# 博客系统设计报告

## 1. 系统的架构设计 System architecture design

### 1.1系统的架构System architecture

描述系统的组成，各组件间的关系。

Description of the consist of this system and the relationship of all the components.

系统分成三个部分，分别是系统管理，博客管理，普通用户管理等。

The system is divided into three parts, namely, system management, personal blog management, general user management.

系统管理主要包括用户管理，角色管理，系统功能。

System management mainly includes user management, role management, system functions.

用户管理下有：用户注册，用户登录, 找回密码，退出登录，个人信息维护

User management under: user registration, user login, retrieve password, exit log, personal information maintenance

用户注册：使用邮件进行注册，设置密码，重复密码后，在点击获取验证码后， 系统将发送验证码给用户，用户将验证码正确输入，提交后，跳转至已登录状态的博客前台界面。用户登录时，需要完成帐号与密码，以及随机验证码的验证工作。就会跳转至已登录状态的博客前台界面。找回密码：流程在功能点上已详细说明。退出登录：需要将用户登录的状态置空。个人信息维护。前台界面:普通用户可对个人基础信息进行维护，用于留言展示等。

User registration: use the mail to register, set the password, repeat the password, click to obtain the verification code, the system will send a verification code to the user, the user will verify the correct input, after submission to the login status of the blog front desk interface The Users need to complete the account and password, as well as random verification code verification work. It will jump to the login status of the blog front desk interface. Retrieve Password: The process is described in detail at the function point. Log out: You need to empty the user's login status. Personal information maintenance. Front desk interface: ordinary users can maintain personal basic information for message display and so on.

角色管理主要对角色信息及角色授权，角色成员配置进行维护。用于配置角色权限。

Role management mainly carries out maintenance on role information and role authorization, role member configuration. Used to configure role permissions.

系统功能主要是对系统功能菜单，按钮，权限等基础信息进行维护。

System function is mainly on the system function menu, buttons, permissions and other basic information to maintain.

个人博客管理包括文章管理，评论审核，留言回复，文件管理，字典管理，点赞查看等功能点。文章管理对所有的文章内容进行维护，能够实现对文章的实时编辑，实时发布，实时预览效果。评论审核：能够过滤不良信息，对于用户发送的评论，能够对他们的评论进行审核，保证系统数据存在不良言论。留言回复，当用户查看文章，想要联系博主时，可在留言板块留言，这样，形成一个交流的机会。文件管理，主要实现了对发布文章时使用的静态图片，以及一些文档或工具，可上传至后台，一同发布在文章内容中，字典管理的内容：主要对一些一对多的键值，存放一些常用的不经常变动的分类，状态等数据。

Personal blog management, including article management, review review, message reply, file management, dictionary management, point view and so on. Article management of all the contents of the article to maintain, to achieve the article real-time editing, real-time release, real-time preview effect. Review review: to filter bad information, for the user to send the comments, to their comments to review, to ensure that the system data there is a bad speech. Message reply, when the user to view the article, you want to contact the bloggers, you can message in the message section, so that the formation of a communication opportunity. File management, the main implementation of the article when the use of the release of static images, as well as some documents or tools can be uploaded to the background, published in the article content, the contents of the dictionary management: mainly on the one-to-many key, Commonly used changes in the classification, status and other data.

普通用户管理主要是普通用户与游客拥有的功能，包括以下：浏览文章，评论文章，收藏文章，类别管理，个人信息维护，留言，查看博主的信息及其说明，查询文章，标签等。

General user management is mainly ordinary users and visitors have the following functions, including the following: browse articles, comment articles, collection articles, category management, personal information maintenance, message, view bloggers information and instructions, query articles, labels and so on.

