Number system converter and summer

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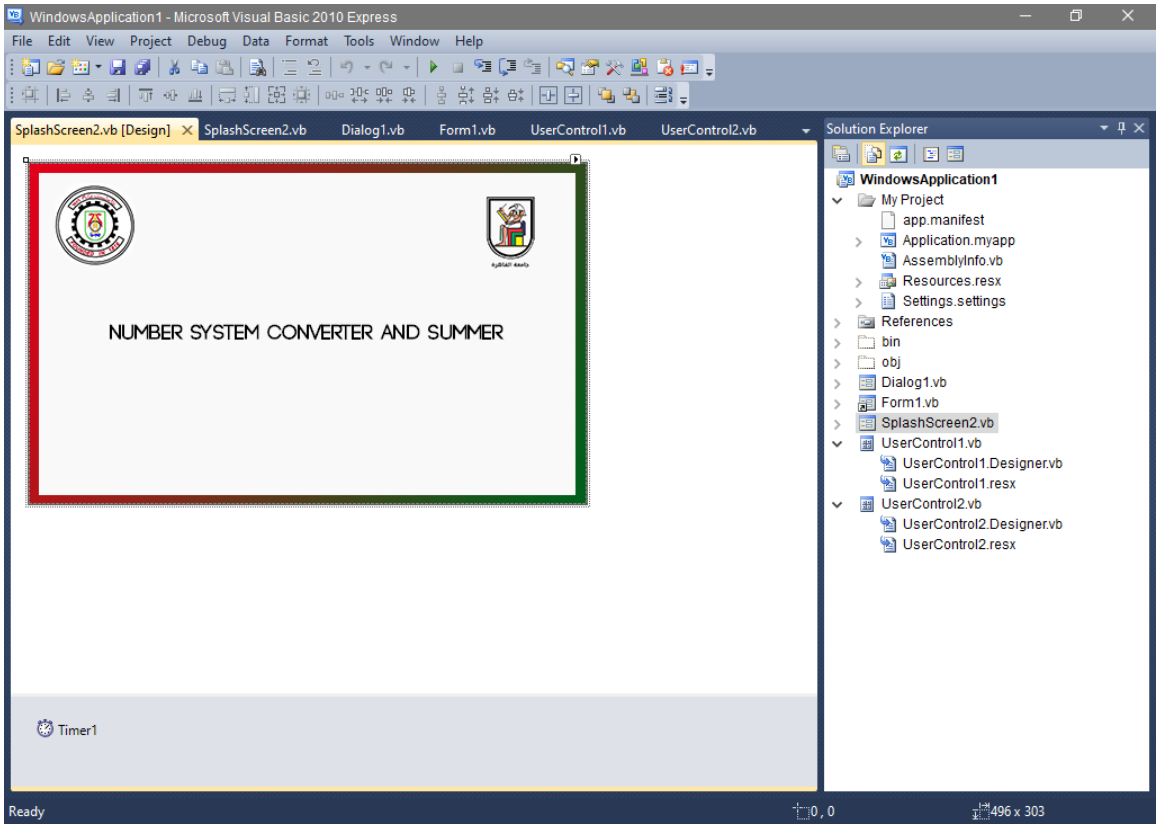
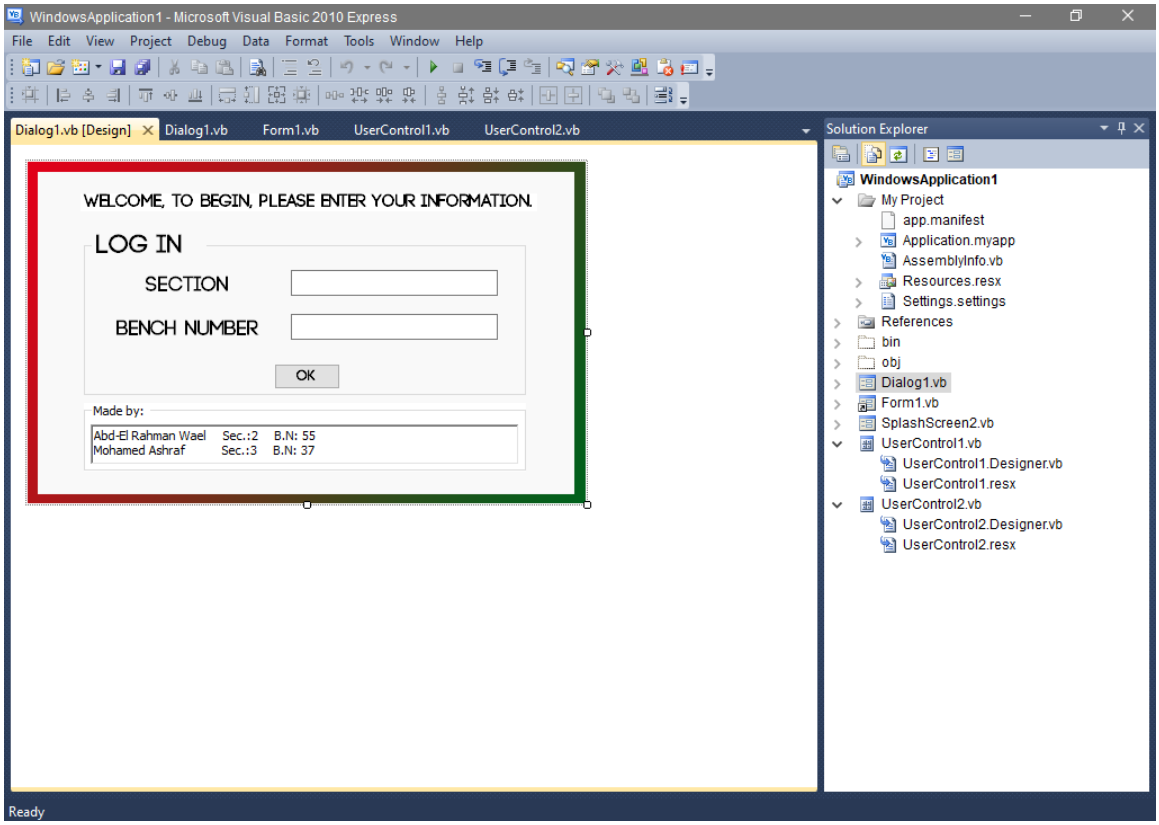
Splash screen code



```
Public NotInheritable Class SplashScreen2

    Private Sub SplashScreen2_Load(ByVal sender As Object, ByVal e As
System.EventArgs) Handles Me.Load
        Timer1.Start()
    End Sub

    Private Sub Timer1_Tick(sender As System.Object, e As System.EventArgs)
Handles Timer1.Tick
        Dialog1.Show()
        Me.Close()
    End Sub
End Class
```

