Library management system

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Of the requirements for the

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INFORMATON TECHNOLOGY

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Contents

DECLARATION

I do hereby declare that the work reported in this project report was exclusively carried out by me under the supervision of R.M.K.A. Rasika Sampath Rathnayaka. It describes the results of my own independent work except where due reference has been made in the text. No part of this project report has been submitted earlier or concurrently for the same or any other degree.

Date: …………………….   ………………………………………………………….

                                        Signature of the Candidate

Certified by:

Supervisor (Name): …………………………   Date: ………………..

(Signature): …………………………………

Manager of Esoft (Name):…………………………….   Date: ………………..

(Signature): …………………………………

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ABSTRACT

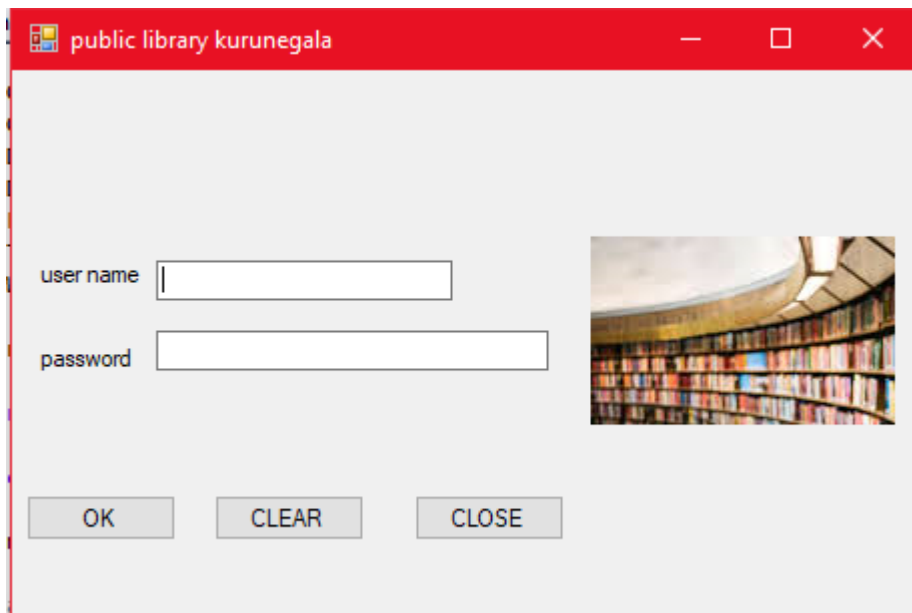**library management system**

By DïTEC – INT-**112**

Library system is an programme that used by librarian to manage the library using an electronic system that can record data of members, addition of members, books, addition of books, borrowing of books, return of books…etc.

With this electronic system there will be no loss of member records, book records which generally happen when a non-electronic system is used.

If user's position is Admin, the user is able to generate different kinds of report like lists of members registered, list of books issue and return reports

All these modules are able to help librarian to manage the library with more convenience and in a more efficient way as compared way as compared to library system which are not electronic
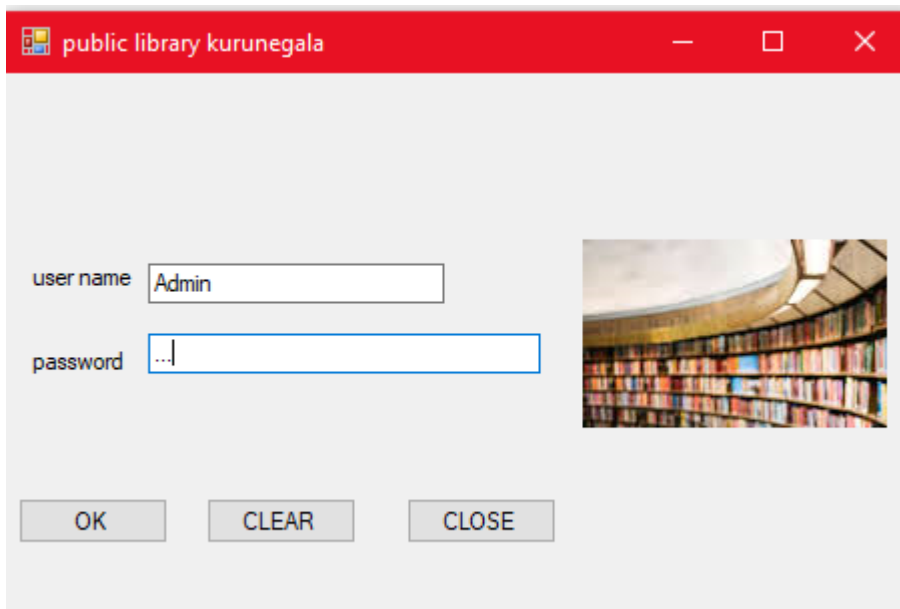
Logging Page

This is the logging page. You will need a User name and a password to pass this page. After selecting the user name and password then click OK.
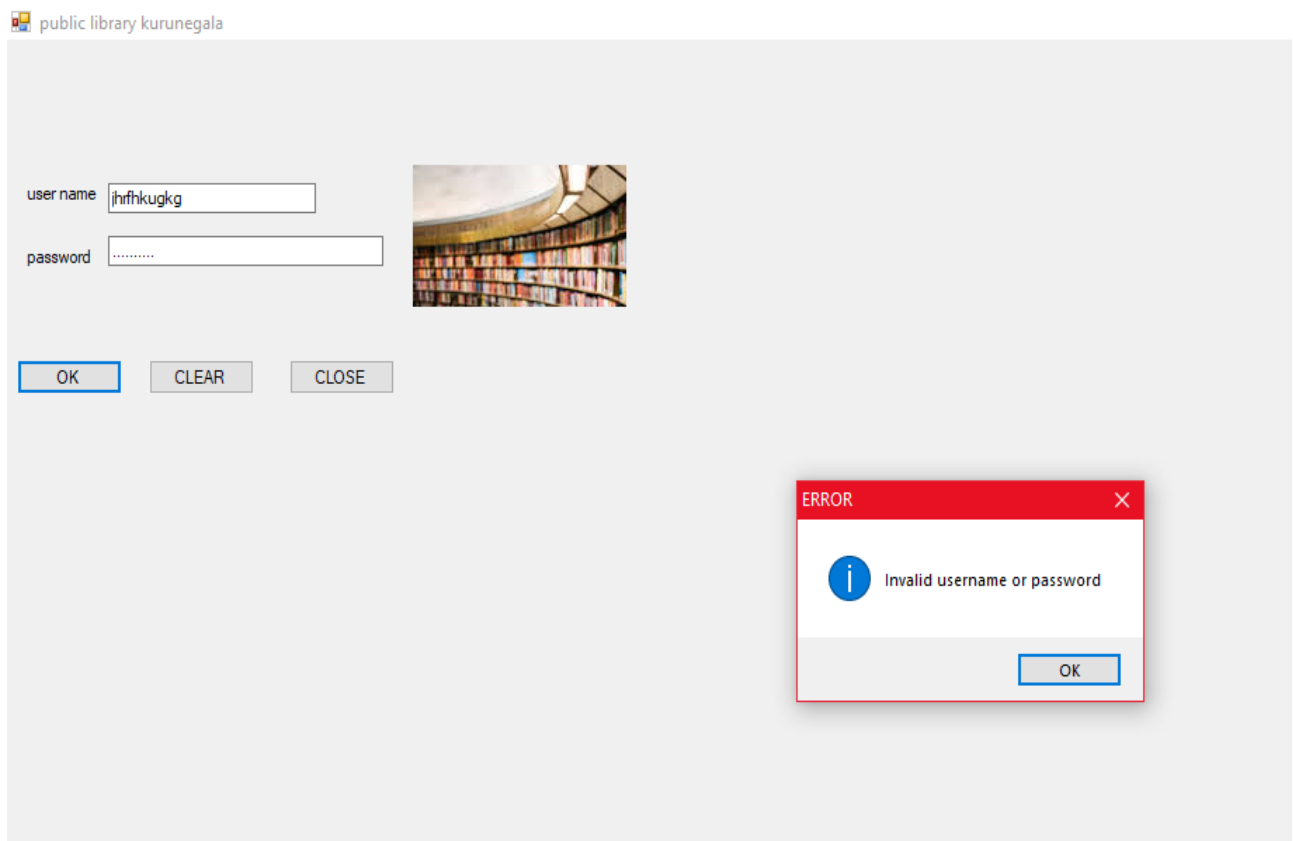
If you input a invalid User name or password, Error can be appeared

