LAB ASSIGNMENT-1

REG NO	:	**19BCS0012**
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COURSE CODE	:	**CSC3004**
COURSE	:	**VISUAL PROGRAMMING**
DATE	:	**07.03.2021**

Lab Assignment Questions:

1. Study of Visual Basic Environment. (Toolbox controls in vb).

2. Calculate an area of rectangle and circle

3. Design and develop a program to perform arithmetic operation on two numbers (get the input values through textbox).

4. Design and develop a program to calculate Simple Interest with necessary input.

5. Design and develop a program to change form background color.(Use RGB functions and text boxes)

6. Use a first loop that will print Hello 5 times and another loop to print welcome to VB tutorial 4 times after every hello messages each on a separate line in the List box control. Use For loop

7. Write a VB program to display days of week i.e. Monday to Sunday using switch case statement.

8. Write to print the following series in List box control :
   (Use all the loops)
   i.   2,4,6,8------20
   ii. 20,18,16------2
   iii. 0,3,6,9---15

9. Write to print the following series and sum of series in List box controlusing while –end loop and all Do loops
   i. 3,6,9..21
   j. 19,18,..6

1. Study of Visual Basic Environment. (Toolbox controls in vb).

Select Objects	**Select Objects** is the only item in the **Toolbox** that doesn't draw a control. When you select it, you can only resize or move a control that has already been drawn on a form.
Label	Allows you to have text that you do not want the user to Change, such as a caption under a graphic.
TextBox	Holds text that the user can either enter or change.
ComboBox	Allows you to draw a combination list box and text box. The User can either choose an item from the list or enter a value in the text box.
ListBox	Use to display a list of items from which the user can choose. The list can be scrolled if it has more items than can be displayed at one time.
CheckBox	Creates a box that the user can easily choose to indicate if something is true or false, or to display multiple choices when the user can choose more than one.
OptionButton	Allows you to display multiple choices from which the usercan choose only one.
ToggleButton	Creates a button that toggles on and off.
Frame	Allows you to create a graphical or functional grouping for controls. To group controls, draw the frame first, and then draw controls inside the frame.
CommandButton	Creates a button that the user can choose to carry out a command.
TabStrip	Allows you to define multiple pages for the same area of a window or dialog box in your application.
MultiPage	Presents multiple screens of information as a single set.
ScrollBar	Provides a graphical tool for quickly navigating through a long list of items or a large amount of information, for indicating the current position on a scale, or as an input device or indicator of speed or quantity.
SpinButton	A spinner control that you can use with another control to increment and decrement numbers. You can also use it to scroll back and forth through a range of values or a list of items.
Image	Displays a graphical image from a bitmap, icon, or metafile on your form. Images displayed in an **Image** control can only be decorative and use fewer resources than a **PictureBox**.

Question No. 2

AIM:

> ➤ Calculate an area of rectangle and circle using visual basic forms

FORM DESIGN:

EVENT PROCEDURE:

Private Sub Combo1_Click()

If Combo1.Text = "Area of Rectangle" Then

Frame1.Visible = True

Else

If Combo1.Text = "Area of Circle" Then

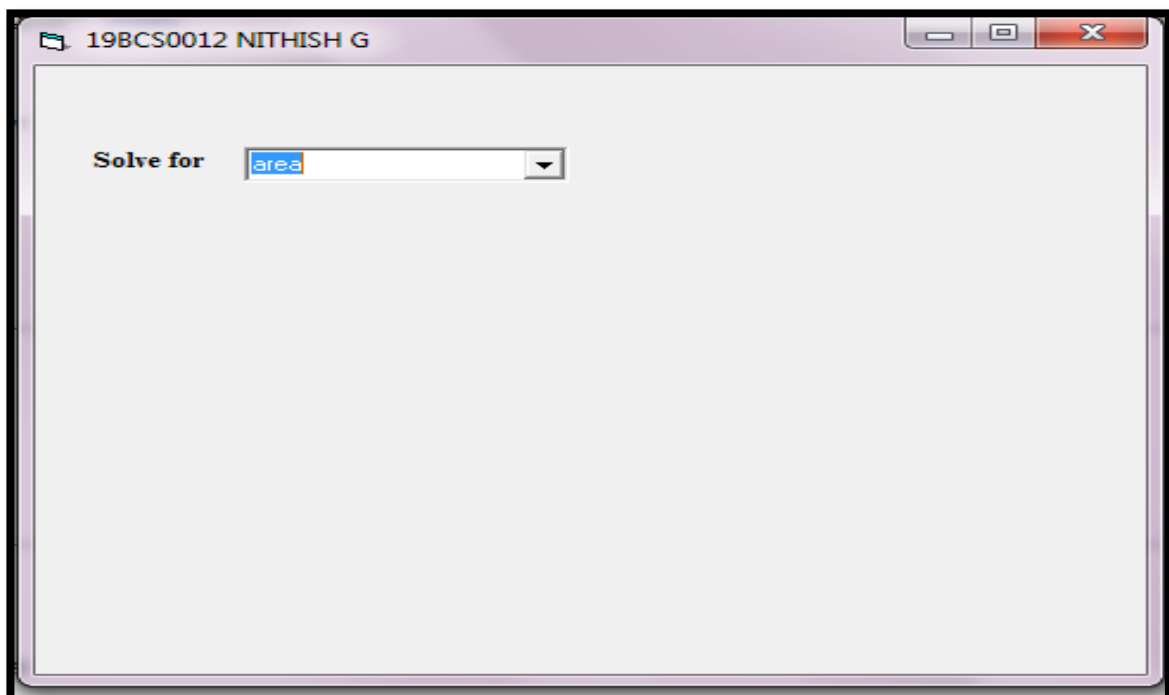Frame2.Visible = True

End If

End If

```vb
End Sub


Private Sub Command1_Click()

Dim l, w, area As Integer

l = Val(Text1.Text)

w = Val(Text2.Text)

area = l * w

Text3.Text = area

End Sub


Private Sub Command2_Click()

Dim radius As Double

radius = Val(Text4.Text)

radius = (radius * radius) * 3.14

Text5.Text = radius

End Sub


Private Sub Form_Load()

Frame1.Visible = False

Frame2.Visible = False

Combo1.AddItem "Area of Rectangle"

Combo1.AddItem "Area of Circle"

End Sub
```