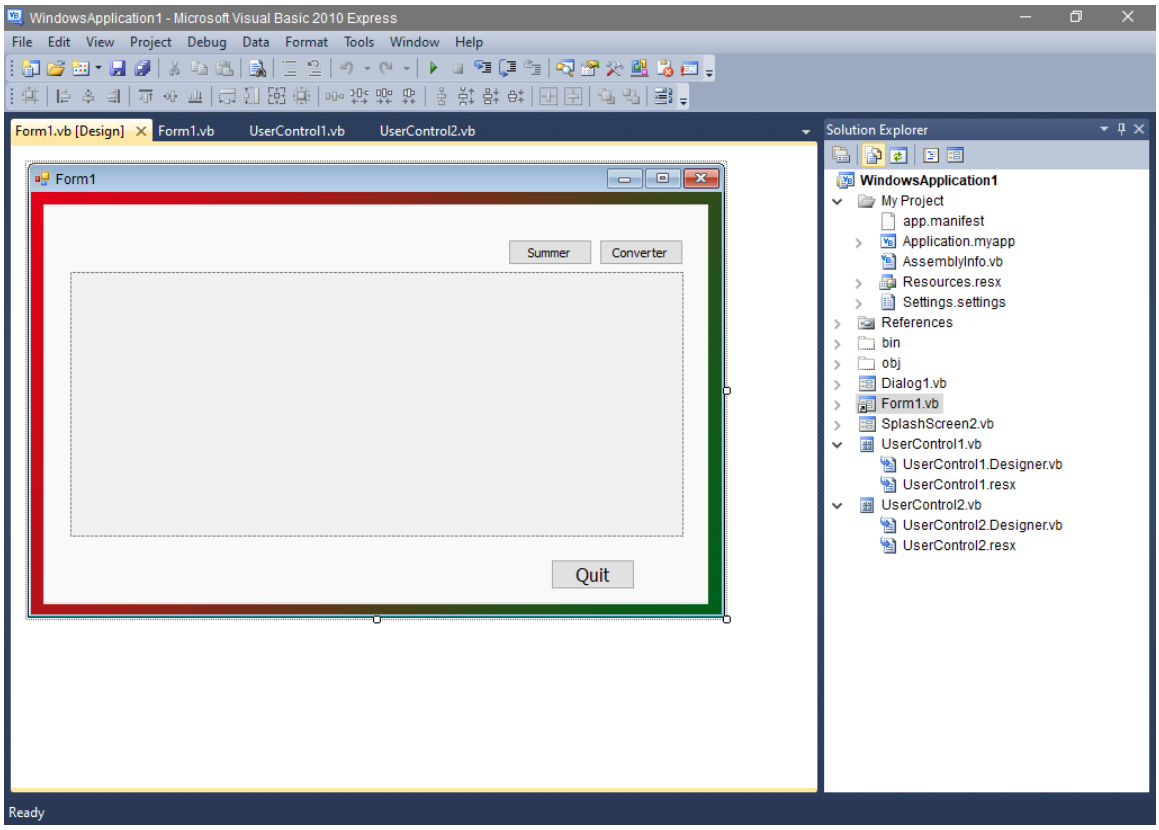
Dialogue box code




```
Imports System.Windows.Forms

Public Class Dialog1

    Private Sub OK_Button_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
        If (IsNumeric(TextBox3.Text) And TextBox3.Text <> "" And
IsNumeric(TextBox4.Text) And TextBox4.Text <> "") Then
            If ((Val(TextBox3.Text) = 2 And Val(TextBox4.Text) = 55) Or
(Val(TextBox3.Text) And Val(TextBox4.Text))) Then
```

```
                Form1.Show()
                Me.Close()
            Else
                MessageBox.Show("Please enter Section or Bench Number Correctly")
            End If
        Else : MessageBox.Show("Please enter" & Check_inputs() & "as a number.")
        End If
    End Sub
    Private Function Check_inputs() As String
        Dim Wrong_inputs As String
        If (Not (IsNumeric(TextBox3.Text)) Or TextBox3.Text = "") Then
            Wrong_inputs = Wrong_inputs & " Section "
        End If
        If (Not (IsNumeric(TextBox4.Text)) Or TextBox4.Text = "") Then
            Wrong_inputs = Wrong_inputs & " Bench Number "
        End If
        Return Wrong_inputs
    End Function
End Class
```

