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1. Introduction:

When we read some academic paper, we may have some parts we don't understand, the model of author used or some ideas of the user is hard to figure out, so we often need to Google some notes of others to help us understand author's thoughts. But the search results are often unsatisfactory, some paper is too new to find a note, some paper notes you find may not help you solve your problems. It wastes a lot of time. So we got an idea, we want to build a website to share people's notes where everyone can share their own notes on the same page for the same paper. When you have some parts you don't understand in the paper, you just click on it and you can see others' notes. You can also ask questions for others to answer. We hope to construct a paper sharing platform to help people read papers more efficiently.

This project is a paper sharing platform. The whole system is divided into four subsystems, registration system, user management system, paper reading system, and management system. Users can select articles of interest on the web page and share their notes. If there are related questions, you can ask questions and watch notes shared by others. The paper recommendation system will recommend relevant articles based on the reader's preferences.

2. competitors

Competitors' name	The function of competitors' products	How do competitors work?	Disadvantage	Our product's function	Our product's advantage

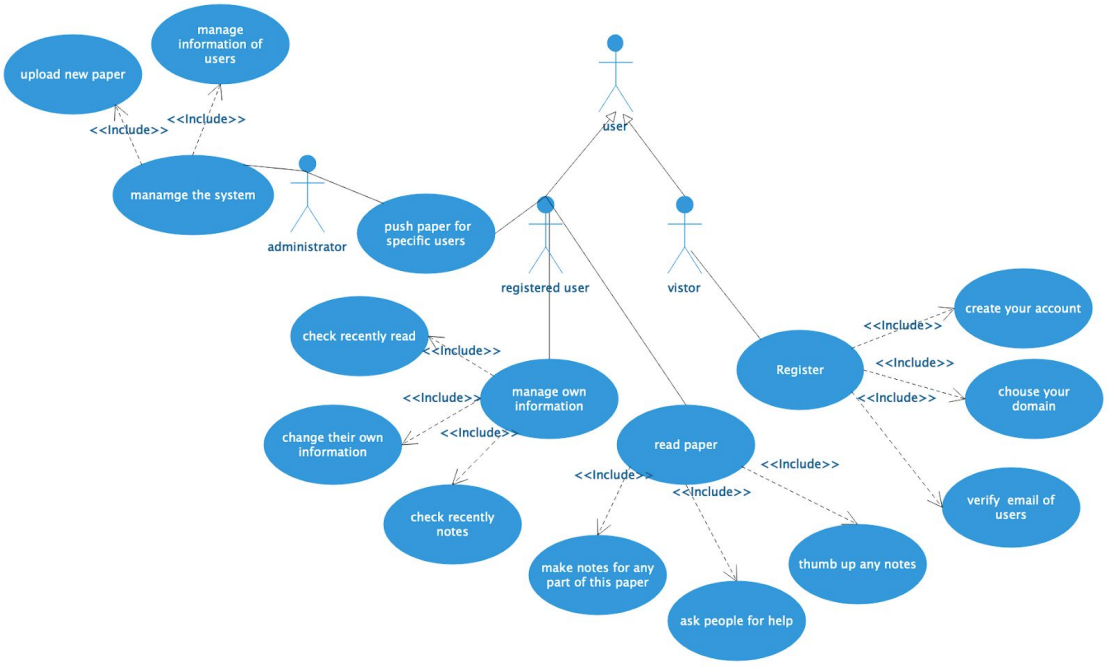
Personal blog	Uploading notes/ Making Comments	Users can upload their reading notes to their personal blogs. Other users can leave comments below the blog.	Users can only upload personal notes on personal blogs; it is not public. There may be more than one blog for the same paper, this makes the information very diffuse. The different blog has different concerns about the same paper , users may not be interested in this blog.so the user should search other notes.it wastes time. The user often searches a blog through Google and other ways, less efficient.	When you find a part of a paper that you don't understand and you want to find someone's note to help you, you don't need to use google. You just need to tap the paper's name into the search bar on our website, and then just click the part that you don't understand (any part: a word, a sentence, a paragraph or the whole paper), it will display other's note on the right side of the web page. It makes people read papers more efficiently. Users can grade the notes to help us distinguish which note is good or bad. And admin can delete the bad notes or comments. Users can write notes/search notes of any parts of the paper when they are reading.	High efficiency of reading paper Excellent user sharing High-quality notes and comments
Paperweekly	Making comments/ Writing Notes/ providing paper links	Users can search for papers through the searching bar. Clicking the searching result to enter the page and a link to the paper is provided on this page, you can write notes and comments on the below.	It just provides a link to the paper. you can't write notes in papers directly. The quality of the notes is not good. The number of users is small		