Source code:

```vb
If Combo1.Text = "Area of Rectangle" Then
Frame1.Visible = True

Else
If Combo1.Text = "Area of Circle" Then
Frame2.Visible = True

End If

End If

End Sub

Private Sub Command1_Click()
Dim l, w, area As Integer
l = Val(Text1.Text)
w = Val(Text2.Text)
area = l * w
Text3.Text = area
End Sub

Private Sub Command2_Click()
Dim radius As Double
radius = Val(Text4.Text)
radius = (radius * radius) * 3.14
Text5.Text = radius
End Sub

Private Sub Form_Load()
Frame1.Visible = False
Frame2.Visible = False
Combo1.AddItem "Area of Rectangle"
Combo1.AddItem "Area of Circle"
End Sub
```

Output

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Solve for   area

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Solve for Area of Rectangle ▼

Area of Rectangle
Area of Circle

Rectangle

Area of Rectangle = w * l

l length Enter the value

w Width Enter the value

Calculate

Area result

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Solve for Area of Rectangle ▼

Rectangle

Area of Rectangle = w * l

l length 6

w Width 5

Calculate

Area 30

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Solve for   Area of Circle ▼

Area of Rectangle
Area of Circle

Circle

Area of Circle = Pie * (radius*radius)

r Radius   Enter a value

Calculate

Area of circle   Enter a value

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Solve for   Area of Circle ▼

Circle

Area of Circle = Pie * (radius*radius)

r Radius   7

Calculate

Area of circle   153.86

QUESTION NO-3

AIM:

➢ To Design and develop a program to perform arithmetic operation on two numbers (get the input values through textbox).using visual basic forms

<u>**FORM DESIGN:**</u>

Code:

```
Public Class Form1
    Dim a, b, c As Double
    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
```

```vbnet
    System.EventArgs)
Handles Button1.Click
        a = TextBox1.Text
        b = TextBox2.Text
        c = a + b
        TextBox3.Text = c
    End Sub


    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button2.Click

        a = TextBox1.Text
        b = TextBox2.Text
        c = a - b
        TextBox4.Text = c
    End Sub

    Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button3.Click
        a = TextBox1.Text
        b = TextBox2.Text
        c = a * b
        TextBox5.Text = c

    End Sub

    Private Sub Button4_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button4.Click
        a = TextBox1.Text
        b = TextBox2.Text
        c = a / b
        TextBox6.Text = c
    End Sub

End Class
```

19BCS0012 NITHISH G   — □ ✕

Arithmetic operation on two numbers

Enter 1st number   49

Enter 2nd number   7

| Add | Sub | Mult | Div |

| 56 | | | |

19BCS0012 NITHISH G   — □ ✕

Arithmetic operation on two numbers

Enter 1st number   49

Enter 2nd number   7

| Add | Sub | Mult | Div |

| 56 | 42 | | |

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Arithmetic operation on two numbers