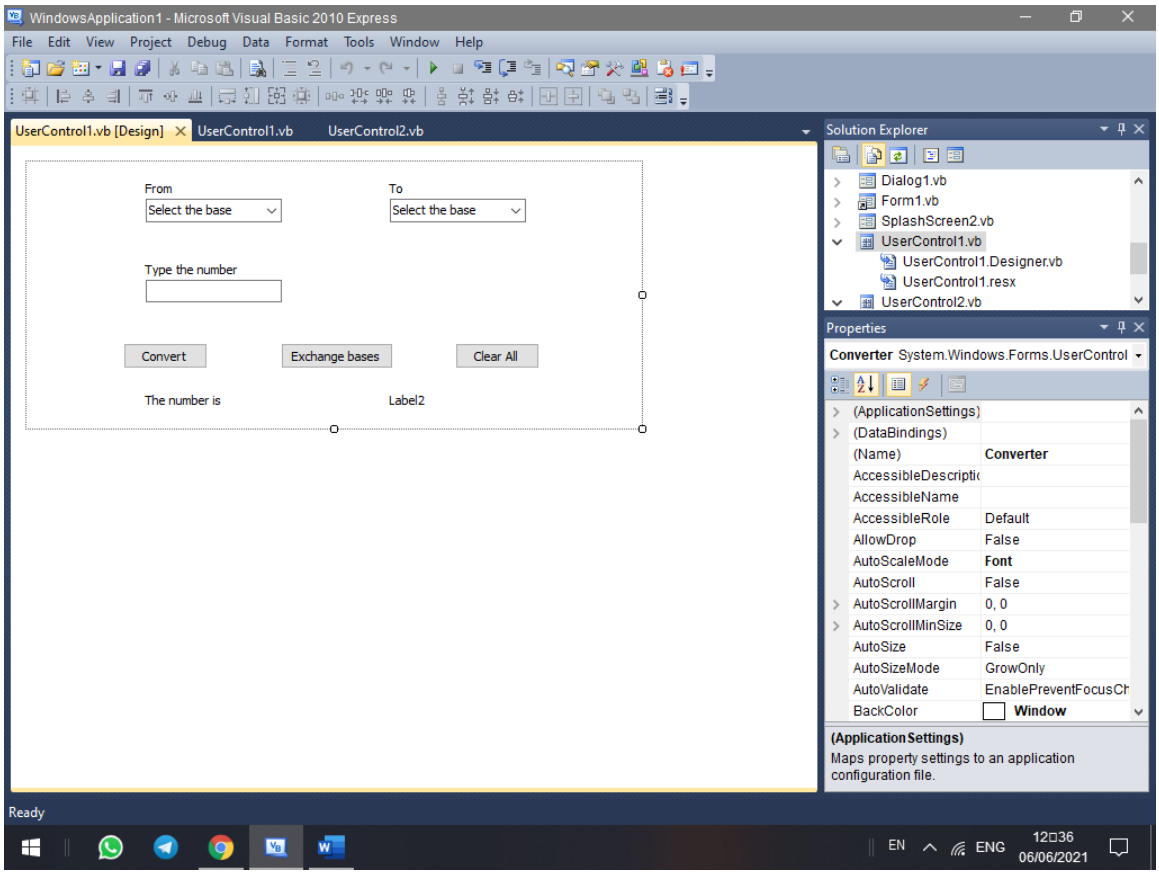
Form box code




```
Public Class Form1

    Private Sub Button2_Click_1(sender As System.Object, e As System.EventArgs)
Handles Button2.Click
        Me.Close()
    End Sub
```

```
    Private Sub Button1_Click(sender As System.Object, e As System.EventArgs)
Handles Button1.Click
        If Me.Panel1.Controls.Count > 0 Then
            Me.Panel1.Controls.Item(0).Dispose()
        End If
        Dim a As New Converter
        Me.Panel1.Controls.Add(a)
    End Sub
    Private Sub Button3_Click(sender As System.Object, e As System.EventArgs)
Handles Button3.Click
        If Me.Panel1.Controls.Count > 0 Then
            Me.Panel1.Controls.Item(0).Dispose()
        End If
        Dim a As New Summer
        Me.Panel1.Controls.Add(a)
    End Sub
End Class
```

