

**A website for story collection – bookbranch web**

by

Wang Ruoxi, Jack  
(20300860)

Supervised by  
Dr. David Rossiter

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HONG KONG UNIVERSITY  
OF SCIENCE AND TECHNOLOGY

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## ACKNOWLEDGEMENT

I would like to express my great gratitude towards my supervisor, Dr. David Rossiter, who had given me invaluable advice to this project.

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A website for story collection – bookbranch web

by

Wang Ruoxi, Jack

Msc in Information Technology  
HONG KONG UNIVERSITY  
OF SCIENCE AND TECHNOLOGY

**ABSTRACT**

These days' people can interact with others on the Internet by sharing photos or videos but few of them share their idea of story writing. The bookbranch web provides a platform for people who interested in writing stories. User can write story with others, create their own favorite story based on others' interesting ideas.

## **1 Introduction**

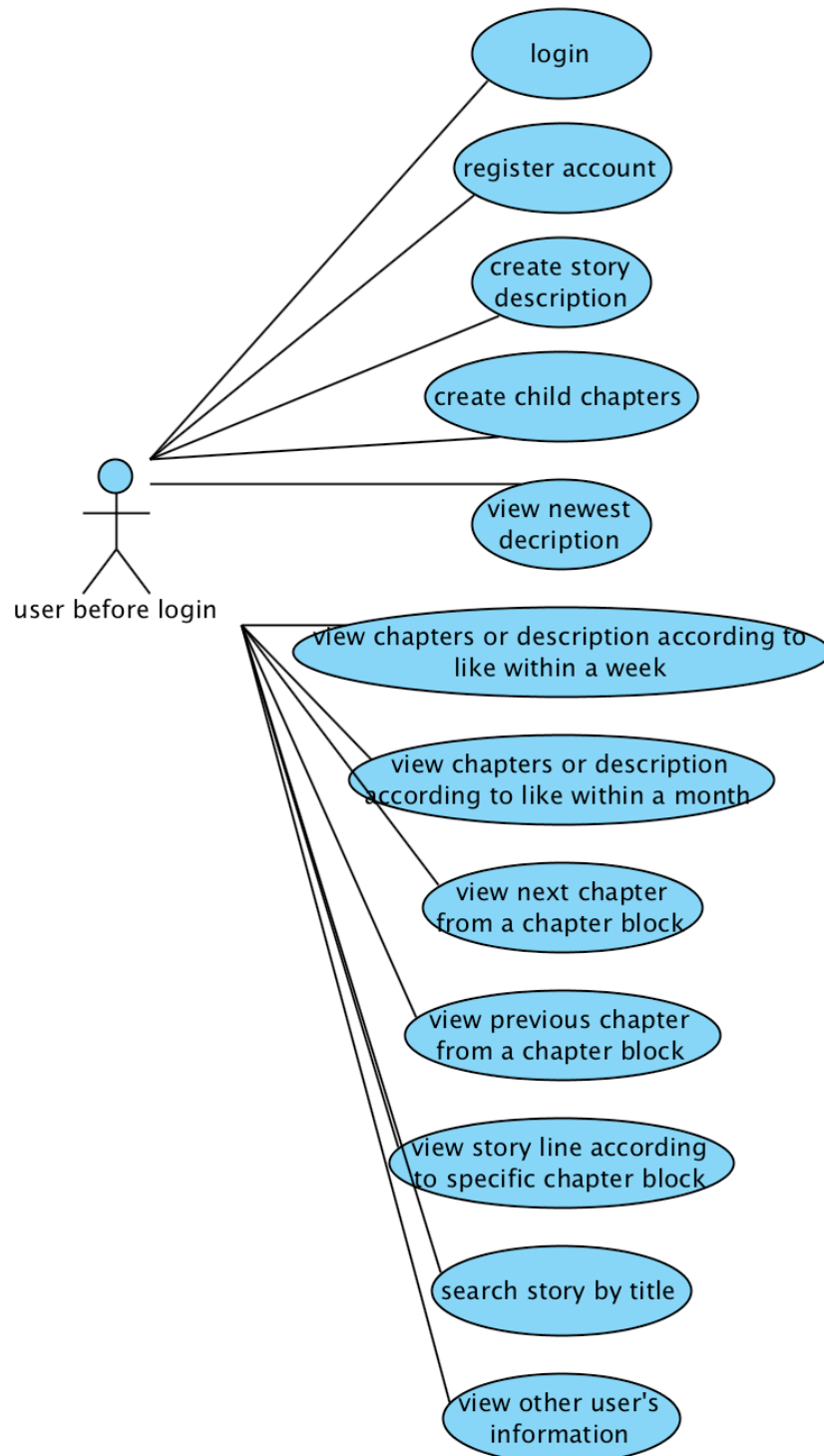
The idea is about a website that has a new mechanism of story reading and creation. First title and introduction of a story can be created by one user, introduction includes characters, background and anything the user comes up with. After the story is created, any users include the creator can continue writing and create a branch of this story. When reading stories, users can choose chapters from different branches they prefer, hit the like button within chapters and even write their own branch if they got some ideas about how a different possibility can be emerge out of a specific chapter. So a story can be consisted of different branches with many chapters rank by liked times created by different users.

There are roughly two advantages of this mechanism, first, it makes writing easier and has much more fun since users don't have to write a story from the beginning to the end, they can continue and stop at any chapter they like, even create an introduction without continue writing anything, what matters here is the idea of introduction or branch is interesting or not.

Second, the mechanism brings a new experience of reading since reader can choose different version of next chapter and it makes reading story like an adventure. Also a user can choose a specific chapter and retrieve the whole story line that relates to this chapter, so reader doesn't have to figure out a story is interesting or not by reading from the beginning, find a high quality chapter judging by its liked times and fetch the specific branch will do the trick.