Enter 1st number   49

Enter 2nd number   7

Add	Sub	Mult	Div
56	42	343	

19BCS0012 NITHISH G

Arithmetic operation on two numbers

Enter 1st number   49

Enter 2nd number   7

Add	Sub	Mult	Div
56	42	343	7
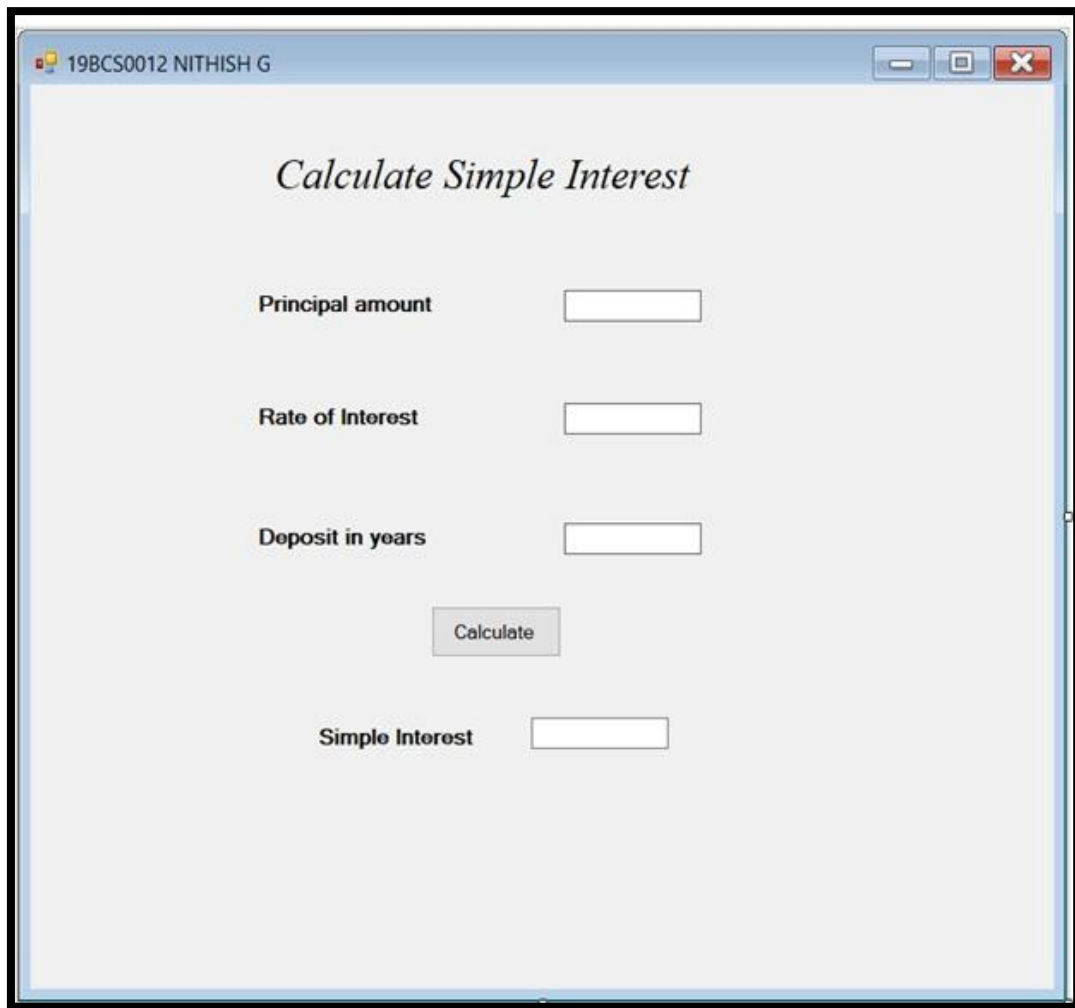
Question 4:

AIM:

➢ To design and develop a program to calculate Simple Interest withnecessary input using visual basic forms.

Design Form:

Event Procedures:

```
Public Class Form1

    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)Handles Button1.Click
        Dim p, n, r, s As Integerp
        = TextBox1.Text
```

```
        n = TextBox2.Text
        r = TextBox3.Text
        s = (p * n * r) / 100
        TextBox4.Text = s

    End Sub
End Class
```
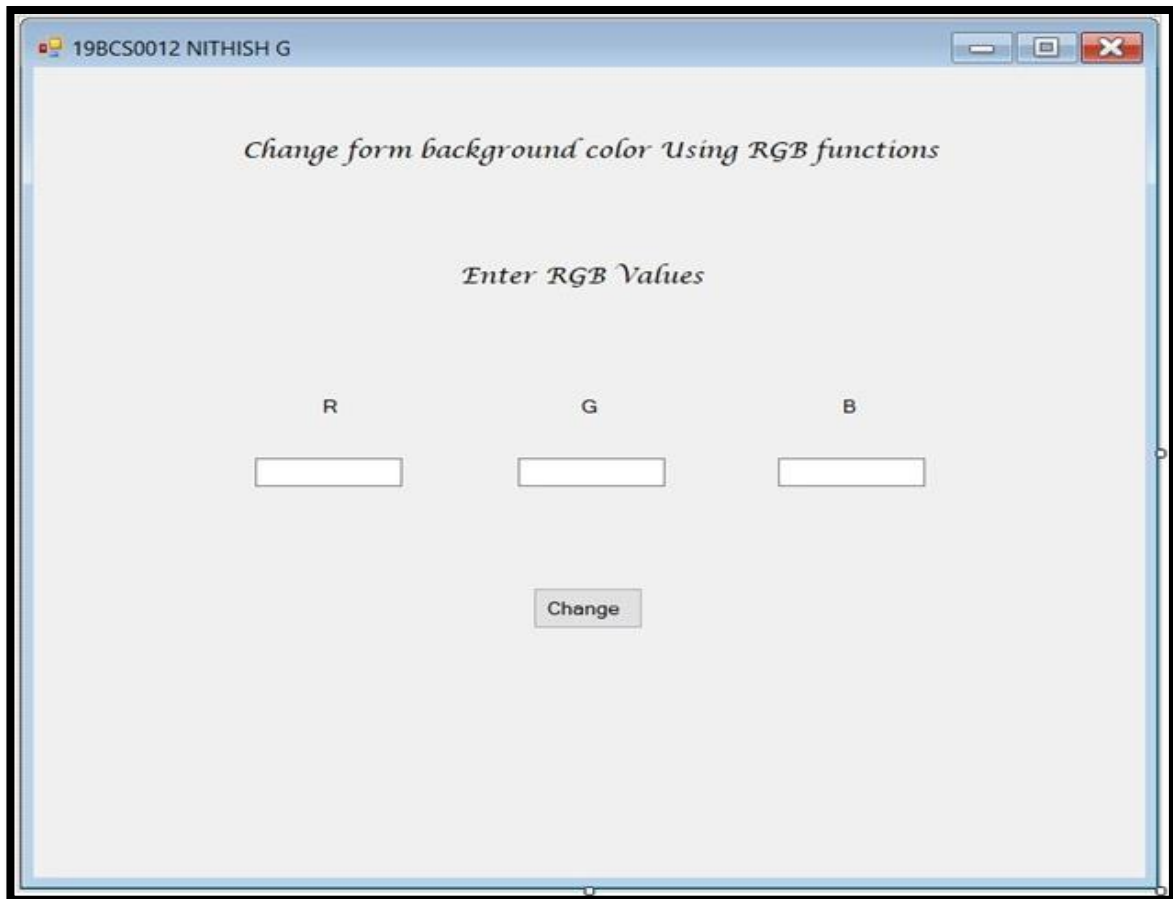
Output:

Question 5:

AIM:

➤ Design and develop a program to change form background color.(Use RGB functions and text boxes)

Design Form:

Event Procedures:

```
Public Class Form1
    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)Handles Button1.Click
        Dim r, g, b As Integerr
        = TextBox1.Text
        g = TextBox2.Text
        b = TextBox3.Text
        Me.BackColor = Color.FromArgb(r,
```
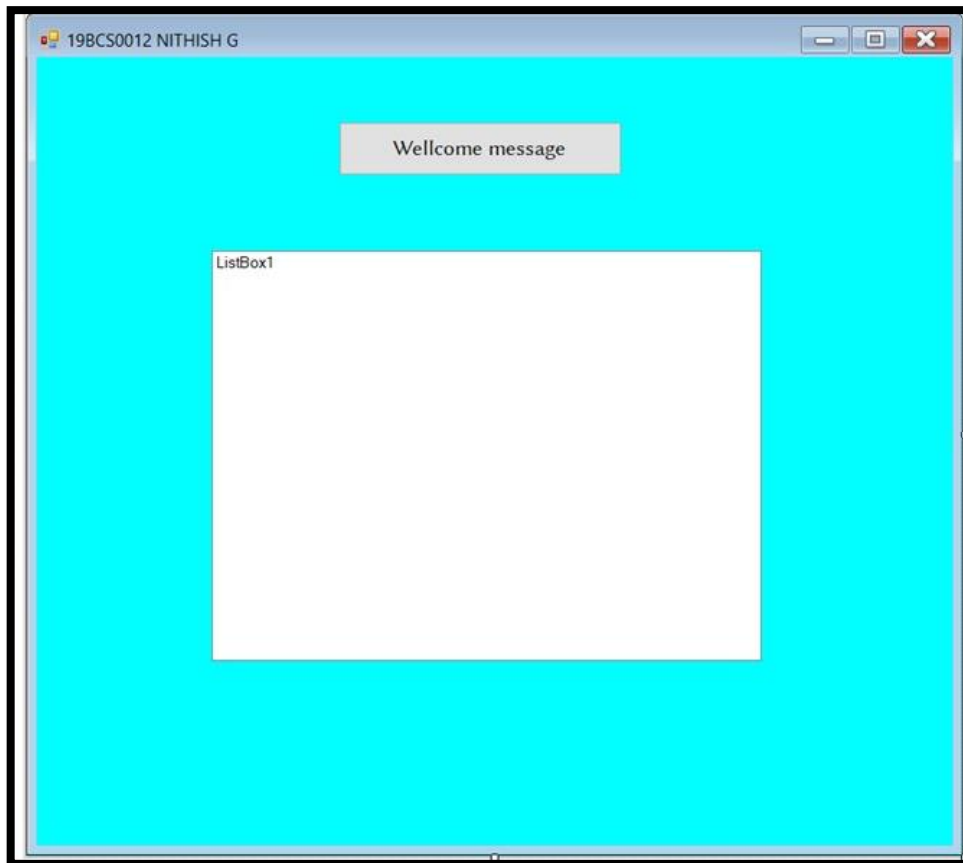
g, b)End Sub
End Class

Output:

Question 6:

Aim:

To print welcome to VB tutorial 4 times after every hello messages each on a separate line in the List box control print Hello 5 times.

Design Form:

