# 图书馆系统设计

1. 类——Class\_Login

1. static public int Operate(string sql ) //成功返回影响行数 0 插入失败 -1 出错

2. static public DataTable SelectT(string sql) //成功返回数据表，失败返回null

3. static public string SelectHead(string sql) //成功返回查询出表的左上角元素 失败返回-1

二、用户板块

（一）验证码—ValidatorPage

1.产生验证码图片上的表达式：private string Vstring() //产生验证码图片的字符串

2.生成图片并且文字为参数validateNum：private void CreatImage(string validateNum) //生成bitmao图像

（二）注册页面—Regester

1. public int isUsername(string username) //验证是否已经存在该用户

2. public int Register(string Username, string Password, string Email, string Phone) //写入到数据库Users

3.if(!RegularExpressionValidator\_Username.IsValid&&!RegularExpressionValidator\_Email.IsValid && !RegularExpressionValidator\_phone.IsValid && !CompareValidator\_Pwd.IsValid) //是否通过验证控件的判断

3.1 用户名验证控件：正则表达式^[a-zA-Z]\w{5,17}$

3.2E-mail合法性验证控件：正则表达式^\w+([-+.]\w+)[\*@\w+([-.]\w+)\*\.\w+([-.]\w+)\*$](mailto:*@\w+(%5b-.%5d\w+)*\.\w+(%5b-.%5d\w+)*$)

3.3手机号正确性验证控件：正则表达式1[3,4,5,8]\d[\s,-]?\d{4}[\s,-]?\d{4}

（三）登录页面—Login

登录验证函数：public int Logining(string Username ,string Password ) //登录验证函数

（四）借阅图书：

1.查找借阅图书的ISBN：string sqlisbn = "select ISBN from Library .dbo .Books where Bname='" + bookname + "'";

2.查找该ISBN下有没有剩余图书：string sqlleft = "select Blent from Library.dbo.Books where ISBN = " + tisbn + "";

3.获取该ISBN下的一本图书编号：string sqldt = "select Rid from Library.dbo.Repertory where Rstate = 1 and Risbn = "+tisbn+"";

4.绑定用户到该本书：string sqlbind = "update Library .dbo.Repertory set Ruid ="+uid +" , Rstate=0 where Rid ="+trid +"";

5.添加用户借阅记录：string sqlhistory = "insert into Library.dbo.History values ("+uid +", "+trid +","+tisbn+")";

6.更新Books表的数据：string sqlupdatebook = "update Library.dbo .Books set Blent-=1 where ISBN = "+tisbn +"";

1. 管理员板块
2. 添加图书—addbook

1.判断ISBN是否存在：string sqlCheckISBN = "select Library.dbo.Books.ISBN from Library.dbo.Books where ISBN='" + txtISBN.Text.Trim() + "'";

2.添加图书信息到Books表：string sqlAddtoBooks = "insert into Library.dbo.Books values('"+txtISBN .Text .Trim ()+"','"+txtName.Text .Trim ()+"','"+txtClass .Text .Trim ()+"','"+txtAuthor .Text .Trim ()+"','"+txtText .Text.Trim ()+"',"+Convert .ToInt32(txtCount .Text .Trim ())+ "," + Convert.ToInt32(txtCount.Text.Trim()) + ")";

3.如果添加失败则删除刚才添加到Books的数据条：string sqlDel = "delete Library.dbo.Books where ISBN='"+txtISBN .Text.Trim ()+"'";

4.组装新ISBN的条形码起始值：int maxrid = Convert.ToInt32(txtISBN.Text.Trim() + "0001");

5.循环添加：

for (int i = 0; i < Convert.ToInt32(txtCount.Text.Trim()); i++)

{

sqlinsert = "insert into library.dbo.repertory values(" + (maxrid++) + "," + txtISBN.Text.Trim() + ",-1,1) ";

if( Class\_Login.Operate(sqlinsert)!=1)

{

Class\_Login.Operate(sqlDel); //删除books的记录

Response.Write("<script>window.alert('增加失败！')</script>");

return;

