```vb
1  Imports Guna.UI2.WinForms
2  Imports System.IO
3  Imports MySql.Data.MySqlClient
4  Imports System.Diagnostics.Eventing.Reader
5  Imports System.Text.RegularExpressions
6
7  Public Class Loanbooks
8      Dim myconn As New MySqlConnection("Data
         Source=localhost;userid=root;password=12345678;database = library")
9      Dim rowNumber = 1
10     Private Sub load_students()
11         rowNumber = 1
12         Guna2DataGridView2.Rows.Clear()
13         Try
14             myconn.Open()
15             Dim cmd As New MySqlCommand("SELECT * ,CONCAT(Lastname, ', ',
                  Firstname, ' ', MI) as StudentName FROM students where
                  StudentNo like '%" + Guna2TextBox9.Text + "%' OR Firstname
                  like '%" + Guna2TextBox9.Text + "%' OR Lastname like '%" +
                  Guna2TextBox9.Text + "%'", myconn)
16             Dim dr As MySqlDataReader = cmd.ExecuteReader()
17             Do While dr.Read = True
18                 Guna2DataGridView2.Rows.Add(dr("StudentID"), rowNumber, dr
                      ("StudentNo"), dr("StudentName"), dr("Section"), dr
                      ("Course"))
19                 rowNumber += 1
20             Loop
21             myconn.Close()
22         Catch ex As Exception
23             MsgBox(ex.Message)
24         End Try
25     End Sub
26     Private Sub load_books()
27         rowNumber = 1
28         Guna2DataGridView3.Rows.Clear()
29         Try
30             myconn.Open()
31             Dim cmd As New MySqlCommand("SELECT * FROM books WHERE
                  AccessionNo like '%" + Guna2TextBox10.Text + "%' OR Bookname
                  like '%" + Guna2TextBox10.Text + "%'", myconn)
32             Dim dr As MySqlDataReader = cmd.ExecuteReader()
33             Do While dr.Read = True
34                 Guna2DataGridView3.Rows.Add(dr("BookNo"), rowNumber, dr
                      ("BookName"), dr("Authorname"), dr("Publicationyear"),
                      dr("AccessionNo"), dr("NoCopies"))
35                 rowNumber += 1
36
37             Loop
38             myconn.Close()
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39              Catch ex As Exception
40                  MsgBox(ex.Message)
41              End Try
42          End Sub
43
44          Private Sub load_loanbooks()
45
46              rowNumber = 1
47              Guna2DataGridView1.Rows.Clear()
48              Try
49                  myconn.Open()
50                  Dim cmd As New MySqlCommand("SELECT * FROM loanbooks WHERE
                        Bookname like '%" + Guna2TextBox21.Text + "%' OR StudentNo
                        like '%" + Guna2TextBox21.Text + "%' OR Studentname like '%"
                         + Guna2TextBox21.Text + "%'", myconn)
51                  Dim dr As MySqlDataReader = cmd.ExecuteReader()
52                  Do While dr.Read = True
53                      Guna2DataGridView1.Rows.Add(dr("LoanNo"), rowNumber, dr
                            ("BookName"), dr("StudentName"), dr("StudentNo"), dr
                            ("Issuedate"), dr("Duedate"))
54                      rowNumber += 1
55
56                  Loop
57                  myconn.Close()
58              Catch ex As Exception
59                  MsgBox(ex.Message)
60              End Try
61
62          End Sub
63          Public Sub check_defaulter()
64              Try
65                  myconn.Open()
66                  Dim cmd As New MySqlCommand($"INSERT INTO defaulter SELECT *
                        FROM loanbooks WHERE Duedate < CURDATE();", myconn)
67                  cmd.ExecuteNonQuery()
68                  myconn.Close()
69                  AddEditData("DELETE FROM loanbooks WHERE Duedate < CURDATE
                        ();")
70                  load_loanbooks()
71              Catch ex As Exception
72                  MsgBox(ex.Message)
73                  myconn.Close()
74              End Try
75          End Sub
76
77
78
79          Private Sub Guna2Button1_Click(sender As Object, e As EventArgs)
                 Handles Guna2Button1.Click
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80                 Guna2GroupBox1.Visible = True
81         End Sub
82
83         Private Sub Guna2ImageButton2_Click(sender As Object, e As EventArgs) ⤶
             Handles Guna2ImageButton2.Click
84             Panel1.Visible = True
85             Guna2GroupBox1.Visible = False
86             load_students()
87         End Sub
88
89         Private Sub Guna2ImageButton3_Click(sender As Object, e As EventArgs) ⤶