Coding of Logging Page

```csharp
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;

namespace Library_Management_System
{
    public partial class Form4 : Form
    {
        public Form4()
        {
            InitializeComponent();
        }
        string user, pass;
        private void pictureBox1_Click(object sender, EventArgs e)
        {

        }

        private void button1_Click(object sender, EventArgs e)
        {
            user = txtusername.Text;
            pass=txtpassword.Text;


            if (user=="Admin" && pass=="123")
            {
                MDIParent1 main = new MDIParent1();
                main.Show();
            }

            else
                {
```

```csharp
            MessageBox.Show("Invalid username or
password","ERROR",MessageBoxButtons.OK,MessageBoxIcon.Information);


        }


        }

        private void button2_Click(object sender, EventArgs e)
        {
            user = txtusername.Text;
            pass = txtpassword.Text;



        }

        private void button3_Click(object sender, EventArgs e)
        {
            Close();
        }
    }
}
```

Admin Logging Page

Coding of Admin Logging Page

```csharp
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;

namespace Library_Management_System
{
    public partial class MDIParent1 : Form
    {
        private int childFormNumber = 0;

        public MDIParent1()
        {
            InitializeComponent();
        }

        private void ShowNewForm(object sender, EventArgs e)
        {
            Form childForm = new Form();
            childForm.MdiParent = this;
            childForm.Text = "Window " + childFormNumber++;
            childForm.Show();
        }

        private void OpenFile(object sender, EventArgs e)
        {
            OpenFileDialog openFileDialog = new OpenFileDialog();
            openFileDialog.InitialDirectory =
Environment.GetFolderPath(Environment.SpecialFolder.Personal);
            openFileDialog.Filter = "Text Files (*.txt)|*.txt|All
Files (*.*)|*.*";
            if (openFileDialog.ShowDialog(this) == DialogResult.OK)
            {
                string FileName = openFileDialog.FileName;
            }
        }

        private void SaveAsToolStripMenuItem_Click(object sender,
EventArgs e)
        {
            SaveFileDialog saveFileDialog = new SaveFileDialog();
            saveFileDialog.InitialDirectory =
Environment.GetFolderPath(Environment.SpecialFolder.Personal);
            saveFileDialog.Filter = "Text Files (*.txt)|*.txt|All
Files (*.*)|*.*";
            if (saveFileDialog.ShowDialog(this) == DialogResult.OK)
            {
                string FileName = saveFileDialog.FileName;
```

```csharp
            }
        }

        private void ExitToolsStripMenuItem_Click(object sender,
EventArgs e)
        {
            this.Close();
        }

        private void CutToolStripMenuItem_Click(object sender,
EventArgs e)
        {
        }

        private void CopyToolStripMenuItem_Click(object sender,
EventArgs e)
        {
        }

        private void PasteToolStripMenuItem_Click(object sender,
EventArgs e)
        {
        }

        private void ToolBarToolStripMenuItem_Click(object sender,
EventArgs e)
        {

        }

        private void StatusBarToolStripMenuItem_Click(object sender,
EventArgs e)
        {

        }

        private void CascadeToolStripMenuItem_Click(object sender,
EventArgs e)
        {
            LayoutMdi(MdiLayout.Cascade);
        }

        private void TileVerticalToolStripMenuItem_Click(object
sender, EventArgs e)
        {
            LayoutMdi(MdiLayout.TileVertical);
        }

        private void TileHorizontalToolStripMenuItem_Click(object
sender, EventArgs e)
        {
            LayoutMdi(MdiLayout.TileHorizontal);
        }

        private void ArrangeIconsToolStripMenuItem_Click(object
sender, EventArgs e)
        {
            LayoutMdi(MdiLayout.ArrangeIcons);
        }

        private void CloseAllToolStripMenuItem_Click(object sender,
EventArgs e)
        {
```

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```csharp
            foreach (Form childForm in MdiChildren)
            {
                childForm.Close();
            }
        }

        private void button1_Click(object sender, EventArgs e)
        {
            frmmember member = new frmmember();
            member.Show();
        }

        private void button2_Click(object sender, EventArgs e)
        {
            Frmbook book = new Frmbook();
            book.Show();

        }

        private void button3_Click(object sender, EventArgs e)
        {
            Frmall all = new Frmall();
            all.Show();
        }

        private void button4_Click(object sender, EventArgs e)
        {
            Close();
        }
    }
}
```

Member Registration Page

This form is used to register a member .

Coding of Admin Logging Page

```csharp
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;

namespace Library_Management_System
{
    public partial class frmmember : Form
    {
        public frmmember()
        {
            InitializeComponent();
        }
        DataTable dt;
        DataRow dr;
        string gender, memid;
        DialogResult res;

        public void clear()
        {
            txtid.Clear();
            txtname.Clear();
            txtaddress.Clear();
            txttel.Clear();
            txtnic.Clear();
            cmbtype.Text = "";
            dtpdob.Text = "";
            dtpmemdate.Text = "";
            dtpexdate.Text = "";
            radmale.Checked = false;
            radfemale.Checked = false;

        }

        private void frmmember_Load(object sender, EventArgs e)
        {
            // TODO: This line of code loads data into the
'_library_system_DataSet.member' table. You can move, or remove it,
as needed.

this.memberTableAdapter.Fill(this._library_system_DataSet.member);

