课程：Web 开发技术 II - 综合实验报告
实施说明及评分

学生自讦：请自行评估，完成请打Ⅴ，部份完成△，未完成Ⅹ，

请在上传学者网前将学生自评项完成

学号： 班级： 姓名：			
项次及说明	学生自讦	教师评定	备注
A.先期实作：50%			
1.以学号作为项目名、母版及页面导航功能	V		
2.设备信息及借还信息操作-SQL	V		
3.设备信息及借还信息操作-DataSet	V		
4.AJAX 功能的应用	V		
5.关于功能	V		
B.即席实作：25%			
6.指定题目实作(题目当日宣布)	△		
C.报告内容及文件提交：25%			
7.实验报告转 PDF 格式(学号.PDF 命名),置 WEB 项目下(学号下),并将 WEB 项目加压为 zip 或 rar 格式后,提交学者网	V		
合计评分（教师评订）：			

计算机科学与软件学院、大数据学院

课程：Web 开发技术 II

综合实验报告

题目：设备维护管理系统实作

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学　　号：201624131221

班　　级：16 科 2

任课教师：许盛贵

2019 年 5 月 30 日

1. 系统开发目的

信息社会的高科技，商品经济化的高效益，使计算机的应用已经普及到经济和社会生活的各个领域。计算机虽然与人类的关系愈来愈密切，还有人由于计算机操作不方便继续用手工劳动。为了适应现代社会人高度强烈的时间观念，设备管理系统为设备管理带来了极大的方便。该网站管理系统采用 Asp.net 技术实现，操作人员只需输入一些简单的汉子，数字等信息，就可以有效的管理设备。

2. 系统需求

（1）系统的功能性需求：系统主要完成任务的数据查询（设备信息查询、设备借还信息查询）模块分析设计与的实现，通过设备的属性字段查询每一件产品设备零件信息，使管理人员随时掌握设备的现状及公司雇员领用设备的情况。

设备管理系统包括数据处理、数据查询二个子功能模块。

数据处理功能：新设备的添加、修改、删除；及领用设备的修改、删除等一些设备信息操作活动。

数据查询功能：实现每一阶段库设备、领用设备的查询操作活动。

（2）本系统对非功能需求不做要求。

（3）信息需求（数据库）

设备信息表：

设备编号：主键，数据类型为 char(10),用于标识设备。

设备名称：外键，数据类型为 nvarchar（10），人工录入设备名称。

生产厂家：外键，数据类型为 nvarchar（20），登记设备的产生厂家。

登记日期：外键，数据类型为 datetime2（7），记录购入设备的日期。

维修次数：外键，数据类型为 char（5），记录设备维修的次数。

设备负责人：外键，数据类型为 nvarchar（10），负责管理设备的人员。

设备信息借还表：

设备名称：和借出时间、借用人姓名共同组成主键，同时是又受设备信息表约束，同时是外键，数据类型为 nvarchar（10），人工录入设备名称。

借出时间：和设备名称和借用人姓名共同组成主键，数据类型为 datatime2（7），人工录入借出时间。

借用人姓名：和设备名称和借出时间共同组成主键，数据类型为 nvarchar（8），

人工录入借用人姓名。

设备负责人：外键，数据类型为 nvarchar（8），记录被借出设备的管理人员。

是否已还：外键，数据类型为 nchar（1），记录被借出的设备是否已归还。

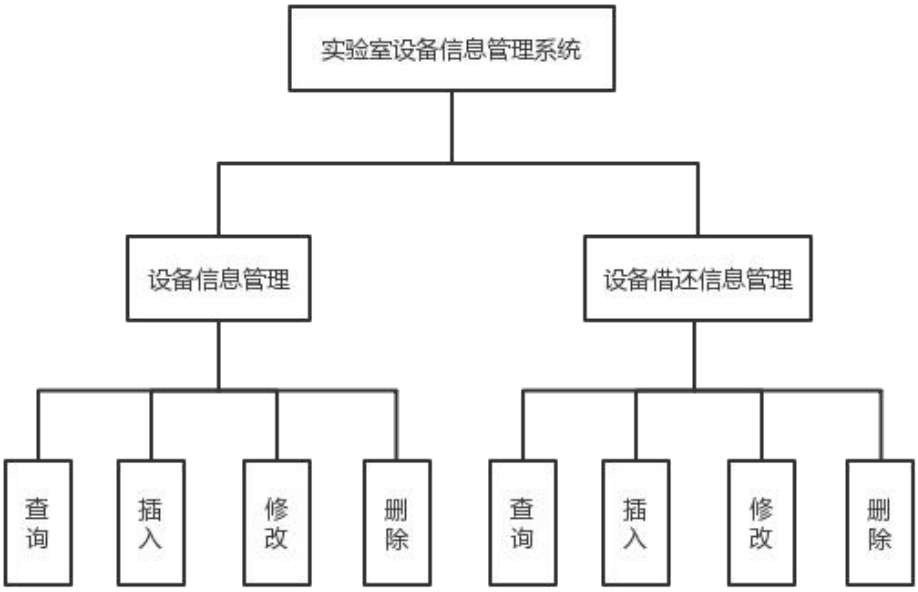
（4）使用 AJAX 技术，使网页实现异步更新。可以在不重新加载整个网页的情况下，对网页的某部分进行更新。

3. 系统分析及设计

3.1 开发及运行环境

本系统使用 ASP.net 技术开发，开发语言为 C#和 XML，编译器为 VS2017，数据库为 VS2017 自带的 SQL Express，运行的操作系统为 Windows7。

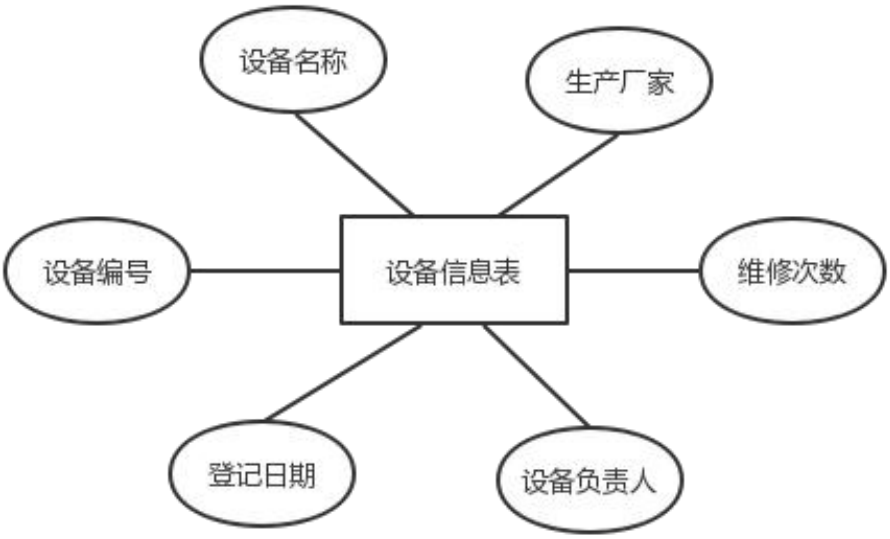
3.2 系统功能架构设计



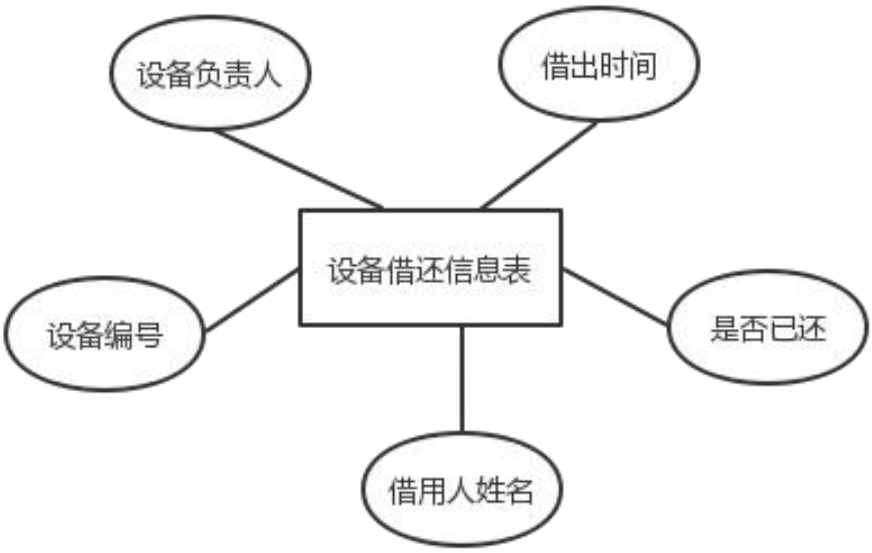
本设备信息管理系统主要分为两个功能模块，两个功能模块分别有增删查改操作。其中设备借还信息管理受设备信息管理系统影响。

3.3 数据库概念设计

（1）设备信息实体描述



（2）设备借还信息实体描述



3.4 数据库逻辑设计

（1）设备信息表：

字段名	数据类型	允许 NULL	默认值	主键/外键
设备编号	char(10)		null	主键
设备名称	nvarchar(10)	null	null	外键
生产产家	nvarchar(20)	null	null	外键
登记日期	datetime2（7）	null	null	外键
维修次数	char（5）	null	null	外键
设备负责人	nvarchar(10)	null	null	外键

（2）设备借还信息表：

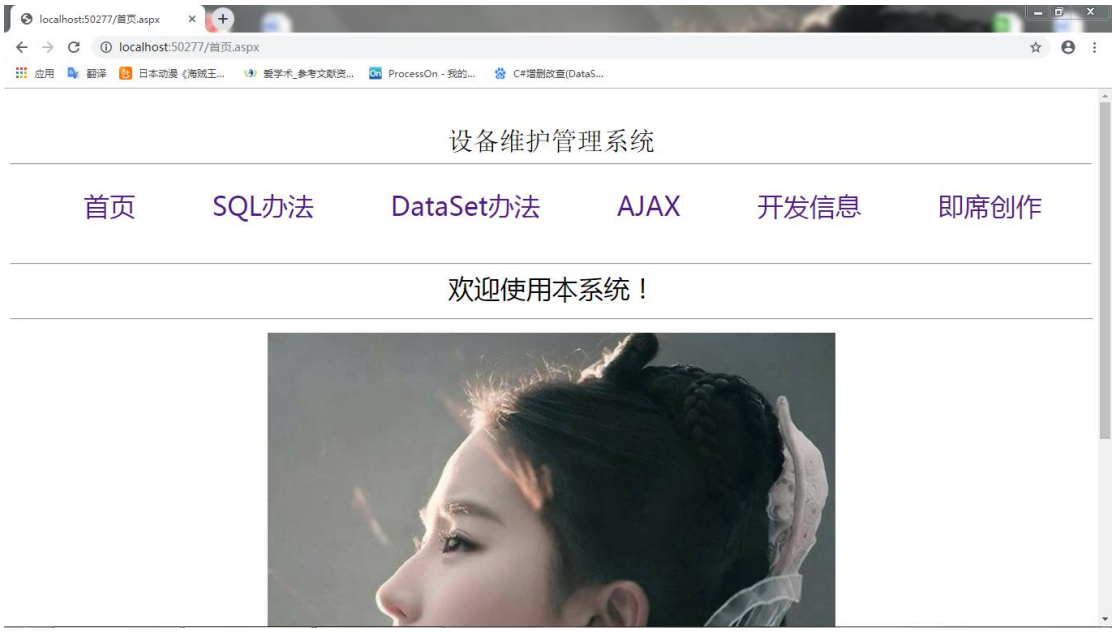
字段名	数据类型	允许 NULL	默认值	主键/外键
设备编号	char(10)		null	主键、外键
借出时间	datetime2（7）		null	主键
借用人姓名	nvarchar(8)		null	主键
设备负责人	nvarchar(8)	null	null	外键
是否已还	nhar（1）	null	null	外键

注：因为设备信息和设备借还信息之间存在一种逻辑关系，所以设备借还信息表含有一个指向设备信息表的链接。设备借还信息表中的设备编号列与设备信息表中的主键列相对应。设备借还信息表中的设备编号列是指向设备信息表的外键。