             Handles Guna2ImageButton3.Click
90             Panel1.Visible = False
91             Guna2GroupBox1.Visible = True
92             Guna2TextBox9.Clear()
93         End Sub
94
95         Private Sub Guna2DataGridView2_CellContentClick(sender As Object, e As ⤶
             DataGridViewCellEventArgs) Handles                                   ⤶
           Guna2DataGridView2.CellContentClick
96             If Guna2DataGridView2.CurrentCell.OwningColumn.Name = "dgvSelect" ⤶
                 Then
97                 If ValidateTableData("SELECT * FROM defaulter WHERE StudentNo ⤶
                     = '" & Guna2DataGridView2.CurrentRow.Cells(2).Value.ToString ⤶
                   () & "'") = True Then
98                     MsgBox("This student is on defaulter list.",             ⤶
                         MsgBoxStyle.Exclamation, "Warning")
99                     Exit Sub
100                Else
101                    Panel1.Visible = False
102                    Try
103                        myconn.Open()
104                        Dim cmd As New MySqlCommand("SELECT * ,CONCAT         ⤶
                           (Lastname, ', ', Firstname, ' ', MI) as StudentName FROM⤶
                            students WHERE StudentID = '" &                       ⤶
                           Guna2DataGridView2.CurrentRow.Cells(0).Value.ToString() ⤶
                           & "'", myconn)
105                        Dim dr As MySqlDataReader = cmd.ExecuteReader()
106                        If dr.Read Then
107                            Guna2GroupBox1.Visible = True
108                            Dim imageData As Byte() = DirectCast(dr           ⤶
                           ("StudentPic"), Byte())
109                            Dim imageStream As New MemoryStream(imageData)
110                            Dim image As Image = Image.FromStream(imageStream)
111                            Guna2PictureBox1.Image = image
112                            Guna2TextBox1.Text = dr("StudentNo")
113                            Guna2TextBox2.Text = dr("StudentName")
114                            Guna2TextBox3.Text = dr("Course")
115                            Guna2TextBox4.Text = dr("Section")
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116                            Guna2TextBox22.Text = dr("Email")
117                            Guna2TextBox23.Text = dr("Number")
118
119                    End If
120                    myconn.Close()
121                    Guna2TextBox9.Clear()
122                Catch ex As Exception
123                    MsgBox(ex.Message)
124                    myconn.Close()
125                End Try
126            End If
127
128
129        End If
130    End Sub
131
132    Private Sub Guna2ImageButton1_Click(sender As Object, e As EventArgs) ⤶
          Handles Guna2ImageButton1.Click
133        Panel2.Visible = True
134        Guna2GroupBox1.Visible = False
135        load_books()
136    End Sub
137
138    Private Sub Guna2DataGridView3_CellContentClick(sender As Object, e As ⤶
          DataGridViewCellEventArgs) Handles ⤶
        Guna2DataGridView3.CellContentClick
139        If Guna2DataGridView3.CurrentCell.OwningColumn.Name = "dgvSelect2" ⤶
              Then
140            Dim copies As Integer
141            Try
142                myconn.Open()
143                Dim cmd As New MySqlCommand("SELECT * FROM books WHERE ⤶
                    AccessionNo = '" & Guna2DataGridView3.CurrentRow.Cells ⤶
                    (5).Value.ToString() & "'", myconn)
144                Dim dr As MySqlDataReader = cmd.ExecuteReader()
145                If dr.Read Then
146                    copies = dr("NoCopies")
147                End If
148                myconn.Close()
149            Catch ex As Exception
150                MsgBox(ex.Message)
151                myconn.Close()
152            End Try
153            If copies = 0 Then
154                MsgBox("Insufficient copies of this book.", ⤶
                    MsgBoxStyle.Exclamation, "Warning")
155            Else
156                Try
157                    myconn.Open()
```

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158                         Dim cmd As New MySqlCommand("SELECT * FROM books WHERE ⮐
                            BookNo = '" & Guna2DataGridView3.CurrentRow.Cells ⮐
                            (0).Value.ToString() & "'", myconn)
159                         Dim dr As MySqlDataReader = cmd.ExecuteReader()
160                         If dr.Read Then
161                             Guna2GroupBox1.Visible = True
