Chatting forum design with SSM framework

Xinwei Zhang[*], Lungching Zhang, Liwei Tian, Yanghong Zhang, Lei Yang, Peipei Li

Guangdong University of Science and Technology, Dongguang, Guangdong, 523083, China.

[*]Corresponding Author

Abstract

Modern society pays more and more attention to social networking. almost all software will have social content. people also like to socialize on the BBS is also a very popular way of social networking. The BBS system was developed and used in the framework of SSM (spring mvc+spring+mybatis). At that time, it focused on convenience. In order to make the user more convenient to use the web site, the current popular Bootstrap was used to develop the In order to make the user more convenient to use the web site, the current popular Bootstrap was used to develop the front-end to realize responsive pages, so that users can access it on mobile devices. Members, you can do different operations in the forum. Make the forum easy for users to understand.

Keywords

BBS System; SSM; Social Network; Responsive Page; Portable.

1. Introduction

Now the social network is very developed, and BBS forum is part of the network social. Foreign and domestic forum trial JavaWeb framework is very much, such as Hibernate, Apache Struts2, Creamware Spring, Hibernate is intended for developers to use object-oriented approach to development [1], very powerful, these three components of the SSH framework, but the use of this framework, but also is a relatively heavyweight framework, the cost of development is also relatively high with the imagination is not as good, so here the use of lightweight SSM framework for development. This web forum is designed to share some stories, and discuss some of today's issues more casual and exchange but also improve the knowledge of the forum, so that users see the interface is simple and clear, you can see all the boards at once, to discuss, the use of responsive page design so that users can also be accessed on mobile devices, have a good user experience, to bring simple pleasure to users.

2. Database table design

The system key database tables are as follows

2.1 Administrator table

Administrator table mainly describes the administrator information. For example: administrator account, administrator password. The details are shown in Table 1 below.

Table 1 Administrator Table

Listings	Data Type	Length	Primary Key	Description
adminname	varchar	50	Yes	Administrator account
adminpassword	varchar	50	No	Administrator password

2.2 Notification form

The notification table mainly describes the information of the notification, such as notification ID, notification status, notification type, user ID, and notification time, as shown in Table 2 below.

Table 2 Notification Form

Listings	Data Type	Length	Primary Key	Description
aid	varchar	50	Yes	Notification ID
state	int	10	No	Notification Status
type	varchar	150	No	Notification Type
uid	varchar	50	No	User ID
adate	datetime	0	No	Notification time

2.3 Level 1 response form

The first-level reply table mainly describes the information of first-level replies, such as reply ID, reply content, reply date, user ID, post ID, as shown in Table 3 below.

Table 3 Level 1 response table

Listings	Data Type	Length	Primary Key	Description
rid	varchar	50	Yes	Reply ID
rdesc	text	0	No	Reply content
rdate	datetime	0	No	Reply Date
uid	varchar	50	No	User ID
pid	varchar	50	No	Post ID

2.4 Secondary Response Form

The secondary reply table mainly describes the information of the missing bed records, such as reply ID, primary reply ID, user ID, reply content, reply date, and post ID, as shown in Table 4 below.

Table 4 Secondary Response Table

Listings	Data Type	Length	Primary Key	Description
rid	varchar	50	Yes	Reply ID
rrid	varchar	50	No	First level reply ID
uid	varchar	50	No	User ID
rrdesc	text	0	No	Reply content
rrdate	datetime	0	No	Reply Date
pid	varchar	50	No	Post ID

2.5 User table

User table mainly describes user information. Such as: user ID, user name, password, real name, date of birth, avatar, gender, and user status. The details are shown in Table 5 below.

Table 5 User Table

Listings	Data Type	Length	Primary Key	Description
uid	varchar	50	Yes	User ID
username	varchar	30	No	User Name
password	varchar	25	No	Password
name	varchar	20	No	Real Name
birthday	date	0	No	Date of Birth
uimage	varchar	200	No	Avatar
sex	varchar	10	No	Gender
state	int	3	No	User Status

2.6 Post table

The post table mainly describes the information of the post, such as post ID, post name, post content, post date, number of likes, user ID, category ID, latest reply time, and post status, as shown in Table 6 below.

Table 6 Table of posts

Listings	Data Type	Length	Primary Key	Description
pid	varchar	50	Yes	Post ID
pname	varchar	50	No	Post Name
pdesc	text	0	No	Post content
date	datetime	0	No	Post Date
plike	int	10	No	Number of likes
uid	varchar	50	No	User ID
cid	varchar	50	No	Category ID
newreplytime	datetime	0	No	Latest response time
state	int	10	No	Post Status

2.7 Point of view table

The likes table mainly describes the likes information. For example: Post ID, User ID, as shown in Table 7 below.