}}

6.查找管理员ID：string sqlLid = "select mid from Library.dbo.Manager where Mname='" + Session["Succeed\_main"].ToString().Trim() + "'";

7.添加管理员操作事件到OperateLog表：string sqlAddlog = "insert into Library.dbo.OperateLog values('" + Lid + "','" + Session["Succeed\_main"].ToString().Trim() + "',Datename(year,GetDate())+'-'+Datename(month,GetDate())+'-'+Datename(day,GetDate())+'-'+DATENAME(WEEKDAY,GETDATE())+'-'+DATENAME(HOUR,GETDATE())+':'+DATENAME(MINUTE,GETDATE())+':'+DATENAME(SECOND,GETDATE()),'添加图书,ISBN=" + txtISBN.Text.Trim() + ",书号:" + txtISBN.Text.Trim() + "0001 到"+ (maxrid-1).ToString () + "的图书')";

（二）图书删除

1.判断该ISBN下说图书是否都处于在馆状态：string sqlISdelete = "select \* from Library.dbo.Repertory where Risbn='" + e.CommandArgument.ToString().Trim() + "' and Rstate=0 ";

2.删除Books表下该ISBN记录：string sqlDel = "delete Library.dbo.Books where ISBN='"+isbn+"'";

3.记录管理员动作，查找管理员ID：string sqlLid = "select mid from Library.dbo.Manager where Mname='" + Session["Succeed\_main"].ToString().Trim() + "'";

4.记录操作事件：string sqlAddlog = "insert into Library.dbo.OperateLog values('" + Lid + "','" + Session["Succeed\_main"].ToString().Trim() + "',Datename(year,GetDate())+'-'+Datename(month,GetDate())+'-'+Datename(day,GetDate())+'-'+DATENAME(WEEKDAY,GETDATE())+'-'+DATENAME(HOUR,GETDATE())+':'+DATENAME(MINUTE,GETDATE())+':'+DATENAME(SECOND,GETDATE()),'删除,ISBN为" + isbn + "的图书')";

（三）图书编辑

1.查询现在ISBN下馆藏书目：string sqloldcount = "select Library .dbo.Books.Bcount from Library.dbo.Books where ISBN=" + isbn + "";

2.查询该repertory表中已经借阅该ISBN图书的数量：string sqlmaxcount = "select Library .dbo.Repertory .Risbn from Library .dbo.Repertory where Risbn ='" + isbn + "' and Rstate =0";//大于状态为0的数量

3.更新Books表该ISBN行的数据：string sqlupbooks = "update Library.dbo.Books set Bname= '" + txtName.Text.Trim() + "', Bclass = '" + txtClass.Text.Trim() + "',Bauthor= '" + txtAuthor.Text.Trim() + "',Btext= '" + txtText.Text.Trim() + "',Bcount ="+ Convert.ToInt32(txtCount.Text.Trim())+",Blent+= "+ (Convert.ToInt32(txtCount.Text.Trim())-oldcount)+" where ISBN='"+isbn+"'";

4.查询该ISBN下目前最大条形码：string sqlmaxrid = "select max(Rid) from Library.dbo.repertory where Risbn=" + isbn + "";

5.循环增加数据到repertory表中：

for (int j = 0; j < Convert.ToInt32(txtCount.Text.Trim())-oldcount; j++)

{

sqlinsert = "insert into library.dbo.repertory values(" + (++maxrid) + "," + isbn + ",-1,1) ";

if (Class\_Login.Operate(sqlinsert) != 1)

{

Response.Write("<script>window.alert('增加失败！')</script>");

return;

}

}

（四）用户管理界面—Users

1.用户密码重置功能：string sqlReset= "update Library.dbo.Users set Password='F7C3BC1D808E04732ADF679965CCC34C' where id='"+e.CommandArgument .ToString ().Trim ()+"'";

2.查询用户是否还有在借图书：string sqlSearch = "select Library.dbo.Repertory.Rstate from Repertory where Ruid='" + e.CommandArgument.ToString().Trim() + "' and Rstate=0";

3.用户删除：string sqlDEL = "delete from Library.dbo.Users where id='" + e.CommandArgument.ToString().Trim() + "'";