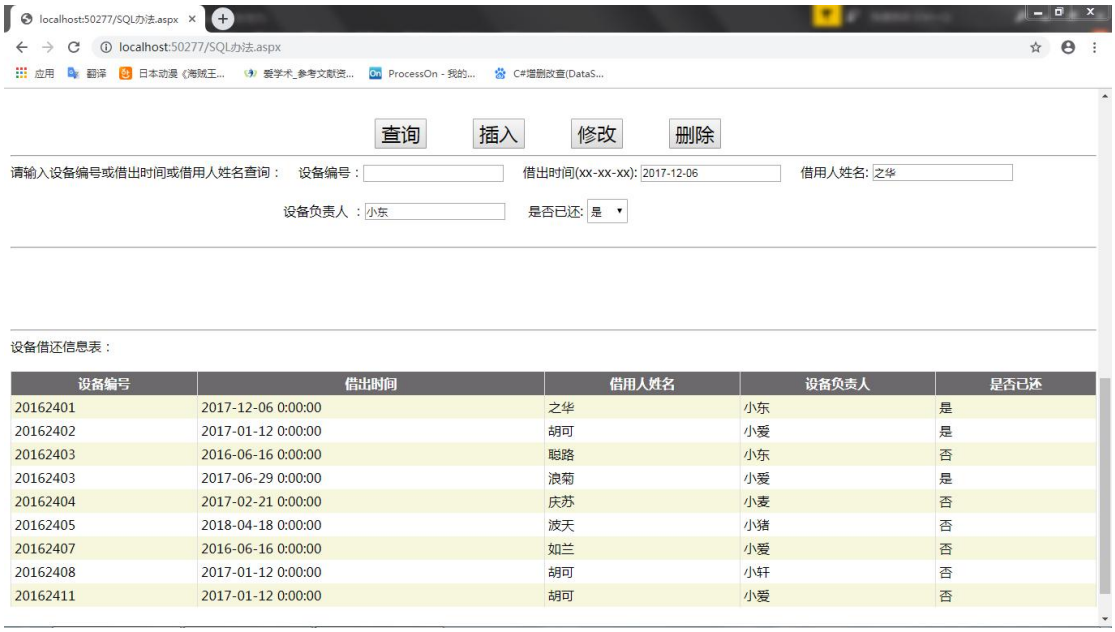
4. 软件操作说明

4.1 先期实作之各项功能运作

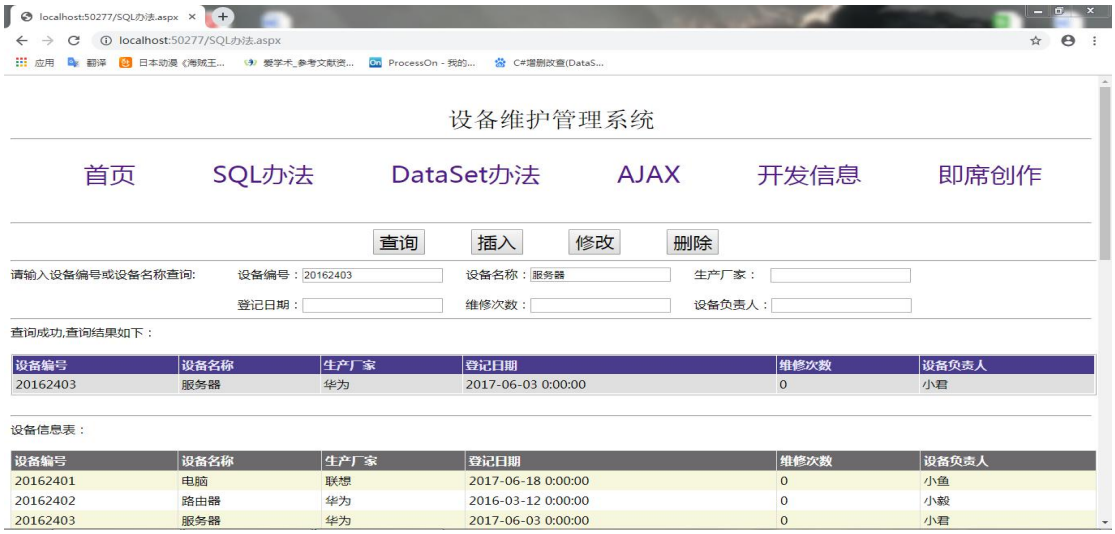
（1）首页

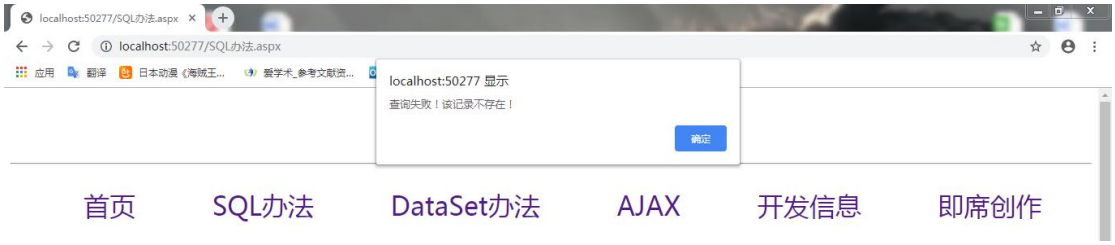


（2）SQL 办法页



①对设备信息表进行查询操作（可根据设备编号或设备名称进行查询，也可模糊查询）；当查询不到时会给出提示。





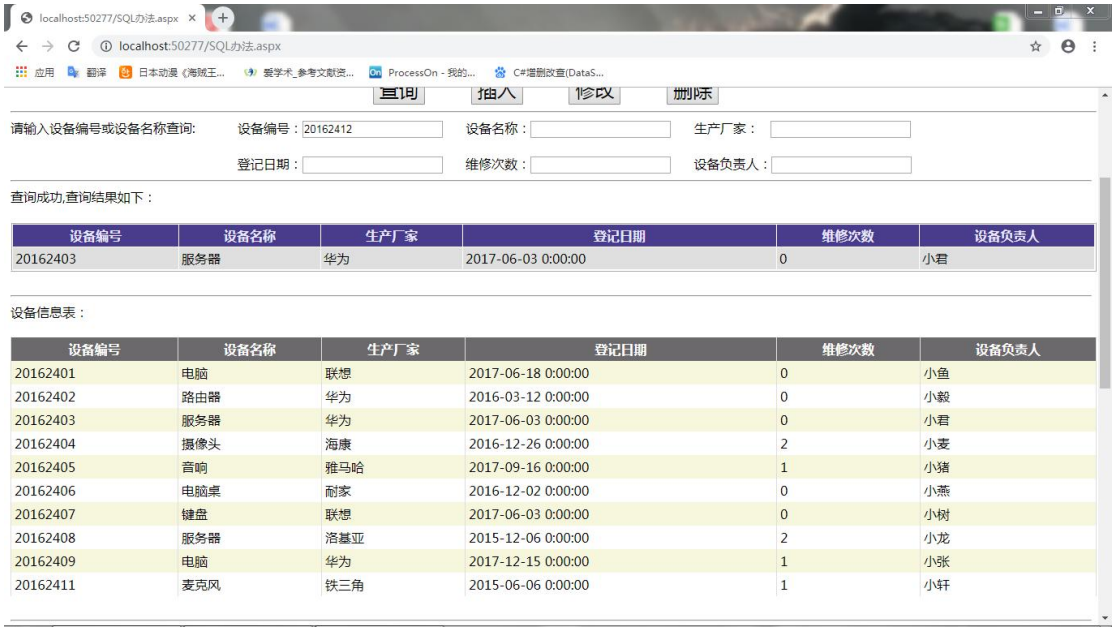
②对设备信息表进行插入操作（设备编号不能为空）会先查询该设备编号是否已存在；点击插入按钮前会先询问是否确定；当插入成功或失败时会给出相应提示。

③对设备信息表进行修改操作（设备编号不能为空）会先查询该设备编号是否已存在；点击修改按钮前会先询问是否确定；当修改成功或失败时会给出提示。

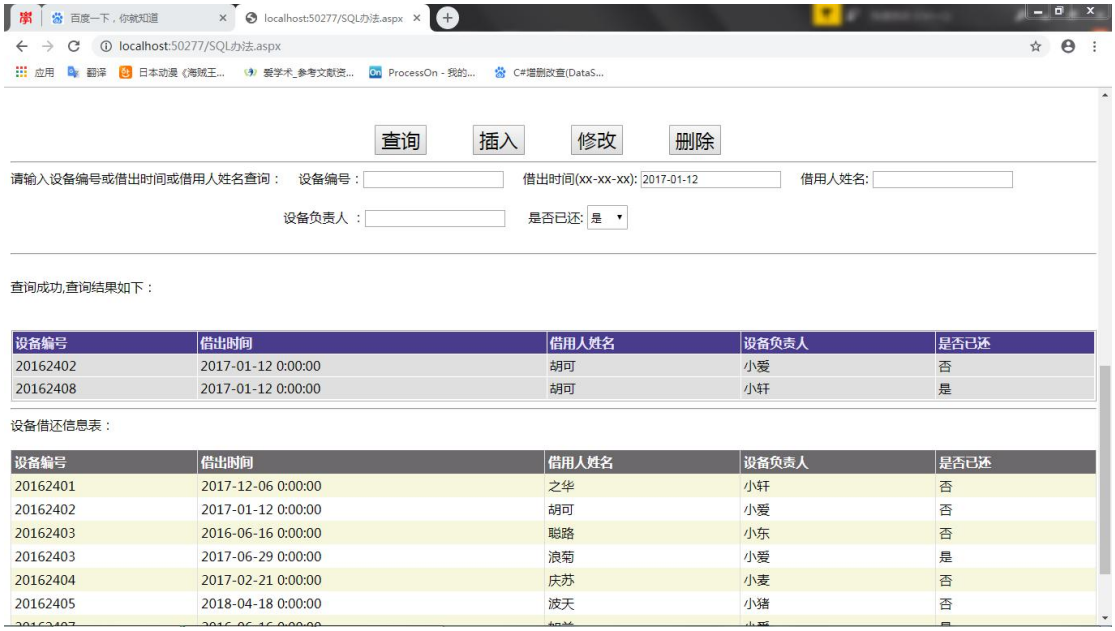
设备编号	设备名称	生产厂家	登记日期	维修次数	设备负责人
20162403	服务器	华为	2017-06-03 0:00:00	0	小君

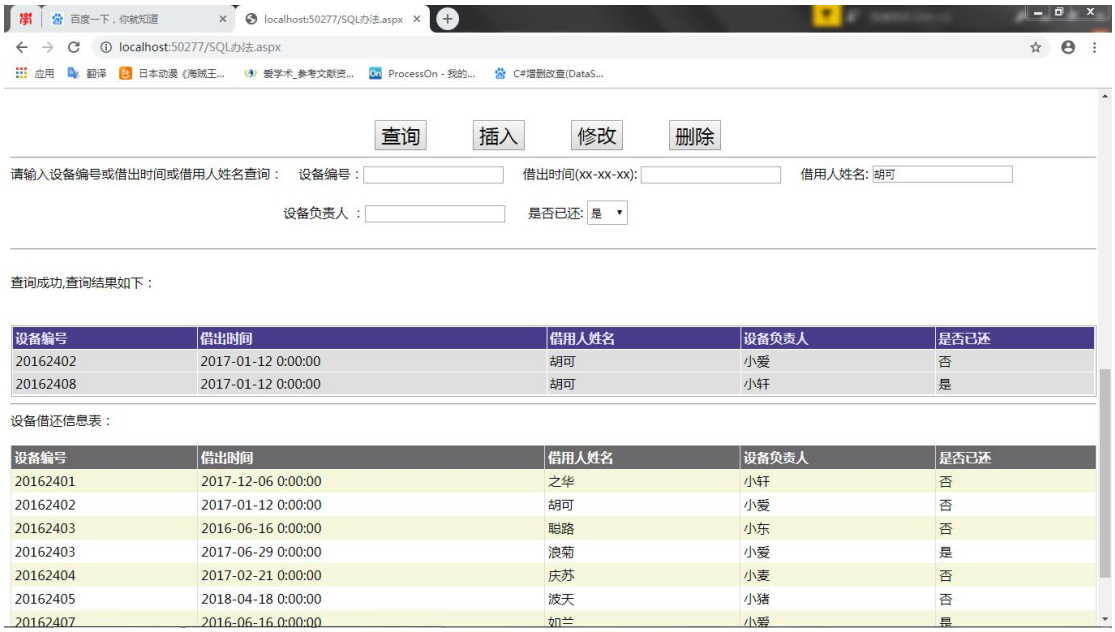
设备编号	设备名称	生产厂家	登记日期	维修次数	设备负责人
20162401	电脑	联想	2017-06-18 0:00:00	0	小鱼
20162402	路由器	华为	2016-03-12 0:00:00	0	小毅
20162403	服务器	华为	2017-06-03 0:00:00	0	小君
20162404	摄像头	海康	2016-12-26 0:00:00	2	小麦
20162405	音响	雅马哈	2017-09-16 0:00:00	1	小猪
20162406	电脑桌	耐家	2016-12-02 0:00:00	0	小燕
20162407	键盘	联想	2017-06-03 0:00:00	0	小树
20162408	服务器	洛基亚	2015-12-06 0:00:00	2	小龙
20162409	电脑	华为	2017-12-15 0:00:00	1	小张
20162411	麦克风	铁三角	2015-06-06 0:00:00	1	小轩
20162412	麦克风	铁三角	2017-06-03 0:00:00	2	小龙