3. Features

3.1 User group

Undergraduates, postgraduates, doctoral students, relevant staff and scientific researchers

3.2 User case diagram ：



A 2-1 use case diagram

3.2.1 The Register system

a. The Register system shall make visitors sign first
b. The register system shall allow visitors to create their own account
c. The register system shall allow visitors to chose their domain to get a recommendation from the system
d. Register system shall make sure the email has belonged to the user

3.2.2 The user management system for users

a. The user management system shall allow users to manage their information
b. User information management shall allow users to check recently notes
c. User information management shall allow users to manage the collection of notes
d. User information management shall allow users to manage recently notes
e. User information management shall allow users to manage their profile information

3.2.3 The paper reading subsystem

a. The paper reading subsystem shall allow users to manage and look through the paper.
b. Paper management shall allow users to make notes for any parts of the paper.
c. Paper management shall allow users to thumb up their favorite notes.
d. Paper management shall allow users to ask people for help. Paper management shall allow users to have chat with other users who are reading the same paper

3.2.4 The management system for administrator

a. The management system for the administrator shall allow the administrator to

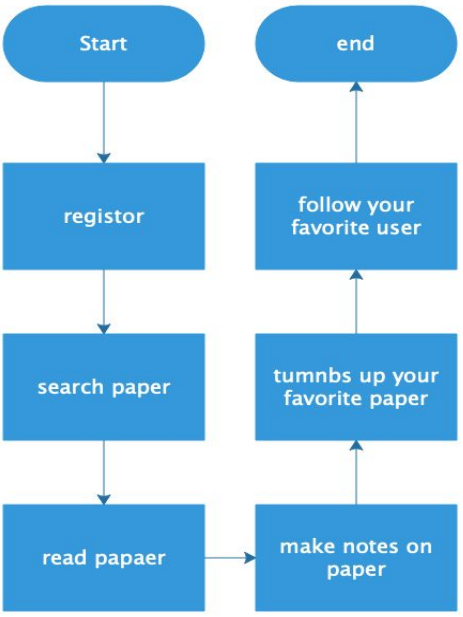
manage the system

b. User information management shall allow the administrator to push papers for specific user
c. User information management shall allow the administrator to delete information/comments of users
d. User information management shall allow an administrator to ban specific users
e. User information management shall allow the administrator to modify the information/comments of users.
f. User information management shall allow administrators to upload the paper for users to read

3.2.5 Recommendation System

a. Recommendation system shall allow the system to push specific paper for users
b. Recommendation system shall tag users with their domain
c. Recommendation system shall tag notes with their notes
d. Recommendation system shall push paper for specific users

3.3 Operational flow diagram ：



2-2 Overall Operational flow diagram

3.3.1 register

First of all, users visit our system as a visitor.

3.3.2 search paper

Then they can find some interesting articles on the platform.

3.3.3 read paper

They can read their favorite papers.

3.3.4 make notes on paper

They also can make notes on every part of this paper.

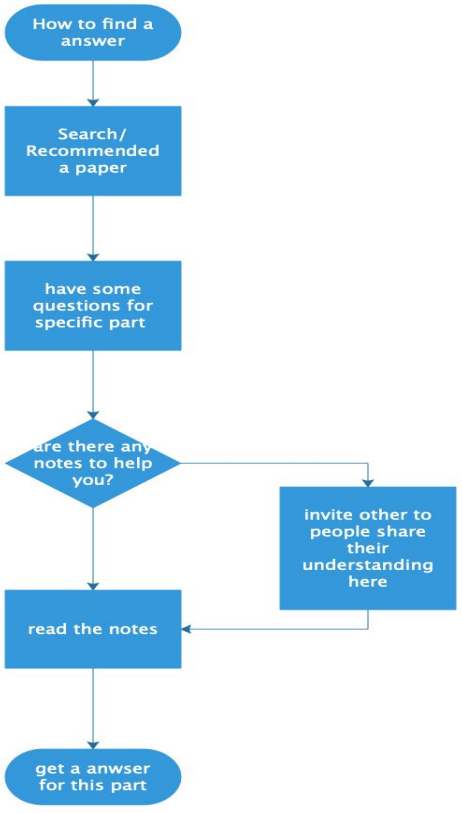
3.3.5 thumbs up to your favorite paper

They also can thumb up their favorite paper.