User control 1 code (Converter)

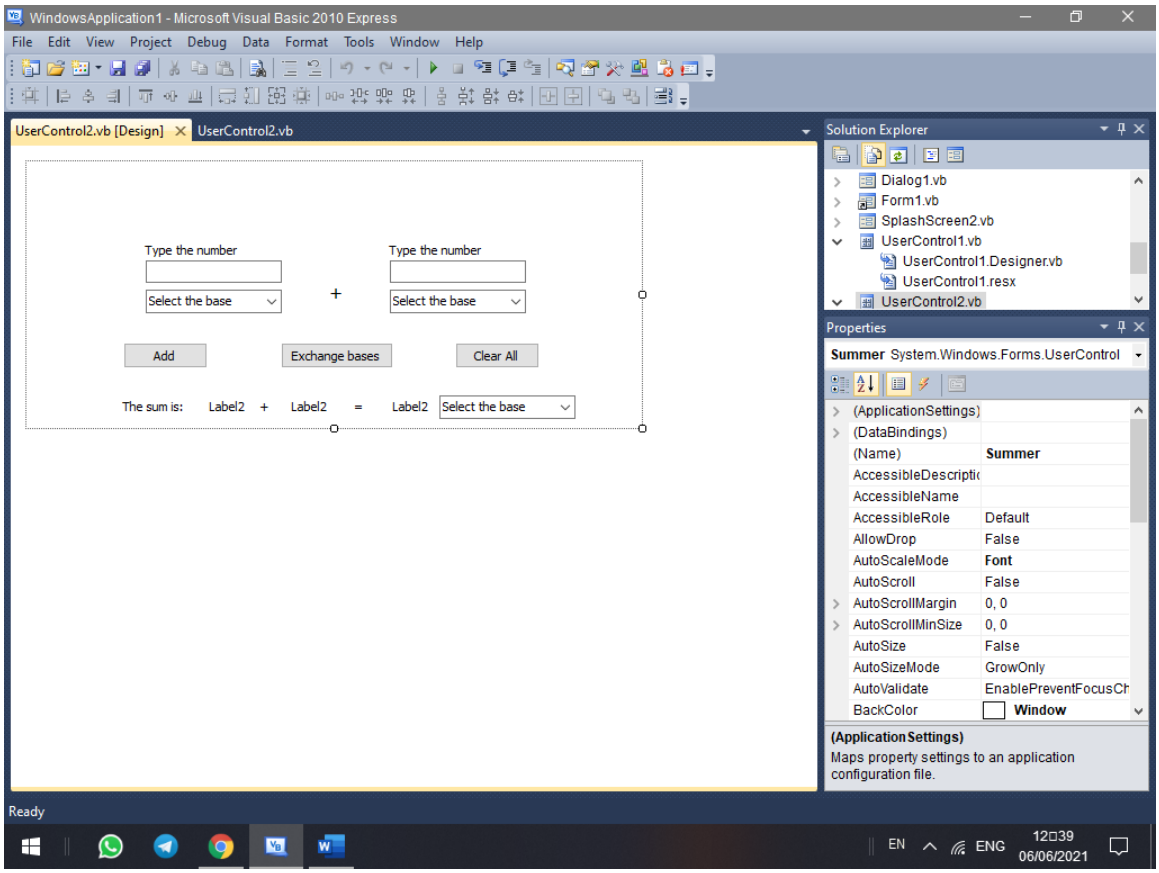



```
Imports System.Text.RegularExpressions
Public Class Converter

    Private Sub Converter_Load(sender As System.Object, e As System.EventArgs)
Handles MyBase.Load
        Label3.Text = ""
```

```
        Label6.Text = ""
    End Sub

    Private Sub Button3_Click(sender As System.Object, e As System.EventArgs)
Handles Button3.Click
        Dim Binarypattern As String = "[2-9]{1,}"
        Dim Octalpattern As String = "[8-9]{1,}"
        If (IsNumeric(TextBox1.Text) And TextBox1.Text <> "") Then
            If (ComboBox1.Text <> "Select the base" And ComboBox2.Text <> "Select
the base") Then
                If ComboBox1.Text = "Decimal (Base 10)" Then
                    Dim data As Integer = CInt(TextBox1.Text)
                    If (ComboBox2.Text = "Binary (Base 2)") Then
                        Dim value = DecimalToBinary(data)
                        Label6.Text = value.ToString
                    ElseIf (ComboBox2.Text = "Octal (Base 8)") Then
                        Label6.Text = Oct(data)
                    ElseIf (ComboBox2.Text = "Decimal (Base 10)") Then
                        Label6.Text = data
                    End If

                ElseIf ComboBox1.Text = "Binary (Base 2)" Then

                    Dim regex As Regex = New Regex(Binarypattern)
                    Dim match As Match = regex.Match(TextBox1.Text)
                    If match.Success Then
                        'here we test the range [01]
                        MessageBox.Show("Only digits from 0 to 1 are allowed")
                    Else : Dim data As Integer = Convert.ToInt32(TextBox1.Text, 2)
                        If (ComboBox2.Text = "Binary (Base 2)") Then
                            Dim value = DecimalToBinary(data)
                            Label6.Text = value.ToString
                        ElseIf (ComboBox2.Text = "Octal (Base 8)") Then
                            Label6.Text = Oct(data)
                        ElseIf (ComboBox2.Text = "Decimal (Base 10)") Then
                            Label6.Text = data
                        End If
                    End If

                ElseIf ComboBox1.Text = "Octal (Base 8)" Then
                    Dim regex As Regex = New Regex(Octalpattern)
                    Dim match As Match = regex.Match(TextBox1.Text)
                    If match.Success Then
                        MessageBox.Show("Only digits from 0 to 7 are allowed")
                    Else                    'here we test the range [0-7]
                        Dim data As Integer = Convert.ToInt32(TextBox1.Text, 8)
                        If (ComboBox2.Text = "Binary (Base 2)") Then
                            Dim value = DecimalToBinary(data)
                            Label6.Text = value.ToString
                        ElseIf (ComboBox2.Text = "Octal (Base 8)") Then
                            Label6.Text = Oct(data)
                        ElseIf (ComboBox2.Text = "Decimal (Base 10)") Then
                            Label6.Text = data
                        End If

                    End If

                End If
```

```
            Else : MessageBox.Show("Please select a base.")
            End If
        Else : MessageBox.Show("Please enter a number.")
        End If
    End Sub
    Private Sub Button1_Click(sender As System.Object, e As System.EventArgs)
Handles Button1.Click
        ComboBox2.Text = "Select the base"
        ComboBox1.Text = "Select the base"
        TextBox1.Text = ""
        Label6.Text = ""
        TextBox1.Focus()
    End Sub
    Public Shared Function DecimalToBinary(dec As Integer) As String
        If dec < 1 Then Return "0"

        Dim binStr As String = String.Empty

        While dec > 0
            binStr = binStr.Insert(0, (dec Mod 2).ToString())
            dec = Int(dec / 2)
        End While
        Return binStr
    End Function


    Private Sub Button2_Click(sender As System.Object, e As System.EventArgs)
Handles Button2.Click
        Dim A As String = ComboBox2.Text
        ComboBox2.Text = ComboBox1.Text
        ComboBox1.Text = A
        TextBox1.Text = ""
        Label6.Text = ""
        TextBox1.Focus()
    End Sub
End Class
```