        }


        private void button1_Click(object sender, EventArgs e)
        {
            try
            {

this.memberTableAdapter.Fill(this._library_system_DataSet.member);
```

```csharp
                            dt = _library_system_DataSet.member;
                            dr = dt.NewRow();
                            dr["MemberId"] = txtid.Text;
                            dr["MemberName"] = txtname.Text;
                            dr["Address"] = txtaddress.Text;
                            dr["Tel"] = txtname.Text;
                            dr["NIC"] = txtnic.Text;
                            dr["DOB"] = dtpdob.Text;
                            dr["Type"] = cmbtype.Text;
                            dr["MembershipDate"] = dtpmemdate.Text;
                            dr["ExDate"] = dtpexdate.Text;
                            if (radmale.Checked == true)
                            {
                                gender = "male";
                            }
                            else if (radfemale.Checked == true)
                            {
                                gender = "female";
                            }
                            dr["Gender"] = gender;

                            dt.Rows.Add(dr);
                            memberTableAdapter.Update(_library_system_DataSet );
                            MessageBox.Show("Record Added Succesfully..", "ADD
    RECORD", MessageBoxButtons.OK, MessageBoxIcon.Information);
                            this.clear();
                    }//end of the try
                    catch
                    {
                            MessageBox.Show("Invalid MemberID", "ERROR",
    MessageBoxButtons.OK, MessageBoxIcon.Error);
                    }

            }

            private void button2_Click(object sender, EventArgs e)
            {
                try
                {

    this.memberTableAdapter.Fill(this._library_system_DataSet.member);
                        dt = _library_system_DataSet.member;
                        memid = txtid.Text;
                        dr = dt.Rows.Find(memid);
                        txtname.Text = dr["MemberName"].ToString();
                        txtaddress.Text = dr["Address"].ToString();
                        txttel.Text = dr["Tel"].ToString();
                        txtnic.Text = dr["NIC"].ToString();
                        dtpdob.Text = dr["DOB"].ToString();
                        dtpmemdate.Text = dr["MembershipDate"].ToString();
    dtpexdate.Text = dr["Exdate"].ToString();
                        cmbtype.Text = dr["Type"].ToString();
                        gender = dr["Gender"].ToString();


                        if (gender == "male")
                        {
                            radmale.Checked = true;
                        }
                        else if (gender == "female")
                        {
                            radfemale.Checked = true;
                        }
```

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```csharp
            }//end of the try
            catch
            {
                MessageBox.Show("Record not found", "ERROR",
MessageBoxButtons.OK, MessageBoxIcon.Error);

            }
        }

        private void button3_Click(object sender, EventArgs e)
        {

this.memberTableAdapter.Fill(this._library_system_DataSet.member );
            dt = _library_system_DataSet.member;
            memid = txtid.Text;
            dr = dt.Rows.Find(memid);
            dr.BeginEdit();
            dr["MemberName"] = txtname.Text;
            dr["Address"] = txtaddress.Text;
            dr["Tel"] = txtname.Text;
            dr["NIC"] = txtnic.Text;
            dr["DOB"] = dtpdob.Text;
            dr["Type"] = cmbtype.Text;
            dr["MembershipDate"] = dtpmemdate.Text;
            dr["ExDate"] = dtpexdate.Text;

            if (radmale.Checked == true)
            {
                gender = "male";
            }
            else if (radfemale.Checked == true)
            {
                gender = "female";
            }
            dr["Gender"] = gender;
            dr.EndEdit();

            memberTableAdapter.Update(_library_system_DataSet );
            MessageBox.Show("Record Updated", "Update",
MessageBoxButtons.OK, MessageBoxIcon.Information);
            this.clear();

        }

        private void button4_Click(object sender, EventArgs e)
        {

this.memberTableAdapter.Fill(this._library_system_DataSet.member );
            dt = _library_system_DataSet.member;
            memid = txtid.Text;
            dr = dt.Rows.Find(memid);


            res = MessageBox.Show("Delete????", "DELETE",
MessageBoxButtons.YesNo, MessageBoxIcon.Question);
            if (res == DialogResult.Yes)
            {


                dr.Delete();

memberTableAdapter.Update(_library_system_DataSet.member);
```

```csharp
                    MessageBox.Show("Record Deleted", "DELETE",
MessageBoxButtons.OK, MessageBoxIcon.Information);
                    this.clear();
                }
            }

        private void button5_Click(object sender, EventArgs e)
        {
            this.clear();
        }
    }
}
```

ADD Button

Fill the data of the form & click ADD

Coding of ADD Button

```
private void button1_Click(object sender, EventArgs e)
        {
            try
            {

this.memberTableAdapter.Fill(this._library_system_DataSet.member);
                dt = _library_system_DataSet.member;
                dr = dt.NewRow();
                dr["MemberId"] = txtid.Text;
                dr["MemberName"] = txtname.Text;
                dr["Address"] = txtaddress.Text;
```

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```csharp
                    dr["Tel"] = txtname.Text;
                    dr["NIC"] = txtnic.Text;
                    dr["DOB"] = dtpdob.Text;
                    dr["Type"] = cmbtype.Text;
                    dr["MembershipDate"] = dtpmemdate.Text;
                    dr["ExDate"] = dtpexdate.Text;
                    if (radmale.Checked == true)
                    {
                        gender = "male";
                    }
                    else if (radfemale.Checked == true)
                    {
                        gender = "female";
                    }
                    dr["Gender"] = gender;

                    dt.Rows.Add(dr);
                    memberTableAdapter.Update(_library_system_DataSet );
                    MessageBox.Show("Record Added Succesfully..", "ADD
RECORD", MessageBoxButtons.OK, MessageBoxIcon.Information);
                    this.clear();
                }//end of the try
                catch
                {
                    MessageBox.Show("Invalid MemberID", "ERROR",
MessageBoxButtons.OK, MessageBoxIcon.Error);
                }
```

Search Button

Coding Of Search Button

```
    }

        private void button2_Click(object sender, EventArgs e)
        {
            try
            {

this.memberTableAdapter.Fill(this._library_system_DataSet.member);
                dt = _library_system_DataSet.member;
```

```csharp
            memid = txtid.Text;
            dr = dt.Rows.Find(memid);
            txtname.Text = dr["MemberName"].ToString();
            txtaddress.Text = dr["Address"].ToString();
            txttel.Text = dr["Tel"].ToString();
            txtnic.Text = dr["NIC"].ToString();
            dtpdob.Text = dr["DOB"].ToString();
            dtpmemdate.Text = dr["MembershipDate"].ToString();
            dtpexdate.Text = dr["Exdate"].ToString();
            cmbtype.Text = dr["Type"].ToString();
            gender = dr["Gender"].ToString();


            if (gender == "male")
            {
                radmale.Checked = true;
            }
            else if (gender == "female")
            {
                radfemale.Checked = true;
            }
        }//end of the try
        catch
        {
            MessageBox.Show("Record not found", "ERROR",
MessageBoxButtons.OK, MessageBoxIcon.Error);