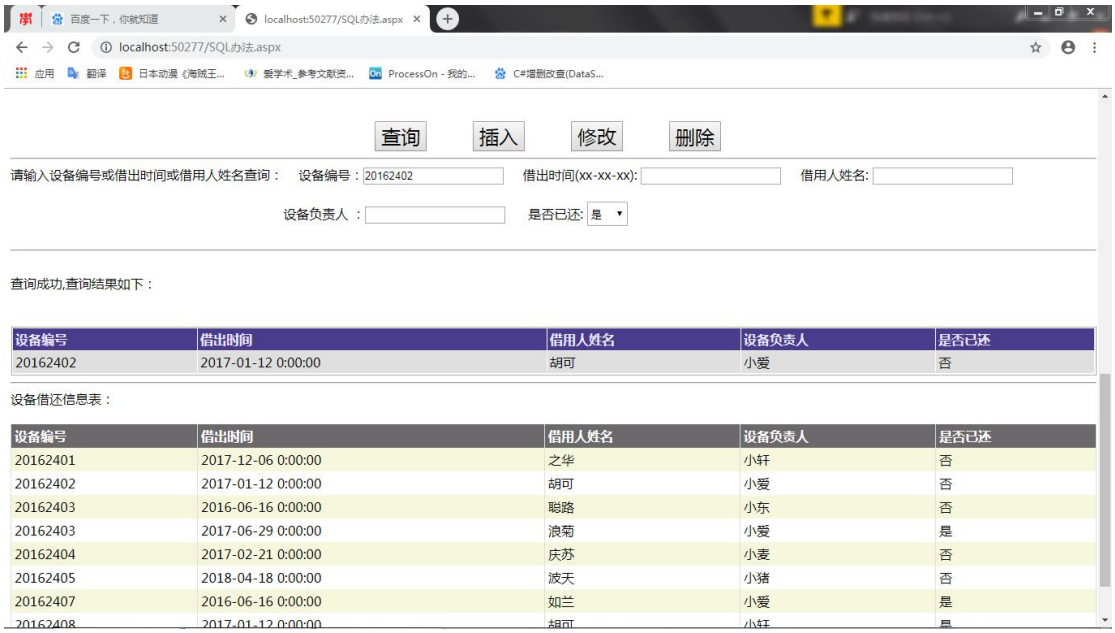
④对设备信息表进行删除操作（设备编号不能为空）会先查询该设备编号是否已存在；点击删除按钮前会先询问是否确定；当删除成功或失败时会给出提示。



⑤对设备借还信息表进行查询操作（可根据设备编号或借出时间或借用人姓名进行查询，也可模糊查询）；当查询不到时会给出提示。




localhost:50277/SQL办法.aspx
查询
插入
修改
删除
请输入设备编号或借出时间或借用人姓名查询：
设备编号：
借出时间(xx-xx-xx):
借用人姓名: 胡可
设备负责人：
是否已还: 是
查询成功,查询结果如下：
设备编号 借出时间 借用人姓名 设备负责人 是否已还
20162402 2017-01-12 0:00:00 胡可 小爱 否
20162408 2017-01-12 0:00:00 胡可 小轩 是
设备借还信息表：
设备编号 借出时间 借用人姓名 设备负责人 是否已还
20162401 2017-12-06 0:00:00 之华 小轩 否
20162402 2017-01-12 0:00:00 胡可 小爱 否
20162403 2016-06-16 0:00:00 聪路 小东 否
20162403 2017-06-29 0:00:00 浪菊 小爱 是
20162404 2017-02-21 0:00:00 庆苏 小麦 否
20162405 2018-04-18 0:00:00 波天 小猪 否
20162407 2016-06-16 0:00:00 如兰 小爱 是

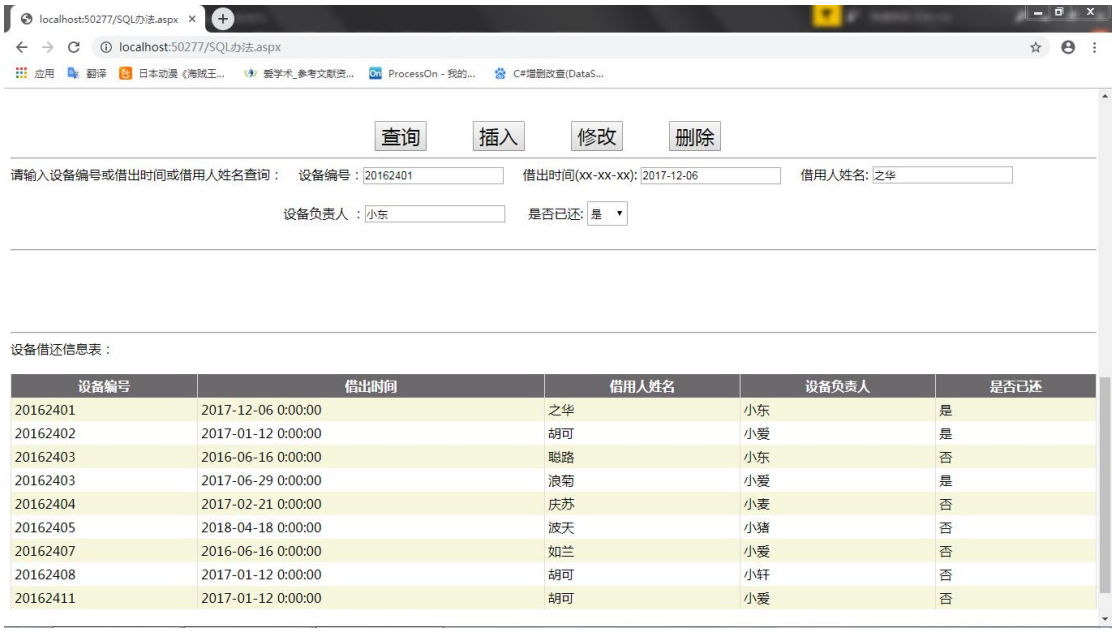

localhost:50277/SQL办法.aspx
查询
插入
修改
删除
请输入设备编号或借出时间或借用人姓名查询：
设备编号：20162402
借出时间(xx-xx-xx):
借用人姓名:
设备负责人：
是否已还: 是
查询成功,查询结果如下：
设备编号 借出时间 借用人姓名 设备负责人 是否已还
20162402 2017-01-12 0:00:00 胡可 小爱 否
设备借还信息表：
设备编号 借出时间 借用人姓名 设备负责人 是否已还
20162401 2017-12-06 0:00:00 之华 小轩 否
20162402 2017-01-12 0:00:00 胡可 小爱 否
20162403 2016-06-16 0:00:00 聪路 小东 否
20162403 2017-06-29 0:00:00 浪菊 小爱 是
20162404 2017-02-21 0:00:00 庆苏 小麦 否
20162405 2018-04-18 0:00:00 波天 小猪 否
20162407 2016-06-16 0:00:00 如兰 小爱 是

localhost:50277/SQL办法.aspx
localhost:50277 显示
请输入要查询的设备编号或借出时间或借用人姓名进行查询！
确定

localhost:50277/SQL办法.aspx
localhost:50277 显示
查询失败！该记录不存在！
确定

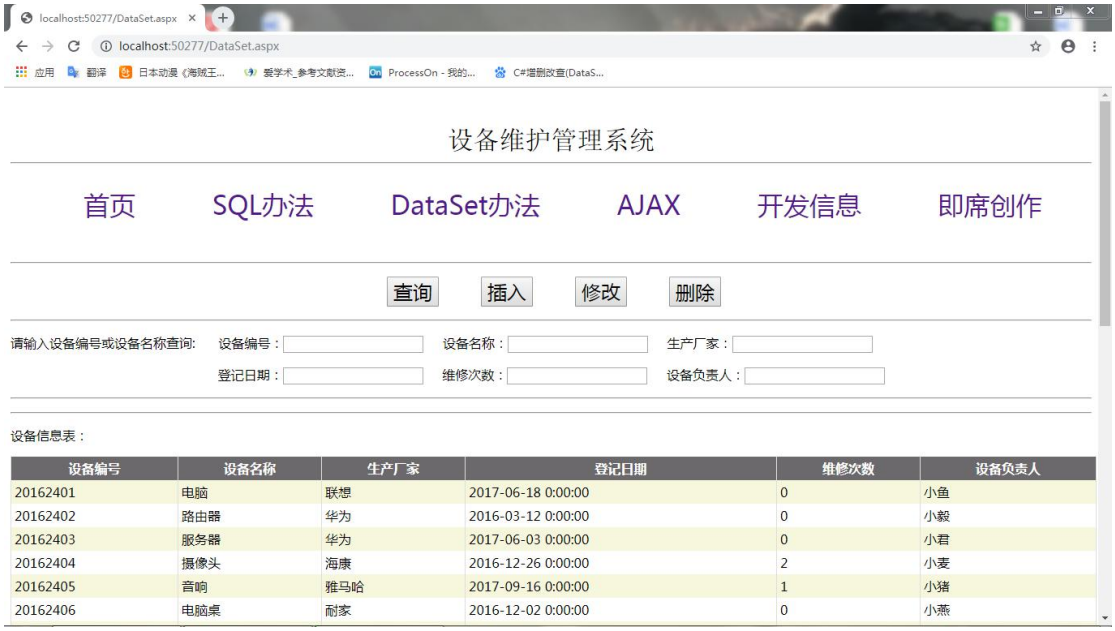
⑥ 对设备借还信息表进行插入操作（设备编号和借出时间和借用人姓名不能为空）会先从设备信息表中查询该设备编号是否已存在，再查询在借还信息表中是否已存在，若存在是否已还；点击插入按钮前会先询问是否确定；当插入成功或失败时会给出相应提示。

⑦对设备借还信息表进行修改操作（设备编号和借出时间和借用人姓名不能为空）会先查询该设备是否已存在；点击修改按钮前会先询问是否确定；当修改成功或失败时会给出提示。

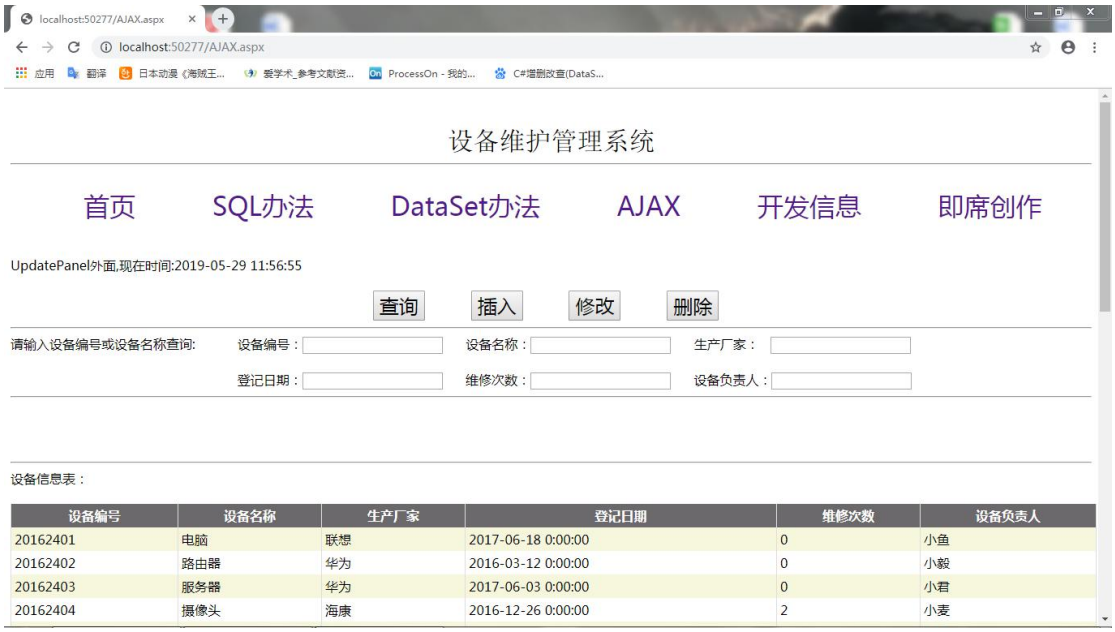


⑧对设备借还信息表进行删除操作（设备编号和借出时间和借用人姓名不能为空）会先查询该设备是否已存在，该设备是否已还；点击删除按钮前会先询问是否确定；当删除成功或失败时会给出提示。

（3）DataSet 办法页，其对两个表的增删查改逻辑类似，就不再重复展示。



（4）AJAX 页



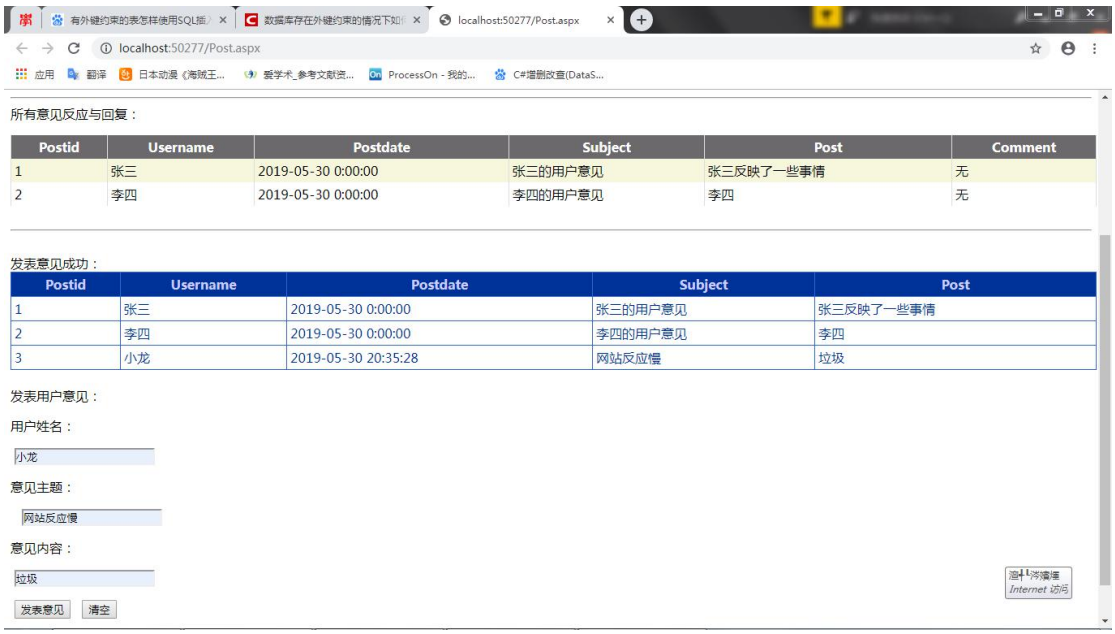
设备编号	设备名称	生产厂家	登记日期	维修次数	设备负责人
20162401	电脑	联想	2017-06-18 0:00:00	0	小鱼
20162402	路由器	华为	2016-03-12 0:00:00	0	小毅
20162403	服务器	华为	2017-06-03 0:00:00	0	小君
20162404	摄像头	海康	2016-12-26 0:00:00	2	小麦