用户只要通过浏览器就可以访问到博客的前台界面。就能够选择文章进行浏览，只有已登录的用户才拥有对文章的评论，主要是文章内容的见解和自己对文章的想法，用户都可以评论，也可对别人的评论进行回复。当用户觉得文章不错时，可进行收藏，分享，收藏时可放至某一个类别时，类别对于用户就想当于一个文件夹，文件夹也是可以创建的，是一个可维护的类别。用户要对自己的用户信息进行修改，已验证的邮件是无法修改的，留言，主要针对用户想要联系博主的情况，以及有一些建议的时候，可通过留言联系博主。查看博主的信息，主要是博主的个人说明，查询文章，可通过关键字对文章进行检索，从而快速找到自己感兴趣的文章，标签，也是分类的一种，可点击标签，快速链接到包含此标签的文章。

As long as the user through the browser can access the front desk interface to the blog. You can select the article to browse, only the user has been logged on the article has a comment, mainly the content of the article and their views on the idea of the article, the user can comment, but also to reply to other people's comments. When the user feels that the article is good, can be collected, shared, collection can be put into a category, the category for the user would like to be in a folder, the folder can also be created, is a maintainable category. Users to modify their own user information, verified mail can not be modified, the message, mainly for users want to contact the bloggers, and some suggestions, you can contact the blog by message. View bloggers information, mainly bloggers personal description, query articles, through the keyword search for the article, so quickly find their own interest in the article, the label is also a sort, you can click the label, fast link to An article that contains this tag.

### 1.2 图形表示系统的架构Graphic representation of the architecture of the system

图 1 博客系统的组织架构图

## 2 系统静态建模 System static module(Class diagram）

### 2.1 定义类Class definition

个人博客系统主要涉及到的事物包括：Personal blog system mainly involves things, including:

以下事物属性都应包含创建人，创建时间，删除标志，删除人,删除时间，最后修改人，最后修改时间。

The following attributes should include the creator, create time, delete the logo, delete the person, delete the time, finally modify the person, and finally modify the time.

即：CreatorUserId、CreatorTime、DeleteMark、DeleteUserId、DeleteTime、LastModifyUserId、LastModifyTime

1）用户管理 （User Management）

使用本系统的相关人员都是系统用户。系统用户根据权限不同，可以分为系统管理员，普通用户和游客。

The users who use this system are all system users. System users according to different permissions, can be divided into system administrators, ordinary users and tourists.

系统用户的基本属性：The basic attributes of system users:

用户名（唯一）：用户名由字母和数字构成，并且首字符必须是字母，长度为5个字符及以上。（可用于登录，设置后不可更改）

UserName (unique): the user name is composed of letters and numbers, and the first character must be an alphabet with a length of 5 characters and above. (can be used for login, settings can not be changed)

邮件（账号，唯一）：邮件必须是有效的邮件地址。（可用于登录，设置后不可更改）

e-mail (account only): the mail must be a valid email address (can be used for login, settings can not be changed)

账号密码：密码由用户注册时自行设置，并且密码必须含有大写字母和数字，且长度必须大于8位。

Account password: the password is set up by the user registration, and the password must contain uppercase letters and numbers, and the length must be greater than 8 bits.

用户密钥:和密码一起形成加密。用户密码+密钥形成正确的密码。

User key: encrypted with password. User password + key to form correct password.

昵称：用于博客的留言，评论显示的名字。

Nickname: a message for a blog, a name for a comment.

随机验证码：随机验证码是由系统随机生成的任意8位字符，在用户登录过程中，会发送到用户预留的邮件上，用户通过输入这一串唯一的字符来进行身份验证。

Random verification code: random verification code is any system randomly generated 8 characters in the user login process, will be sent to the user for the mail, users to authenticate via this string only character input.

状态码：包含，禁用，启用。当用户为禁用状态下，将无法正常登录本系统。

Status code: include, disable, enable. When the user is forbidden, it will not log on to the system.

登录次数：用于记录用户登录的次数。

Number of entries: record the number of users logged in.

对系统用户的操作：

The operation of system user

可以新增一个用户，当文章发布需要多个人进行编辑时，可以新增一个用户，并配置他的角色。让其只拥有特定的权限。

You can add a new user, and when the article is published by multiple editors, you can add a new user and configure his role. Let it have only specific permissions.

本系统能够对用户删除的功能。当某一个帐号，普通用户，操作具有非法性，博主有权对其进行删除。已删除的用户将不能再登录。

The system can delete the function of the user. When an account, ordinary users, the operation is illegal, bloggers have the right to delete it. Deleted users will no longer be logged in.