        }
    }
```

UPDATE Button

If you want to change any data or detail you can use the update button
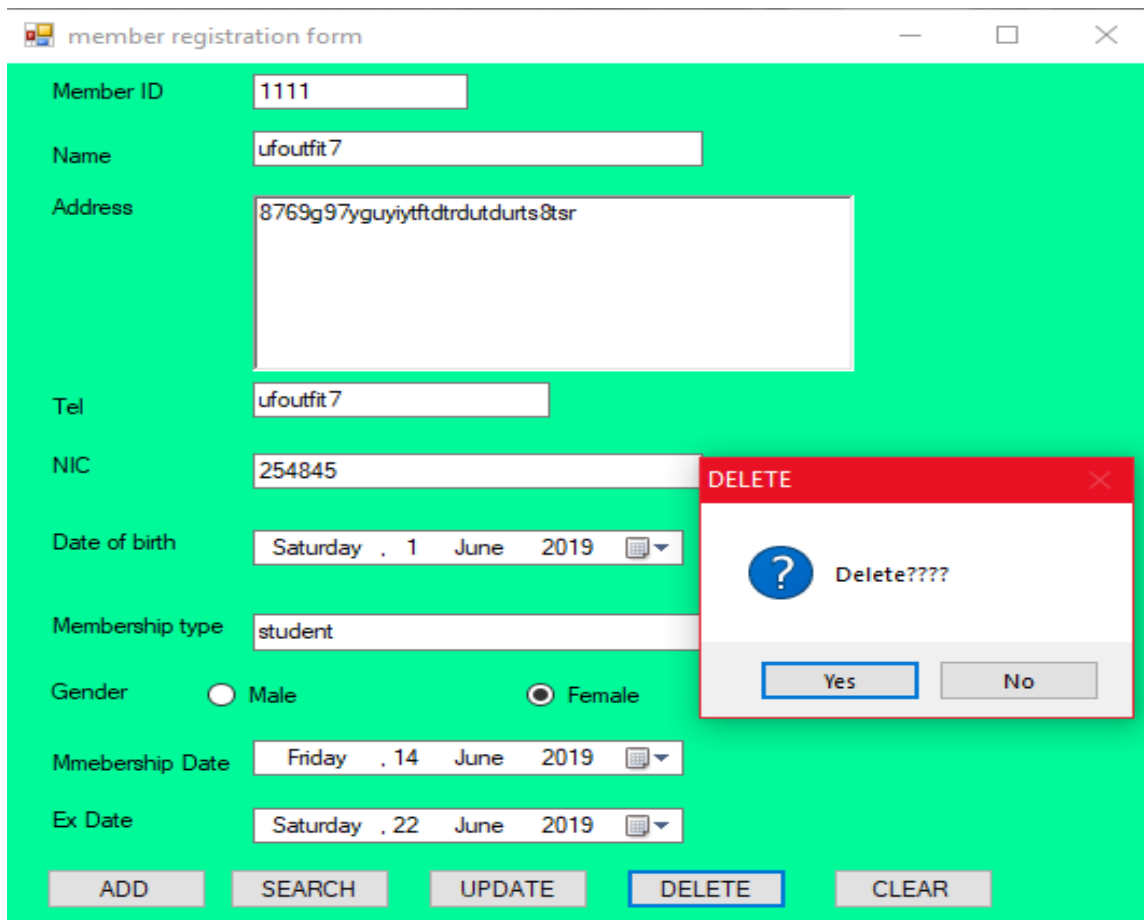
Coding of UPDATE Button

```csharp
        private void button3_Click(object sender, EventArgs e)
        {

this.memberTableAdapter.Fill(this._library_system_DataSet.member );
            dt = _library_system_DataSet.member;
            memid = txtid.Text;
            dr = dt.Rows.Find(memid);
            dr.BeginEdit();
            dr["MemberName"] = txtname.Text;
            dr["Address"] = txtaddress.Text;
            dr["Tel"] = txtname.Text;
            dr["NIC"] = txtnic.Text;
            dr["DOB"] = dtpdob.Text;
            dr["Type"] = cmbtype.Text;
            dr["MembershipDate"] = dtpmemdate.Text;
            dr["ExDate"] = dtpexdate.Text;

            if (radmale.Checked == true)
            {
                gender = "male";
            }
            else if (radfemale.Checked == true)
            {
                gender = "female";
            }
            dr["Gender"] = gender;
            dr.EndEdit();

            memberTableAdapter.Update(_library_system_DataSet );
            MessageBox.Show("Record Updated", "Update",
MessageBoxButtons.OK, MessageBoxIcon.Information);
            this.clear();
```

DELETE Button

If you want to remove or delete a member , First you have to search the member and click the delete the button, After that click Yes.

Coding Of DELETE Button.

```csharp
private void button4_Click(object sender, EventArgs e)
        {

this.memberTableAdapter.Fill(this._library_system_DataSet.member );
            dt = _library_system_DataSet.member;
            memid = txtid.Text;
            dr = dt.Rows.Find(memid);


            res = MessageBox.Show("Delete????", "DELETE",
MessageBoxButtons.YesNo, MessageBoxIcon.Question);
            if (res == DialogResult.Yes)
            {


                dr.Delete();

memberTableAdapter.Update(_library_system_DataSet.member);
                MessageBox.Show("Record Deleted", "DELETE",
MessageBoxButtons.OK, MessageBoxIcon.Information);
                this.clear();
            }
        }
```

CLEAR Button

If you want to clear the form, Click CLEAR

Coding of CLEAR Button.

```
private void button5_Click(object sender, EventArgs e)
        {
            this.clear();
        }
```

BOOK REGISTRATION FORM

This form is use to register new books

Coding of Book Registration form

```csharp
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;

namespace Library_Management_System
{
    public partial class Frmbook : Form
    {
        public Frmbook()
        {
            InitializeComponent();
        }
        DataTable dt;
        DataRow dr;
        string Status, bookid;
        DialogResult res;

        public void clear()
        {
            txtid.Clear();
            txtbookname.Clear();
            txtispn.Clear();
            txtauthor.Clear();
            cmbcatergory.Text = "";
            cmblanguage.Text = "";
            raddonate.Checked = false;
            radpurchase.Checked = false;
            dtpdate.Text = "";
            txtdescription.Clear();

        }

        private void button1_Click(object sender, EventArgs e)
        {

this.bookTableAdapter.Fill(this._library_system_DataSet1.book);
            dt = _library_system_DataSet1.book;
            dr = dt.NewRow();
            dr.BeginEdit();
            dr["BookId"] = txtid.Text;
            dr["BookName"] = txtbookname.Text;
            dr["ISPN"] = txtispn.Text;
            dr["Author"] = txtauthor.Text;
            dr["catergory"] = cmbcatergory.Text;
            dr["Language"] = cmblanguage.Text;
            dr["DDate"] = dtpdate.Text;
```