3.3.6 follow your favorite user

Meanwhile, they could follow their favorite users.

3.4 core function flow diagram



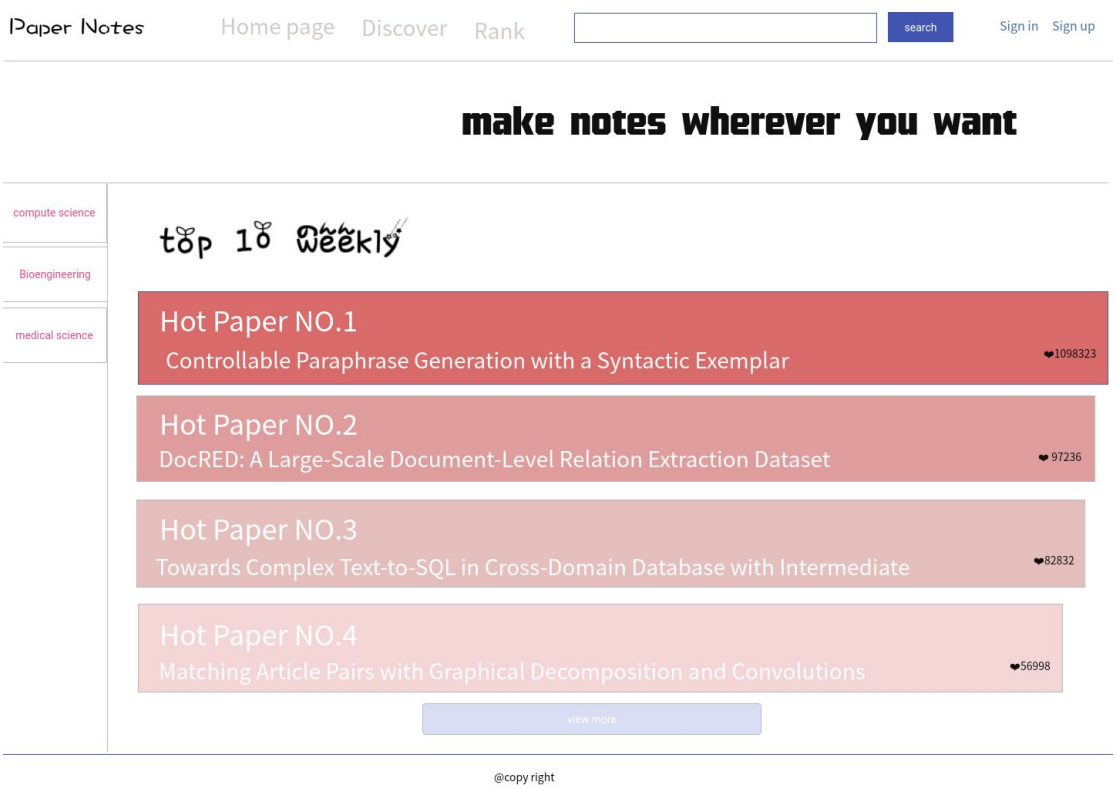
2-3 core function flow diagram

diagram 2-3 shows the process of how a user looking for valuable information from our system. First of all, the user is able to get a paper from a search function or recommendation system. Then when users read the paper when they have questions on some sentences, formula or expressions. users could select these parts and check if there have any notes to help them understand this question. If there are no any notes there, they could invite other users who understand this part to make notes here to share their knowledge.it will also help other users who have the same problem here .when every people do the something here, it will generate a knowledge-sharing environment on a more concrete question.