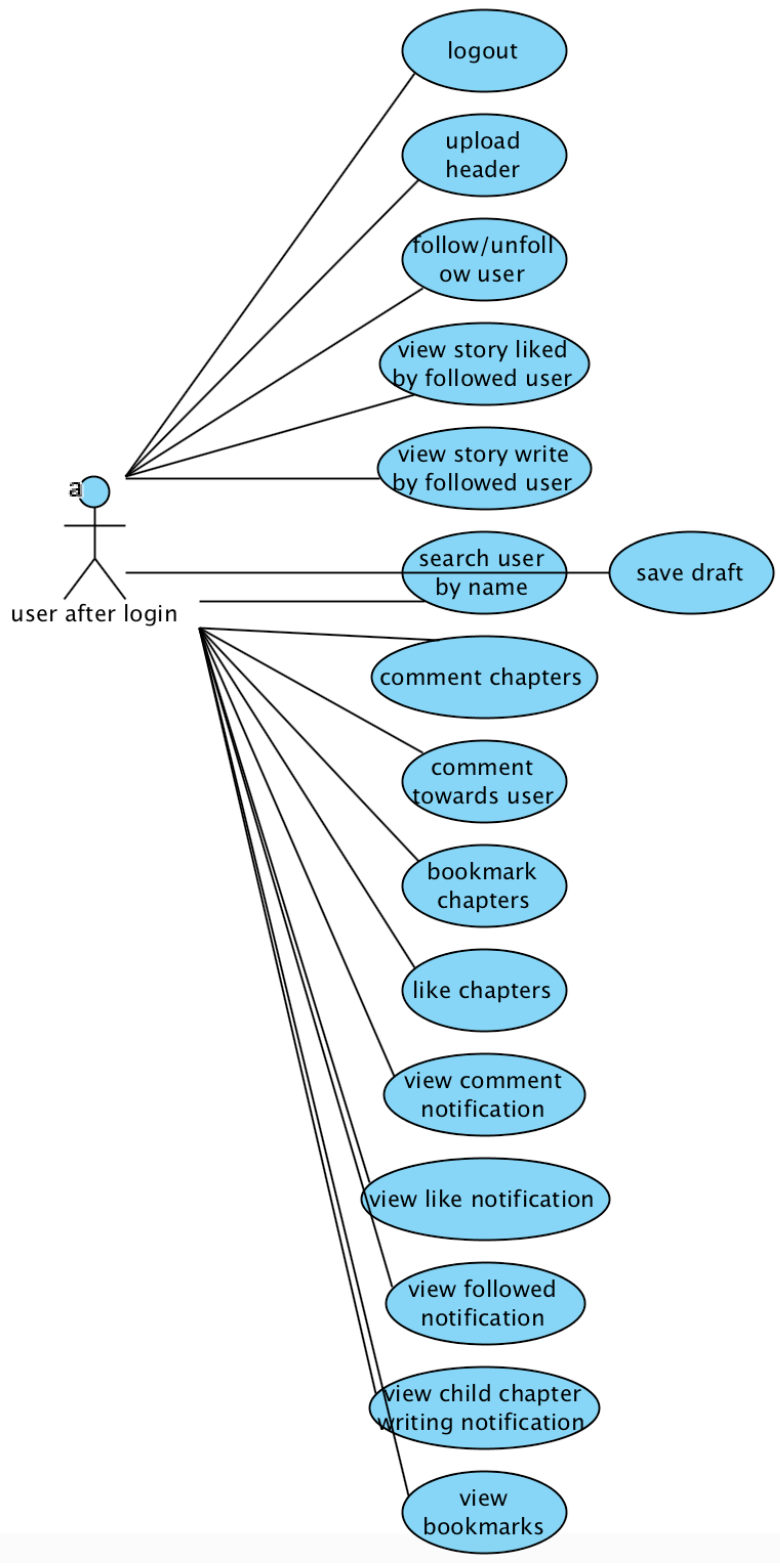
## 2 Thesis

### 2.1 Use case



Above use case is for user who haven't login yet, use case detail are as follow

1. Login: Enter email and password for login
2. Register account: Enter email, alias, password for registration
3. Create a story description: Enter story title and description to create a new story
4. Create child chapters: Continue writing based on existing chapters or description
5. View newest description: Show all story description according to created time
6. View chapters and description according to like within a week
7. View chapters and description according to like within a month
8. View next chapter from a chapter block
9. View previous chapter from a chapter block
10. View story line according to specific chapter block: View a specific chapter and all its parent chapters, so it consists a story line
11. Search story by title
12. View other's user information: User information includes stories this user written, stories this user liked, users this user followed and users following this user.

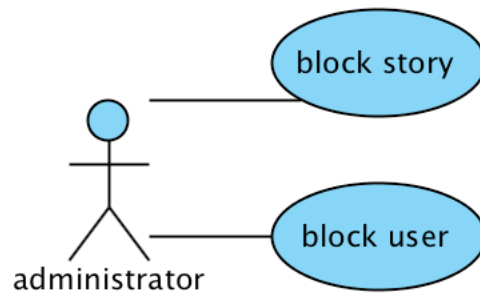




Along with functions that provided to user that did not login, there are some other functions that can be implemented by login user.

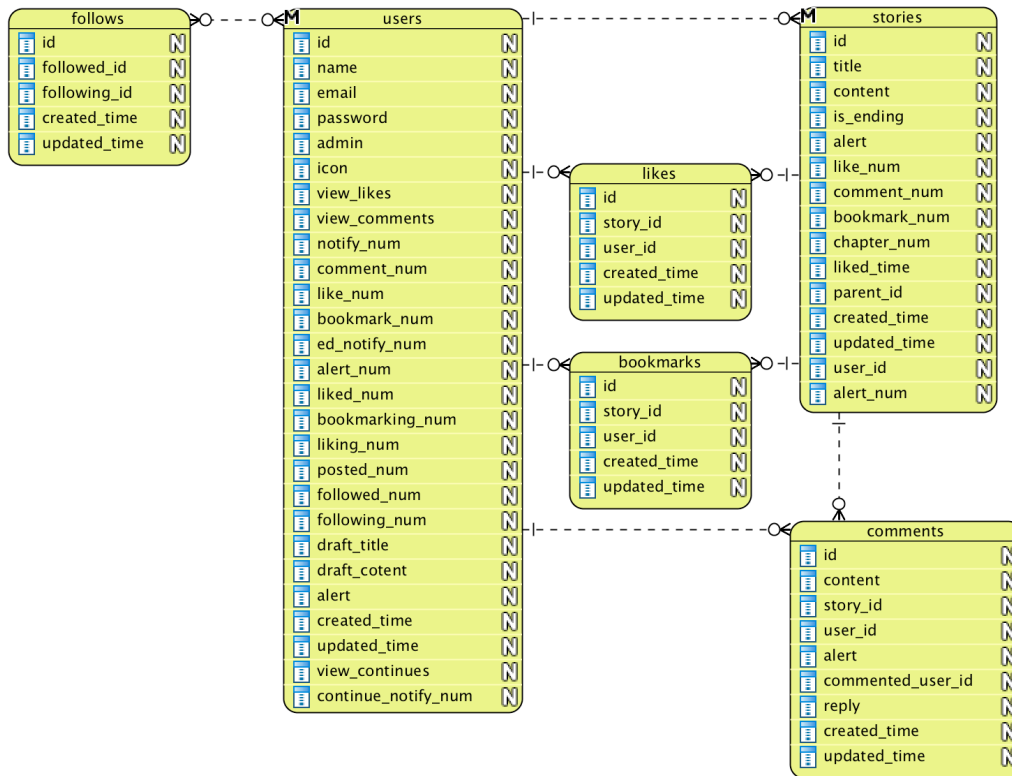
1. Logout
2. Upload header: Header can not exceed 200k
3. Follow/unfollow users
4. View stories liked by followed users
5. View stories written by followed users
6. Search user by name
7. Comment chapters: Can leave comments on any chapters and comments can be view by other users
8. Comment towards user: Can leave comment towards specific user who appear in comments
9. Bookmark chapters
10. Like chapters
11. View comment notifications: If other users comment this user's stories or make comment towards this user, then he or she will receive a notification and comments can be view
12. View likes notifications: If other users liked this user's story, then likes will be received and who liked a specific story can also be viewed
13. View followed notifications: If one user followed this user, then there will be a notification
14. View child chapter writing notifications: If this user's story is continued by other users, then there will be a notification
15. View bookmark: Bookmark can be viewed in user main page.
16. Save draft