User control 2 code (Summer)



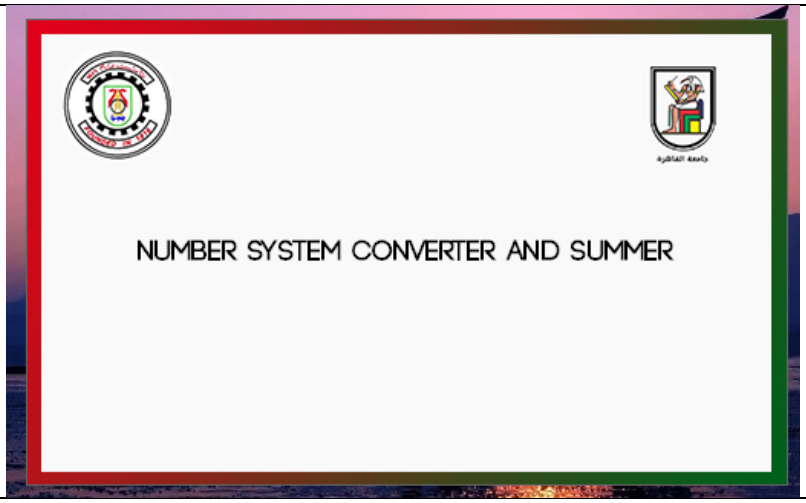

```
Imports System.Text.RegularExpressions
Public Class Summer

    Private Sub Summer_Load(sender As System.Object, e As System.EventArgs)
Handles MyBase.Load
        Label3.Text = ""
        Label6.Text = ""
        Label8.Text = ""
        Label2.Text = ""
        Label7.Text = ""
        Label9.Text = ""
    End Sub
    Private Sub Button3_Click(sender As System.Object, e As System.EventArgs)
Handles Button3.Click
        Dim Binarypattern As String = "[2-9]{1,}"
        Dim Octalpattern As String = "[8-9]{1,}"
        Dim Num1 As Integer = False
        Dim Num2 As Integer = False
        Dim bln1 As Boolean = False
        Dim bln2 As Boolean = False
        If ComboBox1.Text <> "Select the base" Then
            If (IsNumeric(TextBox1.Text) And TextBox1.Text <> "") Then
                'Number1
                If ComboBox1.Text = "Decimal (Base 10)" Then
                    Dim data As Integer = CInt(TextBox1.Text)
                        Num1 = Val(TextBox1.Text)
                        bln1 = True
```

