# **Requirement definition**

## **Functional Requirements**

1. **User registration**

The application should allow the user to register an account based on the username and password that input by the user. The application will auto detect the username if it is already taken by other users and prompt the user to input another username if it is in used.

1. **User login**

User must be able to login their account through the username and password input by the user. If the username or password is not correct, the application will prompt user the password is incorrect.

**3. Sending message**

User should be able to send instant message to anyone on his/her friendlist. User can choose to send text message or voice message just like other message application. However, there is a bit difference that user can convert the voice message by pressing the voice message and under the voice message there will have a button called “conversation”. After user click the “conversatio”, the application will convert the voice message into text and display the text under the voice message.

**4. Adding friends**

User should be able to add friends by click “add friends” button. After click the “add friend” button, the application will prompt a small window to let the user input the username. When user input the username, his friend’s account will display in the application.

## **Non-functional Requirements**

1. **Usability requirements**

* The application should have a user-friendly interface which perform high usability.
* The application should perform high scalability and be able to store at least 100 thousand accounts.
* The application will detect error as well as prevent

1. **Performance requirements**

* The application must be lightweight and send message instantly.
* The application must start a chat room instantly when user choose a friend to chat.

1. **Security Requirement**

* All messages that are sended by users should be encrypted to keep privacy.