## 17. Alert



Administrator can block story from viewing by other and can block a user from login.

## 2.2 Database design



Database is consisted of 6 tables, relationship concepts are below

For one to many

1. user -> story
2. user -> comment
3. parent\_story -> child\_story
4. story -> comment

For many to many

1. user -> story (bookmark)
2. user -> user (follow relation)

### ***2.3 Laravel framework and implementation***

The website is designed by PHP framework Laravel along with JavaScript, CSS, Ajax and html 5, database is implemented by MySQL. Server side is using Ubuntu 14.04 and nignx as engine.

In Laravel framework there is an extension of html named Blade, Blade is the simple, yet powerful templating engine provided with Laravel. Unlike other popular PHP templating engines, Blade does not restrict you from using plain PHP code in your views. All Blade views are compiled into plain PHP code and cached until they are modified, meaning Blade adds essentially zero overhead to your application. Blade view files use the .blade.php file extension and are typically stored in the resources/views directory. [1]

Before user makes requests to the server, their requests will have to go through some middleware, HTTP middleware provide a convenient mechanism for filtering HTTP requests entering your application. For example, Laravel includes a middleware that verifies the user of your application is authenticated. If the user is not authenticated, the middleware will redirect the user to the login screen. However, if the user is authenticated, the middleware will allow the request to proceed further into the application. [2]

After user makes a request from a Blade, the request will be loaded to routes.php, all Laravel routes are defined in the app/Http/routes.php file, which is automatically loaded by the framework. The most basic Laravel routes simply accept a URI and a Closure, providing a very simple and expressive method of defining routes. [3]

Instead of defining all of your request handling logic in a single routes.php file, you may wish to organize this behavior using Controller classes. Controllers can group related HTTP request handling logic into a class. Controllers are stored in

the app/Http/Controllers directory. [4] inside controller there are some repositories that is responsible for database connection and SQL execution.

Below is each use case's implementation.

### 2.3.1. Registration and login

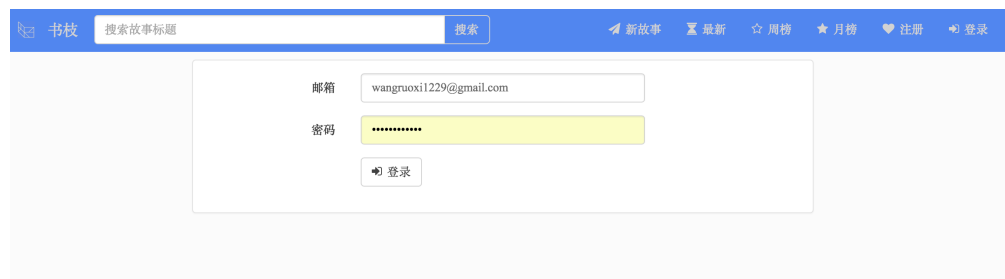


The screenshot shows a registration form on a website. The form is located in the center of the page and contains the following fields and elements:

- 用户名** (Username): A text input field.
- 邮箱** (Email): A text input field.
- 密码** (Password): A text input field.
- 确认密码** (Confirm Password): A text input field.
- 验证码** (Captcha): A captcha image showing the characters "7PF6X".
- 注册** (Register): A button with a right-pointing arrow.

The form is set against a light gray background. Above the form, there is a blue navigation bar with a search bar and several menu items: "新故事", "最新", "周榜", "月榜", "注册", and "登录".

Registration will need to enter a captcha code, also a validation rule is set to forbid duplicate email and user alias.



The screenshot shows a login form on a website. The form is located in the center of the page and contains the following fields and elements:

- 邮箱** (Email): A text input field containing the email address "wangruoxi1229@gmail.com".
- 密码** (Password): A text input field with a yellow background and masked characters "\*\*\*\*\*".
- 登录** (Login): A button with a right-pointing arrow.

The form is set against a light gray background. Above the form, there is a blue navigation bar with a search bar and several menu items: "新故事", "最新", "周榜", "月榜", "注册", and "登录".

If a user fail to login 6 times, then the user's IP will be block from login for 1 minute.

### 2.3.2. Create story description

标题

简介

发送

9DPC3

保存

Title and description are needed for create a new story, description need to be more that 50 words and title can not exceed 20 words.

If some conditions are not fulfilled, there will be notifications above the title.

- 需要一个标题
- 故事不能为空
- 需要验证码

标题

Also starting a story need to fill in the captcha code.

If a user did not login, then the save method cannot be used, if it is clicked, then a notification will pop out to say that anonymous user cannot save content.



During the save process, there will be animation for saving, it is created using CSS and JavaScript.

Once the story is posting, the post button will be disable to avoid duplicate posting.

After the story is created, user will be redirect back to view newest story his story will be at the top at that time.