162                             Guna2TextBox5.Text = dr("AccessionNo")
163                             Guna2TextBox6.Text = dr("Bookname")
164                             Guna2TextBox7.Text = dr("Authorname")
165                             Guna2TextBox8.Text = dr("Publicationyear")
166                         End If
167                         myconn.Close()
168                         Panel2.Visible = False
169                         Guna2TextBox10.Clear()
170                     Catch ex As Exception
171                         MsgBox(ex.Message)
172                         myconn.Close()
173                     End Try
174                 End If
175             End If
176         End Sub
177
178         Private Sub Guna2TextBox10_TextChanged(sender As Object, e As ⮐
                EventArgs) Handles Guna2TextBox10.TextChanged
179             load_books()
180         End Sub
181
182         Private Sub Guna2TextBox9_TextChanged(sender As Object, e As ⮐
                EventArgs) Handles Guna2TextBox9.TextChanged
183             load_students()
184         End Sub
185
186         Private Sub Guna2ImageButton4_Click(sender As Object, e As EventArgs) ⮐
                Handles Guna2ImageButton4.Click
187             Panel2.Visible = False
188             Guna2GroupBox1.Visible = True
189             Guna2TextBox10.Clear()
190         End Sub
191         Private Function LoanbooksFields()
192             LoanbooksFields = False
193             If Guna2TextBox1.Text = "" Then
194                 MsgBox("Please select a student first.", ⮐
                        MsgBoxStyle.Exclamation, "Warning")
195                 Guna2TextBox1.Focus()
196             ElseIf Guna2TextBox5.Text = "" Then
197                 MsgBox("Please select a book first.", MsgBoxStyle.Exclamation, ⮐
                        "Warning")
198                 Guna2TextBox5.Focus()
199             Else
```

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200                    Return True
201            End If
202        End Function
203        Private Sub Guna2Button3_Click(sender As Object, e As EventArgs)      ⇄
              Handles Guna2Button3.Click
204            If LoanbooksFields() = False Then
205                Exit Sub
206            End If
207            Dim newcopies As Integer
208            Dim copies As Integer
209            If MsgBox("Are you sure you want to lend the selected book to the ⇄
                 selected student?", MsgBoxStyle.YesNo, "Loan Books") =         ⇄
                 MsgBoxResult.Yes Then
210
211            End If
212            Try
213                myconn.Open()
214                Dim cmd As New MySqlCommand("SELECT * FROM books WHERE        ⇄
                     AccessionNo = '" & Guna2TextBox5.Text & "'", myconn)
215                Dim dr As MySqlDataReader = cmd.ExecuteReader()
216                If dr.Read Then
217                    copies = dr("NoCopies")
218                End If
219                myconn.Close()
220            Catch ex As Exception
221                MsgBox(ex.Message)
222                myconn.Close()
223            End Try
224            If copies = 0 Then
225                MsgBox("Insufficient copies of this book.",                  ⇄
                     MsgBoxStyle.Exclamation, "Warning")
226            Else
227                Dim currentDate As DateTime = Date.Now
228                If ValidateTableData("SELECT * FROM loanbooks WHERE StudentNo ⇄
                     = '" & Guna2TextBox1.Text & "' AND AccessionNo = '" &       ⇄
                     Guna2TextBox5.Text & "'") = True Then
229                    MsgBox("Student already borrowed this book.",             ⇄
                         MsgBoxStyle.Exclamation, "Warning")
230                    Exit Sub
231                ElseIf ValidateTableData("SELECT * FROM defaulter WHERE       ⇄
                     StudentNo = '" & Guna2TextBox1.Text & "'") = True Then
232                    MsgBox("This student is on defaulter list.",              ⇄
                         MsgBoxStyle.Exclamation, "Warning")
233                    Exit Sub
234                Else
235                    Try
236                        myconn.Open()
237                        Dim cmd As New MySqlCommand("INSERT INTO loanbooks     ⇄
                         (StudentNo,                                             ⇄
```

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                          Studentname,Course,Section,Email,Number,StudentPic,Acces⮑