3.5 screen flow

3.5.1 Home page

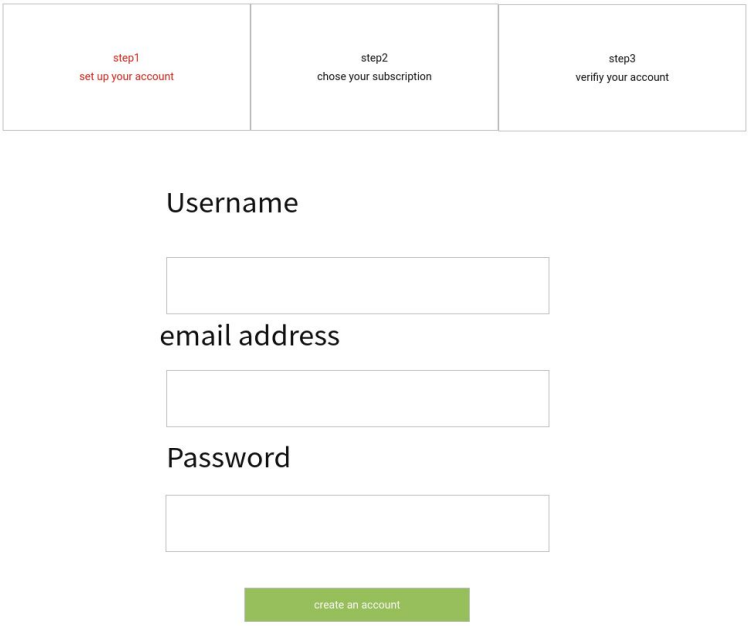
The first page is our home page, the left side shows the different scientific fields, and the right side is the top ten articles selected according to the heat.



3.5.2 sign up 1

The second page is our registration page. First, we need to fill in the username, user email, and password.

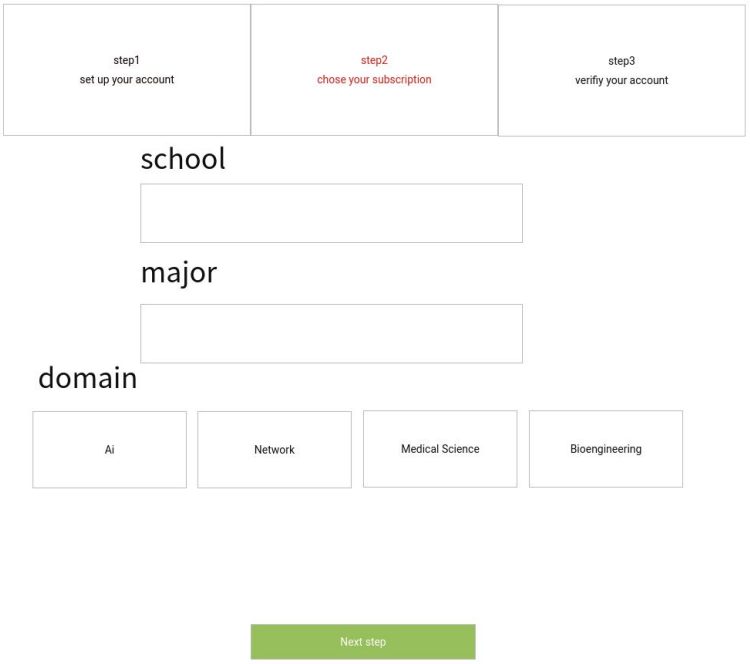
Paper Notes



3.5.3 sign up 2

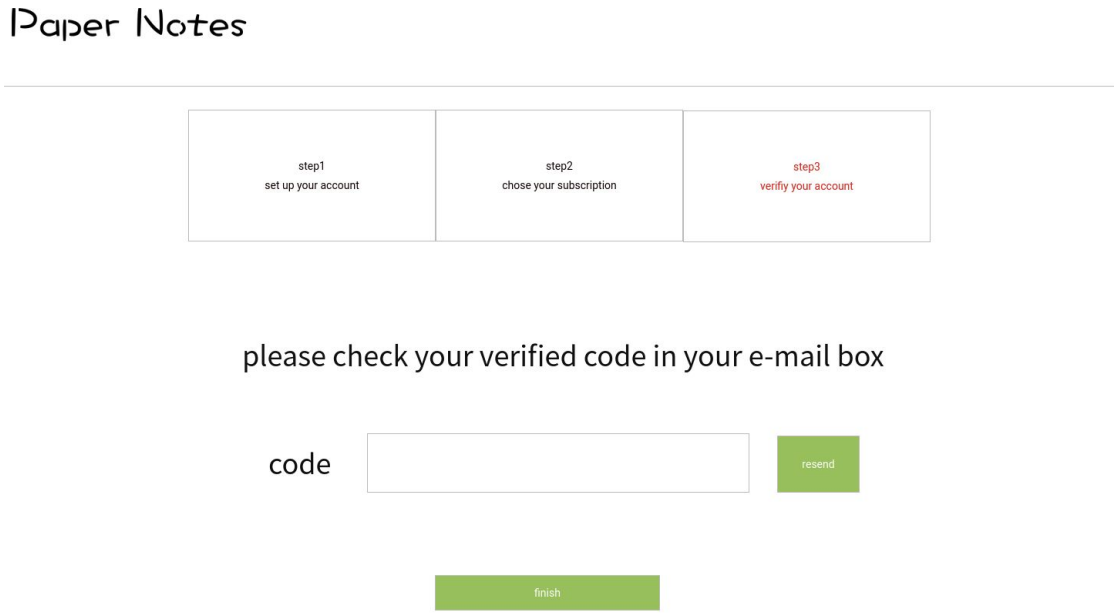
Then we need to choose our school, profession, and the field we like.