### 2.3.3. Create child chapter



The screenshot shows a web form for creating a child chapter. It features a text input field at the top labeled "章节标题" (Chapter Title). Below it is a large text area labeled "章节内容" (Chapter Content). At the bottom of the form, there are three buttons: "发送" (Send) with a paper plane icon, "普通章节" (Normal Chapter) in blue, and "保存" (Save) with a floppy disk icon. A small image of a child's drawing is visible below the "普通章节" button.

This is very much the same as creating a story except there is a option beside the post button to choose whether is chapter is a normal chapter or a ending chapter.

After the chapter is posted, user will be redirect to his or her main page and see the story is posted there.



## 2.3.4. View newest description



The screenshot shows a web interface for Douban's 'Mirror City' (镜中城) section. At the top, there is a search bar and navigation links. Below, three story descriptions are listed, each with a title, a view count (e.g., 54, 57, 58), a brief description, and a user profile picture. The first description is for 'Mirror City' (镜中城) by user '冷魅' (Cold Charm), with a view count of 54. The second is for 'Ancestor' (始祖) by user 'lanruosi', with a view count of 57. The third is for 'Mirror Man' (镜中人) by user '冷魅', with a view count of 58. Each entry includes a 'More' link and buttons for 'Bookmark', 'Comment', 'Continue Writing', and 'Next Chapter'. Below the list, there is a section titled 'Mystery Novels' (家作侦探) with a sub-section for 'Mirror City' (镜中城) and a description for 'Mirror Man' (镜中人) by user '冷魅', with a view count of 54.

The story block is shown as above, all story display here is description of stories, the upper center is the title and says it is the description, upper left number means how many times the description is viewed, one can view the whole story by clicking more or just click the content.

镜中城  
简介

👁 55  
转载自作者: More.

作者: [www.douban.com/people/morechange/](http://www.douban.com/people/morechange/)

出处: [www.douban.com/note/542536873/](http://www.douban.com/note/542536873/)

此篇为《镜中人》的后续,但故事的时间轴为《镜中人》前传.  
文中会出现大量对《镜中人》剧透及释疑,未曾读过《镜中人》者,请谨慎阅读.  
《镜中人》及《镜中城》中有部分血腥、压抑场景,不适者请斟酌观看.

2016-04-16 09:49:49 举报

书签 0      评论 0      [续写](#)      [下一章](#)


Above is after the content is clicked, it will show the creating time at bottom right and an alert keyword beside it.

The left bottom four key words are bookmark, comment, continue writing and next chapter, since they are all description, there will no exist precious chapter.

Only a registered user can bookmark a story or make a comment, an unregistered user can view comments but can not post one.

评论

---


月历

2个月前  
回复


啊啊,我想看你停更的那个上古的故事

---


SKD

2个月前

---


月历

2个月前

。这怎么接

Every comments has its created time on the right, it display how long has it been after creating this comments, here it display 2 month ago. The time transformation is implemented using JavaScript.

When one put the mouse over a comment, it will display a reply key word, if it is clicked, then it will show reply input and button.



View according to monthly and weekly like is much the same, except it can show not only description but also chapters.

The Story display is using Scroll down effect that achieved by JavaScript.

Every Scroll down will display 20 stories.

### 2.3.5. View next/previous chapter and view story line

故事线末章选择

镜中城  
简介

55

转载自作者: More. 作者: www.douban.com/people/morechange/ 出处: www.douban.com/note/542536873/  
此篇为《镜中人》的后续.但故事的时间轴为《镜中人》前传.文中会出现大量对《镜中人》剧透及释疑.未曾读过《镜中人》者,请谨慎阅读.《镜中人》及《镜中城》中有部分血腥、压抑场景,不适者请斟酌观看.

...更多

书签 0 | 评论 0 | 新故事线

---

镜中城  
第1章 记录日期:2010年4月6日

9

上个月的一天,副主任医师王平叫住了我,他递给我一份有些泛黄的医生笔记.“李彤,你看看这个.”王平算我的老师,他经常带着住院医师的我去各个病房巡查,给我分析各种典型的心理疾病.有时还会出题考我.我翻开笔记的封面,第一行写着:【记录日期:2010年4月6日 患者姓名:赵信.】“这个病人是谁啊,德邦总管吗?”我抬头问王主任.“这个名字你不认识没关系,你往下读就知道了.”王主任说.我点了点头,继续往下看.

...更多

书签 0 | 评论 0 | 续写 | 下一章

Above is the story page, the upper most block is the description of the story, below is the chapter 1, if there exist multiple chapter one, there will all be shown like below test case.



故事线末章选择

- 第11章
- 第10章
- 第9章
- 第8章
- 第7章
- 第6章
- 第5章
- 第4章
- 第3章
- 第2章
- 第1章

镜中城  
简介

[www.douban.com/people/morechange/](http://www.douban.com/people/morechange/) 出处: [www.douban.com/note/542536873/](http://www.douban.com/note/542536873/)  
但故事的时间轴为《镜中人》前传. 文中会出现大量对《镜中人》剧透及释疑. 未  
慎阅读. 《镜中人》及《镜中城》中有部分血腥、压抑场景, 不适者请斟酌观看.



冷魅  
6

评论 0 | 新故事线

For story list retrieving, click a story block's title, it will retrieve its parent, the its parent's parent along up to the root and all display in this story page, for example if one click the chapter 3's title, then chapter 1- 3 of this story line will be retrieved.

故事线末章选择

### 镜中城

简介

👁 55

转载自作者: More. 作者: [www.douban.com/people/morechange/](http://www.douban.com/people/morechange/) 出处: [www.douban.com/note/542536873/](http://www.douban.com/note/542536873/)  
 此篇为《镜中人》的后续,但故事的时间轴为《镜中人》前传.文中会出现大量对《镜中人》剧透及释疑.未曾读过《镜中人》者,请谨慎阅读.《镜中人》及《镜中城》中有部分血腥、压抑场景,不适者请斟酌观看.

**冷魅**  
6

书签 0
评论 0
新故事线

---

### 镜中城

第1章 记录日期:2010年4月6日

👁 9

上个月的一天,副主任医师王平叫住了我,他递给我一份有些泛黄的医生笔记.“李彤,你来看看这个.”王平算我的老师,他经常带着住院医师的我去各个病房巡查,给我分析各种典型的心理疾病.有时还会出题考考我.我翻开笔记的封面,第一行写着:【记录日期:2010年4月6日 患者姓名:赵信.】“这个病人是谁啊,德邦总管吗?”我抬头问王主任.“这个名字你不认识没关系,你往下读就知道了.”王主任说.我点了点头,继续往下看.