禁用：将用户置于禁用状态。当前用户将处于禁用状态。无法登录。

Disable: disable the user in the forbidden state. The current user will be in a disabled state. Unable to login.

重置密码：Reset password:

当用户发现自己的密码忘记时，而邮件也无法解决时，通过留言联系系统管理员，系统管理员可直接重置用户的密码，属于系统管理员的后台管理内容

When the user finds his password forgotten, and mail can not be resolved, through the message to contact the system administrator, the system administrator can directly reset the user's password, belonging to the system administrator background management content

当用户忘记密码时，通过邮件找回自己的密码。When the user forgets the password, retrieve his password by mail.

2）角色管理(Role Management)

属性：Attribute:

角色名称：用于描述角色的名称。Role name: the name used to describe the role.

是否启用：true默认为启用的状态。False为禁用。（以下拥有此属性的类，功能与此相同 ）

Enable: true defaults to enabled state. False is disabled. (the class with the property below) has the same function

备注：作为描述角色的备注信息。Remarks: remarks as a description of roles.

排序码：用于给角色进行排序。默认按照排序码的升序排序。

Sort code: used to sort roles. The default sort of ascending order by sort code.

操作：

Operation:

新增：新增一个角色信息。用于配置用户，分配权限

删除：当此角色无特殊意义时，可进行删除操作。

修改：对角色的信息进行修改。

配置成员：用于给当前角色配置用户成员。表明当前角色下有哪些用户。

配置权限：用于给当前角色配置权限。表明当前角色拥有哪些权限。

Add: add a role information. Configure user, assign permissions

Delete: when the role has no special meaning, it can be deleted.

Modify: modify the role's information.

Configuration members: configure user members to the current role. Indicate what users are under the current role.

Configuration permissions: configure permissions for the current role. Show what permissions the current role has.

3）系统功能（模块）：

模块Module

Attribute:

父节点 ：作为父节点Parent node: as parent node

编码：唯一的，不重复的字符编码Encoding: unique, non repeating character encoding

名称：用于显示的中文名字。Name: Chinese name for display.

排序码：用于排序的字段。默认按排序码的升序排列。

Sort code: fields used for sorting. The default sort of ascending order by sort code.

图标：用于展示在菜单前的图标名称。可双击或点击文本后的一个按钮选择图标，双击选中，即可。

Icon: used to display icon names in front of the menu. You can double-click or click a button after the text to select the icon, double-click the selection, you can.

链接的地址：URL用于权限分配时的地址。

Link address: URL address for permission assignment.

类别（是否是菜单（Menu）,是否是按钮（Button），是否是权限(Permission)）

Class (whether the menu (Menu), whether the button (Button), whether it is permission (Permission))

操作

Operation:

新增：当开发模块多一个的时候，可新增一个模块。当模块是父菜单时，无按钮权限等配置。当模块是菜单时，需要配置其下的按钮及数据权限。

删除：当模块不使用时，或者无效时，可删除。

修改：新增有问题时，可对其进行修改。

Add: when the development module is more than one, you can add a module. When the module is the parent menu, no button permissions and other configuration. When the module is a menu, you need to configure buttons and data permissions under it.

Delete: when the module is not used or invalid, it can be deleted.

Amendment: when there is a problem, it can be modified.

4）文章：

Article:

属性：（Attribute:）

分组FID：分组的父ID Grouping FID: the parent ID of a group

文章标题：文章的标题。用于标题头的显示。Article title: title of the article. Display for Title header.

关键词：用于显示文章的关键字Keyword: keyword used to display articles

文章来源：写出文章的原创，还是从哪里复制过来的。要将链接放在这里。Article source: write the original article, or copy from where?. Put the link here.

摘要:简单地对文章进行简单的概述Abstract: a brief overview of the article is given

内容：这里使用文本编辑 器Ueditor，可对文章进行有效编辑，排版。

Content: the text editor Ueditor is used here to edit and typeset the articles effectively.