设备编号	借出时间	借用人姓名	设备负责人	是否已还
20162401	2017-12-06 0:00:00	之华	小东	是
20162402	2017-01-12 0:00:00	胡可	小爱	是
20162403	2016-06-16 0:00:00	聪路	小东	否
20162403	2017-06-29 0:00:00	浪菊	小爱	是
20162404	2017-02-21 0:00:00	庆苏	小麦	否
20162405	2018-04-18 0:00:00	波天	小猪	否
20162407	2016-06-16 0:00:00	如兰	小爱	否
20162408	2017-01-12 0:00:00	胡可	小轩	否

（5）开发信息页

4.2 即席实作之各项功能运作

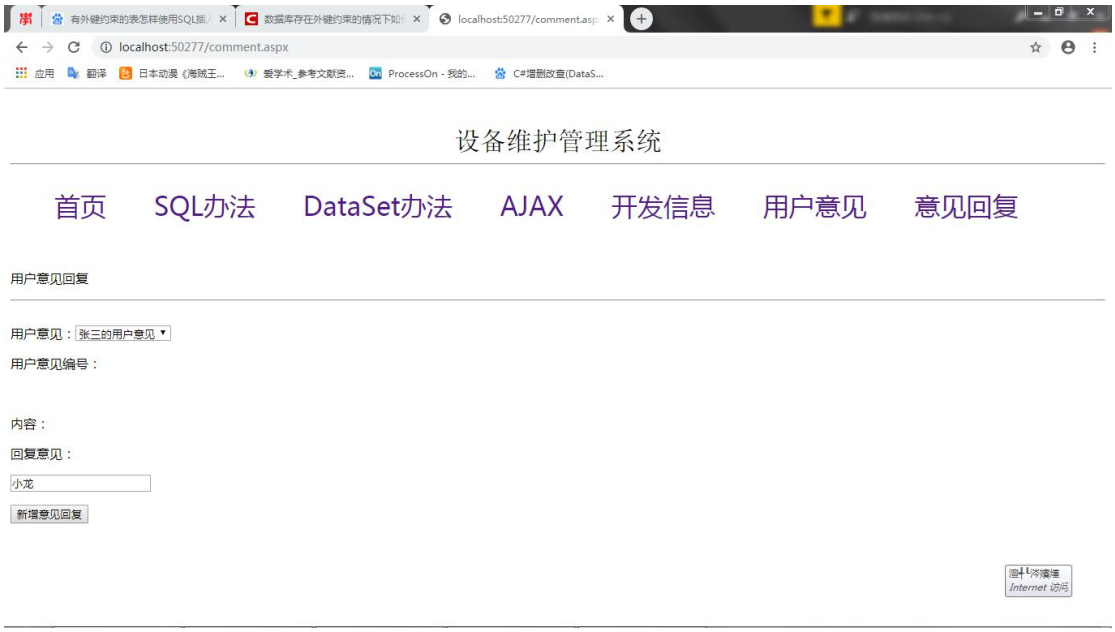
（1）用户意见



Postid	Username	Postdate	Subject	Post	Comment
1	张三	2019-05-30 0:00:00	张三的用户意见	张三反映了一些事情	无
2	李四	2019-05-30 0:00:00	李四的用户意见	李四	无

Postid	Username	Postdate	Subject	Post
1	张三	2019-05-30 0:00:00	张三的用户意见	张三反映了一些事情
2	李四	2019-05-30 0:00:00	李四的用户意见	李四
3	小龙	2019-05-30 20:35:28	网站反应慢	垃圾

（2）意见回复



5. 程序源码说明

5.1 先期实作各项功能之源码（含.aspx 丶.cs 及关键源码）

（1）首页代码

```
</div>
      <div align="center"><div  style="width:700px; height:600px;" class="auto-style3">
       <img src="image/timg.jpg" style="width:100%;" />
       </div>
    </div>
```

（2）SQL 办法

①XML 代码

```
<%@    Page    Title=""    Language="C#"    MasterPageFile="~/Site1.Master"
AutoEventWireup="true"       CodeBehind="SQL       办       法       .aspx.cs"
Inherits="_201624131221.ceshi" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
    <style type="text/css">
        .auto-style2 {
            width: 1164px;
        }
        .auto-style3 {
            text-align: center;
            width: 1339px;
        }
        .auto-style7 {
            width: 1339px;
        }
        .auto-style8 {
            text-align: left;
        }
        .auto-style9 {
            text-align: left;
            width: 1339px;
        }
```

```
        .auto-style10 {
            text-align: center;
        }
        </style>
</asp:Content>
<asp:Content    ID="Content2"    ContentPlaceHolderID="ContentPlaceHolder1"
runat="server">
    <div class="auto-style8">
            <hr />
            <div class="auto-style7">
                <div class="auto-style3">
                         
            <asp:Button ID="Button1" runat="server" OnClick="Button1_Click"
Text="查询" Font-Size="X-Large"/>
          
            <asp:Button   ID="Button2"   runat="server"   Text="  插  入  "
Font-Size="X-Large" OnClick="Button2_Click" />
          
            <asp:Button   ID="Button3"   runat="server"   Text="  修  改  "
Font-Size="X-Large" OnClick="Button3_Click" />
                      
                <asp:Button ID="Button4" runat="server" Font-Size="X-Large"
Text="删除" OnClick="Button4_Click" />
                         
                    <hr />
                    <div class="auto-style3">
                        <div class="auto-style3">
                            <div class="auto-style9">
                            请 输 入 设 备 编 号 或 设 备 名 称 查
询:           设备编号：
<asp:TextBox ID="txtId" runat="server"></asp:TextBox>
                 设备名称：<asp:TextBox ID="txtName"
runat="server"></asp:TextBox>
                                          生 产 厂 家 ：
  
                                        <asp:TextBox        ID="txtcompany"
runat="server"></asp:TextBox>
                            </div>
                        </div>
                        <div class="auto-style7">
                            <br
/>            
登记日期：<asp:TextBox ID="txtdatetime" runat="server"></asp:TextBox>
      维 修 次 数 ：  <asp:TextBox   ID="txtdegree"
runat="server"></asp:TextBox>
      设 备 负 责 人 ：  <asp:TextBox  ID="txtpeople"
runat="server"></asp:TextBox>
                            <br />
                        </div>
                    </div>
                </div>
            </div>
            <hr  />
            <asp:Label ID="Label1" runat="server"></asp:Label>

            <br />
        <br />
            <asp:GridView  ID="GridView1"  runat="server"  BackColor="White"
BorderColor="White"  BorderStyle="Ridge"  BorderWidth="2px"  CellPadding="3"
Width="1339px"       OnSelectedIndexChanged="GridView1_SelectedIndexChanged"
CellSpacing="1" GridLines="None">
                <FooterStyle BackColor="#C6C3C6" ForeColor="Black" />
                <HeaderStyle      BackColor="#4A3C8C"      Font-Bold="True"
ForeColor="#E7E7FF" />
                <PagerStyle      BackColor="#C6C3C6"      ForeColor="Black"
HorizontalAlign="Right" />
                <RowStyle BackColor="#DEDFDE" ForeColor="Black" />
                <SelectedRowStyle    BackColor="#9471DE"    Font-Bold="True"
ForeColor="White" />
```

```
                <SortedAscendingCellStyle BackColor="#F1F1F1" />
                <SortedAscendingHeaderStyle BackColor="#594B9C" />
                <SortedDescendingCellStyle BackColor="#CAC9C9" />
                <SortedDescendingHeaderStyle BackColor="#33276A" />
            </asp:GridView><br />
        <hr />
           设备信息表：<br />
        <br /><asp:GridView ID="GridView5" runat="server" BackColor="White"
BorderColor="#DEDFDE" BorderStyle="None" BorderWidth="1px" CellPadding="4"
ForeColor="Black"           GridLines="Vertical"            Width="1339px"
OnSelectedIndexChanged="GridView5_SelectedIndexChanged">
                <AlternatingRowStyle BackColor="White" />
                <FooterStyle BackColor="#CCCC99" />
                <HeaderStyle       BackColor="#6B696B"       Font-Bold="True"
ForeColor="White" />
                <PagerStyle       BackColor="#F7F7DE"       ForeColor="Black"
HorizontalAlign="Right" />
                <RowStyle BackColor="#F7F7DE" />
                <SelectedRowStyle    BackColor="#CE5D5A"    Font-Bold="True"
ForeColor="White" />
                <SortedAscendingCellStyle BackColor="#FBFBF2" />
                <SortedAscendingHeaderStyle BackColor="#848384" />
                <SortedDescendingCellStyle BackColor="#EAEAD3" />
                <SortedDescendingHeaderStyle BackColor="#575357" />
            </asp:GridView>
             <br /><hr />


             <div class="auto-style3">
             <br />
                 <br />
                 <div                                        class="auto-style2">
            &nb
sp;            
            &nb
sp;      
                     <asp:Button          ID="Button6"          runat="server"
OnClick="Button6_Click" Text="查询" Font-Size="X-Large"  />
                            
             <asp:Button ID="Button7" runat="server" OnClick="Button7_Click"
Text="插入" Font-Size="X-Large" />
          
                     <asp:Button          ID="Button8"          runat="server"
OnClick="Button8_Click" Text="修改" Font-Size="X-Large"  />
                             
             <asp:Button ID="Button9" runat="server" OnClick="Button9_Click"
Text="删除" Font-Size="X-Large"  />
          
                     </div>
                 <hr />
                 <div class="auto-style10">
                     <div class="auto-style8">
                     请输入设备编号或借出时间或借用人姓名查询：
       设   备   编   号   :   <asp:TextBox    ID="txtId1"
runat="server"></asp:TextBox>
                      借出时间(xx-xx-xx): <asp:TextBox
ID="txttime" runat="server"></asp:TextBox>
     借用人姓名 :  <asp:TextBox  ID="txtbName"
runat="server"></asp:TextBox>
                 <br />
                 <br />
                     </div>
                     <div class="auto-style8">

            &nb
sp;            
            &nb
sp;            
            &nb
```

```
sp;        设备负责人 ：<asp:TextBox
ID="txtp1" runat="server"></asp:TextBox>
                     是否已还: <asp:DropDownList
ID="DropDownList1" runat="server" Height="30px" Width="50px">
                    <asp:ListItem Value="yes">是</asp:ListItem>
                    <asp:ListItem Value="no">否</asp:ListItem>
                </asp:DropDownList>
  <br />
                <br />
                    </div>
                </div>
                <hr />
                <div class="auto-style8">
            <br />
                    <asp:Label ID="Label2" runat="server"></asp:Label>
                    <br />
                    <br />
            <br />
                    <asp:GridView        ID="GridView3"        runat="server"
Width="1339px"  BackColor="White"  BorderColor="White"  BorderStyle="Ridge"
BorderWidth="2px"                                          CellPadding="3"
OnSelectedIndexChanged="GridView3_SelectedIndexChanged"      CellSpacing="1"
GridLines="None">
                        <FooterStyle BackColor="#C6C3C6" ForeColor="Black" />
                        <HeaderStyle  BackColor="#4A3C8C"  Font-Bold="True"
ForeColor="#E7E7FF" />
                        <PagerStyle  BackColor="#C6C3C6"  ForeColor="Black"
HorizontalAlign="Right" />
                        <RowStyle BackColor="#DEDFDE" ForeColor="Black" />
                        <SelectedRowStyle                BackColor="#9471DE"
Font-Bold="True" ForeColor="White" />
                        <SortedAscendingCellStyle BackColor="#F1F1F1" />
                        <SortedAscendingHeaderStyle BackColor="#594B9C" />
                        <SortedDescendingCellStyle BackColor="#CAC9C9" />
                        <SortedDescendingHeaderStyle BackColor="#33276A" />
                    </asp:GridView><hr />
                    设备借还信息表：<br />
            <br      /><asp:GridView      ID="GridView6"      runat="server"
BackColor="White" BorderColor="#DEDFDE" BorderStyle="None" BorderWidth="1px"
CellPadding="4"   ForeColor="Black"   GridLines="Vertical"   Width="1339px"
OnSelectedIndexChanged="GridView6_SelectedIndexChanged">
                        <AlternatingRowStyle BackColor="White" />
                        <FooterStyle BackColor="#CCCC99" />
                        <HeaderStyle  BackColor="#6B696B"  Font-Bold="True"
ForeColor="White" />
                        <PagerStyle  BackColor="#F7F7DE"  ForeColor="Black"
HorizontalAlign="Right" />
                        <RowStyle BackColor="#F7F7DE" />
                        <SelectedRowStyle                BackColor="#CE5D5A"
Font-Bold="True" ForeColor="White" />
                        <SortedAscendingCellStyle BackColor="#FBFBF2" />
                        <SortedAscendingHeaderStyle BackColor="#848384" />
                        <SortedDescendingCellStyle BackColor="#EAEAD3" />
                        <SortedDescendingHeaderStyle BackColor="#575357" />
            </asp:GridView>
             <br />
                </div>
             </div>
        </div>
</asp:Content>
```

