submit → | Collect Info |
| | Review the application |
| | ◇ (decision) |
| Become the moderator ← Authorize | passed / failed |
| Get the result ← | Send audit results |
| | Save info |
| | ◉ (end) |

*Act_Apply*

- Users can apply to be the Moderator of a certain column, only when Admin authorized it.
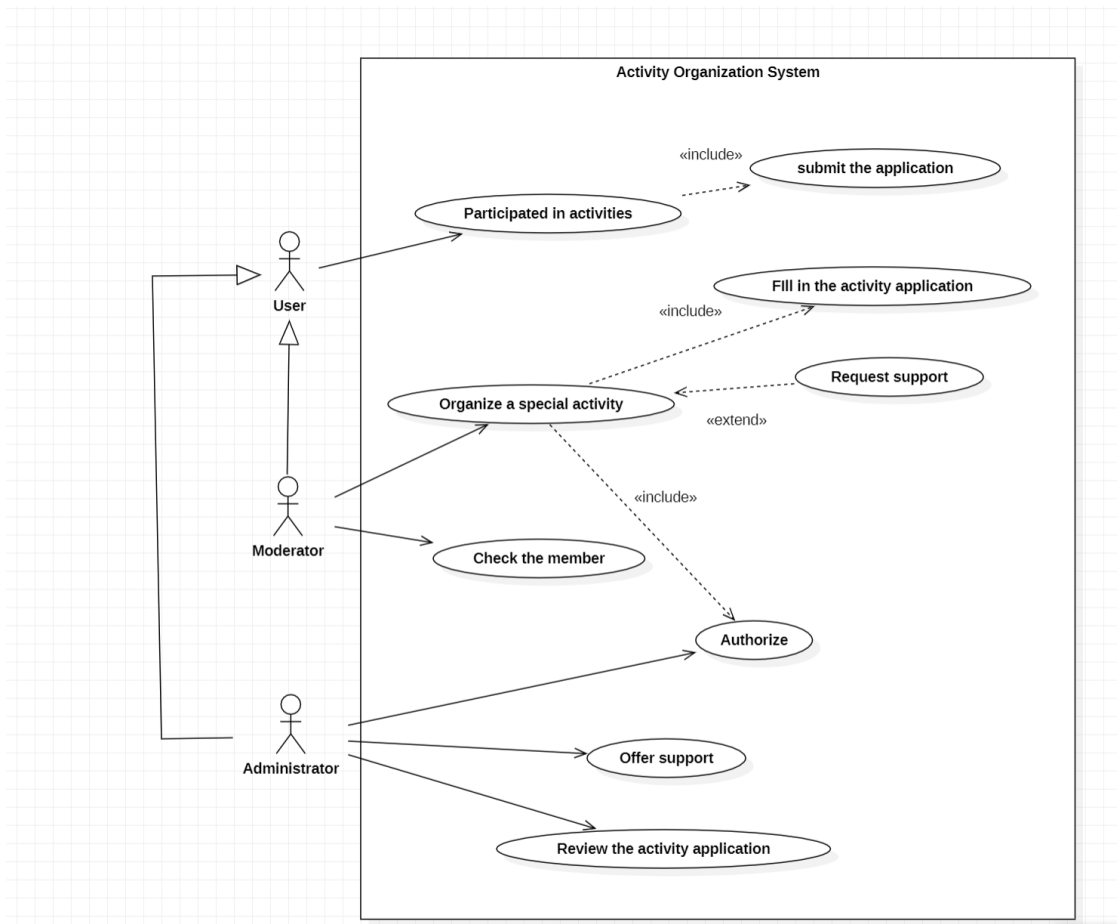
*Act_Organization*

- How to organize an activity was shown in the picture. Moderator can organize one, then after authorization given by Admin, Users can participate in the activities.

# 5. Supplementary Specification

## 5.1 Objectives

The purpose of this part is to define requirements of the user experience. And this Supplementary Specification lists the requirements that are not readily captured in the use cases of the use case model and some additional things that can be done. The Supplementary Specifications and the use-case model together capture a complete set of requirements on the system.

## 5.2 More prototype ideas

- User credits system: Users can earn credits by completing daily tasks or keeping active. When credits are accumulated to a certain level, users can exchange them for privileges or goods.

- User hierarchy system: Our user base can be divided into several categories so that we can offer more targeted services. A ordinary users can browse content that suits their tastes. If one have professional skills, he/she can perform the authentication and get more special authority.

## 5.3 Performance

- The system must be able to process at least 100 requests concurrently

- The system must respond to each request within one second

- The system must support more than 50,000 users logged in at the same time

## 5.4 Reliability

We should ensure that users log in and out first, and consider adding a human authentication mechanism to the log-in process to filter out invalid requests and reduce bandwidth pressure. In terms of data push, We plan to use a combination of local cache and online resources to users. In this way, resource utilization can be improved to avoid the occupation of network resources by repetitive requests. Specially, the system must be 100% operational in 99.9% of the calendar year during some special time in a year(Special treatment is required during peak hours of daily use)

## 5.5 Security

- The security of the system includes authentication, access control, data integrity and data privacy.

- The system requires that users' password strength must reach a certain level.

- The system provides binding function. It is better for users' accounts to be bound with other channels(phone number, e-mail, social software, etc.) The security factor can be increased.

- Sensitive information should be stored in a specific database with strong encryption algorithm, and transmission information should be encrypted to protect privacy.

### 5.6 Maintainability
- The system should be easy to expand, and the code should be conducive to the realization of new functions.

- The system should be able to provide users with multiple versions of update services at the same time. The service should be tailored to the client version and the content should be compatible with different versions to some degrees.

- The system should synchronize upload and download data regularly, in other words,the system should ensure data synchronization between client and server in the interaction.

- On the underlying implementation, the system should be easy to expand, and the code should be conducive to the realization of new functions.

### 5.7 Comprehensibility

The text and buttons in the GUI should be friendly for different users,and the UI needs to be art-related.

### 5.8 Design constraints

The system shall provide Web pages that can run on all major browsers. Better yet, we will port the system to Android or ios application.

## 6. Contributions
- All team members actively took part in discussing and complete this SRS document. We cooperated quite well in this task.

- Part 1&2 were mainly completed by Wenchao Liu, other two members also assisted in these two modules,

- Part 3&4 were equally distributed to all group members, everyone finished their job quite good.

- Part 5 was mainly completed by Ze Sun, other two members also helped.

- All group members' score weight shall be 100%.