Paper Notes



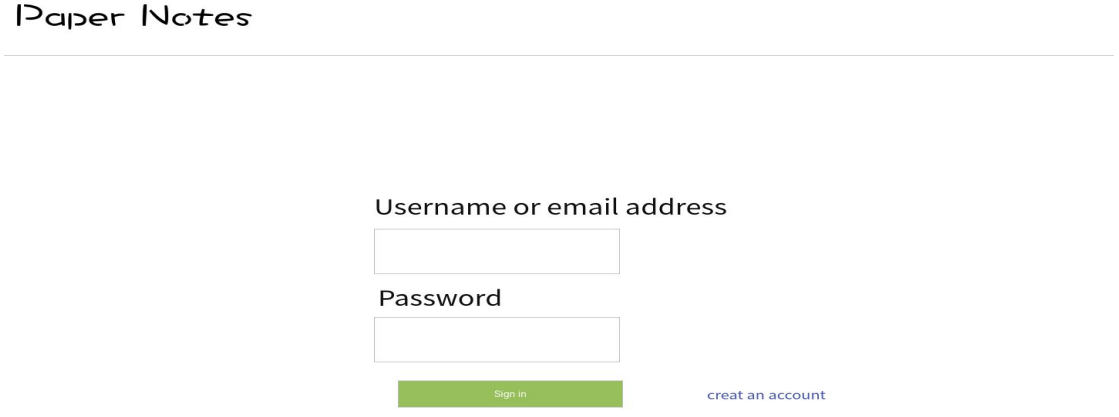
3.5.4 sign up 3

The final step in registration requires us to verify the identity using the verification code of the mailbox.