②C#代码

```
using System;
using System.Collections.Generic;
using System.Data.SqlClient;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
```

```
namespace _201624131221
{
    public partial class ceshi : System.Web.UI.Page
    {
        String sqlconn = "Data Source = (LocalDB)\\MSSQLLocalDB;
AttachDbFilename ='|DataDirectory|\\Database1.mdf'; ";
        protected void Page_Load(object sender, EventArgs e)
        {   //操作前提示
            Button2.Attributes["onClick"] = "javascript:return confirm('你确
认要插入吗？');";
            Button3.Attributes["onClick"] = "javascript:return confirm('你确
认要修改吗？');";
            Button4.Attributes["onClick"] = "javascript:return confirm('你确
认要删除吗？');";
            Button7.Attributes["onClick"] = "javascript:return confirm('你确
认要插入吗？');";
            Button8.Attributes["onClick"] = "javascript:return confirm('你确
认要修改吗？');";
            Button9.Attributes["onClick"] = "javascript:return confirm('你确
认要删除吗？');";
            if (!Page.IsPostBack)
            {
                ShowData();
            }
            if (!Page.IsPostBack)
            {
                ShowData1();
            }
        }
        //显示员工资料至 GridView5
        void ShowData()
        {
            using (SqlConnection cn = new SqlConnection())
            {
                cn.ConnectionString = sqlconn;
                cn.Open();
                SqlCommand cmd = new SqlCommand("SELECT * FROM equipment", cn);
                SqlDataReader dr = cmd.ExecuteReader();
                GridView5.DataSource = dr;
                GridView5.DataBind();
            }
        }

        //显示员工资料至 GridView6
        void ShowData1()
        {
            using (SqlConnection cn = new SqlConnection())
            {
                cn.ConnectionString = sqlconn;
                cn.Open();
                SqlCommand cmd = new SqlCommand("SELECT * FROM circulate", cn);

                SqlDataReader dr = cmd.ExecuteReader();
                GridView6.DataSource = dr;
                GridView6.DataBind();
            }
        }

        //equipment 表操作

        //查询功能
        protected void Button1_Click(object sender, EventArgs e)
        {
            using (SqlConnection cn = new SqlConnection())
            {
                if (txtId.Text == "" && txtName.Text == "")
                {
                    Response.Write("<script>alert('请输入要查询的设备编号或
设备名称进行查询！')</script>");
```

```
                }
                else
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();
                    String sql = "";
                    if (txtId.Text != "" && txtName.Text == "")
                        sql = "SELECT * FROM [equipment] where 设备编号
LIKE'%" + txtId.Text.Trim() + "%'";
                    if (txtId.Text == "" && txtName.Text != "")
                        sql = "SELECT * FROM [equipment] where 设备名称 LIKE
N'%" + txtName.Text.Trim() + "%'";
                    if (txtId.Text != "" && txtName.Text != "")
                        sql = "SELECT * FROM [equipment] where 设备编号
LIKE'%" + txtId.Text.Trim() + "%' and 设备名称 LIKE N'%" + txtName.Text.Trim()
+ "%'";
                    SqlCommand cmd = new SqlCommand(sql, cn);
                    ShowData();
                    /*执行 SQL 语句操作，无返回记录集信息，只返回受影响的记
录数*/
                    int rs = Convert.ToInt32(cmd.ExecuteScalar());
                    if (rs > 0)
                    {
                        Label1.Text = "查询成功,查询结果如下：";
                        SqlDataReader dr = cmd.ExecuteReader();
                        GridView1.DataSource = dr;
                        GridView1.DataBind();
                    }
                    else
                    {
                        Response.Write("<script>alert('查询失败！该记录不存
在！')</script>");
                    }
                    cn.Close();
                }
            }
        }

        //插入功能
        protected void Button2_Click(object sender, EventArgs e)
        {
            if (txtId.Text == "")
            {
                Response.Write("<script>alert('设备编号不能为空！
')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();

                    SqlCommand cmd = new SqlCommand(string.Format("select
Count(*) from equipment where 设备编号='{0}'", txtId.Text), cn);
                    if ((int)cmd.ExecuteScalar() > 0)  //该记录已存在，无法
插入
                    {
                        Response.Write("<script>alert('请先查询该记录是否已
存在')</script>");

                    }
                    else
                    {
                        try
                        {
                            string sqlstr = string.Format("INSERT INTO
equipment(设备编号,设备名称,生产厂家,登记日期,维修次数,设备负责人)" +
"VALUES('{0}',N'{1}',N'{2}','{3}','{4}',N'{5}')", txtId.Text, txtName.Text,
```

```
txtcompany.Text, txtdatetime.Text, txtdegree.Text, txtpeople.Text);
                            SqlCommand cmd1 = new SqlCommand(sqlstr, cn);
                            cmd1.ExecuteNonQuery();
                            Response.Write("<script>alert('插入成功!')</script>");
                            ShowData();
                        }
                        catch (Exception ex)
                        {
                            Response.Write("<script>alert('插入失败!')</script>");
                            //Response.Write(ex.Message);
                        }
                    }
                    cn.Close();
                }
            }
        }

        //修改功能
        protected void Button3_Click(object sender, EventArgs e)
        {
            if (txtId.Text == "")
            {
                Response.Write("<script>alert('设备编号不能为空!')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();

                    SqlCommand cmd = new SqlCommand(string.Format("select Count(*) from equipment where 设备编号='{0}'", txtId.Text), cn);
                    if ((int)cmd.ExecuteScalar() > 0)//该记录存在，可以进行修改
                    {
                        string sqlstr = string.Format("UPDATE equipment SET 设备名称=N'{0}',生产厂家=N'{1}',登记日期='{2}',维修次数='{3}',设备负责人=N'{4}'" +
                            "  WHERE 设备编号='{5}'", txtName.Text, txtcompany.Text, txtdatetime.Text, txtdegree.Text, txtpeople.Text, txtId.Text);
                        SqlCommand cmd1 = new SqlCommand(sqlstr, cn);
                        cmd1.ExecuteNonQuery();
                        ShowData();
                        /*执行 SQL 语句操作，无返回记录集信息，只返回受影响的记录数*/
                        int rs = cmd1.ExecuteNonQuery();
                        if (rs > 0)
                        {
                            Response.Write("<script>alert('修改成功!')</script>");
                        }
                        else
                        {
                            Response.Write("<script>alert('该记录不存在或输入格式有误，请重新修改!')</script>");
                        }
                        cn.Close();
                    }
                    else
                    {
                        Response.Write("<script>alert('请先查询该记录是否已存在')</script>");
                    }
                }
```

```
            }
        }

        //删除功能
        protected void Button4_Click(object sender, EventArgs e)
        {
            if (txtId.Text == "" )
            {
                Response.Write("<script>alert('请输入要删除的设备编号！
')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();
                    SqlCommand cmd = new SqlCommand(string.Format("select
Count(*) from equipment where 设备编号= '{0}'", txtId.Text), cn);
                    if ((int)cmd.ExecuteScalar() > 0)
                    {
                        string sqlstr1 = string.Format("DELETE FROM equipment
where 设备编号='{0}' ", txtId.Text);
                        SqlCommand cmd2 = new SqlCommand(sqlstr1, cn);
                        cmd2.ExecuteNonQuery();
                        Response.Write("<script>alert('  删  除  成  功  !
')</script>");
                        ShowData();
                    }
                    else
                    {
                        Response.Write("<script>alert('删除失败，请确认该记
录存在！')</script>");
                    }
                    cn.Close();
                }
            }
        }

        //刷新 Response.Redirect(Request.Url.ToString());

        //circulate 操作

        //查询
        protected void Button6_Click(object sender, EventArgs e)
        {
            using (SqlConnection cn = new SqlConnection())
            {
                if   (txtId1.Text   ==   ""   &&   txttime.Text   ==   ""&&
txtbName.Text=="")
                {
                    Response.Write("<script>alert('请输入要查询的设备编号或
借出时间或借用人姓名进行查询！')</script>");
                }
                else
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();
                    String sql = "";
                    if    (txtId1.Text    !=    ""    &&    txttime.Text    ==
""&&txtbName.Text=="")
                        sql  =  "SELECT  *  FROM  [circulate]  where  设备编号
LIKE'%" + txtId1.Text.Trim() + "%'";
                    if (txtId1.Text !="" && txttime.Text !="" && txtbName.Text
== "")
                        sql  =  "SELECT  *  FROM  [circulate]  where  设备编号
LIKE'%" + txtId1.Text.Trim() + "%' and 借出时间 LIKE N'%" + txttime.Text.Trim()
+ "%'";
                    if  (txtId1.Text  !=  ""  &&  txttime.Text  ==  ""  &&
```

```
txtbName.Text != "")
                    sql = "SELECT * FROM [circulate] where 设备编号
LIKE'%" + txtId1.Text.Trim() + "%' and 借用人姓名 LIKE N'%" +
txtbName.Text.Trim() + "%'";
                if (txtId1.Text == "" && txttime.Text != "" && txtbName.Text
== "")
                    sql = "SELECT * FROM [circulate] where 借出时间 LIKE
N'%" + txttime.Text.Trim() + "%'";
                if (txtId1.Text == "" && txttime.Text == "" &&
txtbName.Text != "")
                    sql = "SELECT * FROM [circulate] where 借用人姓名 LIKE
N'%" + txtbName.Text.Trim() + "%'";
                if (txtId1.Text == "" && txttime.Text != "" &&
txtbName.Text != "")
                    sql = "SELECT * FROM [circulate] where 借出时间
LIKE'%" + txttime.Text.Trim() + "%' and 借用人姓名 LIKE N'%" +
txtbName.Text.Trim() + "%'";
                if(txtId1.Text != "" && txttime.Text != "" &&
txtbName.Text != "")
                    sql = "SELECT * FROM [circulate] where 设备编号
LIKE'%" + txtId1.Text.Trim() + "%' and 借出时间 LIKE N'%" + txttime.Text.Trim()
+ "%' and 借用人姓名 LIKE N'%" + txtbName.Text.Trim() + "%'";
                SqlCommand cmd = new SqlCommand(sql, cn);
                ShowData1();
                /*执行 SQL 语句操作，无返回记录集信息，只返回受影响的记
录数*/
                int rs = Convert.ToInt32(cmd.ExecuteScalar());
                if (rs > 0)
                {
                    Label2.Text = "查询成功,查询结果如下：";
                    SqlDataReader dr = cmd.ExecuteReader();
                    GridView3.DataSource = dr;
                    GridView3.DataBind();
                }
                else
                {
                    Response.Write("<script>alert('查询失败！该记录不存
在！')</script>");
                }
                cn.Close();
            }
        }

    }

    //插入
    protected void Button7_Click(object sender, EventArgs e)
    {

        if (txtId1.Text =="" || txttime.Text =="" || txtbName.Text =="")
        {
            Response.Write("<script>alert('设备编号和借出时间和借用人姓
名不能为空！')</script>");
        }
        else
        {
            using (SqlConnection cn = new SqlConnection())
            {
                cn.ConnectionString = sqlconn;
                cn.Open();

                SqlCommand cmd = new SqlCommand(string.Format("select
Count(*) from [equipment] where 设备编号='{0}'", txtId1.Text), cn);
                if ((int)cmd.ExecuteScalar() > 0)  //该记录在 equipment
中存在，再看是否已借出
                {
                    SqlCommand cmd1 = new
SqlCommand(string.Format("select Count(*) from [circulate] where 设备编号=
'{0}'", txtId1.Text), cn);
```

```
                        if ((int)cmd1.ExecuteScalar() > 0)//该记录在借出信息表中
                        {
                            SqlCommand cmd2 = new SqlCommand(string.Format("select Count(*) from [circulate] where 是否已还=N'是' and 设备编号= "+txtId1.Text.Trim()+""), cn);
                            if ((int)cmd2.ExecuteScalar() > 0)//已还，可借出
                            {
                                try
                                {
                                    string sqlstr1 = string.Format("INSERT INTO circulate(设备编号,借出时间,借用人姓名,设备负责人,是否已还)" + "VALUES('{0}','{1}',N'{2}',N'{3}',N'{4}')",    txtId1.Text,    txttime.Text, txtbName.Text, txtpl.Text, DropDownList1.SelectedItem.Text);
                                    SqlCommand cmd3 = new SqlCommand(sqlstr1, cn);
                                    cmd3.ExecuteNonQuery();
                                    Response.Write("<script>alert('插入成功!')</script>");
                                    ShowData1();
                                    cn.Close();
                                }
                                catch (Exception ex)
                                {
                                    Response.Write("<script>alert('插入失败!')</script>");
                                }
                            }
                            else
                            {
                                Response.Write("<script>alert('该设备已被借出!')</script>");
                            }
                        }
                        else//该记录不在借出信息表中，可插入
                        {
                            try
                            {
                                string sqlstr1 = string.Format("INSERT INTO circulate(设备编号,借出时间,借用人姓名,设备负责人,是否已还)" + "VALUES('{0}','{1}',N'{2}',N'{3}',N'{4}')",    txtId1.Text,    txttime.Text, txtbName.Text, txtpl.Text, DropDownList1.SelectedItem.Text);
                                SqlCommand cmd2 = new SqlCommand(sqlstr1, cn);
                                cmd2.ExecuteNonQuery();
                                Response.Write("<script>alert('插入成功!')</script>");
                                ShowData1();
                                cn.Close();
                            }
                            catch (Exception ex)
                            {
                                Response.Write("<script>alert('插入失败!')</script>");
                            }
                        }
                    }
                    else
                    {
                        Response.Write("<script>alert('请先查询是否有该设备,若不存在无法借出!')</script>");
                    }
                }
            }
        }

        //修改
        protected void Button8_Click(object sender, EventArgs e)
        {
```

```
            if (txtId1.Text == "" || txttime.Text == "" || txtbName.Text == "")
            {
                Response.Write("<script>alert('设备编号和借出时间和借用人姓名不能为空！')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();

                    SqlCommand cmd = new SqlCommand(string.Format("select Count(*) from [circulate] where 设备编号='{0}' and 借出时间='{1}' and 借用人姓名=N'{2}'", txtId1.Text, txttime.Text, txtbName.Text), cn);
                    if ((int)cmd.ExecuteScalar() > 0)//该记录存在，可以进行修改
                    {      //三个联合主键不做修改
                        string sqlstr = string.Format("UPDATE circulate SET 设备负责人=N'{0}',是否已还=N'{1}',借出时间='{2}',借用人姓名=N'{3}'" +
                            "  WHERE 设 备 编 号 ='{4}'",  txtpl.Text, DropDownList1.SelectedItem.Text, txttime.Text, txtbName.Text,txtId1.Text);
                        SqlCommand cmd1 = new SqlCommand(sqlstr, cn);
                        cmd1.ExecuteNonQuery();
                        ShowData1();
                        /*执行 SQL 语句操作，无返回记录集信息，只返回受影响的记录数*/
                        int rs = cmd1.ExecuteNonQuery();
                        if (rs > 0)
                        {
                            Response.Write("<script>alert('修改成功！')</script>");
                        }
                        else
                        {
                            Response.Write("<script>alert('该记录不存在或输入格式有误，请重新修改！')</script>");
                        }
                        cn.Close();
                    }
                    else
                    {
                        Response.Write("<script>alert('请先查询该记录是否已存在')</script>");
                    }
                }
            }
        }

        //删除
        protected void Button9_Click(object sender, EventArgs e)
        {
            if (txtId1.Text == "" && txttime.Text == "" && txtbName.Text == "")
            {
                Response.Write("<script>alert('请输入要删除的设备编号或借出时间或借用人姓名！')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();
                    SqlCommand cmd = new SqlCommand(string.Format("select Count(*) from [circulate] where 是否已还=N'是' and 设备编号='" + txtId1.Text.Trim() + "'"), cn);
                    if ((int)cmd.ExecuteScalar() > 0) //已还可删除
                    {
                        SqlCommand cmd1 = new
```

```
SqlCommand(string.Format("select Count(*) from [circulate] where 设备编号='{0}' and 借出时间='{1}' and 借用人姓名=N'{2}'",txtId1.Text,txttime.Text,txtbName.Text), cn);
                        if ((int)cmd1.ExecuteScalar()>0)//该记录符合删除条件，可以删除
                        {
                            string sqlstr1 = string.Format("DELETE FROM circulate where 设备编号='{0}' and 借出时间='{1}' and 借用人姓名=N'{2}'", txtId1.Text, txttime.Text, txtbName.Text );
                            SqlCommand cmd2 = new SqlCommand(sqlstr1, cn);
                            cmd2.ExecuteNonQuery();
                            Response.Write("<script>alert('删除成功！')</script>");
                            ShowData1();
                            cn.Close();
                        }
                        else
                        {
                            Response.Write("<script>alert('删除失败！必须保证设备编号，借出时间，借用人一致才可以删除')</script>");
                        }
                    }
                    else
                    {
                        Response.Write("<script>alert('设备尚未归还，无法删除！')</script>");
                    }
                }
            }
        }

        protected void GridView1_SelectedIndexChanged(object sender, EventArgs e)
        {
        }
        protected void GridView3_SelectedIndexChanged(object sender, EventArgs e)
        {
        }

        protected void GridView5_SelectedIndexChanged(object sender, EventArgs e)
        {
        }
        protected void GridView6_SelectedIndexChanged(object sender, EventArgs e)
        {
        }
    }
}
```