Table 7 Points table

Listings	Data Type	Length	Primary Key	Description
pid	varchar	50	Yes	Post ID
uid	varchar	50	No	User ID

2.8 Classification table

Category table mainly describes the category information. For example: category ID, category name. The details are shown in Table 8 below.

Table 8 Classification table

Listings	Data Type	Length	Primary Key	Description
cid	varchar	50	Yes	Category ID
cname	varchar	50	No	Category Name

3. System design

This system is a casual communication forum, mainly to achieve the basic functions of the forum, different roles also have different functions, such as visitors can not post and like reply, only when you log in to carry out these operations and other user interaction, the administrator can block, delete posts, etc.. Lists the functions that users with different permissions can perform respectively, for example, visitors can only browse and search for posts, users can post, like, reply and secondary reply, etc., and the administrator can manage the site.

3.1 Forum home page interface

3.1.1　Computer side

热门帖子

标题	发帖人	发帖时间	点赞数
33333333	ssm	2018-11-30 10:57:04	5
22222	ssm	2018-11-30 10:56:56	1
zhebaok	ssm	2018-11-27 06:28:06	1
开学第一天	123	2018-09-02 07:23:29	1

最新帖子

标题	发帖人	时间	点赞数
33333333	ssm	2018-11-30 10:57:04	5
22222	ssm	2018-11-30 10:56:56	1
zhebaok	ssm	2018-11-27 06:28:06	1
开学第一天	123	2018-09-02 07:23:29	1

Figure 1 Home page of the computer side

In the home page on the right way to register and login, below you can see some popular posts and the latest posts, their publishers and release date also have a bit of praise, click in to browse posts, the navigation bar above you can search and see the categories of this forum, the following is the main code.

```
@RequestMapping(value = "/register.action")
    public String register(String username,String password,
                String birthday,String name,String sex) {
        User user = new User();
        user.setUid(UUID.randomUUID().toString());
        user.setUsername(username);
        user.setPassword(password);
        user.setSex(sex);
        user.setName(name);
        SimpleDateFormat temp=new SimpleDateFormat("yyyy-MM-dd");
        Date date2 = null;
        try {
            date2 = temp.parse(birthday);
        } catch (ParseException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
```

3.2 Mobile phone terminal

Figure 2 Mobile home page

The mobile and computer interface is the same, using Bootstrap responsive page development, you can distinguish the size of the screen when you visit, and then let the web page LOGO in the top center, categories and search bar will be hidden, only when you click, the following can also be seen with the computer side of the same popular posts and the latest posts.
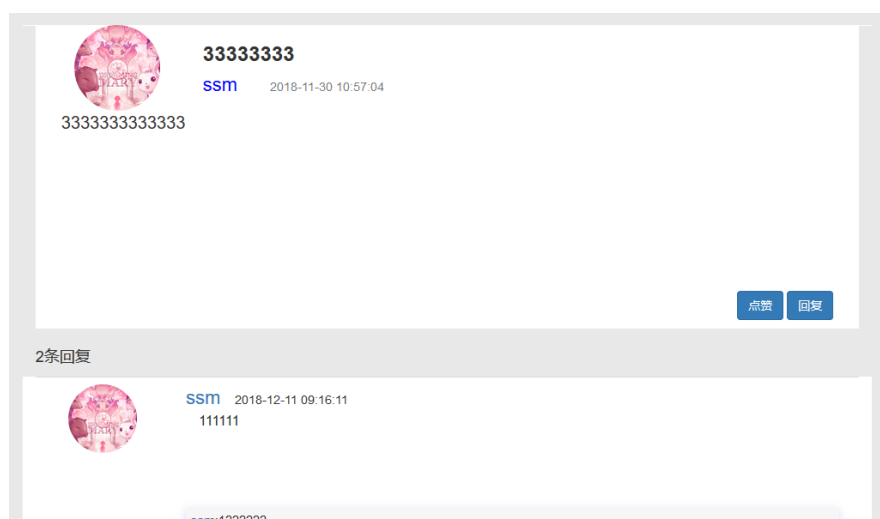
<linkrel="stylesheet "href="css/bootstrap.min.css "type="text/css"/>

<scriptsrc="js/jquery-1.11.3.min.js" type="text/javascript">

</script>

<scriptsrc="js/bootstrap.min.js" type="text/javascript">

</script>

3.3 Visitor functions

Figure 3 Post internal display diagram

Visitors can browse and search posts but cannot reply or like them, if you click reply or like you will jump to the login screen for login operation.