阅读次数：当用户打开一次文章，阅读量就加1，主要是对文章的阅读次数时行统计。

Reading times: when the user opens an article, the amount of reading and 1 reading times were mainly on the statistics.

评论量:当用户评论一次。这是就加1

Comment quantity: when the user reviews once. This is just 1

点赞量:已登录的用户。只可对一篇文章点赞一次。用于统计文章的点赞量。

Click amount: logged in user. I can only praise one point of an article. The amount of praise used for statistical articles.

缩略图：上传一张缩略图。用于列表的展示。

Thumbnail: upload a thumbnail. Display for lists.

审核：默认为审核通过Audit: default to audit pass

推荐：默认不推荐。推荐的文章会放在上面的推荐列表。

Recommendation: default is not recommended. The recommended articles will be placed on the recommended list.

置顶：当置顶一篇文章后，这篇文章会放在列表的最上方。Top: when a post, this article will be placed at the top of the list.

状态：分为暂存：暂时保存文章。发布：将文章发布到前台，用户就可以立刻看到。Status: divided into temporary storage: temporarily save the article. Release: publish the article to the front desk, and the user can see it immediately.

操作：

Operation:

添加：当系统管理员想要发布一篇文章时，可新增一篇文章。

查询：在列表中可根据标题时行查询。

修改：用户暂存文章后，可修改。发布后，也可修改。

Add: when the system administrator wants to publish an article, you can add an article.

Query: in the list according to the title or query.

Modification: users can modify after temporarily storing articles. After publication, it can also be modified.

5）评论

Review

属性：

Attribute:

评论的内容：主要是用户对文章评论的内容The content of the review: the main content of the user comments on the article

用户名：当前用户的名字。Username: the name of the current user.

评论者邮件：当前评论的用户的邮件。Reviewer mail: user mail for current comments.

状态：（已审核,拉黑，删除）默认为已审核状态Status: (checked, pulled black) defaults to audited state

操作：

Operation:

查询：根据邮件，名字查出评论的多条数据

审核：当为拉黑，还可置为审核成功的状态。

拉黑：将当前评论拉黑，不显示在前台。

Query: according to the name of the mail, check out the comments of multiple data

Audit: when you pull the black, you can also set the audit successful state.

Pull Black: the current comment black, not displayed in the front desk.

6）点赞

点赞的文章：用于当前点赞的是哪一篇文章

Point like article: which article is used for the current point of praise?

点赞的人：用于描述当前是哪一个人点的赞。

A person who likes to describe what kind of person is at present.

点赞时间：用于记录点赞的时间

Point like time: time for recording points

操作：

Operation:

查询统计文章的点赞量。

The amount of praise for query and statistics articles.

7）字典类别

父节点：为树形结构，需要父节点来显示递归结构

Parent node: tree structure, and the parent node is needed to display the recursive structure

编码：唯一的字符编码Encoding: unique character encoding

名称：作为类别的名称Name: the name of the category

排序码：用于显示的顺序，为数字Sort code: the order used for display, for numbers

是否展开：默认是展开效果：为true，否则为false

Whether to expand: default is the expansion effect: true, otherwise false

是否启用：即是否有效IsEnableMark：默认为true

Is it enabled: is it valid? IsEnableMark: defaults to true

备注:用于一些额外的数据填写

Remarks: use some extra data to fill in

操作：

Operation:

增，删，改，查

add, delete, modify, query

8）字典明细

编码：唯一的字符编码

名称：用于显示的名称

排序码：用于显示的顺序，为数字

是否启用：即是否有效IsEnableMark：默认为true

备注：用于一些额外的数据填写

操作：

Operation:

增，删，改，查

add, delete, modify, query

9）留言

LeaveMsg

属性：

Attribute:

留言用户名:留言的用户名Message Username: Message username

留言时间：记录留言的时间 Message time: the time to record messages

留言标题：留言的标题Message Title: the title of the message

留言内容：用户留言的内容Message content: the content of the user message

操作：

Operation:

查询：根据用户名进行查询数据

审核：当状态为拉黑，还可置为审核成功的状态。

拉黑：将当前留言拉黑，不显示在前台。

删除：将留言删除

Query: query data based on user name

Audit: when the state is black, can also be set as a successful audit state.