                          sionNo,Bookname,Authorname,Publicationyear,Issuedate,Due⮑
                          date) VALUES (@StudentNo,                              ⮑
                          @Studentname,@Course,@Section,@Email,@Number,@img,@Acces⮑
                          sionNo,@Bookname,@Authorname,@Publicationyear,@Issuedate⮑
                          ,@Duedate)", myconn)
238                          Dim ms As New MemoryStream
239                          Guna2PictureBox1.Image.Save(ms,                     ⮑
                          Guna2PictureBox1.Image.RawFormat)
240                          cmd.Parameters.AddWithValue("@StudentNo",           ⮑
                          Guna2TextBox1.Text)
241                          cmd.Parameters.AddWithValue("@Studentname",          ⮑
                          Guna2TextBox2.Text)
242                          cmd.Parameters.AddWithValue("@Course",              ⮑
                          Guna2TextBox3.Text)
243                          cmd.Parameters.AddWithValue("@Section",             ⮑
                          Guna2TextBox4.Text)
244                          cmd.Parameters.AddWithValue("@Email",               ⮑
                          Guna2TextBox22.Text)
245                          cmd.Parameters.AddWithValue("@Number",              ⮑
                          Guna2TextBox23.Text)
246                          cmd.Parameters.AddWithValue("@img", ms.ToArray())
247                          cmd.Parameters.AddWithValue("@AccessionNo",          ⮑
                          Guna2TextBox5.Text)
248                          cmd.Parameters.AddWithValue("@Bookname",            ⮑
                          Guna2TextBox6.Text)
249                          cmd.Parameters.AddWithValue("@Authorname",           ⮑
                          Guna2TextBox7.Text)
250                          cmd.Parameters.AddWithValue("@Publicationyear",      ⮑
                          Guna2TextBox8.Text)
251                          cmd.Parameters.AddWithValue("@Issuedate",            ⮑
                          currentDate.ToString("yyyy-MM-dd"))
252                          cmd.Parameters.AddWithValue("@Duedate",             ⮑
                          currentDate.AddDays(1).ToString("yyyy-MM-dd"))
253                          cmd.ExecuteNonQuery()
254                          myconn.Close()
255                          MsgBox("Book loan to student Successfuly",           ⮑
                          MsgBoxStyle.Information, "Loaning Book")
256                          If Guna2PictureBox1.Image IsNot Nothing Then
257                              Guna2PictureBox1.Image.Dispose()
258                          End If
259                          Guna2PictureBox1.Image = Nothing
260                      Catch ex As Exception
261                          MsgBox(ex.Message)
262                          myconn.Close()
263                      End Try
264                      Try
265                          myconn.Open()
266                          Dim cmd As New MySqlCommand("SELECT * FROM books WHERE ⮑
```

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                            AccessionNo = '" & Guna2TextBox5.Text & "'", myconn)
267                         Dim dr As MySqlDataReader = cmd.ExecuteReader()
268                         If dr.Read Then
269                             copies = dr("NoCopies")
270                             newcopies = copies - 1
271                         End If
272                         myconn.Close()
273                     Catch ex As Exception
274                         MsgBox(ex.Message)
275                         myconn.Close()
276                     End Try
277                     Try
278                         myconn.Open()
279                         Dim strSQL As String
280                         strSQL = "UPDATE books set NoCopies = '" & newcopies & ⮎
                            "' WHERE AccessionNo = '" & Guna2TextBox5.Text & "'"
281                         Dim cmd As New MySqlCommand(strSQL, myconn)
282                         If cmd.ExecuteNonQuery = 1 Then
283                             Guna2GroupBox1.Visible = False
284                             Guna2TextBox1.Clear()
285                             Guna2TextBox2.Clear()
286                             Guna2TextBox3.Clear()
287                             Guna2TextBox4.Clear()
288                             Guna2TextBox5.Clear()
289                             Guna2TextBox6.Clear()
290                             Guna2TextBox7.Clear()
291                             Guna2TextBox8.Clear()