**冷魅**  
0

书签 0
评论 0
续写
更多的下一章

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### 镜中城

第2章 记录日期:2010年5月到2010年8月

👁 1

【记录日期:2010年5月5日.患者入院四周,病情无好转迹象,对认知及干预疗法强烈排斥,缺少安定剂的情况下,暴躁情绪愈加严重.采取加大药物剂量,暂时取消认知及干预疗法,依旧使用暗示催眠疗法.】 【记录日期:2010年7月5日.患者入院十三周,病情较入院时稍有缓解,但依旧排斥认知疗法.暗示催眠疗法略有成效.保留用药剂量,持续观察.】 【记录日期:2010年8月1日.患者病情发生明显好转,无任何暴躁,易怒情绪,无自残倾向.】

**冷魅**  
0

书签 0
评论 0
续写
更多的下一章

---

### 镜中城

第3章 记录日期: 2010年8月5日

### 2.3.6. Search story by title



It is implemented using SQL and it performed great by only search relevant title.

### 2.3.7. View user's information

冷魅

❤️被赞 13

写过 22 | 赞过 5 | 关注的 0 | 被关注的 0

镜中城

结局 第11章 2012年12月6日

👁️ 4

【2012年12月6日. 南京市脑科医院心理科主治医师,陈奕. 被发现死在门诊部三楼的诊室里. 死亡原因:外伤(胸腔被钝器撕裂),全身大面积出血. 被发现时,心脏,肝脏,脾脏,肺部及1/3的大肠全部失踪. 预估死亡时间:20点-21点,凶器尚未找到. 凶手至今尚未落网.】我的汗水顺着额头一直流滴到领口里面,激起一阵阵的寒意. 我再也按耐不住,冲出办公室,在4楼走廊的尽头找到了王主任. “37号房.” 王主任听见我的声音却不理睬,若...[更多](#)

书签 0 | 评论 0 | 上一章

镜中城

第10章 记录日期:2012年12月3, 6日


👁️ 1

【记录日期:2012年12月3日 “魏儿”终于肯出来和我对话了. 让我震惊的是,她居然知道另外两个人格的存在,并且了解他们身上所发生的所有事情. 据我所知,心理学史上只有1977年的英国患者亚瑟·米格尔有过能感知并分配管理人格出现的案例. 还没在震惊中缓过神来,“魏儿”说了更让我震惊的事. 她说,她的出现,正是因为那天我给“毕梦辰”注射了3mg的安定剂,让他感受到危险的存在,潜意识里分裂出“魏儿”来感知身边发生...[更多](#)

书签 0 | 评论 0 | [续写](#) | 上一章 | 下一章

The upper four buttons means wrote, liked, following and followed.









Jack Wang

♥被赞 11

---

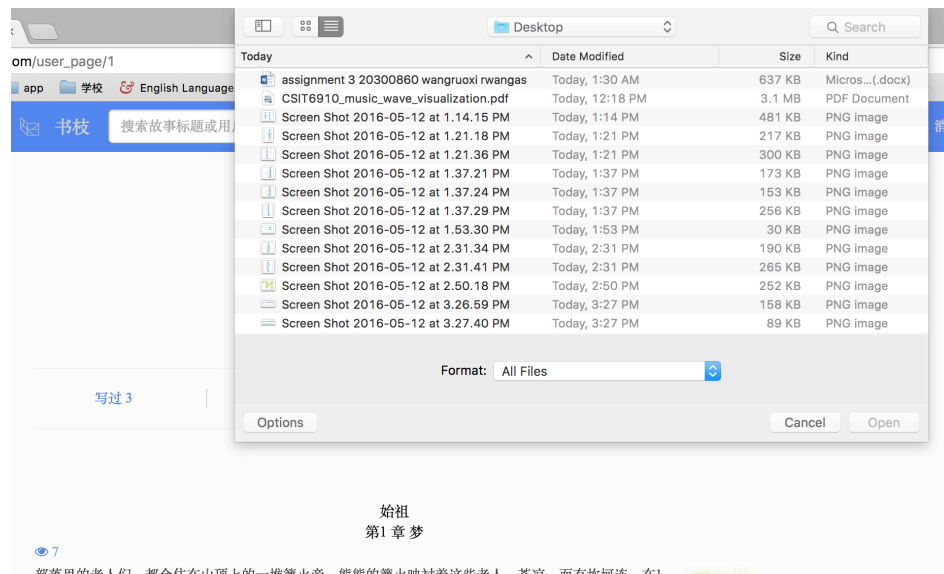
写过 3
赞过 14
关注的 7
被关注的 2

---

 <p>lanruosi</p>	被赞 4	写过 1	关注 0	被关注 2
 <p>星神</p>	被赞 56	写过 27	关注 3	被关注 4
 <p>琪琪打酱油</p>	被赞 0	写过 0	关注 1	被关注 2
 <p>月历</p>	被赞 2	写过 1	关注 0	被关注 2