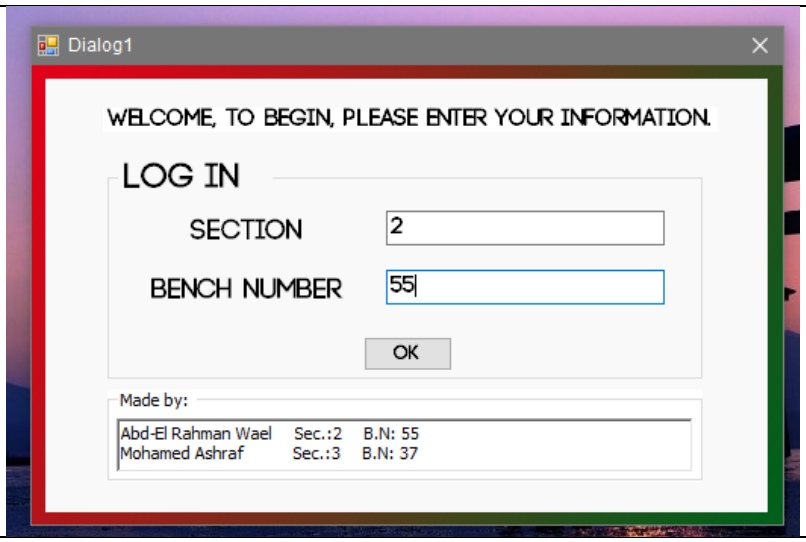
```
                ElseIf ComboBox1.Text = "Binary (Base 2)" Then
                    'here we test the range [01]
                    Dim regex As Regex = New Regex(Binarypattern)
                    Dim match As Match = regex.Match(TextBox1.Text)
                    If match.Success Then
                        MessageBox.Show("Only digits from 0 to 1 are allowed")
                        TextBox1.Text = ""
                        TextBox1.Focus()
                        bln1 = False
                    Else 'here we convert to decimal
                        Num1 = Convert.ToInt32(TextBox1.Text, 2)
                        bln1 = True
                    End If

                ElseIf ComboBox1.Text = "Octal (Base 8)" Then
                    'here we test the range [0-7]
                    Dim regex As Regex = New Regex(Octalpattern)
                    Dim match As Match = regex.Match(TextBox1.Text)
                    If match.Success Then
                        MessageBox.Show("Only digits from 0 to 7 are allowed")
                        TextBox1.Text = ""
                        TextBox1.Focus()
                        bln1 = False
                    Else 'here we convert to decimal
                        Num1 = Convert.ToInt32(TextBox2.Text, 8)
                        bln1 = True
                    End If
                End If
            Else : MessageBox.Show("Please enter digits only for the first
number.")
            End If
        Else : MessageBox.Show("Please select a base for the first number.")
        End If

        If ComboBox2.Text <> "Select the base" Then
            'Number2
            If (IsNumeric(TextBox2.Text) And TextBox2.Text <> "") Then
                If ComboBox2.Text = "Decimal (Base 10)" Then
                    Dim data As Integer = CInt(TextBox2.Text)
                    Num2 = Val(TextBox2.Text)
                    bln2 = True
                ElseIf ComboBox2.Text = "Binary (Base 2)" Then
                    'here we test the range [01]
                    Dim data As Integer = CInt(TextBox2.Text)
                    Dim regex As Regex = New Regex(Binarypattern)
                    Dim match As Match = regex.Match(TextBox2.Text)
                    If match.Success Then
                        MessageBox.Show("Only digits from 0 to 1 are allowed")
                        TextBox2.Text = ""
                        TextBox2.Focus()
                        bln2 = False
                    Else 'here we convert to decimal
                        Num2 = Convert.ToInt32(TextBox2.Text, 2)
                        bln2 = True
                    End If

                ElseIf ComboBox2.Text = "Octal (Base 8)" Then
                    'here we test the range [0-7]
```

```
                Dim data As Integer = CInt(TextBox2.Text)
                Dim regex As Regex = New Regex(Octalpattern)
                Dim match As Match = regex.Match(TextBox1.Text)
                If match.Success Then
                    MessageBox.Show("Only digits from 0 to 7 are allowed")
                    TextBox2.Text = ""
                    TextBox2.Focus()
                    bln2 = False
                Else 'here we convert to decimal
                    Num2 = Convert.ToInt32(TextBox2.Text, 8)
                    bln2 = True
                End If
            End If
            Else : MessageBox.Show("Please enter digits only for the second
number.")
            End If
        Else : MessageBox.Show("Please select a base for the second number.")
            End If
        'here we sum them
        If (ComboBox3.Text <> "Select the base" And bln1 And bln2) Then
            Dim decsum As Integer = Num1 + Num2
            If ComboBox3.Text = "Decimal (Base 10)" Then
                Label9.Text = decsum
            ElseIf ComboBox3.Text = "Binary (Base 2)" Then
                Label9.Text = Convert.ToString(decsum, 2)
            ElseIf ComboBox3.Text = "Octal (Base 8)" Then
                Label9.Text = Convert.ToString(decsum, 8)
            End If
            Label3.Text = "The sum is:"
            Label6.Text = TextBox1.Text
            Label2.Text = TextBox2.Text
            Label8.Text = "+"
            Label7.Text = "="
        Else : MessageBox.Show("Please select a base for the summed number.")

        End If
    End Sub
    Private Sub Button1_Click(sender As System.Object, e As System.EventArgs)
Handles Button1.Click
        ComboBox2.Text = "Select the base"
        ComboBox1.Text = "Select the base"
        ComboBox3.Text = "Select the base"
        TextBox1.Text = ""
        TextBox2.Text = ""
        Label3.Text = ""
        Label6.Text = ""
        Label8.Text = ""
        Label2.Text = ""
        Label7.Text = ""
        Label9.Text = ""
        TextBox1.Focus()
    End Sub
    Public Shared Function DecimalToBinary(dec As Integer) As String
        If dec < 1 Then Return "0"

        Dim binStr As String = String.Empty

        While dec > 0
```

