Design Document

A: A general overview

This is a system about users registration and posting questions with some related functionalities (answer a question, vote a post, edit a post, mark an accepted answer, give badge and add a tag ).

**Here is the small user guide:**

Use path connect to database. And then the first screen is about login screen. Users can choose ‘r’ if they have registered otherwise they can enter ‘u’ to register as a common user.

Choose ‘r’ ——>enter user id as well password ——> successfully login

Choose ‘u’ ——>enter user id —->enter name—>enter city—>enter password—>successful signup/log in (entered value cannot be empty)

Once user has logged in, they can select an option and there are three given(post a question, search for posts and log out ). users can choose ‘p’ to post a question, ‘s’ to search a post, and ‘l’ to log out, following the step they have been prompted. If action is invalid, the system will automatically go back. After a search action, users have 2 post action can be used, and privileged users have 4 more post actions.

For more, the program can be terminated by EOF in Linux and Windows.

B: A detailed design of the software

The main program loop are: connect to database, user login, user action. If logout then save action and eliminate current user.

This program has a class named User contains most of function for user actions, and main function connect(), login().

1. In the main program while loop, handlers exist to handle assertError and avoid unpredictable mistakes, so the program won’t terminate except the user want to terminate it. There are two connections and two cursors in this program, most functions use general cursor, s\_connection and s\_cursor are designed for search function since we need headers and print table out in this function.
2. In User class, self.privileged, self.uid are set initially, and self.pid is the current selected post id if no selection the it’s None. Promptaction and promptpostaction will always let user do some actions. Input values are all checked by assert, if invalid, return to the last step or menu.
3. Search function is used to search posts, and user can choose a post in showing table to do post action. All of the post actions have notification if successfully running to end otherwise function directly raise error to the handler in prompt action function, so the loop will start from prompt again.

C: Testing Strategy:

Our testing strategy is mainly about testing boundary conditions. Firstly, we check some valid input. After the program running correctly under valid input, we start test most of our functions by entering what we not expected. For instance, when testing the searching function, after displaying “what do you want to search for”, we try things like invalid pid or some unordered alphabetic characters other than some body tests which is expected. Thus, we use print() to show what inner program value is, which can double check our idea and coding is correct or not.

D：Group work break down strategy

|  |  |  |
| --- | --- | --- |
| Ccid | Time-spent / hour | Progress |
| Jinglong | 10 | Frame, functions |
| Wentai | 8 | Functions |
| Weitong | 9 | Functions |

**Method of coordination to keep the project on track:**

We share the documents of the project to our discussion group. At the beginning, Jinglong share a file with frames, each group member shares the new file to the discussion group after they finished their own part. There are many versions of code named from 291\_1 to 291\_7 and final version 291\_demo. When each function is completed, we added it into main code and may give a new version number. When closed to final version we tested the code together by considering some special conditions and share the testing results and fix the code.