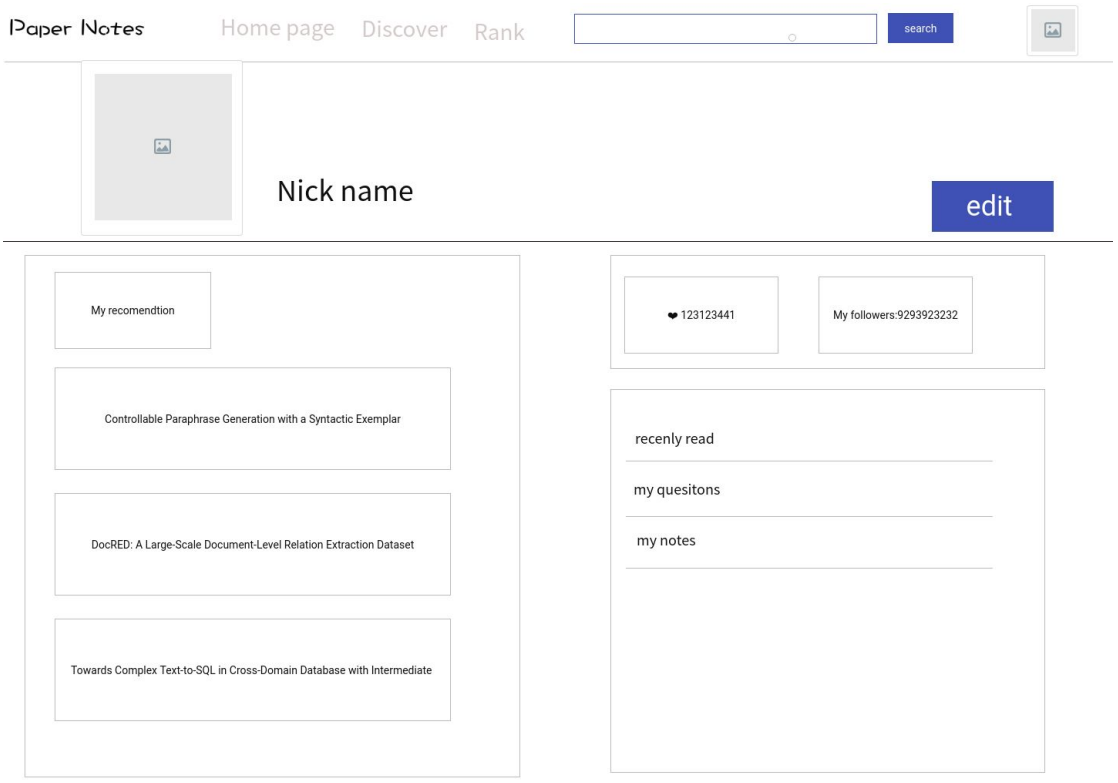
3.5.4 sign in

Users input their account and password to sign in, If you don't have account you can just create an account.



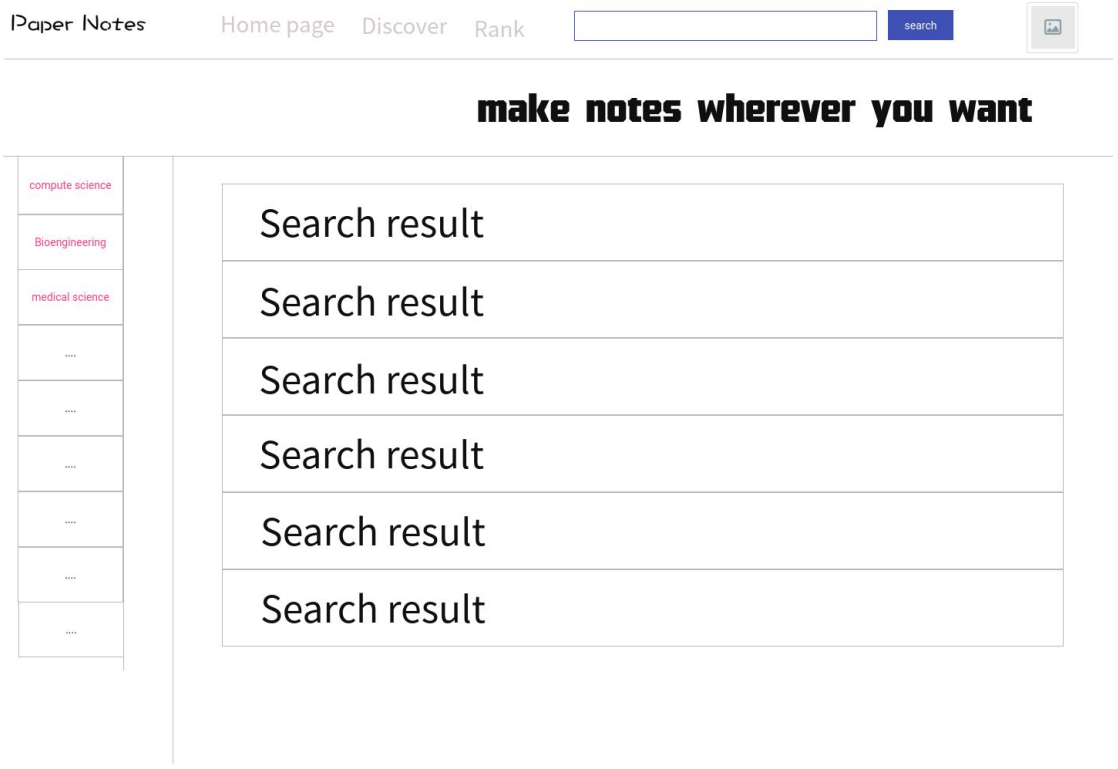
3.5.6 User center

In the user center, users can edit personal information. Browsing the recommended papers, questions, and notes.