**Above are all functions for non-registered user, below is functions for registered user.**

### 2.3.8. Upload header

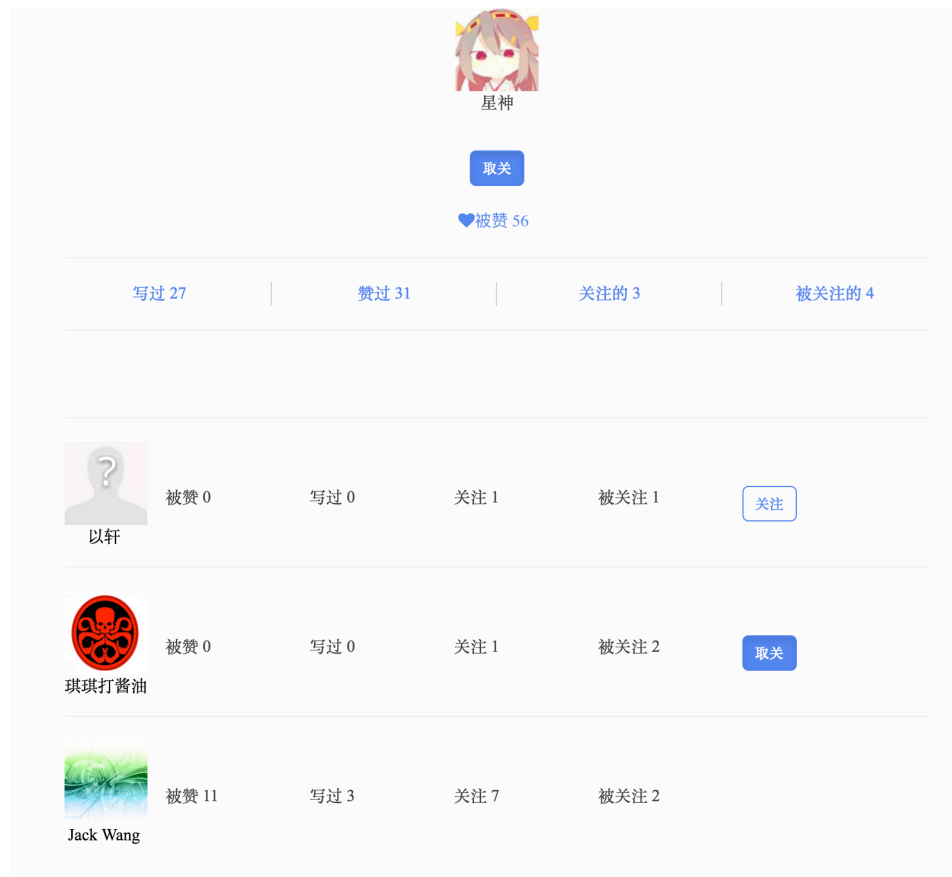


After click the header of the registered user's own main page, there will be a pop out window for image uploading.

If the image size is larger than 200k or it is not a image form, then the upload will fail along with a alert pop out by JavaScript.

### 2.3.9. Follow/unfollow user

After the user is login, the follow/unfollow button will shown as below



In the process of database manipulation, once a user want to follow other user, first the JavaScript will test whether the user is clicking a follow button or a unfollow button, then it will send the correct request the server, whether display follow or unfollow is judged in Blade. But it can still cause mistakes, so if server has the request that A is following B, then it will first check whether in follow table that A is truly not following B, if it is true, then increment B's followed number and A's following number, then send back the respond that operation is succeed, JavaScript received the respond and turn the follow button into unfollow button.

If a user click a follow button multiple times, it will only trigger one request until the first request has respond. It is handled in Ajax and JavaScript.

Also the transaction is set, if any process is wrong in the server, then it will roll

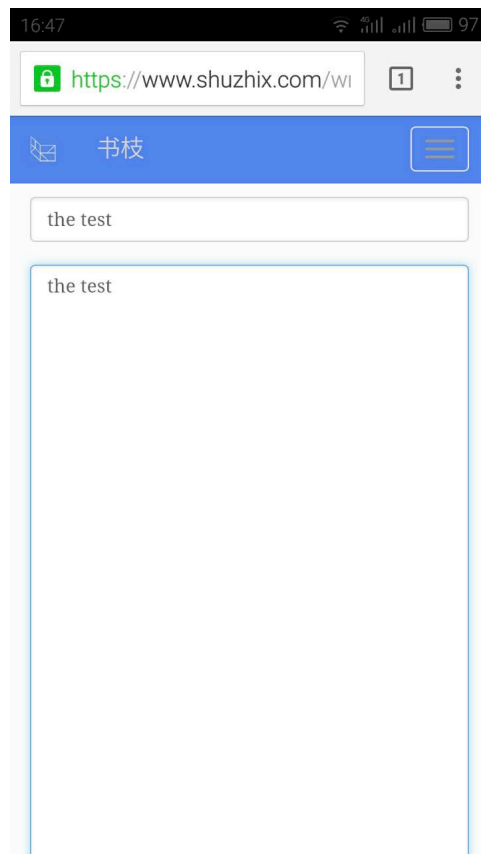
back all SQL and direct user to a page says there is a error, all post requests are using transaction handing.

### 2.3.10. Alert

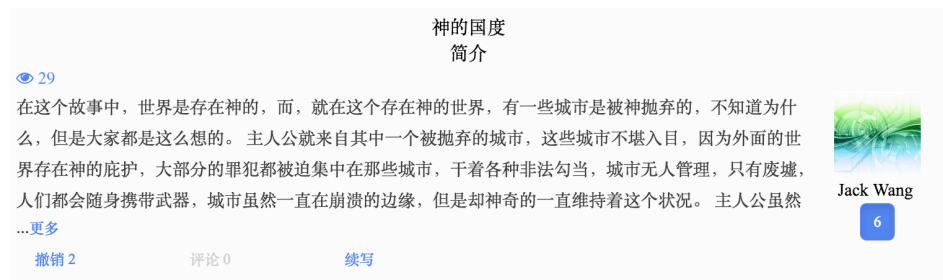
Only a register user can click alert, then it will make administrator know that a story is alerted.

### 2.3.11. Save draft

Once a draft is saved, the next time user click new story or continue writing, it will shows the same draft. And if user posted the saved draft, it will be erased. since the website is using bootstrap, it can view in mobile phone, saving method makes it convenient for writing story on mobile side.

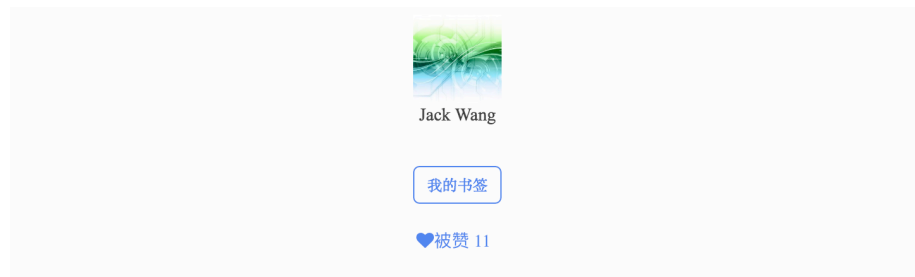


### 2.3.12. Bookmarks and viewing

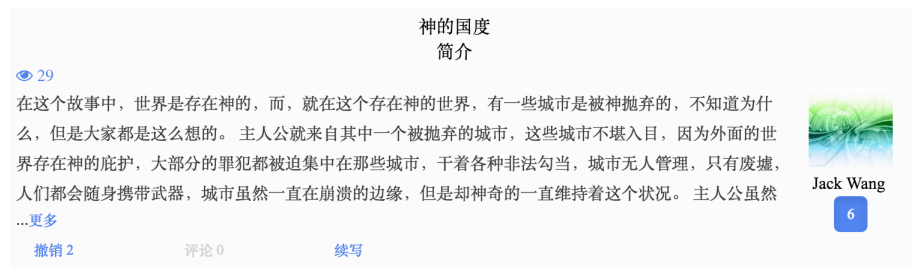


After a story is bookmarked by current user, it will show cancel and it will become blue. Again click it will cancel the bookmark.