```csharp
                dr["Description"] = txtdescription.Text;


                if (raddonate.Checked == true)
                {
                    Status = "donate";
                }

                else if (radpurchase.Checked == true)
                {
                    Status = "purchase";
                }

                dr["status"] = Status;
                dr.EndEdit();
                dt.Rows.Add(dr);
                bookTableAdapter.Update(_library_system_DataSet1);
                MessageBox.Show("Record Added Succesfully.....", "ADD
RECORD", MessageBoxButtons.OK, MessageBoxIcon.Information);
                this.clear();



        }

        private void Frmbook_Load(object sender, EventArgs e)
        {
            // TODO: This line of code loads data into the
'_library_system_DataSet1.book' table. You can move, or remove it,
as needed.

this.bookTableAdapter.Fill(this._library_system_DataSet1.book);

        }

        private void button2_Click(object sender, EventArgs e)
        {
            try
            {

this.bookTableAdapter.Fill(this._library_system_DataSet1.book );
                dt = _library_system_DataSet1.book;
                bookid = txtid.Text;
                dr = dt.Rows.Find(bookid);
                txtid.Text = dr["BookId"].ToString();
                txtbookname.Text = dr["BookName"].ToString();
                txtispn.Text = dr["ISPN"].ToString();
                txtauthor.Text = dr["Author"].ToString();
                cmbcatergory.Text = dr["catergory"].ToString();
                cmblanguage.Text = dr["Language"].ToString();
                dtpdate.Text = dr["DDate"].ToString();
                txtdescription.Text = dr["Description"].ToString();
                Status = dr["status"].ToString();


                if (raddonate.Checked == true)
                {
                    Status = "donate";
                }

                else if (radpurchase.Checked == true)
                {
```

```csharp
                    Status = "purchase";
                }

            }//end of the try
            catch
            {
                MessageBox.Show("Record not found", "ERROR",
MessageBoxButtons.OK, MessageBoxIcon.Error);

            }

        }

        private void button3_Click(object sender, EventArgs e)
        {
            try
            {


this.bookTableAdapter.Fill(this._library_system_DataSet1.book);
                dt = _library_system_DataSet1.book;
                dr = dt.NewRow();
                dr.BeginEdit();
                dr["BookName"] = txtbookname.Text;
                dr["ISPN"] = txtispn.Text;
                dr["Author"] = txtauthor.Text;
                dr["catergory"] = cmbcatergory.Text;
                dr["Language"] = cmblanguage.Text;
                dr["DDate"] = dtpdate.Text;
                dr["Description"] = txtdescription.Text;

                if (raddonate.Checked == true)
                {
                    Status = "donate";
                }

                else if (radpurchase.Checked == true)
                {
                    Status = "purchase";
                }

                dr["status"] = Status;
                dr.EndEdit();

bookTableAdapter.Update(_library_system_DataSet1.book);
                MessageBox.Show("Record Updated Succesfully.....",
"UPDATE", MessageBoxButtons.OK, MessageBoxIcon.Information);
                this.clear();
            }
            catch
            {

            }
        }

        private void button4_Click(object sender, EventArgs e)
        {

this.bookTableAdapter.Fill(this._library_system_DataSet1.book);
            dt = _library_system_DataSet1.book;
            bookid = txtid.Text;
            dr = dt.Rows.Find(bookid);
```

```
                    res = MessageBox.Show("Delete?", "DELETE",
MessageBoxButtons.YesNo, MessageBoxIcon.Information);
                if (res == DialogResult.Yes)
                {


                    dr.Delete();

bookTableAdapter.Update(_library_system_DataSet1.book);
                    MessageBox.Show("Record Deleted", "DELETE",
MessageBoxButtons.OK, MessageBoxIcon.Information);
                    this.clear();
                }

            }

        private void button5_Click(object sender, EventArgs e)
        {
            this.clear();
        }
    }
}
```

ADD Button

If you need to add a new book , first You have to fill the form and click ADD button and click OK

Coding of the ADD Button.

```csharp
private void button1_Click(object sender, EventArgs e)
        {

this.bookTableAdapter.Fill(this._library_system_DataSet1.book);
            dt = _library_system_DataSet1.book;
            dr = dt.NewRow();
            dr.BeginEdit();
            dr["BookId"] = txtid.Text;
            dr["BookName"] = txtbookname.Text;
            dr["ISPN"] = txtispn.Text;
            dr["Author"] = txtauthor.Text;
            dr["catergory"] = cmbcatergory.Text;
            dr["Language"] = cmblanguage.Text;
            dr["DDate"] = dtpdate.Text;
            dr["Description"] = txtdescription.Text;


            if (raddonate.Checked == true)
            {
                Status = "donate";
            }

            else if (radpurchase.Checked == true)
            {
                Status = "purchase";
            }

            dr["status"] = Status;
            dr.EndEdit();
            dt.Rows.Add(dr);
            bookTableAdapter.Update(_library_system_DataSet1);
            MessageBox.Show("Record Added Succesfully.....", "ADD
RECORD", MessageBoxButtons.OK, MessageBoxIcon.Information);
            this.clear();



        }

        private void Frmbook_Load(object sender, EventArgs e)
        {
            // TODO: This line of code loads data into the
'_library_system_DataSet1.book' table. You can move, or remove it,
as needed.

this.bookTableAdapter.Fill(this._library_system_DataSet1.book);

        }
```
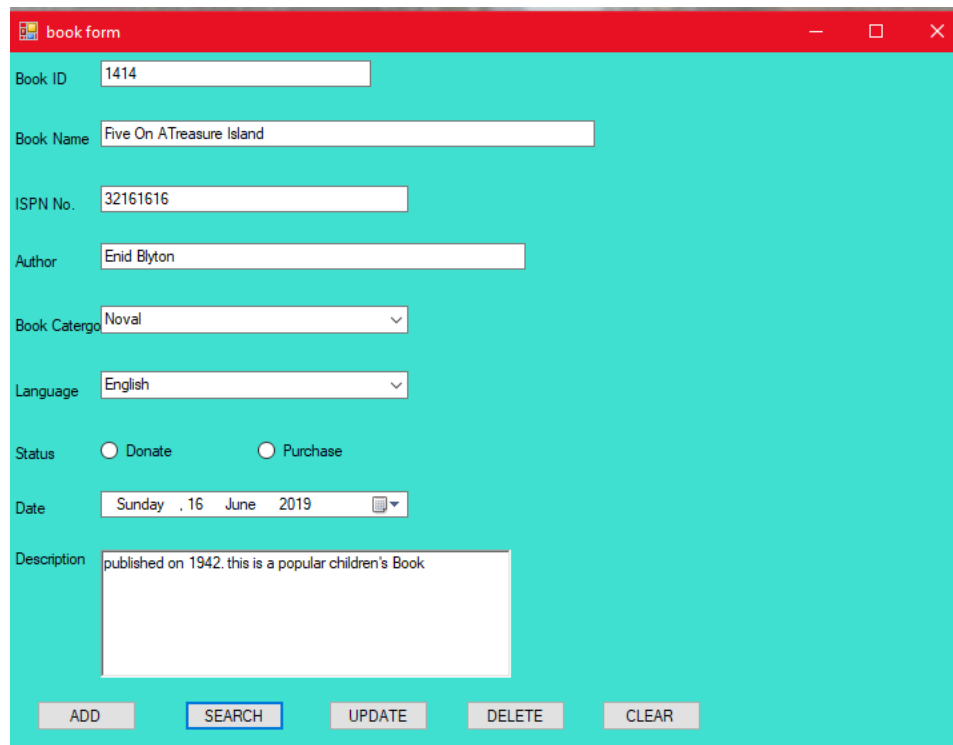
Search Button

If you need to find a book , You have to enter the book id and click SEARCH

Coding of SEARCH Button