（3）DataSet 办法

①XML 代码

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master" AutoEventWireup="true" CodeBehind="DataSet.aspx.cs" Inherits="_201624131221.second" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
    <style type="text/css">
        .auto-style2 {
            width: 1340px;
            text-align: center;
        }
        .auto-style3 {
            width: 1340px;
            text-align: left;
        }
    </style>
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server"><hr
```

```
/>
    <p class="auto-style2">
        <asp:Button ID="Button1" runat="server" Font-Size="X-Large" Text="查询"
OnClick="Button1_Click1" />
         
        <asp:Button ID="Button2" runat="server" Font-Size="X-Large" Text="插入"
OnClick="Button2_Click" />
         
        <asp:Button ID="Button3" runat="server" Font-Size="X-Large" Text="修改"
OnClick="Button3_Click" />
         
        <asp:Button ID="Button4" runat="server" Font-Size="X-Large" Text="删除"
OnClick="Button4_Click" />
    </p><hr />
    <p class="auto-style3">
        请输入设备编号或设备名称查询:      设备编号：
<asp:TextBox ID="txtId" runat="server"></asp:TextBox>
    设备名称：<asp:TextBox ID="txtName" runat="server"></asp:TextBox>
    生产厂家：<asp:TextBox ID="txtcompany" runat="server"></asp:TextBox>
    </p>
    <p class="auto-style3">

         
```

```
    <p class="auto-style3">
         </p>
    <p class="auto-style2">
        <asp:Button ID="Button5" runat="server" Font-Size="X-Large" Text="查询"
OnClick="Button5_Click" />
         
        <asp:Button ID="Button6" runat="server" Font-Size="X-Large" Text="插入"
OnClick="Button6_Click" />
         
        <asp:Button ID="Button7" runat="server" Font-Size="X-Large" Text="修改"
OnClick="Button7_Click" />
         
        <asp:Button ID="Button8" runat="server" Font-Size="X-Large" Text="删除"
OnClick="Button8_Click" />
    </p><hr />
    <p class="auto-style3">
        请输入设备编号或借出时间或借用人姓名查询：  设备编号：<asp:TextBox
ID="txtId1" runat="server"></asp:TextBox>
    借出时间(xx-xx-xx):<asp:TextBox ID="txttime"
runat="server"></asp:TextBox>
    借用人姓名:<asp:TextBox ID="txtbName" runat="server"></asp:TextBox>
    </p>
    <p class="auto-style3">

         
```

```
            <PagerStyle BackColor="#F7F7DE" ForeColor="Black" HorizontalAlign="Right" />
            <RowStyle BackColor="#F7F7DE" />
            <SelectedRowStyle BackColor="#CE5D5A" Font-Bold="True" ForeColor="White" />
            <SortedAscendingCellStyle BackColor="#FBFBF2" />
            <SortedAscendingHeaderStyle BackColor="#848384" />
            <SortedDescendingCellStyle BackColor="#EAEAD3" />
            <SortedDescendingHeaderStyle BackColor="#575357" />
        </asp:GridView>
    </p>
    <p class="auto-style2">
         </p>
</asp:Content>
```

②C#代码

```
using System;
using System.Collections.Generic;
using System.Data.SqlClient;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;
using System.Text;
using System.Configuration;
using System.Data.OleDb;

namespace _201624131221
{
    public partial class second : System.Web.UI.Page
    {
        String sqlconn = "Data Source = (LocalDB)\\MSSQLLocalDB;
AttachDbFilename ='|DataDirectory|\\Database1.mdf'; ";
        protected void Page_Load(object sender, EventArgs e)
        {   //操作前提示
            Button2.Attributes["onClick"] = "javascript:return confirm('你确
认要插入吗？');";
            Button3.Attributes["onClick"] = "javascript:return confirm('你确
认要修改吗？');";
            Button4.Attributes["onClick"] = "javascript:return confirm('你确
认要删除吗？');";
            Button6.Attributes["onClick"] = "javascript:return confirm('你确
认要插入吗？');";
            Button7.Attributes["onClick"] = "javascript:return confirm('你确
认要修改吗？');";
            Button8.Attributes["onClick"] = "javascript:return confirm('你确
认要删除吗？');";
            if (!Page.IsPostBack)
            {
                ShowData();
                ShowData1();
            }
        }

        //显示员工资料至 GridView2
        void ShowData()
        {
            using (SqlConnection cn = new SqlConnection())
            {
                cn.ConnectionString = sqlconn;
                cn.Open();
                SqlCommand cmd = new SqlCommand("SELECT * FROM [equipment]
ORDER BY [设备编号]", cn);
                SqlDataReader dr = cmd.ExecuteReader();
                GridView2.DataSource = dr;
                GridView2.DataBind();
            }
        }

        //显示员工资料至 GridView4
```

```
        void ShowData1()
        {
            using (SqlConnection cn = new SqlConnection())
            {
                cn.ConnectionString = sqlconn;
                cn.Open();
                SqlCommand cmd = new SqlCommand("SELECT * FROM [circulate]
ORDER BY [借出时间]", cn);
                SqlDataReader dr = cmd.ExecuteReader();
                GridView4.DataSource = dr;
                GridView4.DataBind();
            }
        }

        //equipment 表操作

        //查询
        protected void Button1_Click1(object sender, EventArgs e)
        {

            using (SqlConnection cn = new SqlConnection())
            {
                if (txtId.Text == "" && txtName.Text == "")
                {
                    Response.Write("<script>alert('请输入要查询的设备编号或
设备名称进行查询！')</script>");
                }
                else
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();
                    String sql = "";
                    if (txtId.Text != "" && txtName.Text == "")
                        sql = "SELECT * FROM [equipment] where 设备编号
LIKE'%" + txtId.Text.Trim() + "%'";
                    if (txtId.Text == "" && txtName.Text != "")
                        sql = "SELECT * FROM [equipment] where 设备名称 LIKE
N'%" + txtName.Text.Trim() + "%'";
                    if (txtId.Text != "" && txtName.Text != "")
                        sql = "SELECT * FROM [equipment] where 设备编号
LIKE'%" + txtId.Text.Trim() + "%' and 设备名称 LIKE N'%" + txtName.Text.Trim()
+ "%'";
                    SqlCommand cmd = new SqlCommand(sql, cn);
                    cmd.ExecuteNonQuery();
                    ShowData();
                    /*执行 SQL 语句操作，无返回记录集信息，只返回受影响的记
录数*/
                    int rs = Convert.ToInt32(cmd.ExecuteScalar());
                    if (rs > 0)
                    {
                        Label1.Text = "查询成功,查询结果如下：";
                        SqlDataAdapter Adapter = new SqlDataAdapter();
                        Adapter.SelectCommand = cmd;
                        DataSet myDs = new DataSet();
                        Adapter.Fill(myDs);
                        GridView1.DataSource = myDs.Tables[0].DefaultView;
                        GridView1.DataBind();
                    }
                    else
                    {
                        Response.Write("<script>alert('查询失败！该记录不存
在！')</script>");
                    }
                    cn.Close();
                }
            }
        }

        //插入
```

```
        protected void Button2_Click(object sender, EventArgs e)
        {
            if (txtId.Text == "")
            {
                Response.Write("<script>alert('设备编号不能为空!')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();

                    SqlCommand cmd = new SqlCommand(string.Format("select Count(*) from equipment where 设备编号='{0}'", txtId.Text), cn);
                    if ((int)cmd.ExecuteScalar() > 0)  //该记录已存在，无法插入
                    {
                        Response.Write("<script>alert('请先查询该记录是否已存在')</script>");

                    }
                    else
                    {
                        try
                        {
                            string sno = txtId.Text;
                            string name = txtName.Text;
                            string company = txtcompany.Text;
                            string time = txtdatetime.Text;
                            string degree = txtdegree.Text;
                            string people = txtpeople.Text;
                            string sql = "SELECT * from equipment";
                            SqlDataAdapter adapter = new SqlDataAdapter(sql, cn);
                            SqlCommandBuilder commandBuilder = new SqlCommandBuilder(adapter);
                            DataSet ds = new DataSet();
                            adapter.Fill(ds);