Bookmark is viewed in one's main page by click the button below his or her own header, in other user's main page the button is follow button.



### 2.3.13. Like chapters



If a chapter is liked by current user, then the number will become blue, otherwise there is no color.

The process of liking a chapter is very much the same as follow/unfollow a user, the effects are achieved using Ajax and CSS, JavaScript.

### 2.3.14. View comment notification

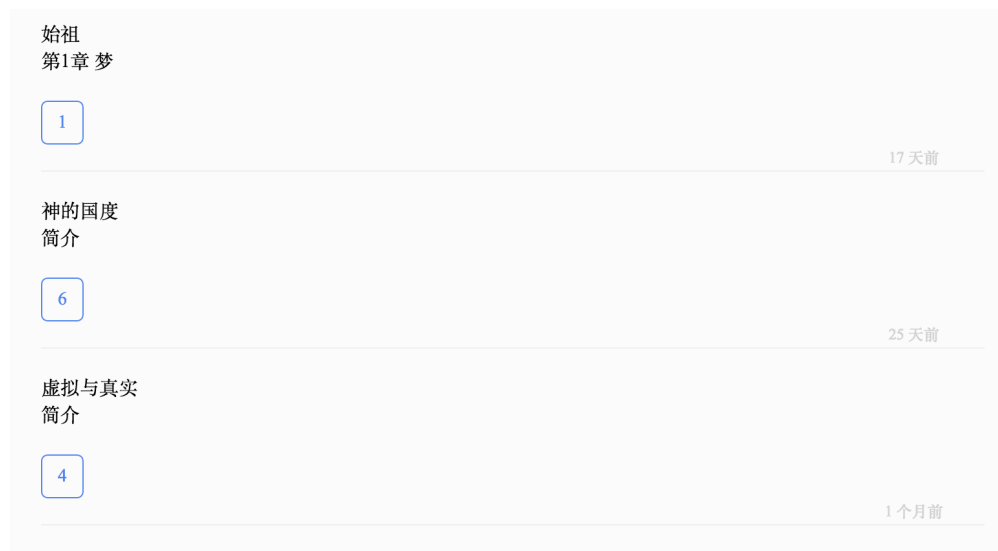
Once a notification is occurred, the it will show in the upper bar as a number and detail will show what kind of notification it is.



Once user's story is commented or some one is commenting this user in other story, it can be view in comment notification. Click the title will get the story line of the story. Click user name or header to go to the user's page.

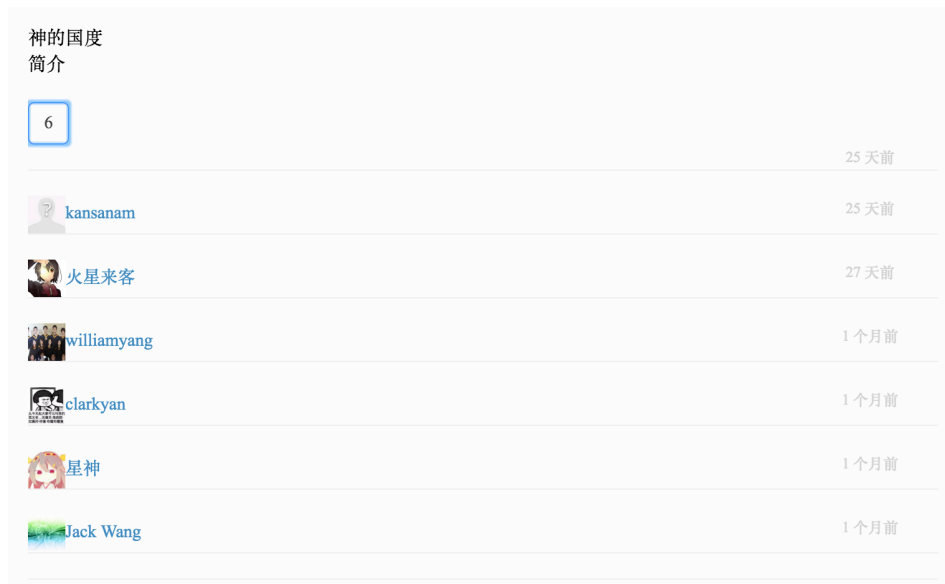
If the comment is new, the background will be blue.

### 2.3.15. View like notification



Likes notification will show stories that are liked by how many users, and its users' detail.

If the likes is new, then the button will be blue.



If the likes is new, the user's background will be blue.

### 2.3.16. View followed notification

If this user is followed by other users, then he or she will be notified. click the notification will direct the user to main page to see the user who is newly following this user.

### 2.3.17. View child chapter writing notification

If a user's story is continued by other, then the user will be notified. Newly writing story's background will be blue.

### 2.3.18. Search user by name







After login, user can search both story and user, user can be search by name.