Pull Black: the current message black, not displayed in the front desk.

Delete: delete messages

10)文件

Upload

文件名：文件真实名

File name: real name of the file

文件大小：用于记录上传文件 的大小(单位KB)

File size: used to record the size of uploaded files (unit KB)

文件类型:(如.jpg）即下标

File type: (.Jpg), subscript

上传人：用于记录当前文件是哪个用户上传的。

Upload person: which user upload is used to record the current file.

操作：

Operation:

下载，图片可预览，文件，图片可提供下载链接

Download, pictures can preview, files, pictures can provide download links

### 2.2关系的描述 The description of relationships

1）系统用户与系统管理员的关系

The relationship between system user and system administrator

系统用户包含系统管理员

System users include system administrators

2）系统用户与普通用户的关系

System users include common users

3）系统用户与角色的关系The relationship between system user and role

一个用户可对应多个角色，一个角色也对应多个用户。系统用户与角色是多对多的关系。

A user can correspond to multiple roles, and a role also corresponds to multiple users. System users and roles are many to many relationships

4）角色与系统功能的关系The relationship between role and system function

角色对应多个系统功能，系统功能被分配给多个角色。

A role corresponds to multiple system functions, and a system function is assigned to multiple roles.

5）文章与评论的关系

一篇文章对应多个评论，文章与评论是一对多的关系。

One article corresponds to multiple comments, and the article and comment are one to many relations.

6）文章与点赞的关系

一篇文章可有多个用户点赞，文章与点赞是一对多的关系。

An article can have more than one user point praise, the article and the point praise is one to many relations.

7） 字典类别与字典详情的关系

一个类别对应多个字典集合。类别与详情是一对多的关系。

A class corresponds to multiple dictionary sets. Categories and details are one to many relationships.

8）用户与留言的关系

一个用户可以有多个留言，用户与留言是一对多的关系。

A user can have more than one message, the user and the message is a one to many relationship.

9）用户与文件的关系

系统管理员上传至后台文件，一个用户可以上传多个文件，用户与文件是一对多的关系。

System administrator upload to the background file, a user can upload multiple files, the user and the document is one to many relations.

### 2.3 建模（完成类图的建模工作）Module

图 2 系统的类图

## 3系统的动态建模

系统的动态建模工作包括两方面，分别是活动图（Activity Diagram）和状态图（State Diagram）

### 3.1活动图 Activity Diagram

1. 活动图主要是对用例做详细的描述。

用户登录-步骤：

1、启动系统；

2、在登录界面上录入用户名/邮件，密码，验证码；

3、验证验证码是否正确， 不正确，重新输入验证码。

4、判断用户名/邮件是否存在，不存在，就重新输入用户名/邮件

5、判断用户名/邮件及密码合法性，不合法，就重新输入密码

6、以上都通过时就可直接登入系统。

1) activity diagrams mainly describe the use cases in detail.

User Login-Step:

1. Starting the system;
2. enter user name / mail, password, verification code on the login interface;
3. Verify that the verification code is correct, incorrect, and re-enter the verification code.
4. to determine whether the user name / mail exists, does not exist, re-enter the user name / mail
5. determine the user name / mail and password legitimacy, illegal, re-enter the password
6. All of the above can be logged directly into the system

2）完成建模工作

1、确定分区Confirm partition

2、确定控制流 Confirm control stream;

3、完成建模的工作 Finish the module.



图3用户登录活动图

2)“注册用户”设计

Step: 1、启动本系统；

2、用户进入前台注册界面；

3、用户录入用户信息（邮件，密码,重复密码,点击获取验证码，将发送邮件的验证码填入验证码处，提交）

4、验证用户信息（是否已经存在，是否合法，存在则跳转步骤3），否则跳转步骤5.