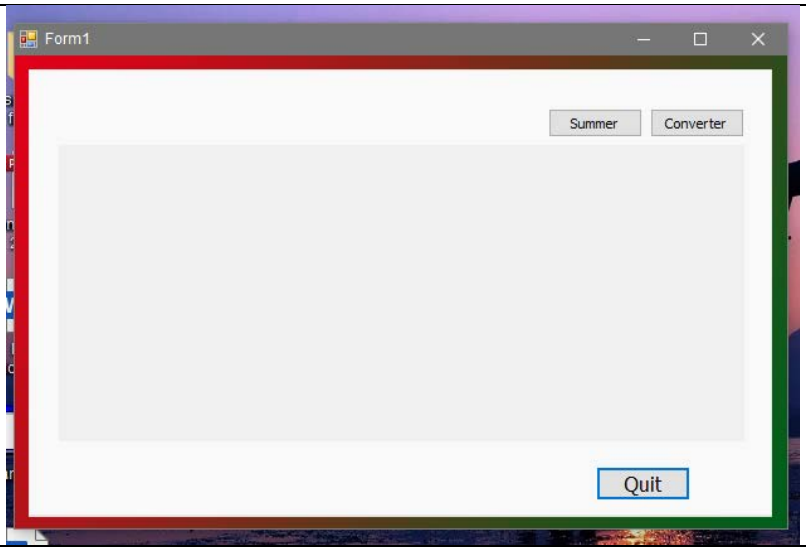
```
            binStr = binStr.Insert(0, (dec Mod 2).ToString())
            dec = Int(dec / 2)
        End While
        Return binStr
    End Function
    Private Sub Button2_Click(sender As System.Object, e As System.EventArgs)
Handles Button2.Click
        Dim A As String = ComboBox2.Text
        ComboBox2.Text = ComboBox1.Text
        ComboBox1.Text = A
        TextBox1.Text = ""
        TextBox2.Text = ""
        Label3.Text = ""
        Label6.Text = ""
        Label8.Text = ""
        Label2.Text = ""
        Label7.Text = ""
        Label9.Text = ""
        TextBox1.Focus()
    End Sub
End Class
```