Event Procedures:

```
Public Class Form1
    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)Handles Button1.Click
        Dim i, j As Integer
        For i = 0 To 5

            ListBox1.Items.Add("Hello ")

            For j = 0 To 4

            ListBox1.Items.Add("Welcome  to the VB tutorial ")
            Next
```
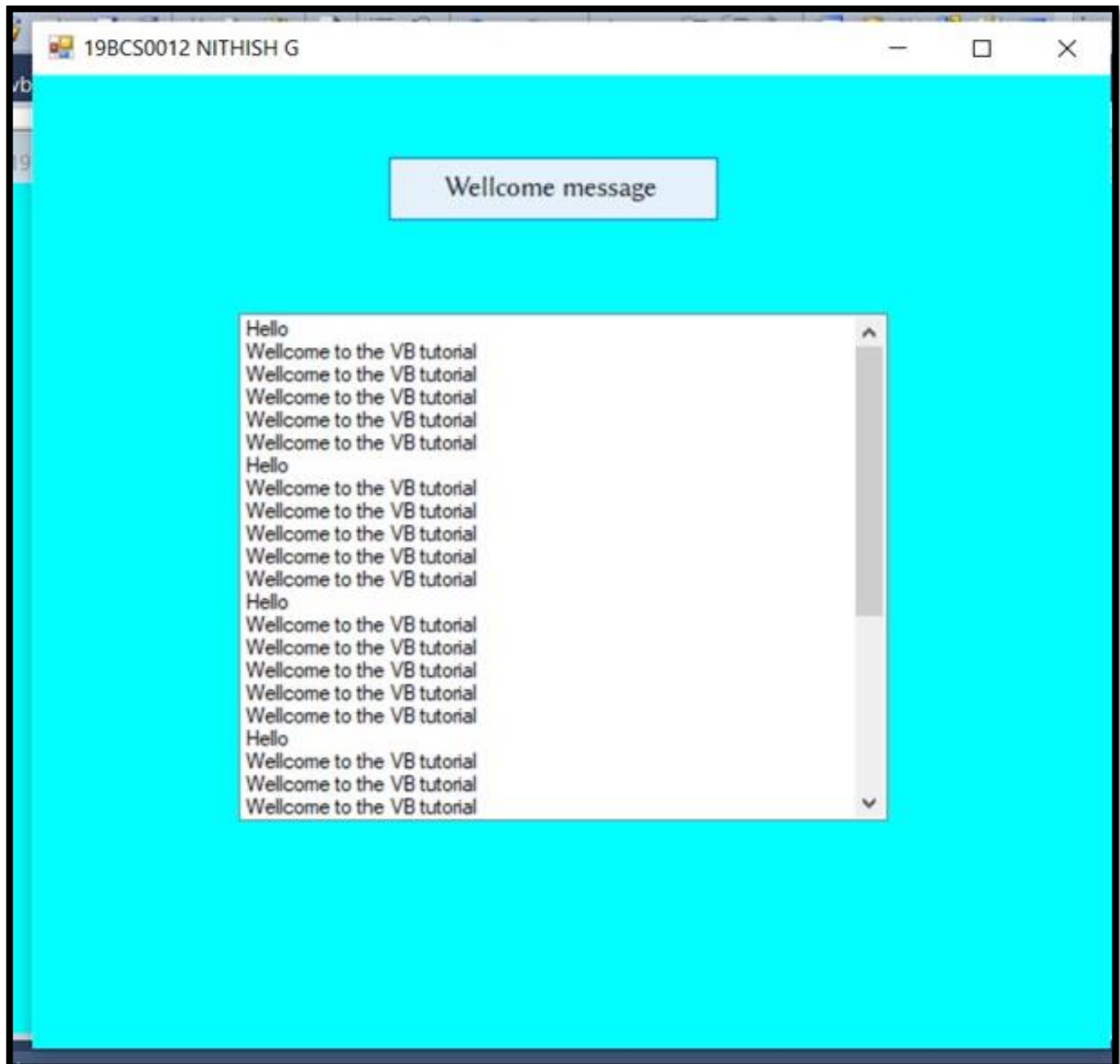
```
        Next

    End Sub
End Class
```

Output:

Question 7

Aim:

➢ Write a VB program to display days of week i.e. Monday to Sunday using switch case statement.

Design Form :

Event Procedures
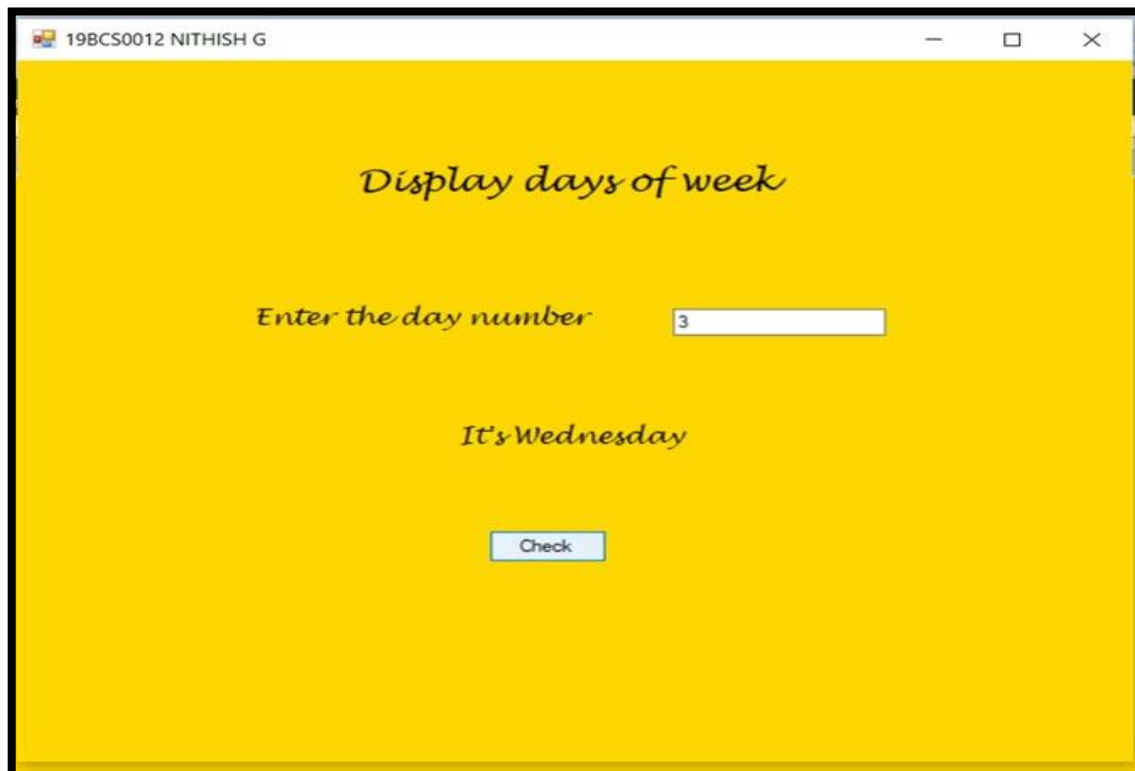
```
Public Class Form1

    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)Handles Button1.Click

        Dim number As Integer
        number =
```

```
        TextBox1.TextIf
        (number <= 7) Then
            Select Case number
                Case 1
                    Label2.Text = " It's Monday "
                Case 2
                    Label2.Text = " It's Tuesday "
                Case 3
                    Label2.Text = " It's Wednesday
                "Case 4
                    Label2.Text = " It's Thursday "
                Case 5
                    Label2.Text = " It's Friday "
                Case 6
                    Label2.Text = " It's Saturday "
                Case 7
                    Label2.Text = " It's Sunday "
            End Select
        End If
        Label2.Text = " please enter the a number from 1 to 7"

    End Sub
End Class
```