5、生成新用户，用户跳转至已登录状态的界面。（注册的用户为普通用户）

1. Start the system
2. User enters the foreground registration interface
3. User input user information (mail, password, repeat password, click to get verification code, fill in the verification code of email, submit)
4. Verify the user information (whether it already exists, whether it is legal, and there is a jump step 3), otherwise jump step 5.
5. Generate a new user, and the user jumps to an interface that is logged in. (registered users are ordinary users)



图4 用户注册活动图

3)找回密码（罗志强）

当用户忘记自己的密码时，可通过邮件，手机号进行找回密码:

此步骤涉及到安全问题,请按照以下流程进行安全验证：（以邮箱帐号为例）

1：输入邮箱帐号，输入图片验证码4位字符

2：验证图片验证码是否正确，不正确返回步骤1;判断手机号是否存在此帐号，不存在，返回步骤1，存在，则将token（唯一凭证，与手机号有关联）返回给前端，并发送给手机验证码

3：验证手机号和验证码是否吻合，如果吻合，进行步骤4；如果不吻合，进行步骤1；

4：输入新密码

5：提交修改（此时提交的参数有手机号、新密码、及凭证token）。

备注：找回密码的凭证：证明本次修改密码的账号与前面输入手机号账号是一致的。

如果没有token类似机制，如果黑客只需要在步骤5上抓包，把手机号修改一下，就可以成功修改任意手机号的密码，所以就有了重置任意用户密码的漏洞。

When the user forgets his or her password, the password can be retrieved via email, mobile phone number:

1. Enter the email account and enter the image verification code 4 characters
2. Verify that the image verification code is correct and incorrect return step 1; Determine whether the mobile phone number exists in this account, do not exist, return to step 1, exist, then return token (the only voucher, with the phone number) to the front end, and send to the phone verification code
3. Verify that the cell phone number and verification code match, if the match, do step 4; If not, step 1
4. [Enter New Password](javascript:;)
5. Submit the changes (the parameters submitted at this time have the phone number, new password, and certificate token).

Note: the password to recover the password: the account that proves this change password is consistent with the previous input mobile number account.

If there is no similar token mechanism, if hackers just caught on in step 5, your hand immediately, can successfully modify any phone number password, so there will be a reset any user's password.



图5找回密码活动图

4)用户管理 User management

1、系统管理员启动并进入本系统（登录完成后）

2、点击菜单栏的“用户管理”菜单，系统跳转至用户管理界面。

3、表格展示用户信息，包括用户名，邮件，昵称，登录次数，登录时间，已配置角色，最后一列显示查看，修改按钮，表格上方有搜索框，管理员可通过用户名，邮件进行查询。

4、管理员通过本系统可以管理用户的各种信息，新增用户，编辑用户，删除用户，重置密码，设置多个角色等操作。

1. System administrator starts and enters the system (after login is completed)
2. Click the "user management" menu in the menu bar, and the system jumps to the user management interface.
3. tables to show the user information, including the user name, email, nicknames, logins, login time, configured role, the last column shows the view, the modify button, the form above the search box, the administrator can through the user name, email.
4. The administrator can manage user's various information through this system, add users, edit users, delete users, reset passwords, set up multiple roles and other operations.

5)角色管理(Role Management)

1、系统管理员启动并进入本系统（登录完成后）

2、点击菜单栏的“角色管理”菜单，系统跳转至角色管理界面。

3、表格展示角色信息，包括角色名，是否启用，排序码，备注表格上方有搜索框，管理员可通过角色名称进行查询。

4、管理员通过表格上方的按钮可能角色信息进行新增，编辑，删除，一个角色可通过角色成员配置，配置角色下的成员是哪些。可对角色进行系统功能的权限配置。一个角色对应着多个系统功能。

1. System administrator starts and enters the system (after login is completed)
2. Click the "role management" menu in the menu bar, and the system jumps to the role management interface.
3. The table shows the role information, including the role name, whether to enable, sort code, and a search box at the top of the note form, which can be searched by the administrator.
4. The administrator can add, edit, delete, and edit the role information through the buttons at the top of the table, which can be configured by the role member and the members of the role. The permission configuration for the system function of the role. A role corresponds to multiple system functions.