                            DataRow row = ds.Tables[0].NewRow();
                            row[0] = sno;
                            row[1] = name;
                            row[2] = company;
                            row[3] = time;
                            row[4] = degree;
                            row[5] = people;

                            ds.Tables[0].Rows.Add(row);
                            adapter.Update(ds);
                            Response.Write("<script>alert('插入成功!')</script>");
                            ShowData();
                        }
                        catch (Exception ex)
                        {
                            Response.Write("<script>alert('插入失败!')</script>");
                            //Response.Write(ex.Message);
                        }
                    }
                    cn.Close();
                }
            }
        }

        //修改
        protected void Button3_Click(object sender, EventArgs e)
```

```
        {
            if (txtId.Text == "")
            {
                Response.Write("<script>alert('设备编号不能为空！')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();

                    SqlCommand cmd = new SqlCommand(string.Format("select Count(*) from equipment where 设备编号='{0}'", txtId.Text), cn);
                    if ((int)cmd.ExecuteScalar()> 0)//该记录存在，可以进行修改
                    {
                        string sno = txtId.Text;
                        string name = txtName.Text;
                        string company = txtcompany.Text;
                        string time = txtdatetime.Text;
                        string degree = txtdegree.Text;
                        string people = txtpeople.Text;
                        string sql = "SELECT * from equipment where 设备编号='" + sno + "'";
                        SqlDataAdapter adapter = new SqlDataAdapter(sql, cn);
                        SqlCommandBuilder commandBuilder = new SqlCommandBuilder(adapter);
                        DataSet ds = new DataSet();
                        adapter.Fill(ds);

                        DataRow row = ds.Tables[0].Rows[0];
                        row[1] = name;
                        row[2] = company;
                        row[3] = time;
                        row[4] = degree;
                        row[5] = people;

                        adapter.Update(ds);
                        Response.Write("<script>alert('修改成功！')</script>");
                    }
                    else
                    {
                        Response.Write("<script>alert('修改失败！请先查询该记录是否已存在')</script>");
                    }
                    cn.Close();
                    ShowData();
                }
            }
        }

        //删除
        protected void Button4_Click(object sender, EventArgs e)
        {
            if (txtId.Text == "")
            {
                Response.Write("<script>alert('请输入要删除的设备编号！')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();
                    SqlCommand cmd = new SqlCommand(string.Format("select
```

```
Count(*) from equipment where 设备编号='{0}'", txtId.Text), cn);
                    if ((int)cmd.ExecuteScalar() > 0)
                    {
                        string sno = txtId.Text;
                        string sql = "SELECT * from equipment where 设备编号
='" + sno + "'";
                        SqlDataAdapter adapter = new SqlDataAdapter(sql, cn);
                        SqlCommandBuilder     commandBuilder     =     new
SqlCommandBuilder(adapter);
                        DataSet ds = new DataSet();
                        adapter.Fill(ds);

                        ds.Tables[0].Rows[0].Delete();
                        adapter.Update(ds);

                        Response.Write("<script>alert('  删  除  成  功  !
')</script>");
                        ShowData();
                    }
                    else
                    {
                        Response.Write("<script>alert('删除失败，请确认该记
录存在!')</script>");
                    }
                    cn.Close();
                }
            }
        }


        //circulate 操作

        //查询
        protected void Button5_Click(object sender, EventArgs e)
        {
            using (SqlConnection cn = new SqlConnection())
            {
                if (txtId1.Text == "" && txttime.Text == "" && txtbName.Text
== "")
                {
                    Response.Write("<script>alert('请输入要查询的设备编号或
借出时间或借用人姓名进行查询!')</script>");
                }
                else
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();
                    String sql = "";
                    if (txtId1.Text !="" && txttime.Text =="" && txtbName.Text
== "")
                        sql = "SELECT * FROM [circulate] where 设备编号
LIKE'%" + txtId1.Text.Trim() + "%'";
                    if (txtId1.Text !="" && txttime.Text !="" && txtbName.Text
== "")
                        sql = "SELECT * FROM [circulate] where 设备编号
LIKE'%" + txtId1.Text.Trim() + "%' and 借出时间 LIKE N'%" + txttime.Text.Trim()
+ "%'";
                    if  (txtId1.Text  !=  ""  &&  txttime.Text  ==  ""  &&
txtbName.Text != "")
                        sql = "SELECT * FROM [circulate] where 设备编号
LIKE'%"  +  txtId1.Text.Trim()  +  "%'  and  借用人姓名  LIKE  N'%"  +
txtbName.Text.Trim() + "%'";
                    if (txtId1.Text =="" && txttime.Text !="" && txtbName.Text
== "")
                        sql = "SELECT * FROM [circulate] where 借出时间 LIKE
N'%" + txttime.Text.Trim() + "%'";
                    if  (txtId1.Text  ==  ""  &&  txttime.Text  ==  ""  &&
txtbName.Text != "")
                        sql = "SELECT * FROM [circulate] where 借用人姓名 LIKE
```

```
N'%" + txtbName.Text.Trim() + "%'";
                    if (txtId1.Text == "" && txttime.Text != "" && txtbName.Text != "")
                        sql = "SELECT * FROM [circulate] where 借出时间 LIKE'%" + txttime.Text.Trim() + "%' and 借用人姓名 LIKE N'%" + txtbName.Text.Trim() + "%'";
                    if (txtId1.Text != "" && txttime.Text != "" && txtbName.Text != "")
                        sql = "SELECT * FROM [circulate] where 设备编号 LIKE'%" + txtId1.Text.Trim() + "%' and 借出时间 LIKE N'%" + txttime.Text.Trim() + "%' and 借用人姓名 LIKE N'%" + txtbName.Text.Trim() + "%'";
                    SqlCommand cmd = new SqlCommand(sql, cn);
                    cmd.ExecuteNonQuery();
                    ShowData1();
                    /*执行 SQL 语句操作，无返回记录集信息，只返回受影响的记录数*/
                    int rs = Convert.ToInt32(cmd.ExecuteScalar());
                    if (rs > 0)
                    {
                        Label2.Text = "查询成功,查询结果如下：";
                        SqlDataAdapter Adapter = new SqlDataAdapter();
                        Adapter.SelectCommand = cmd;
                        DataSet myDs = new DataSet();
                        Adapter.Fill(myDs);
                        GridView3.DataSource = myDs.Tables[0].DefaultView;
                        GridView3.DataBind();
                    }
                    else
                    {
                        Response.Write("<script>alert('查询失败！该记录不存在！')</script>");
                    }
                    cn.Close();
                }
            }
        }

        //插入
        protected void Button6_Click(object sender, EventArgs e)
        {

            if (txtId1.Text == "" || txttime.Text == "" || txtbName.Text == "")
            {
                Response.Write("<script>alert('设备编号和借出时间和借用人姓名不能为空！')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();

                    SqlCommand cmd = new SqlCommand(string.Format("select Count(*) from [equipment] where 设备编号='{0}'", txtId1.Text), cn);
                    if ((int)cmd.ExecuteScalar() > 0)  //该记录在 equipment 中存在，再看是否已借出
                    {
                        SqlCommand cmd1 = new SqlCommand(string.Format("select Count(*) from [circulate] where 设备编号='{0}'", txtId1.Text), cn);
                        if ((int)cmd1.ExecuteScalar() > 0)//该记录在借出信息表中
                        {
                            SqlCommand cmd2 = new SqlCommand(string.Format("select Count(*) from [circulate] where 是否已还=N'是' and 设备编号= " + txtId1.Text.Trim() + ""), cn);
                            if ((int)cmd2.ExecuteScalar() > 0)//已还，可借出
                            {
```

```
                                try
                                {
                                    string Id1 = txtId1.Text;
                                    string time = txttime.Text;
                                    string Name = txtbName.Text;
                                    string pl = txtpl.Text;
                                    string               DL                =
DropDownList1.SelectedItem.Text;
                                    string sql = "SELECT * from circulate";
                                    SqlDataAdapter     adapter     =     new
SqlDataAdapter(sql, cn);
                                    SqlCommandBuilder  commandBuilder  =  new
SqlCommandBuilder(adapter);
                                    DataSet ds = new DataSet();
                                    adapter.Fill(ds);

                                    DataRow row = ds.Tables[0].NewRow();
                                    row[0] = Id1;
                                    row[1] = time;
                                    row[2] = Name;
                                    row[3] = pl;
                                    row[4] = DL;

                                    ds.Tables[0].Rows.Add(row);
                                    adapter.Update(ds);

                                    Response.Write("<script>alert(' 插 入 成
功！')</script>");
                                    ShowData1();
                                    cn.Close();
                                }
                                catch (Exception ex)
                                {
                                    Response.Write("<script>alert(' 插 入 失
败！')</script>");
                                }
                            }
                            else
                            {
                                Response.Write("<script>alert('该设备已被借
出！')</script>");
                            }
                        }
                        else//该记录不在借出信息表中，可插入
                        {
                            try
                            {
                                string Id1 = txtId1.Text;
                                string time = txttime.Text;
                                string Name = txtbName.Text;
                                string pl = txtpl.Text;
                                string DL = DropDownList1.SelectedItem.Text;
                                string sql = "SELECT * from circulate";
                                SqlDataAdapter      adapter      =      new
SqlDataAdapter(sql, cn);
                                SqlCommandBuilder   commandBuilder   =   new
SqlCommandBuilder(adapter);
                                DataSet ds = new DataSet();
                                adapter.Fill(ds);

                                DataRow row = ds.Tables[0].NewRow();
                                row[0] = Id1;
                                row[1] = time;
                                row[2] = Name;
                                row[3] = pl;
                                row[4] = DL;

                                ds.Tables[0].Rows.Add(row);
                                adapter.Update(ds);
```

```
                                Response.Write("<script>alert('插入成功！
')</script>");
                                ShowData1();
                                cn.Close();
                            }
                            catch (Exception ex)
                            {
                                Response.Write("<script>alert('插入失败！
')</script>");
                            }
                        }
                    }
                    else
                    {
                        Response.Write("<script>alert('请先查询是否有该设备,
若不存在无法借出!')</script>");
                    }
                }
            }
        }

        //修改
        protected void Button7_Click(object sender, EventArgs e)
        {

            if (txtId1.Text == "" || txttime.Text == "" || txtbName.Text == "")
            {
                Response.Write("<script>alert('设备编号和借出时间和借用人姓
名不能为空！')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();

                    SqlCommand cmd = new SqlCommand(string.Format("select
Count(*) from [circulate] where 设备编号='{0}' and 借出时间='{1}' and 借用
人姓名=N'{2}'", txtId1.Text, txttime.Text, txtbName.Text), cn);
                    if ((int)cmd.ExecuteScalar() > 0)//该记录存在，可以进行
修改
                    {
                        string Id1 = txtId1.Text;
                        string time = txttime.Text;
                        string Name = txtbName.Text;
                        string pl = txtpl.Text;
                        string DL = DropDownList1.SelectedItem.Text;
                        string sql = "SELECT * from circulate where 设备编号
='" + Id1 + "'";
                        SqlDataAdapter adapter = new SqlDataAdapter(sql, cn);
                        SqlCommandBuilder commandBuilder = new
SqlCommandBuilder(adapter);
                        DataSet ds = new DataSet();
                        adapter.Fill(ds);

                        DataRow row = ds.Tables[0].Rows[0];
                        row[3] = pl;
                        row[4] = DL;

                        adapter.Update(ds);
                        ShowData1();
                        Response.Write("<script>alert('修改成功！
')</script>");
                    }
                    else
                    {
                        Response.Write("<script>alert('修改失败！请先查询该
```

```
记录是否已存在')</script>");
                    }
                    cn.Close();
                }
            }
        }

        //删除
        protected void Button8_Click(object sender, EventArgs e)
        {
            if (txtId1.Text == "" && txttime.Text == "" && txtbName.Text == "")
            {
                Response.Write("<script>alert('请输入要删除的设备编号或借出
时间或借用人姓名！')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();
                    SqlCommand cmd = new SqlCommand(string.Format("select
Count(*) from [circulate] where 是否已还=N'是' and 设备编号='" +
txtId1.Text.Trim() + "'"), cn);
                    if ((int)cmd.ExecuteScalar() > 0) //已还可删除
                    {
                        SqlCommand cmd1 = new
SqlCommand(string.Format("select Count(*) from [circulate] where 设备编号
='{0}' and 借出时间='{1}' and 借用人姓名=N'{2}'", txtId1.Text, txttime.Text,
txtbName.Text), cn);
                        if ((int)cmd1.ExecuteScalar() > 0)//该记录符合删除条
件，可以删除
                        {
                            string Id1 = txtId1.Text;
                            string time = txttime.Text;
                            string Name = txtbName.Text;
                            string sql = "SELECT * from circulate where 设备
编号='" + Id1 + "' and 借出时间='"+time+"' and 借用人姓名=N'"+Name+"' ";
                            SqlDataAdapter adapter = new SqlDataAdapter(sql,
cn);
                            SqlCommandBuilder commandBuilder = new
SqlCommandBuilder(adapter);
                            DataSet ds = new DataSet();
                            adapter.Fill(ds);

                            ds.Tables[0].Rows[0].Delete();
                            adapter.Update(ds);