Output

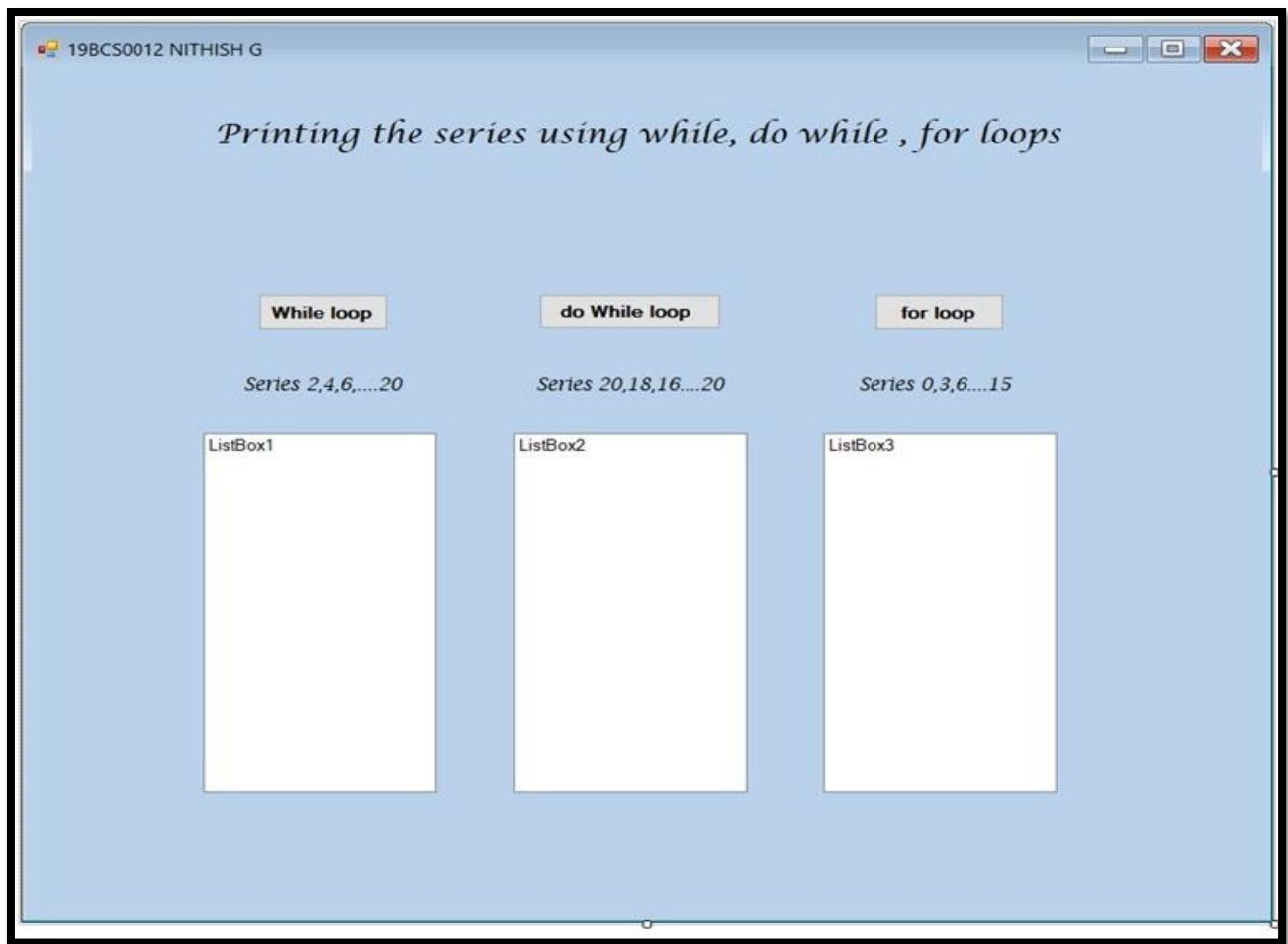## Question 8

Aim:

Print the following series in List box control :(Use all the loops)

    i.   2,4,6,8------20

   ii.   20,18,16------2

  iii.   0,3,6,9---15

Design form:

Event procedure:

Public Class Form1

Dim i, n As Integer

Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)

Handles Button1.Click n = 2

While (n <= 20)

```
ListBox1.Items.Add(n) n += 2



End While End Sub


Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs)

Handles Button2.Click n = 20

Do

ListBox2.Items.Add(n) n -= 2

Loop While (n > 2) End Sub


Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button3.Click

Dim i As Integer

For i = 0 To 15 Step 3 ListBox3.Items.Add(i)



Next End Sub


Private Sub Form1_Load(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles MyBase.Load

Me.BackColor = Color.FromArgb(127, 255, 212) End Sub

End Class
```