The Program in operation

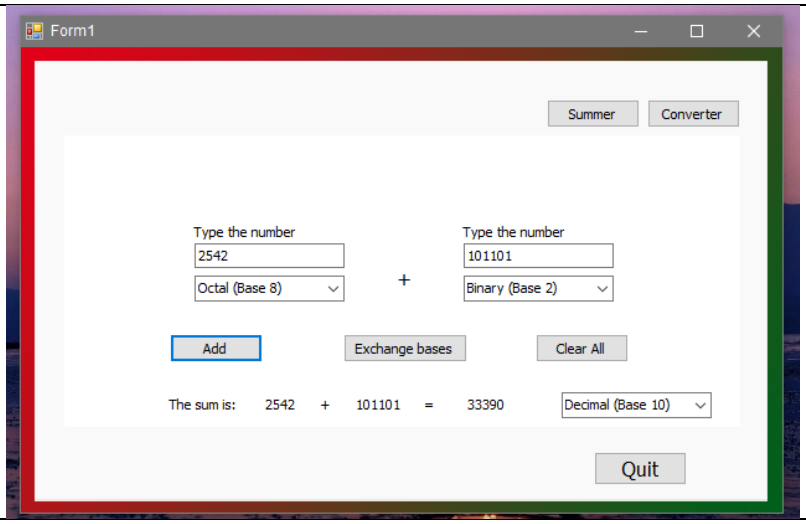
1

2


Dialog1
WELCOME, TO BEGIN, PLEASE ENTER YOUR INFORMATION.
LOG IN
SECTION
2
BENCH NUMBER
55
OK
Made by:
Abd-El Rahman Wael Sec.:2 B.N: 55
Mohamed Ashraf Sec.:3 B.N: 37

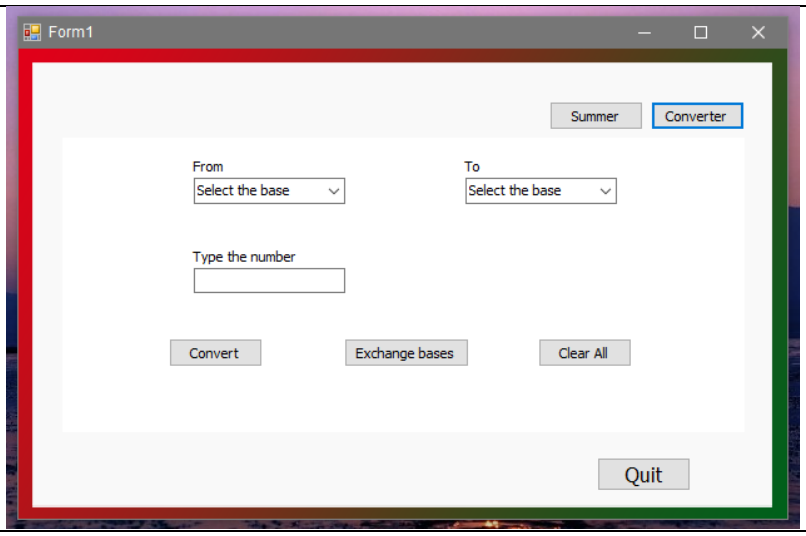
3


Form1
Summer
Converter
Quit

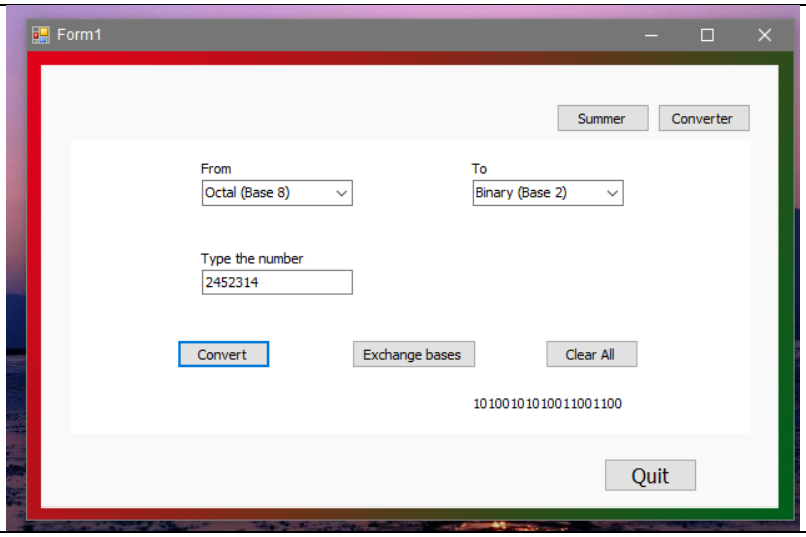
4


Form1
Summer
Converter
Type the number
2542
Octal (Base 8)
+
Type the number
101101
Binary (Base 2)
Add
Exchange bases
Clear All
The sum is: 2542 + 101101 = 33390
Decimal (Base 10)
Quit

5


Form1
Summer
Converter
From
Select the base
To
Select the base
Type the number
Convert
Exchange bases
Clear All
Quit

6


Form1
Summer
Converter
From
Octal (Base 8)
To
Binary (Base 2)
Type the number
2452314
Convert
Exchange bases
Clear All
10100101010011001100
Quit