PROJECT REPORT

ON

LIBRARY MANAGEMENT SYSTEM

USING

EXCEL VBA

Work on one of the most popular projects
Library Management System

A library management system keeps track of the books present in the library. It is an important piece of software which is a must at schools and colleges. We will build a library management system using Excel VBA.

What is Visual Basic (VB)?

Visual Basic (VB) is an event-driven programming language and environment from Microsoft that provides a graphical user interface (GUI) which allows programmers to modify code by simply dragging and dropping objects and defining their behavior and appearance. VB is derived from the BASIC programming language and is considered to be event-driven and object-oriented.
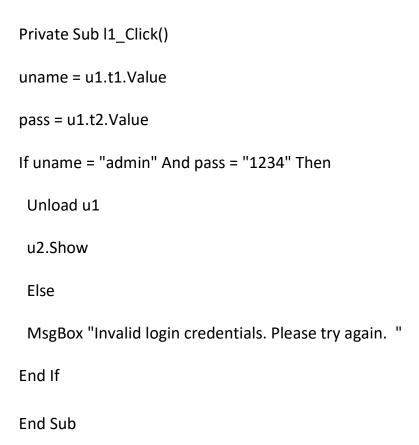
Visual Basic features and characteristics:

❖ VB is a GUI-based development tool that offers a faster RAD than most other programming languages. VB also features syntax that is more straightforward than other languages, a visual environment that is easy to understand and high database connectivity.

❖ Visual Basic was designed to be a complete programming language that contained ordinary features, such as string processing and computation. The visual environment is characterized by a drag-and-drop feature which allows programmers to build a user interface that is easy to use, even for developers with minimum experience.

❖ While these features of VB are advantageous, there are others that can have a negative effect. The VB programming environment requires a large amount of memory, both for the initial installation and to run efficiently afterwards. The graphical features of the programming tool take up a large amount of space and require a significant amount of memory.

❖ Furthermore, Visual Basic is not useful when developing programs that require a lot of processing time, like games, and the use of VB is restricted to Microsoft operating systems (OS).

VISUAL BASIC CODE:

CODE: SIGN IN VBA

```
Private Sub l1_Click()

uname = u1.t1.Value

pass = u1.t2.Value

If uname = "admin" And pass = "1234" Then

 Unload u1

 u2.Show

 Else

 MsgBox "Invalid login credentials. Please try again.  "

End If

End Sub
```

CODE: ADD BOOK DETAILS

```vba
Private Sub Label4_Click()

' to check the last field row

lastrow = ThisWorkbook.Worksheets("Sheet1").Cells(Rows.Count, 1).End(xlUp).Row

ThisWorkbook.Worksheets("Sheet1").Cells(lastrow + 1, 1).Value = TextBox12.Text

ThisWorkbook.Worksheets("Sheet1").Cells(lastrow + 1, 2).Value = TextBox13.Text

ThisWorkbook.Worksheets("Sheet1").Cells(lastrow + 1, 3).Value = TextBox14.Text

ThisWorkbook.Worksheets("Sheet1").Cells(lastrow + 1, 4).Value = ComboBox1.Text

Call resetform

MsgBox ("Add Book Sucessfully")

End Sub

'--------- reset form--------

Sub resetform()

 TextBox12.Value = ""

 TextBox13.Value = ""

 TextBox14.Value = ""

 ComboBox1.Value = ""
```

End Sub

CODE: UPDATE BOOK DETAILS

```vba
Private Sub update_Click()

Dim id As String

id = ComboBox3.Text

lastrow = Worksheets("Sheet1").Cells(Rows.Count, 1).End(xlUp).Row

For i = 2 To lastrow

If Worksheets("Sheet1").Cells(i, 1).Value = id Then

 Worksheets("Sheet1").Cells(i, 2).Value = Tx2.Text

 Worksheets("Sheet1").Cells(i, 3).Value = Tx3.Text

 Worksheets("Sheet1").Cells(i, 4).Value = ComboBox2.Text

End If

Next

 ComboBox3.Value = ""

 Tx2.Value = ""

 Tx3.Value = ""

 ComboBox2.Value = ""

 MsgBox ("Book Updated Sucessfully")

End Sub
```

CODE: VIEW BOOK RECORD

```
'-------------view record---------------

Private Sub MultiPage1_Change()

u2.ListBox1.Clear

u2.ListBox1.ColumnCount = 5

u2.ListBox1.ColumnWidths = "50,50,50,50"

u2.ListBox1.RowSource = ""

i = 1

Do While Cells(i, 1).Value <> ""

For j = 1 To 5

    u2.ListBox1.AddItem

    u2.ListBox1.List(i - 1, j - 1) = Cells(i, j).Value

    Next

    i = i + 1

Loop

End Sub
```

CODE: ISSUED BOOK TO STUDENT

```
Private Sub Label7_Click()

Dim id1 As String

id1 = ComboBox4.Text

lastrow = Worksheets("Sheet1").Cells(Rows.Count, 1).End(xlUp).Row

For i = 2 To lastrow

If Worksheets("Sheet1").Cells(i, 1).Value = id1 Then

Worksheets("Sheet1").Cells(i, 4).Value = "issued"

Worksheets("Sheet1").Cells(i, 5).Value = TextBox10.Text

End If

Next

ComboBox4.Text = ""

TextBox10.Text = ""

MsgBox ("Issued Book Sucessfully")

End Sub
```