```
private void button2_Click(object sender, EventArgs e)
    {
        try
        {

this.bookTableAdapter.Fill(this._library_system_DataSet1.book );
            dt = _library_system_DataSet1.book;
            bookid = txtid.Text;
            dr = dt.Rows.Find(bookid);
            txtid.Text = dr["BookId"].ToString();
            txtbookname.Text = dr["BookName"].ToString();
            txtispn.Text = dr["ISPN"].ToString();
            txtauthor.Text = dr["Author"].ToString();
            cmbcatergory.Text = dr["catergory"].ToString();
            cmblanguage.Text = dr["Language"].ToString();
            dtpdate.Text = dr["DDate"].ToString();
            txtdescription.Text = dr["Description"].ToString();
            Status = dr["status"].ToString();
```

```
                    if (raddonate.Checked == true)
                    {
                        Status = "donate";
                    }

                    else if (radpurchase.Checked == true)
                    {
                        Status = "purchase";
                    }

            }//end of the try
            catch
            {
                    MessageBox.Show("Record not found", "ERROR",
        MessageBoxButtons.OK, MessageBoxIcon.Error);

            }

        }
```

UPDATE Button

If you need to change some data , You can use update Button.

Coding of UPDATE Button

```csharp
        private void button3_Click(object sender, EventArgs e)
        {
            try
            {


this.bookTableAdapter.Fill(this._library_system_DataSet1.book);
                dt = _library_system_DataSet1.book;
                dr = dt.NewRow();
                dr.BeginEdit();
                dr["BookName"] = txtbookname.Text;
                dr["ISPN"] = txtispn.Text;
                dr["Author"] = txtauthor.Text;
                dr["catergory"] = cmbcatergory.Text;
                dr["Language"] = cmblanguage.Text;
                dr["DDate"] = dtpdate.Text;
                dr["Description"] = txtdescription.Text;

                if (raddonate.Checked == true)
                {
                    Status = "donate";
                }

                else if (radpurchase.Checked == true)
                {
                    Status = "purchase";
                }

                dr["status"] = Status;
                dr.EndEdit();

bookTableAdapter.Update(_library_system_DataSet1.book);
                MessageBox.Show("Record Updated Succesfully.....",
"UPDATE", MessageBoxButtons.OK, MessageBoxIcon.Information);
                this.clear();
            }
            catch
            {

            }
        }
```
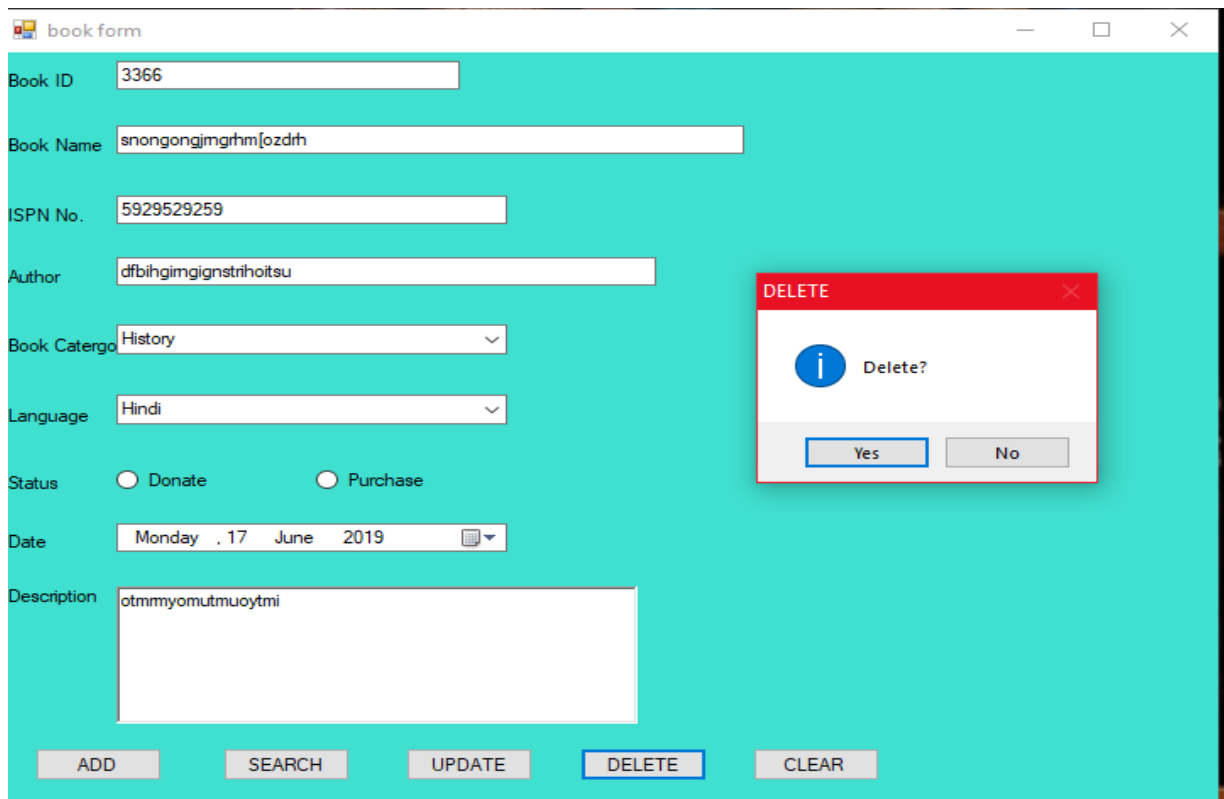
DELETE Button

Coding of DELETE Button

```
private void button4_Click(object sender, EventArgs e)
        {

this.bookTableAdapter.Fill(this._library_system_DataSet1.book);
            dt = _library_system_DataSet1.book;
            bookid = txtid.Text;
            dr = dt.Rows.Find(bookid);

            res = MessageBox.Show("Delete?", "DELETE",
MessageBoxButtons.YesNo, MessageBoxIcon.Information);
            if (res == DialogResult.Yes)
            {

                dr.Delete();

bookTableAdapter.Update(_library_system_DataSet1.book);
```

```
                    MessageBox.Show("Record Deleted", "DELETE",
        MessageBoxButtons.OK, MessageBoxIcon.Information);
                    this.clear();
                }