6)系统功能(system function)

1、系统管理员启动并进入本系统（登录完成后）

2、点击菜单栏的“系统功能”菜单，系统跳转至系统功能管理界面。

3、表格展示系统功能，包括名称 ，链接地址，排序码，类别，编码，图标。采用树形表格形式。

4、表格上有新增，编辑，删除。新增。新增：可对所有字段内容进行填写，当类别为菜单时，可进入下一步，对当前菜单下的按钮及权限功能进行管理，此处为一对多关系。一个菜单下有多个按钮或权限。编辑，可对其功能进行修改。删除：对无效的功能进行删除。

1. System administrator starts and enters the system (after login is completed)
2. Click the "system function" menu in the menu bar, and the system will jump to the system function management interface.
3. Table display system functions, including name, link address, sort code, category, code, icon. Use a tree form.
4. There are new additions, edits and deletions on the table. The new. New: all fields can be filled in. When the category is a menu, the next step can be made to manage the buttons and permissions functions under the current menu. This is a one-to-many relationship. There are multiple buttons or permissions under a menu. Edit, can modify its function. Delete: delete the invalid function.

7)文章管理(Article management)

1、系统管理员启动并进入本系统（登录完成后）

2、点击菜单栏的“文章管理”菜单，系统跳转至文章管理界面。

3、表格展示文章管理，包括标题 ，文章类型，作者，评论量，点赞量，阅读量，关键字/来源/摘要/缩略图，状态，发布时间，点击评论量就可直接弹出关于此文章的评论内容。点击缩略图标，就可以显示正常显示图片，系统用户点击赞的数量，弹出框，里面有一列表，列表中显示的是点赞人的信息。有点赞人昵称，点赞时间。

关键字/来源/摘要只需要使用对号和叉号表示是否填写，状态是指文章的推荐，置顶等。采用图标形式。

4、表格上有新增，编辑，删除。新增。新增：可对所有字段内容进行填写，缩略图可直接上传图片，或填写链接，内容使用文本编辑器，如Ueditor,一些状态可置为默认值。有暂存，发布。编辑：主要是修改操作。删除：对内容进行删除操作。

1. System administrator starts and enters the system (after login is completed)
2. Click the "article management" menu in the menu bar, and the system jumps to the article management interface.
3. tables show the article management, including the title, article type and author, comments, thumb up, reading quantity, keyword/source / / thumbnails, the status, the release time, click on the comment quantity can be directly comment on this article. Click on the thumbnail icon to display the normal display image, the system user clicks the number of likes, the pop-up box has a list, and the list shows the information of the thumb up people. It's a little bit of a nickname, thumb up.
4. Key words/source/abstract only require the use of the opposite number and the cross number to indicate whether or not to fill in, the status refers to the recommendation of the article, the top of the roof, etc. Use the icon form.
5. There are new additions, edits and deletions on the table. The new. Add: all fields can be filled in. Thumbnails can upload images directly, or fill in links. Text editors such as Ueditor can be used for content, and some states can be set as default values. Temporary storage, release. Edit: mainly to modify operations. Delete: delete the content.



图6文章管理-活动图

8)评论审核

1、系统管理员启动并进入本系统（登录完成后）

2、点击菜单栏的“评论审核”菜单，系统跳转至评论审核界面。

3、表格展示评论内容，包括文章标题（原文链接）评论的内容，邮件，名字，状态，评论时间，

4、表格上有审核，拉黑，删除，查询。审核：为审核成功。默认为审核成功。拉黑，可对评论拉黑，删除：对评论直接删除。查询：通过邮件就可查询某一用户的所有评论。

System administrator starts and enters the system (after login is completed)

Click the "review and review" menu in the menu bar, and the system jumps to the comment auditing interface.

Table showing the contents of the comments, including the contents of the comments, email, name, status, comment time,

The form is audited, shielded, deleted and inquired. Audit: successful audit. Default is audit success. Block, block comment, delete: delete the comment directly. Query: you can query all comments of a user by email.