292                             Guna2TextBox22.Clear()
293                             Guna2TextBox23.Clear()
294                         End If
295                         myconn.Close()
296                     Catch ex As Exception
297                         MsgBox(ex.Message)
298                         myconn.Close()
299                     End Try
300                 End If
301
302         End If
303         load_loanbooks()
304         check_defaulter()
305     End Sub
306     Private Sub Loanbooks_Load(sender As Object, e As EventArgs) Handles ⮎
          MyBase.Load
307         load_loanbooks()
308         check_defaulter()
309     End Sub
310
311
312     Private Sub Guna2Button2_Click(sender As Object, e As EventArgs)     ⮎
```

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            Handles Guna2Button2.Click
313         Guna2GroupBox1.Visible = False
314         Guna2TextBox1.Clear()
315         Guna2TextBox2.Clear()
316         Guna2TextBox3.Clear()
317         Guna2TextBox4.Clear()
318         Guna2TextBox5.Clear()
319         Guna2TextBox6.Clear()
320         Guna2TextBox7.Clear()
321         Guna2TextBox8.Clear()
322         Guna2TextBox22.Clear()
323         Guna2TextBox23.Clear()
324         If Guna2PictureBox1.Image IsNot Nothing Then
325             Guna2PictureBox1.Image.Dispose()
326         End If
327         Guna2PictureBox1.Image = Nothing
328     End Sub
329
330
331     Dim issuedate As String
332     Dim duedate As String
333     Private Sub Guna2DataGridView1_CellContentClick(sender As Object, e As ⮧
          DataGridViewCellEventArgs) Handles                                    ⮧
        Guna2DataGridView1.CellContentClick
334         If Guna2DataGridView1.CurrentCell.OwningColumn.Name = "dgvEdit"      ⮧
              Then
335             Guna2GroupBox2.Visible = True
336             Try
337                 myconn.Open()
338                 Dim cmd As New MySqlCommand("SELECT * FROM loanbooks WHERE ⮧
                      LoanNo = '" & Guna2DataGridView1.CurrentRow.Cells          ⮧
                    (0).Value.ToString() & "'", myconn)
339                 Dim dr As MySqlDataReader = cmd.ExecuteReader()
340                 If dr.Read Then
341                     Dim imageData As Byte() = DirectCast(dr("StudentPic"), ⮧
                          Byte())
342                     Dim imageStream As New MemoryStream(imageData)
343                     Dim image As Image = Image.FromStream(imageStream)
344                     Guna2PictureBox2.Image = image
345                     Guna2TextBox11.Text = dr("StudentNo")
346                     Guna2TextBox12.Text = dr("Studentname")
347                     Guna2TextBox13.Text = dr("Course")
348                     Guna2TextBox14.Text = dr("Section")
349                     Guna2TextBox15.Text = dr("AccessionNo")
350                     Guna2TextBox16.Text = dr("BookName")
351                     Guna2TextBox17.Text = dr("Authorname")
352                     Guna2TextBox24.Text = dr("Email")
353                     Guna2TextBox25.Text = dr("Number")
354                     issuedate = dr("Issuedate")
```

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355                     duedate = dr("Duedate")
356                      Dim issuedateValue As DateTime = DateTime.ParseExact
                    (issuedate, "yyyy-MM-dd",
                    System.Globalization.CultureInfo.InvariantCulture)
357                      Dim duedateValue As DateTime = DateTime.ParseExact
                    (duedate, "yyyy-MM-dd",
                    System.Globalization.CultureInfo.InvariantCulture)
358                     Guna2TextBox18.Text = dr("Publicationyear")
359                     Guna2TextBox19.Text = issuedateValue.ToString("dddd,
                    MMMM dd, yyyy")
360                     Guna2TextBox20.Text = duedateValue.ToString("dddd,
                    MMMM dd, yyyy")
361                 End If
362                 myconn.Close()
363             Catch ex As Exception
364                 MsgBox(ex.Message)
365                 myconn.Close()
366             End Try
367         End If
368     End Sub
369
370
371
372     Private Sub Guna2Button4_Click(sender As Object, e As EventArgs)
          Handles Guna2Button4.Click
373         Guna2GroupBox2.Visible = False
374
375     End Sub
376
377     Private Sub Guna2TextBox21_TextChanged(sender As Object, e As
          EventArgs) Handles Guna2TextBox21.TextChanged
378         load_loanbooks()
379     End Sub
380 End Class
```