            }
```

CLEAR Button

Coding of CLEAR Button

```
private void button5_Click(object sender, EventArgs e)
        {
            this.clear();
        }
```

Book Borrowing And Returning Form

This form is used to book borrowing and book returning process.
This contains member details, book details, book borrowing details, book returning details and fine details.

Coding of Book Borrowing And Returning Form

```csharp
using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Windows.Forms;

namespace Library_Management_System
{
    public partial class Frmall : Form
    {
        public Frmall()
        {
            InitializeComponent();
        }
        DataTable dt;
        DataRow dr;
        string memid, bookid, refcode;
        DateTime bor, reted;
        TimeSpan dif;
        float totaldays, latedays, fineperday,totalfine ;

        public void clear()
        {
            txtmemberid.Clear();
            txtmembername.Clear();
            txtbookid.Clear();
            txtbookname.Clear();
            dtpbordate.Text = "";
            dtpreteddate.Text = "";
            txtrefcode.Clear();
            txttotaldays.Clear();
            txtlatedays.Clear();
            cmbfine.Text = "";
            txttotalfine.Clear();


        }

        private void pictureBox1_Click(object sender, EventArgs e)
        {

        }

        private void groupBox5_Enter(object sender, EventArgs e)
        {

        }
```

```csharp
        private void groupBox4_Enter(object sender, EventArgs e)
        {

        }

        private void groupBox3_Enter(object sender, EventArgs e)
        {

        }

        private void groupBox2_Enter(object sender, EventArgs e)
        {

        }

        private void groupBox1_Enter(object sender, EventArgs e)
        {

        }

        private void pictureBox1_Click_1(object sender, EventArgs e)
        {

        }

        private void Frmall_Load(object sender, EventArgs e)
        {
            // TODO: This line of code loads data into the
'_library_system_DataSet3.all' table. You can move, or remove it, as
needed.

this.allTableAdapter.Fill(this._library_system_DataSet3.all);
            // TODO: This line of code loads data into the
'_library_system_DataSet3.book' table. You can move, or remove it,
as needed.

this.bookTableAdapter.Fill(this._library_system_DataSet3.book);
            // TODO: This line of code loads data into the
'_library_system_DataSet3.member' table. You can move, or remove it,
as needed.

this.memberTableAdapter.Fill(this._library_system_DataSet3.member);
            // TODO: This line of code loads data into the
'_library_system_DataSet2.all' table. You can move, or remove it, as
needed.

this.allTableAdapter.Fill(this._library_system_DataSet3.all);
            // TODO: This line of code loads data into the
'_library_system_DataSet2.book' table. You can move, or remove it,
as needed.

this.bookTableAdapter.Fill(this._library_system_DataSet3.book);
            // TODO: This line of code loads data into the
'_library_system_DataSet2.member' table. You can move, or remove it,
as needed.

this.memberTableAdapter.Fill(this._library_system_DataSet3.member);

        }

        private void button1_Click(object sender, EventArgs e)
        {
            try
```

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```csharp
                {
        this.memberTableAdapter.Fill(this._library_system_DataSet3.member);
                    dt = _library_system_DataSet3.member;
                    memid = txtmemberid.Text;
                    dr = dt.Rows.Find(memid);
                    txtmembername.Text = dr["MemberName"].ToString();
                }
                catch
                {
                    MessageBox.Show("Record not found", "ERROR",
        MessageBoxButtons.OK, MessageBoxIcon.Error);
                }
            }

            private void button2_Click(object sender, EventArgs e)
            {
                try
                {
        this.bookTableAdapter.Fill(this._library_system_DataSet3.book);

        this.bookTableAdapter.Fill(this._library_system_DataSet3.book);
                    dt = _library_system_DataSet3.book;
                    bookid = txtbookid.Text;
                    dr = dt.Rows.Find(bookid);
                    txtbookname.Text = dr["BookName"].ToString();
                }
                catch
                {
                    MessageBox.Show("Record not found", "ERROR",
        MessageBoxButtons.OK, MessageBoxIcon.Error);
                }
            }

            private void button3_Click(object sender, EventArgs e)
            {
                string get = DateTime.Now.ToString("ddMMyyyy");

                txtrefcode.Text = txtmemberid.Text + txtbookid.Text +
        get;
            }

            private void button4_Click(object sender, EventArgs e)
            {


        this.allTableAdapter.Fill(this._library_system_DataSet3.all);
                dt = _library_system_DataSet3.all;
                dr = dt.NewRow();
                dr["MemberId"] = txtmemberid.Text;
                dr["MemberName"] = txtmembername.Text;
                dr["BookId"] = txtbookid.Text;
                dr["BookName"] = txtbookname.Text;
                dr["BorDate"] = dtpbordate.Text;
                dr["RetedDate"] = dtpreteddate.Text;
                dr["RefCode"] = txtrefcode.Text;
                dt.Rows.Add(dr);
                allTableAdapter.Update(_library_system_DataSet3.all);
                MessageBox.Show("Book Issued ", "Issue",
        MessageBoxButtons.OK, MessageBoxIcon.Information);
                this.clear();
```

```csharp
            }

            private void button7_Click(object sender, EventArgs e)
            {
                try

                {

    this.allTableAdapter.Fill(this._library_system_DataSet3.all);
                    dt = _library_system_DataSet3.all;
                    refcode = txtsearchrefcode.Text;
                    dr = dt.Rows.Find(refcode);
                    txtmemberid.Text = dr["Memberid"].ToString();
                    txtmembername.Text = dr["MemberName"].ToString();
                    txtbookid.Text = dr["Bookid"].ToString();
                    txtbookname.Text = dr["BookName"].ToString();
                    dtpbordate.Text = dr["BorDate"].ToString();
                    dtpreteddate.Text = dr["RetedDate"].ToString();
                }
                catch
                {


                    MessageBox.Show("Invalid RefCode", "ERROR",
    MessageBoxButtons.OK, MessageBoxIcon.Error);



                }
            }

            private void button5_Click(object sender, EventArgs e)
            {
                bor = DateTime.Parse(dtpbordate.Text);
                reted = DateTime.Parse(dtpreteddate.Text);

                dif = reted - bor;
                txttotaldays.Text = dif.TotalDays.ToString();

                totaldays = float.Parse(txttotaldays.Text);
                if (totaldays > 14)
                {
                    latedays = totaldays - 14;
                    txtlatedays.Text = latedays.ToString();
                }
                else
                {
                    txtlatedays.Text = "0";
                }

                fineperday = float.Parse(cmbfine.Text);
                totalfine = latedays * fineperday;
                txttotalfine.Text = totalfine.ToString();
            }

            private void button6_Click(object sender, EventArgs e)
            {

    this.allTableAdapter.Fill(this._library_system_DataSet3.all);
                dt = _library_system_DataSet3.all;
```

```csharp
                refcode = txtsearchrefcode.Text;
                dr = dt.Rows.Find(refcode);
                dr.BeginEdit();

                dr["MemberId"] = txtmemberid;
                dr["MemberName"] = txtmembername.Text;
                dr["BookId"] = txtbookid.Text;
                dr["BookName"] = txtbookname.Text;
                dr["BorDate"] = dtpbordate.Text;
                dr["RetedDate"] = dtpreteddate.Text;
                dr["RefCode"] = txtrefcode.Text;
                dr["TotalDays"] = txttotaldays.Text;
                dr["LateDays"] = txtlatedays.Text;
                dr["FinePerDay"] = cmbfine.Text;
                dr["TotalFine"] = txttotalfine.Text;

                dr.EndEdit();
                allTableAdapter.Update(_library_system_DataSet3);
                MessageBox.Show("book returned", "RETURN",
MessageBoxButtons.OK, MessageBoxIcon.Information);
                this.clear();

        }
    }
}
```

Ref. Code

Coding of Ref. Code

```csharp
private void button3_Click(object sender, EventArgs e)
{
    string get = DateTime.Now.ToString("ddMMyyyy");

    txtrefcode.Text = txtmemberid.Text + txtbookid.Text +
get;
}
```

ISSUE Button

After you click the issue button, you can see a pop up message "Book Issued". And that means the book is issued from the library.