@RequestMapping(value = "/index.action")

    public String indexpost(HttpServletRequest request,HttpServletResponse response) {

```
List<Post>newindexpost = postservice.newindexpost();
List<Post>hotindexpost = postservice.hotindexpost();
request.setAttribute("indexnew", newindexpost);
request.setAttribute("indexhot",hotindexpost);
return "forward:/index.jsp";
}
```
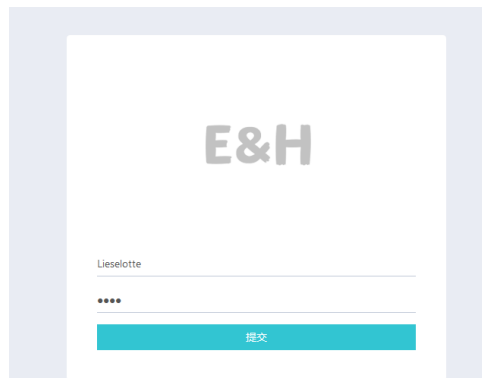
3.4 Administrator functions

Figure 4 Administrator login screen

```
@RequestMapping(value = "admin/login.action")
    public String adminlogin(HttpServletRequest request, HttpServletResponse response ,String adminname,String adminpassword){
        Admin user = new Admin();
        user.setAdminname(adminname);
        user.setAdminpassword(adminpassword);
        Admin loginUser = userservice.adminlogin(user);
        if(loginUser!=null) {
            request.getSession().setAttribute("adminlogin", loginUser);
            return "forward:/admin/index.jsp";
         }else {
```


Figure 5 Administrator function interface

This page displays the functions of the administrator's backend, which allows you to manage posts, manage comments, ban or delete users, add and delete categories.

Figure 6 Administrator function interface mobile

Administrator function page of the mobile side of the page shows the administrator background functions, you can manage posts, manage comments, ban or delete users, add and delete categories, the left column will shrink up, the user wants to use when you can open the convenience of mobile use.

4. System testing

On the windows system using Apache developed tomcat as the server side for testing, and need to install Mysql database, import the developed sql file for data import, and use the common browser (Internet Explorer, Google Chrome, 360 browser, Firefox) to enter the correct IP address of the current tomcat server for access and operation.The login test table as show as 9.

Table 9 Login test case table

Function	Validation points	Specific steps	Expected results	Actual results
Login blocking function	Verify if you can check if a user is banned	1. Open the login page 2. Enter the blocked account and password resonaforma	It shows that the user is blocked from logging in	It shows that the user is blocked from logging in
Login function	Verify that you can log in successfully	1. Open the login page 2. Enter the unblocked account ssm and password 3. Enter the verification code 4. Login	Login successful	Login successful

Enter the user name and password, will be in the SSM Controller layer for method calls, then in the service layer for logic processing, and finally in the Dao layer to find whether the database data exists. And the use of ajax technology for asynchronous access to data will also determine whether the user is blocked, and check whether the verification code is correct.

The use of ajax on the data is accessed asynchronously if, than the blocking will prompt the red letter can not be submitted on the form, and will also verify that the verification code is empty and the correctness of the verification code.The user registration as show as 10.

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Table 10 Table of registered test cases

Function	Validation points	Specific steps	Expected results	Actual results
Verification function for registration	Verify that you can detect why a user cannot register	1. Open the registration page 2. Enter a non-repeating password, enter a duplicate user name, incorrect authentication code	An error message is displayed and registration is not possible	An error message is displayed and registration is not possible
Login function	Verify that you can log in successfully	1. Open the login page 2. Enter the correct information 3. Click to register	Register successfully	Register successfully

5. Summary

This software enables you to verify whether your account has been blocked and log in automatically when you log in, even if you close the browser will automatically remember your login status when you open the web page next time, when posting also uses a rich text editor so that users can send pictures on the forum, but also the pictures are adaptive so that pictures in different resolutions can be displayed normally, and you can The text style such as font and color can be changed. Not only the replies are completed, but also the secondary replies are successfully completed, and you can notify others that you have replied to them in the secondary replies, and the notifications are also loaded asynchronously so that users can see the new notifications without refreshing the page. The administrator function is also successfully completed. The administrator can manage posts, manage comments, and ban and unban users, and add and delete categories when managing categories. All pages are responsive and can be matched according to the size of the device, so that users can access and display the site properly on other devices. And the bugs that easily appear are fixed, and the administrator can manage the users and posts normally.

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