Output form

Printing the series using while, do while , for loops

| While | do While loop | for loop |

Series 2,4,6,....20   Series 20,18,16....20   Series 0,3,6....15

```
2
4
6
8
10
12
14
16
18
20
```
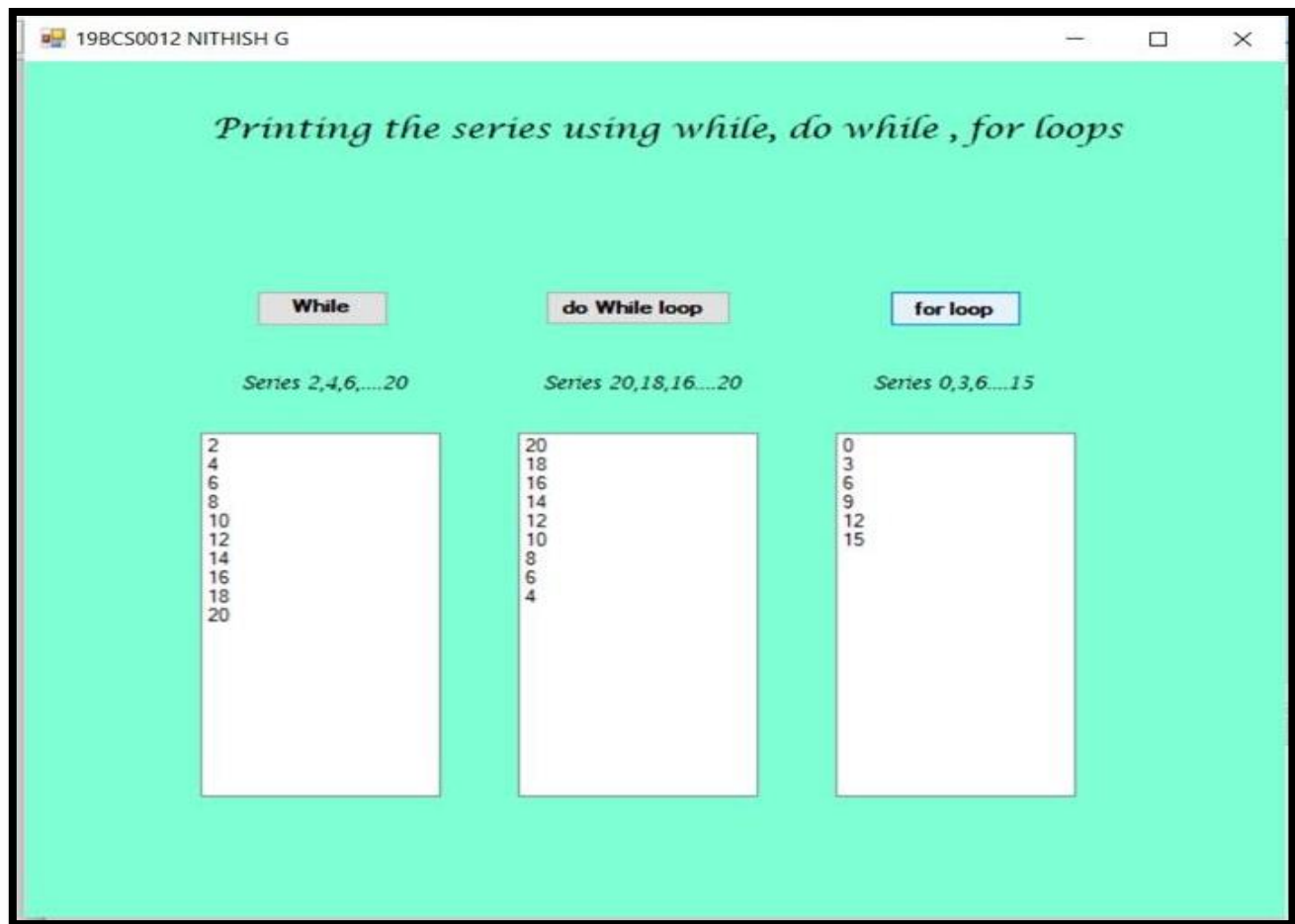
Printing the series using while, do while , for loops

| While | do While loop | for loop |

Series 2,4,6,....20   Series 20,18,16....20   Series 0,3,6...15

```
2
4
6
8
10
12
14
16
18
20
```
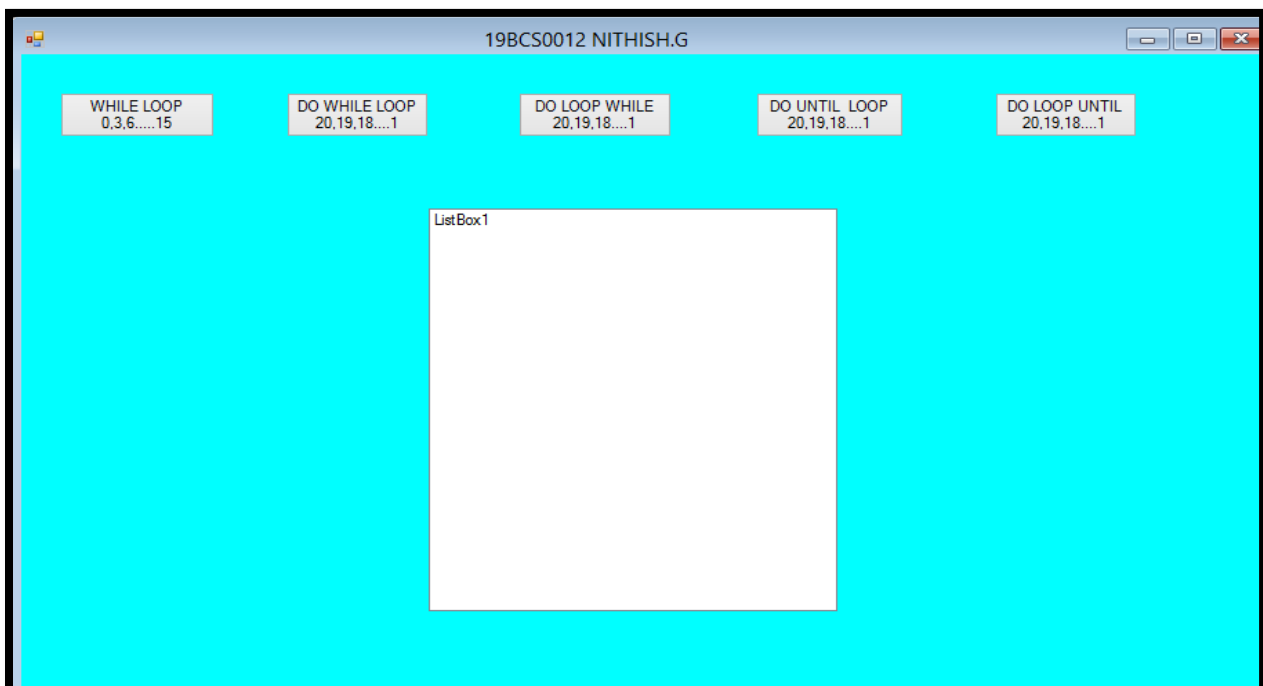
```
20
18
16
14
12
10
8
6
4
```