Coding of ISSUE Button

```
private void button4_Click(object sender, EventArgs e)
        {


this.allTableAdapter.Fill(this._library_system_DataSet3.all);
            dt = _library_system_DataSet3.all;
            dr = dt.NewRow();
            dr["MemberId"] = txtmemberid.Text;
            dr["MemberName"] = txtmembername.Text;
            dr["BookId"] = txtbookid.Text;
            dr["BookName"] = txtbookname.Text;
            dr["BorDate"] = dtpbordate.Text;
            dr["RetedDate"] = dtpreteddate.Text;
```

```
                dr["RefCode"] = txtrefcode.Text;
                dt.Rows.Add(dr);
                allTableAdapter.Update(_library_system_DataSet3.all);
                MessageBox.Show("Book Issued ", "Issue",
MessageBoxButtons.OK, MessageBoxIcon.Information);
                this.clear();


        }
```

SEARCH Button

Coding of SEARCH Button

```
    private void button7_Click(object sender, EventArgs e)
        {
            try

            {

this.allTableAdapter.Fill(this._library_system_DataSet3.all);
                dt = _library_system_DataSet3.all;
                refcode = txtsearchrefcode.Text;
                dr = dt.Rows.Find(refcode);
                txtmemberid.Text = dr["Memberid"].ToString();
                txtmembername.Text = dr["MemberName"].ToString();
                txtbookid.Text = dr["Bookid"].ToString();
                txtbookname.Text = dr["BookName"].ToString();
                dtpbordate.Text = dr["BorDate"].ToString();
                dtpreteddate.Text = dr["RetedDate"].ToString();
```

```
                }
            catch
            {


                MessageBox.Show("Invalid RefCode", "ERROR",
MessageBoxButtons.OK, MessageBoxIcon.Error);



            }
        }
```

Fine Detail Button

When you return a book, by this form the librarian can get all the fine details. Just select an amount of fine per day and click the fine details button.

Coding of Fine Detail Button

```
private void button5_Click(object sender, EventArgs e)
        {
            bor = DateTime.Parse(dtpbordate.Text);
            reted = DateTime.Parse(dtpreteddate.Text);

            dif = reted - bor;
            txttotaldays.Text = dif.TotalDays.ToString();
```

```
        totaldays = float.Parse(txttotaldays.Text);
        if (totaldays > 14)
        {
            latedays = totaldays - 14;
            txtlatedays.Text = latedays.ToString();
        }
        else
        {
            txtlatedays.Text = "0";
        }

        fineperday = float.Parse(cmbfine.Text);
        totalfine = latedays * fineperday;
        txttotalfine.Text = totalfine.ToString();
    }
```

Returned Book Button

Click this button and return the book.

Coding of Returned Book Button

```
private void button6_Click(object sender, EventArgs e)
        {

this.allTableAdapter.Fill(this._library_system_DataSet3.all);
        dt = _library_system_DataSet3.all;
```

```
            refcode = txtsearchrefcode.Text;
            dr = dt.Rows.Find(refcode);
            dr.BeginEdit();

            dr["MemberId"] = txtmemberid;
            dr["MemberName"] = txtmembername.Text;
            dr["BookId"] = txtbookid.Text;
            dr["BookName"] = txtbookname.Text;
            dr["BorDate"] = dtpbordate.Text;
            dr["RetedDate"] = dtpreteddate.Text;
            dr["RefCode"] = txtrefcode.Text;
            dr["TotalDays"] = txttotaldays.Text;
            dr["LateDays"] = txtlatedays.Text;
            dr["FinePerDay"] = cmbfine.Text;
            dr["TotalFine"] = txttotalfine.Text;

            dr.EndEdit();
            allTableAdapter.Update(_library_system_DataSet3);
            MessageBox.Show("book returned", "RETURN",
MessageBoxButtons.OK, MessageBoxIcon.Information);
            this.clear();
```

DATA BASE

Member Data

Book Data

Book borrowing & returning data

MemberId	MemberName	BookId	BookName	BorDate	RefCode	RetedDate	TotalDays	LateDays	FinePerDay
System.Window	bfehfesijf	123456789	ta-nehisi coates	Saturday, 1 June 2019		Sunday, 16 Jun	15	1	20
System.Window	ufoutfit7	1212	jane eyre	Saturday, 1 June 2019	1111121201062019	Saturday, 1 Jun			
1111	fdsuifhdsf	2222	rgghiuhgrrergerg	Friday, 7 June 2019	1111222207062019	Friday, 7 June			
System.Window	aaaaa	123456789	ta-nehisi coates	Saturday, 1 June 2019	22221234567890106062019	Saturday, 1 Jun			
System.Window	aaaaa	1313	great expectation	Saturday, 1 June 2019	2222131301062019	Saturday, 1 Jun			
3333	dssdghusfhghs	4444	ewrrewrer	Friday, 7 June 2019	3333444407062019	Friday, 7 June			
3942	ben 10	1011	vffdbafd	Friday, 7 June 2019	3942101107062019	Friday, 7 June			
System.Window	cccccc	123254756	dgfhfgjgh	Saturday, 1 June 2019	444412325475601062019	Saturday, 1 Jun			
4488	A.D Jayarathna	1414	Five On ATreasure Island	Friday, 7 June 2019	4488141407062019	Friday, 7 June			
5555	fgdhgdf	123456789	ta-nehisi coates	Saturday, 1 June 2019	55551234567890106062019	Saturday, 1 Jun			
5555	fgdhgdf	1313	great expectation	Friday, 7 June 2019	5555131307062019	Friday, 7 June			
6633	dojgofgj[o	3366	snongongjrngrhm[ozdrh	Friday, 7 June 2019	6633336607062019	Friday, 7 June			
8888	fdishbudshfgdhs	87654321	fisa;gf;odf'o	Saturday, 1 June 2019	88888765432101062019	Saturday, 1 Jun			

Record: 1 of 13   No Filter   Search

Datasheet View

Caps Lock   Num Lock