CS MINI IA

Contents

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# Rationale

In this project, I designed a multi user.

# Requirements

* The user can use the program with GUI interface
* The user can sign up with a username and password and get a random ID
* The user can sign in with the username and password
* After sign in
  + The user can change password
  + The user can request to add friends with friend’s ID
  + The user can choose to accept or refuse friend requests
  + The user can send and receive text message to friends
  + When messages are sent to off-line users, they will be stored on cloud, and when the receiver get online, he or she can get message to local. Then the message will be stored in local and removed in cloud.
  + The user can choose to remove message history from local database.

# Tool / Standard choices

* Develop language: Python3
* GUI Lib: Tkinter
* Database: sqlite3
* Communicate protocol: TCP

# Design

## Communication design

The communication between the server is designed as:

## Database design

### Server end

In server end, there’s one database and xx tables in it.

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| Table name: **AUT** | | | |
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### Client end

## UI design

## Top down design

# Implementation

Code in appendix.

# Reference

1. Eric Jin . multi-user-chatting-software . <https://github.com/EricEricEricJin/multi-user-chatting-software>
2. Eric Jin . Python DIY简易多人聊天软件 . <https://blog.csdn.net/weixin_43528943/article/details/104721649>
3. Runoob . SQLite – Python . <https://www.runoob.com/sqlite/sqlite-python.html>