                            Response.Write("<script>alert('删除成功！
')</script>");
                            ShowData1();
                            cn.Close();
                        }
                        else
                        {
                            Response.Write("<script>alert('删除失败！必须保
证设备编号，借出时间，借用人一致才可以删除')</script>");
                        }
                    }
                    else
                    {
                        Response.Write("<script>alert('设备尚未归还，无法删
除！')</script>");
                    }
                }
            }
        }

        protected void GridView1_SelectedIndexChanged(object sender,
```

```
EventArgs e)
        {

        }

        protected    void    GridView2_SelectedIndexChanged(object    sender,
EventArgs e)
        {

        }

        protected    void    GridView3_SelectedIndexChanged(object    sender,
EventArgs e)
        {

        }

        protected    void    GridView4_SelectedIndexChanged(object    sender,
EventArgs e)
        {

        }
    }
}
```

（4）AJAX（沿用 SQL 办法页，C#代码不在展示）

①<asp:ScriptManager ID="ScriptManager1" runat="server">

</asp:ScriptManager>

② UpdatePanel 里面

```
<asp:UpdatePanel ID="UpdatePanel1" runat="server">
        <ContentTemplate>
            UpdatePanel 里面,现在时间:<%=DateTime.Now.ToString() %><br /><br /><div
class="auto-style3">
            <br />
                <br />
                <div class="auto-style2">
                       
                    <asp:Button ID="Button6" runat="server" OnClick="Button6_Click"
Text="查询" Font-Size="X-Large"  />
                           
            <asp:Button ID="Button7" runat="server" OnClick="Button7_Click" Text="插入"
Font-Size="X-Large" />
          
                    <asp:Button ID="Button8" runat="server" OnClick="Button8_Click"
Text="修改" Font-Size="X-Large"  />
                           
            <asp:Button ID="Button9" runat="server" OnClick="Button9_Click" Text="删除"
Font-Size="X-Large"  />
          
                  </div>
                <hr />
                <div class="auto-style10">
                    <div class="auto-style4">
                    请输入设备编号或借出时间或借用人姓名查询：    设备编
号：<asp:TextBox ID="txtId1" runat="server"></asp:TextBox>
                  借出时间(xx-xx-xx)：<asp:TextBox ID="txttime"
runat="server"></asp:TextBox>
    借用人姓名：<asp:TextBox ID="txtbName"
runat="server"></asp:TextBox>
                        <br />
                        <br />

              &nb
sp;              
              &nb
sp;              
```

```
   
```

```
        .auto-style2 {
            text-align: center;
        }
        .auto-style3 {
            text-align: center;
            font-size: x-large;
        }
        .auto-style4 {
            font-size: x-large;
        }
    </style>
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    <hr />
    <p class="auto-style3">
  姓名：刘醌轩</p>
    <p class="auto-style3">
        班级：16 科 2</p>
    <p class="auto-style2">
     <span class="auto-style4"> 学号：201624131221</span></p>
    <p class="auto-style2">
       <span class="auto-style4"> 联系方式：
15766549372</span></p>
    <p class="auto-style3">
  网站简介：本网站为期末综合作业</p>
    <p class="auto-style3">
        谢谢使用！</p>
</asp:Content>
```

5.2 即席实作各项功能之源码（含.aspx 丶.cs 及关键源码）

（1）用户意见

①XML 代码

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master" AutoEventWireup="true"
CodeBehind="Post.aspx.cs" Inherits="_201624131221.即席创作" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">

    <p>
        用户意见<hr />所有意见反应与回复：</p>
    <p>
        <asp:GridView ID="GridView1" runat="server" BackColor="White"
BorderColor="#DEDFDE" BorderStyle="None" BorderWidth="1px" CellPadding="4"
ForeColor="Black" GridLines="Vertical"
OnSelectedIndexChanged="GridView1_SelectedIndexChanged1" Width="1339px">
            <AlternatingRowStyle BackColor="White" />
            <FooterStyle BackColor="#CCCC99" />
            <HeaderStyle BackColor="#6B696B" Font-Bold="True" ForeColor="White" />
            <PagerStyle BackColor="#F7F7DE" ForeColor="Black" HorizontalAlign="Right" />
            <RowStyle BackColor="#F7F7DE" />
            <SelectedRowStyle BackColor="#CE5D5A" Font-Bold="True" ForeColor="White" />
            <SortedAscendingCellStyle BackColor="#FBFBF2" />
            <SortedAscendingHeaderStyle BackColor="#848384" />
            <SortedDescendingCellStyle BackColor="#EAEAD3" />
            <SortedDescendingHeaderStyle BackColor="#575357" />
        </asp:GridView>
        <br /><hr /><br />发表意见成功：
        <br />
    <asp:GridView ID="GridView2" runat="server"
OnSelectedIndexChanged="GridView2_SelectedIndexChanged" Width="1339px" BackColor="White"
BorderColor="#3366CC" BorderStyle="None" BorderWidth="1px" CellPadding="4">
        <FooterStyle BackColor="#99CCCC" ForeColor="#003399" />
        <HeaderStyle BackColor="#003399" Font-Bold="True" ForeColor="#CCCCFF" />
        <PagerStyle BackColor="#99CCCC" ForeColor="#003399" HorizontalAlign="Left" />
```

```
        <RowStyle BackColor="White" ForeColor="#003399" />
        <SelectedRowStyle BackColor="#009999" Font-Bold="True" ForeColor="#CCFF99" />
        <SortedAscendingCellStyle BackColor="#EDF6F6" />
        <SortedAscendingHeaderStyle BackColor="#0D4AC4" />
        <SortedDescendingCellStyle BackColor="#D6DFDF" />
        <SortedDescendingHeaderStyle BackColor="#002876" />
    </asp:GridView>
    <br />
    发表用户意见：</p>
    <p>
        用户姓名：</p>
    <p>
         <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
         </p>
    <p>
        意见主题：</p>
    <p>
  
        <asp:TextBox ID="TextBox2" runat="server"></asp:TextBox>
    </p>
    <p>
        意见内容：</p>
    <p>
         <asp:TextBox ID="TextBox3" runat="server"></asp:TextBox>
         </p>
    <p>
         <asp:Button ID="Button1" runat="server" OnClick="Button1_Click" Text="发表
意见" />
         
        <asp:Button ID="Button2" runat="server" OnClick="Button2_Click" Text="清空" />
    </p>

</asp:Content>
```

②C#代码

```
using System;
using System.Collections.Generic;
using System.Data.SqlClient;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace _201624131221
{
    public partial class 即席创作 : System.Web.UI.Page
    {
        String sqlconn = "Data Source = (LocalDB)\\MSSQLLocalDB; AttachDbFilename
='|DataDirectory|\\Database1.mdf'; ";
        protected void Page_Load(object sender, EventArgs e)
        {

            if (!Page.IsPostBack)
            {
                ShowData();
                ShowData1();
            }
        }

        //显示员工资料至 GridView1
        void ShowData()
        {
            using (SqlConnection cn = new SqlConnection())
            {
                cn.ConnectionString = sqlconn;
                cn.Open();
                string sql= "select Posts.Postid,Username,Postdate,Subject,Post,Comment
from Posts, Comments where Posts.Postid = Comments.Postid";
                SqlCommand cmd = new SqlCommand(sql, cn);
```

```
            SqlDataReader dr = cmd.ExecuteReader();
            GridView1.DataSource = dr;
            GridView1.DataBind();
        }
    }

    //显示员工资料至 GridView2
    void ShowData1()
    {
        using (SqlConnection cn = new SqlConnection())
        {
            cn.ConnectionString = sqlconn;
            cn.Open();
            string sql = "select * from Posts";
            SqlCommand cmd = new SqlCommand(sql, cn);
            SqlDataReader dr = cmd.ExecuteReader();
            GridView2.DataSource = dr;
            GridView2.DataBind();
        }
    }



    protected void Button2_Click(object sender, EventArgs e)
    {
        TextBox1.Text = "";
        TextBox2.Text = "";
        TextBox3.Text = "";
    }

    protected void Button1_Click(object sender, EventArgs e)
    {
        if (TextBox1.Text == ""||TextBox2.Text == ""||TextBox3.Text == "")
        {
            Response.Write("<script>alert('用户姓名和意见主题和意见内容都不能为空!
')</script>");
        }
        else
        {
            using (SqlConnection cn = new SqlConnection())
            {
                cn.ConnectionString = sqlconn;
                cn.Open();

                SqlCommand cmd = new SqlCommand(string.Format("select Count(*) from
Posts where Username= N'{0}' ", TextBox1.Text), cn);
                if ((int)cmd.ExecuteScalar() > 0)  //该记录已存在，无法插入
                {
                    Response.Write("<script>alert('该意见发表已经发表了
')</script>");

                }
                else
                {
                    try
                    {
                        string sqlstr = string.Format("INSERT INTO
Posts(Username,Postdate,Subject,Post) " + "VALUES(N'{0}','{1}',N'{2}',N'{3}')",
TextBox1.Text, DateTime.Now.ToString(), TextBox2.Text, TextBox3.Text);
                        SqlCommand cmd1 = new SqlCommand(sqlstr, cn);
                        cmd1.ExecuteNonQuery();
                        Response.Write("<script>alert('发表成功！')</script>");
                        ShowData();
                        ShowData1();
                    }
                    catch (Exception ex)
                    {
                        Response.Write("<script>alert('插入失败！')</script>");
                        //Response.Write(ex.Message);
```

```
                    }
                }
                cn.Close();
            }
        }
    }

    protected void GridView1_SelectedIndexChanged1(object sender, EventArgs e)
    {

    }

    protected void GridView2_SelectedIndexChanged(object sender, EventArgs e)
    {

    }
  }
}
```

（2）意见回复

①XML代码

```
<%@ Page Title="" Language="C#" MasterPageFile="~/Site1.Master" AutoEventWireup="true"
CodeBehind="comment.aspx.cs" Inherits="_201624131221.意见回复" %>
<asp:Content ID="Content1" ContentPlaceHolderID="head" runat="server">
</asp:Content>
<asp:Content ID="Content2" ContentPlaceHolderID="ContentPlaceHolder1" runat="server">
    <p>
        用户意见回复</p>
        <hr />
    <asp:SqlDataSource ID="SqlDataSource1" runat="server"
ConnectionString="<%$ ConnectionStrings:ConnectionString %>" SelectCommand="SELECT * FROM
[Posts]"></asp:SqlDataSource>
    <br />
    用户意见：<asp:DropDownList ID="DropDownList1" runat="server"
DataSourceID="SqlDataSource1" DataTextField="Subject" DataValueField="Postid">
    </asp:DropDownList>
     </p>
    <p>
        用户意见编号：<asp:Label ID="Label1" runat="server"></asp:Label>
    </p>
    <p>
         </p>
    <p>
        内容：</p>
    <p>
        <asp:Label ID="Label2" runat="server"></asp:Label>
    </p>
    <p>
        回复意见：</p>
    <p>
        <asp:TextBox ID="TextBox1" runat="server"></asp:TextBox>
    </p>
    <p>
        <asp:Button ID="Button1" runat="server" OnClick="Button1_Click" Text="新增意见回
复" />
    </p>
</asp:Content>
```

②C#代码

```
using System;
using System.Collections.Generic;
using System.Data.SqlClient;
```

```
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

namespace _201624131221
{
    public partial class 意见回复 : System.Web.UI.Page
    {
        String sqlconn = "Data Source = (LocalDB)\\MSSQLLocalDB; AttachDbFilename
='|DataDirectory|\\Database1.mdf'; ";
        protected void Page_Load(object sender, EventArgs e)
        {

        }



        protected void GridView1_SelectedIndexChanged(object sender, EventArgs e)
        {

        }

        protected void Button1_Click(object sender, EventArgs e)
        {

            if (TextBox1.Text == "")
            {
                Response.Write("<script>alert('回复内容不能为空！')</script>");
            }
            else
            {
                using (SqlConnection cn = new SqlConnection())
                {
                    cn.ConnectionString = sqlconn;
                    cn.Open();
                        try
                        {
                            string a= "1";
                            string sqlstr = string.Format("INSERT INTO
Comments(Postid,Commentdate,Comment)" + "VALUES('{0}','{1}',N'{2}',)" ,a ,
DateTime.Now.ToString(),TextBox1.Text );
                            SqlCommand cmd1 = new SqlCommand(sqlstr, cn);
                            cmd1.ExecuteNonQuery();
                            Response.Write("<script>alert('插入成功！')</script>");

                        }
                        catch (Exception ex)
                        {
                            Response.Write("<script>alert('插入失败！')</script>");
                            //Response.Write(ex.Message);
                        }

                    cn.Close();
                }
            }
        }
    }
}
```

6. 实验总结

本次综合实验的母版页、站点导航和使用SQL办法对数据库进行增删查改，在以前的实验中已经做过，难点在于使用DataSet办法对数据库进行增删查改，通过百度和同学交流最终解决了DataSet问题。第二个难点是设备信息借还表的操作受设备信息表的影响，通过判断语句各种限制条件表现出两个表之间的联系。在实验过程中不断发现错误，一次次改正，在这过程中加深了对知识的了解。通过本次实验，加强熟悉了DataSet办法的使用，做出了一个小规模的网页。