图7评论审核-活动图

9) 字典管理

1、系统管理员启动并进入本系统（登录完成后）

2、点击菜单栏的“字典管理”菜单，系统跳转至字典管理界面。

3、左侧展示字典类别的树型结构，右侧表格展示字典详情数据，显示字段包括编码，名称，排序码，是否启用，备注。

4、表格上有分类管理，新增，编辑，删除。点击分类管理弹出一个树形表格，上面依旧有增，删，改的功能，名称为树形列，依次是编码，排序码，是否启用，是否展开，备注等信息。点增，删，改，可对字典类别进行维护。新增前先选 中左侧树，表明当前详情数据是属于哪一个类别的，填写表单完毕后，可编辑，删除。搜索可按照名称搜索。

1. System administrator starts and enters the system (after login is completed)

2. Click the "dictionary management" menu in the menu bar, and the system jumps to the dictionary management interface.

3. On the left, the tree structure of the dictionary category is displayed, and the right table shows the dictionary details. The display field includes code, name, sort code, and whether it is enabled or not.

4. There is classified management on the form, adding, editing and deleting. Click on the classified management a tree form, it still have to add, delete, change the function, the name for a tree, followed by encoding, ordering code, whether to enable, whether, notes and other information. Point add, delete, change, can maintain the dictionary category. The left tree in the previous selection is selected, indicating which category is the current details. After completing the form, you can edit and delete the form. Search can be searched by name.

10) 留言审核

1、系统管理员启动并进入本系统（登录完成后）

2、点击菜单栏的“留言审核”菜单，系统跳转至留言查看界面。

3、表格展示留言查看数据，显示字段包括留言者**，**留言时间**，**留言标题**，**留言内容

4、系统管理员可对留言进行回复，回复后，将发送邮件给当前留言的用户，也可对留言进行删除，拉黑。

1. System administrator starts and enters the system (after login is completed)

2. Click the "comment check" menu in the menu bar, and the system jumps to the message viewer interface.

3. The table shows the message to view the data. The display field includes the speaker, the message time, the message title, the message content

4. The system administrator can reply to the message. After replying, it will send the email to the user of the current message, or delete the message.



图8 留言审核-活动图

11) 文件管理

1、系统管理员启动并进入本系统（登录完成后）

2、点击菜单栏的“文件管理”菜单，系统跳转至文件管理界面。

3、左侧有二个类别，一个是文件，一个是图片。右侧是一个表格，当点击“文件”时，右侧显示一个分页的文件的列表，可看到文件的名称，下载地址，文件类型，大小等属性，提供下载的链接和删除功能，当点击左侧“图片”，右边显示一个分页的图片流，还有图片的其他的属性等。可通过点击小图标，查看图片，可删除，可下载，可获取下载的链接。

### 3.2状态图State Diagram

1.描述一个对象的状态的变化

1）描述对象：文章的状态, 文章有暂存，发布，删除状态。

2）描述状态之间转换：新增时，可暂存，也可直接发布文章，暂存可在编辑时进行发布，暂存和发布后再进行删除，变成删除状态。

3）画图

图9 文章状态图

2.描述一个对象的状态的变化

1）描述对象：用户登录/退出;用户状态：未登录，已登录

2）描述状态之间转换： 未登录—>已登录, 已登录—>未登录.

3）画图



图10用户登录/退出状态图



3.描述一个对象的状态的变化

1）描述对象：邮件验证;所有状态：已验证，未验证等状态。

2）描述状态之间转换：未验证—>已验证.

3）画图

图11邮件验证状态图

4.描述一个对象的状态的变化(罗志强)

1）描述对象：用户评论;所有状态：已审核,拉黑，删除等状态。

2）描述状态之间转换：已审核—>拉黑. 拉黑—>已审核 已审核—>删除 拉黑—>删除

3）画图



图12用户评论状态图

5.描述一个对象的状态的变化

1）描述对象：用户留言;所有状态：已审核,拉黑，删除等状态。

2）描述状态之间转换：已审核—>拉黑. 拉黑—>已审核 已审核—>删除 拉黑—>删除

3）画图

图13 用户留言状态图

6描述一个对象的状态的变化

1）描述对象：字典明细，状态包括：启用，禁用

2）描述状态之间转换：启用—>禁用. 禁用—>启用 禁用—>删除 启用—>删除

3）画图



图14 字典明细状态图