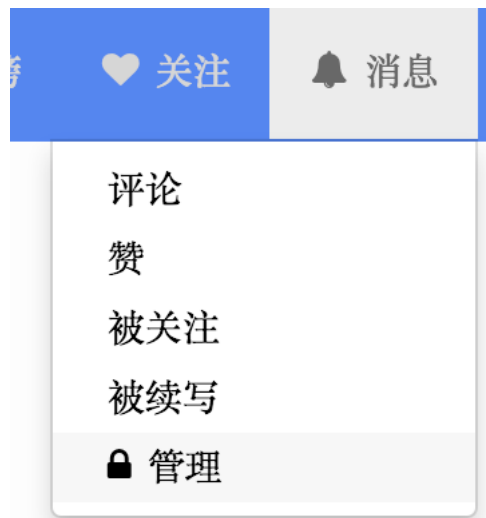
书枝 搜索故事标题或用户名 搜索 新故事 最新

故事 用户

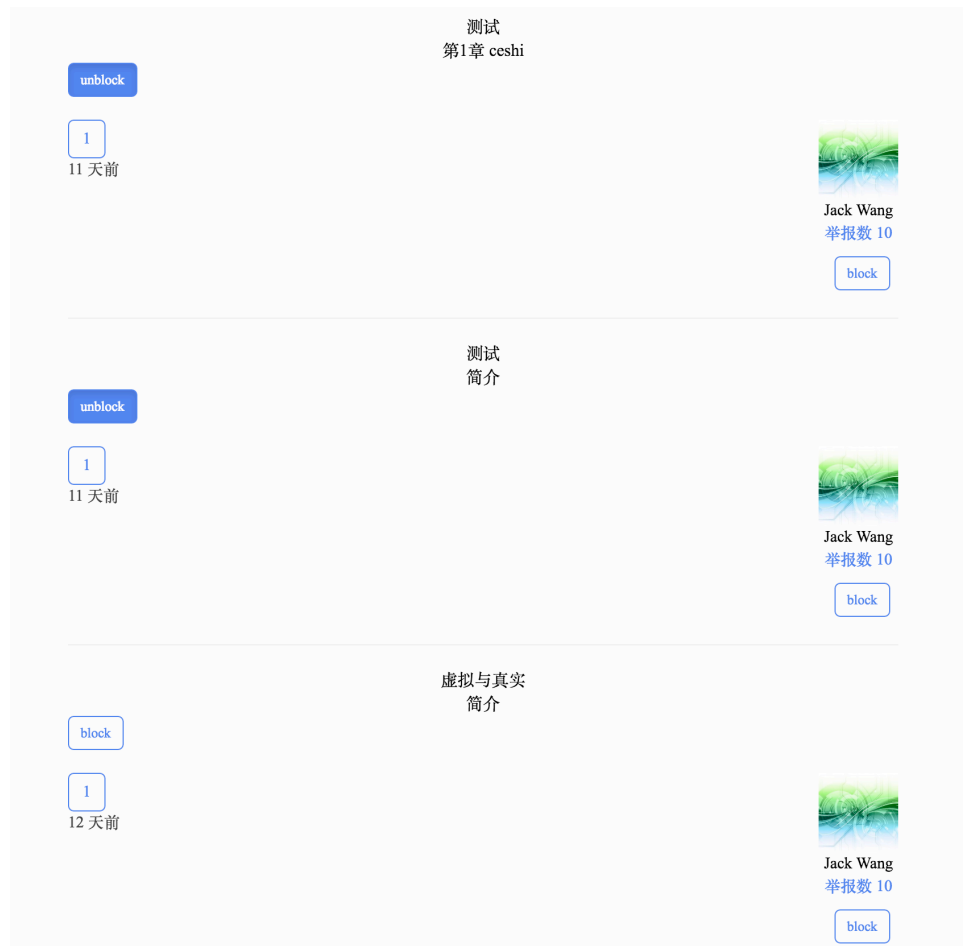
	被赞 2	写过 2	关注 1	被关注 0	关注
SKD					
	被赞 8	写过 14	关注 1	被关注 1	关注
Raise					
	被赞 0	写过 0	关注 1	被关注 1	取关
martias					
	被赞 0	写过 0	关注 0	被关注 1	取关
zhuseshi					

**Above are all functions for registered user, below is functions for administrator.**

### 2.3.19. Block user and block story



Administrator has privilege to block story and user by click the admin button.



In this page administrator can view story which is alerted and its author, after viewing the story, administrator can choose to block the story by click the block button on the upper right, below is the number of times of alerting, on the right is it author and how many times the user's all story is alerted, the button below is used to block the user.

## **Conclusion**

This paper is focusing the idea's implementation with Laravel, it implemented quite well and after testing the website is stable, it used lazy loading to keep the SQL generation to be a constant number, now the website has gain its users on the internet, so in the future it may be able to analysis data from this website.

## References

[1] <https://laravel.com/docs/5.2/blade>

[2] <https://laravel.com/docs/5.2/middleware>

[3] <https://laravel.com/docs/5.2/routing>

[4] <https://laravel.com/docs/5.2/controllers>

## **Appendix**

### **Minutes of the 1st Project Meeting**

**Date:** Tuesday, 1 March 2016

**Time:** 4:20 PM

**Place:** Room 3512

**Attending:** Prof. Rossiter, Jack Wang

**Absent:** None

**Recorder:** Jack Wang

#### **Approval of minutes**

This is first formal group meeting, so there were no minutes to approve.

#### **Report on Progress**

Discussed the idea and settle the plan

#### **Discussion Items and Things To Do**

How to implement and framework to use

#### **Meeting adjournment**

The meeting was adjourned at 4:40 AM.

### **Minutes of the 2nd Project Meeting**

**Date:** Friday, 18 March 2016

**Time:** 4:20 PM

**Place:** Room 3512

**Attending:** Prof. Rossiter, Jack Wang

**Absent:** None

**Recorder:** Jack Wang

### **Approval of minutes**

The minutes of the last meeting were approved without amendment.

### **Report on Progress**

Website is built in its first version

### **Discussion Items and Things To Do**

Extends some function such as searching

### **Meeting adjournment**

The meeting was adjourned at 11:40 AM.

## **Minutes of the 3rd Project Meeting**

**Date:** Thursday, 24 March 2016

**Time:** 10:30 PM

**Place:** Room 3512

**Attending:** Prof. Rossiter, Jack Wang

**Absent:** None

**Recorder:** Jack Wang

### **Approval of minutes**

The minutes of the last meeting were approved without amendment.

### **Report on Progress**

Website is built in its second version

### **Discussion Items and Things To Do**

Extends some function such as tree structure

### **Meeting adjournment**

The meeting was adjourned at 10:50 AM.

## **Minutes of the 4th Project Meeting**

**Date:** Friday, 15 April 2016

**Time:** 2:30 PM

**Place:** Room 3512

**Attending:** Prof. Rossiter, Jack Wang

**Absent:** None

**Recorder:** Jack Wang

### **Approval of minutes**

The minutes of the last meeting were approved without amendment.

### **Report on Progress**

Website is built in its Third version

### **Discussion Items and Things To Do**

Extends some function such as specifying the tree structure

### **Meeting adjournment**

The meeting was adjourned at 2:50 AM.