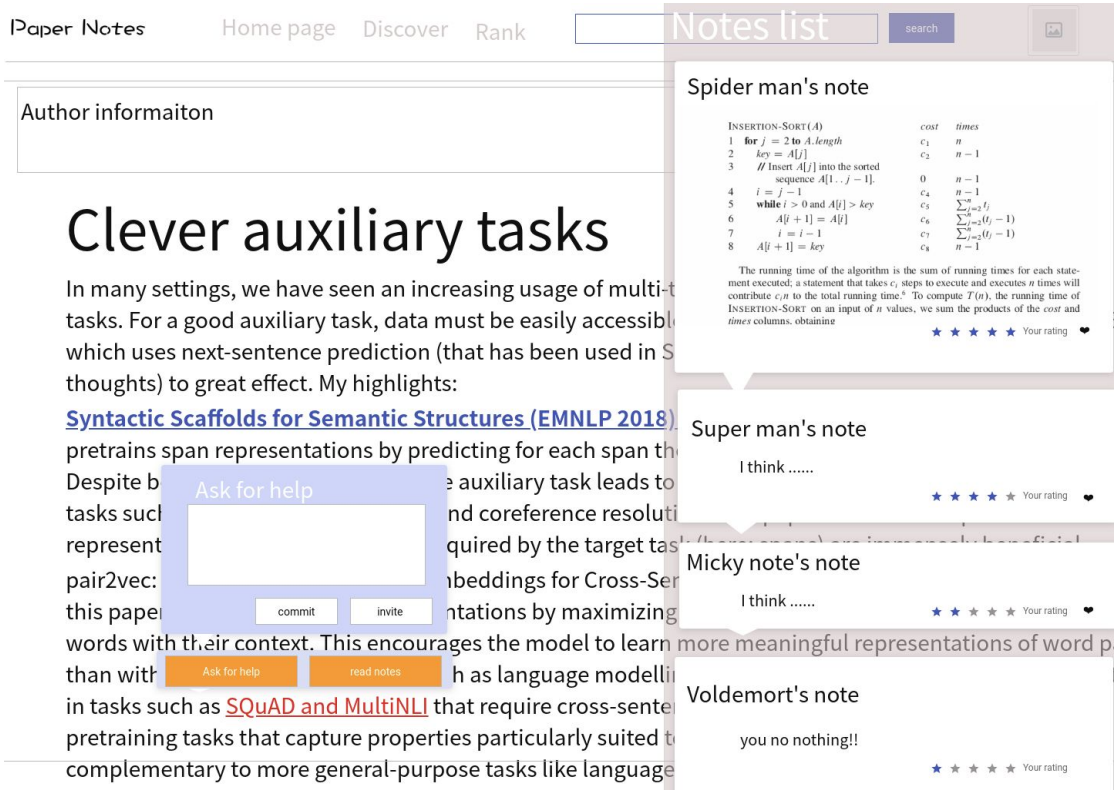


3.5.7 Search page

Users can search papers through the search box and then search results will display on the web page.



3.5.8 Paper page



In the paper which is displayed on the web page, users can use the mouse to choose which part they want to search a note or want to write a note and then will display a note list. When the part which the user wants to check the note but no notes, this part will be marked in red, it indicates that this part needs somebody's help, you can ask for help or make a note for others. And each note or comment can be graded by users, note or comments which has low score will be deleted by admin, it can ensure notes and comments have high quality.

3.5.5 link

https://org.modao.cc/app/arpt8h5nfjmk0a9n6us54lh1flsz0m

3.6 how to avoid the risk

3.6.1 risk of Notes' quality

who will use our rating system to filter the valuable notes.

3.6.2 risk of Copyright

the paper can’t be download or paper

4.Risk ：

Risk	Description	Solution	Realistic Estimate probability

Developer risk	We don't have enough technology	We don’t relevant experience about this kind of project	**70%*336=84**
Schedule risk	We not enough time	We need more time,maybe the time is not enough	**80%*48=38.4**
Notes' quality	We can't guarantee that the quality of the notes is particularly high.	The user's comments are mixed. We can score according to the user's second evaluation, sort according to the score, select good comments, and discard the poor comments.	**30%*120=36**
User number	We can not get too many users.	The promotion of software is not in place, and there are not many users.	**20%168=33.6**
Copyright	We can not get the copyright of every paper	The upload of the paper requires the consent of the relevant website.	**10%*240=24**
Profit	We do not enough money to maintain the software operation	Advertisement	**5%*120=6**

5.Development plan

Time	Goals
2019.9.9	Finish requirements document
2019.9.12	Concrete design
2019.9.13	Build running environment on the computer
2019.9.30	Iteration 1
2019.9.30	Sign in/up to upload and make notes on paper
2019.10.28	Iteration2
2019.10.28	User center, log collection
2019.11.18	Recommendation
2019.12.2	Test software availability

GitHub: https://github.com/liyazhou96/SE1.git