CODE: RETURN BOOK

```vba
Dim id As String

id = ComboBox5.Text

lastrow = Worksheets("Sheet1").Cells(Rows.Count, 1).End(xlUp).Row

For i = 2 To lastrow

If Worksheets("Sheet1").Cells(i, 1).Value = id Then

  Worksheets("Sheet1").Cells(i, 4).Value = "Available"

  Worksheets("Sheet1").Cells(i, 5).Value = ""

  End If

 Next

 ComboBox5.Value = ""

 MsgBox ("Return Book Sucessful")

End Sub
```
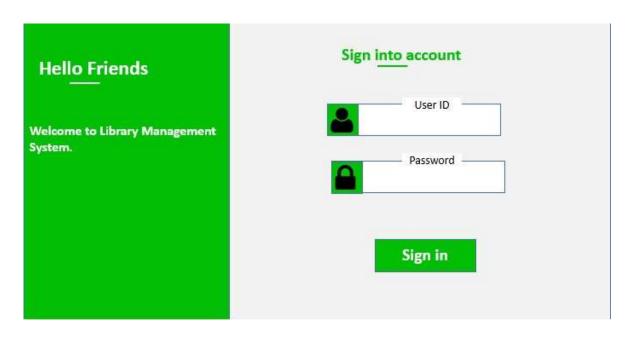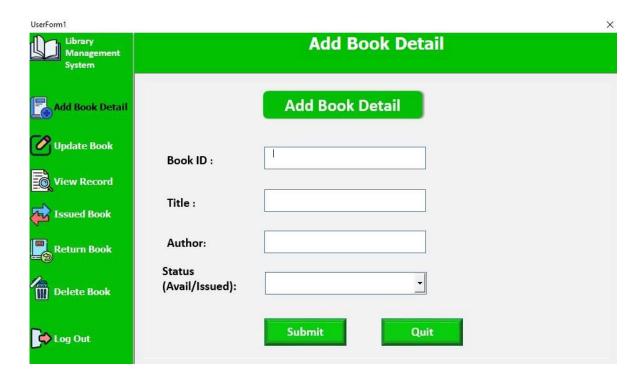
CODE: DELETE BOOK RECORD

```vba
Private Sub Label11_Click()

Dim id As String

id = Trim(ComboBox6.Text)

lastrow = Worksheets("Sheet1").Cells(Rows.Count, 1).End(xlUp).Row

For i = 2 To lastrow

  If Worksheets("Sheet1").Cells(i, 1).Value = id Then

    Worksheets("Sheet1").Rows(i).Delete

 End If

Next

ComboBox6.Text = ""

TextBox5.Text = ""

TextBox3.Text = ""

TextBox4.Text = ""

MsgBox ("Delete Book Sucessfully")

End Sub
```

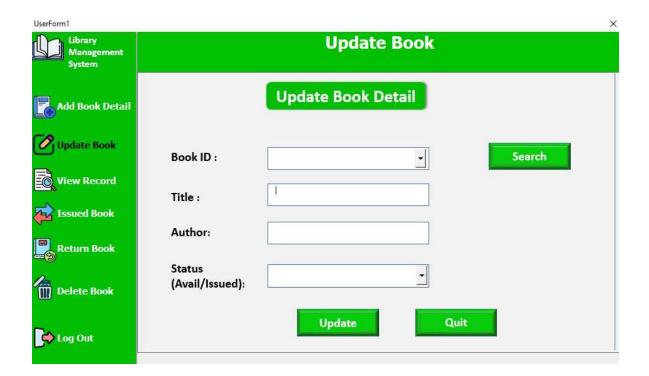**The library management system in VBA which we are going to build will look like this:**

1. **SIGN IN FORM :**

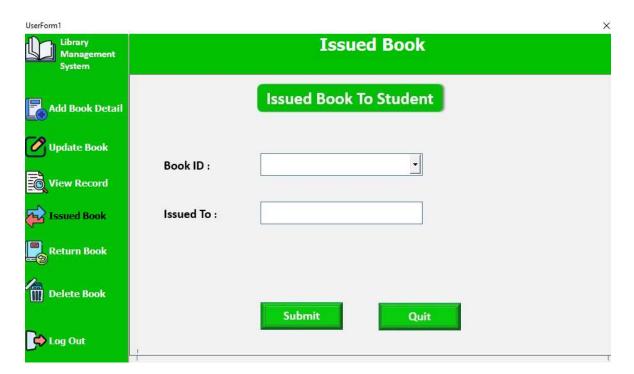## 2. LIBRARY MANAGEMENT SYSTEM (ADD BOOK DETAILS) :
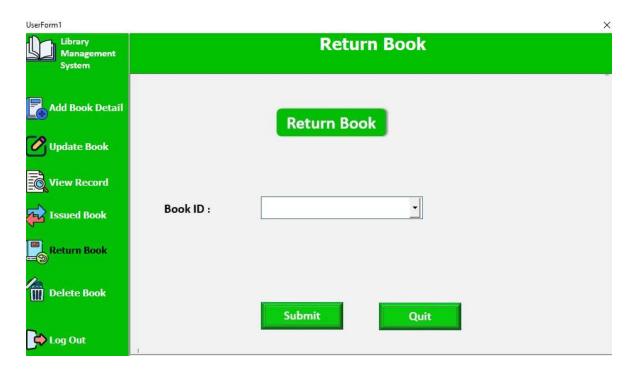
3. UPDATE BOOK DETAILS :

4. VIEW BOOK RECORD :

5. ISSUED BOOK :

6. RETURN BOOK :

7. DELETE BOOK RECORD :