

**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()
```

```
    username = u1.t1.Value
```

```
    pass = u1.t2.Value
```

```
    If username = "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**

```
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**

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**

```
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**

```
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 :


The sign-in form is divided into two main sections. The left section has a solid green background and contains the text 'Hello Friends' followed by a horizontal line, and 'Welcome to Library Management System.' below it. The right section has a light gray background and contains the heading 'Sign into account'. Below this heading are two input fields: the first is labeled 'User ID' and has a green icon of a person to its left; the second is labeled 'Password' and has a green icon of a padlock to its left. At the bottom of the right section is a green button with the text 'Sign in'.


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


UserForm1


**Library Management System**


 **Add Book Detail**


 **Update Book**

 **View Record**

 **Issued Book**

 **Return Book**

 **Delete Book**

 **Log Out**

### Add Book Detail

**Add Book Detail**

**Book ID :**

**Title :**

**Author:**

**Status (Avail/Issued):**

**Submit**

**Quit**

### 3. UPDATE BOOK DETAILS :

UserForm1

Library Management System

Add Book Detail

Update Book

View Record

Issued Book

Return Book

Delete Book

Log Out

## Update Book

### Update Book Detail

Book ID :

Title :

Author:

Status (Avail/Issued):

#### 4. VIEW BOOK RECORD :

UserForm1

Library Management System

**View Record**

**View Book Records**

Book ID	Title	Author	Status	Student ID
1256	Physics	RS Gupta	Issued	Rohan
5623	Chemistry	J Rhosum	Available	
4536	Biology	R Chandra	Available	
1234	Maths	RD Sharma	Available	
6952	English	J Richard	Available	
2584	S.ST.	RK Singhal	Available	

**Add Book Detail**

**Update Book**

**View Record**

**Issued Book**

**Return Book**

**Delete Book**

**Log Out**

#### 5. ISSUED BOOK :

UserForm1

Library Management System

**Issued Book**

**Issued Book To Student**

Book ID :

Issued To :

**Submit** **Quit**

**Add Book Detail**

**Update Book**

**View Record**

**Issued Book**

**Return Book**

**Delete Book**

**Log Out**

## 6. RETURN BOOK :

UserForm1

Library Management System

Add Book Detail

Update Book

View Record

Issued Book

Return Book

Delete Book

Log Out

### Return Book

Return Book

Book ID :

Submit

Quit

## 7. DELETE BOOK RECORD :

UserForm1

Library Management System

Add Book Detail

Update Book

View Record

Issued Book

Return Book

Delete Book

Log Out

### Delete Book

Delete Book Detail

Book ID :

Title :

Author:

Status (Avail/Issued):

Search

Delete

Quit