Question 9

Aim

> Write to print the following series and sum of series in List boxcontrol using while –end loop and all Do loops

Design Form

Source code:

```
Public Class Form1


Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button3.Click

ListBox1.Items.Clear() Dim A, SUM As Integer A = 0

While N <= 15

N += 3

SUM +=N

ListBox1.Items.Add(N & vbTab & SUM) End While

End Sub


Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click


ListBox1.Items.Clear() Dim N, SUM As Integer SUM = 0

N = 20

Do

SUM += N

ListBox1.Items.Add(N & vbTab & SUM) N- =1

Loop While N > 0 End Sub


Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles Button1.Click
```

```vb
ListBox1.Items.Clear() Dim N, SUM As Integer SUM = 0

N= 20

Do While N > 0 SUM = SUM + N

ListBox1.Items.Add(N & vbTab & SUM) N- = N

Loop End Sub


Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click


ListBox1.Items.Clear() Dim N, SUM As Integer SUM = 0

A = 20

Do

SUM += N

ListBox1.Items.Add(N & vbTab & SUM) N-= 1

Loop Until N <= 0 End Sub


Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click


ListBox1.Items.Clear() Dim N, SUM As Integer SUM = 0

N = 20

Do Until N <= 0 SUM = SUM + N

ListBox1.Items.Add(N & vbTab & SUM) N= N 1

Loop End Sub
```
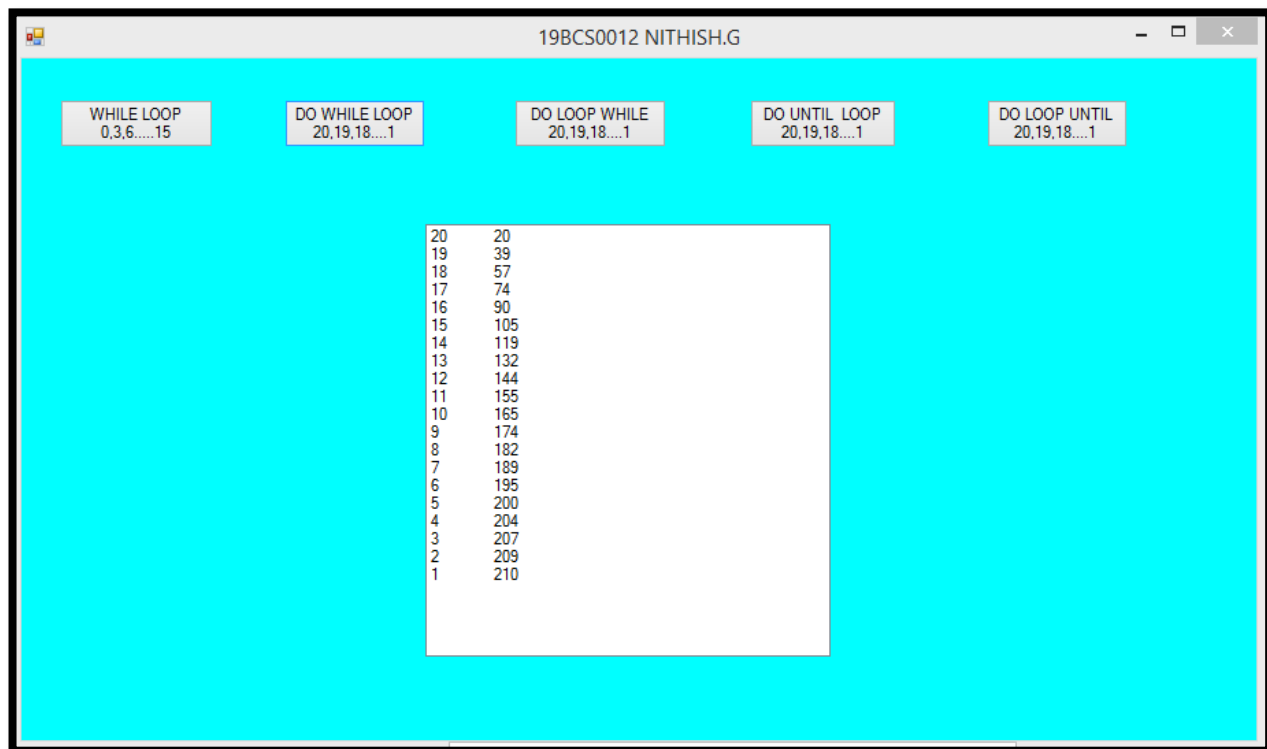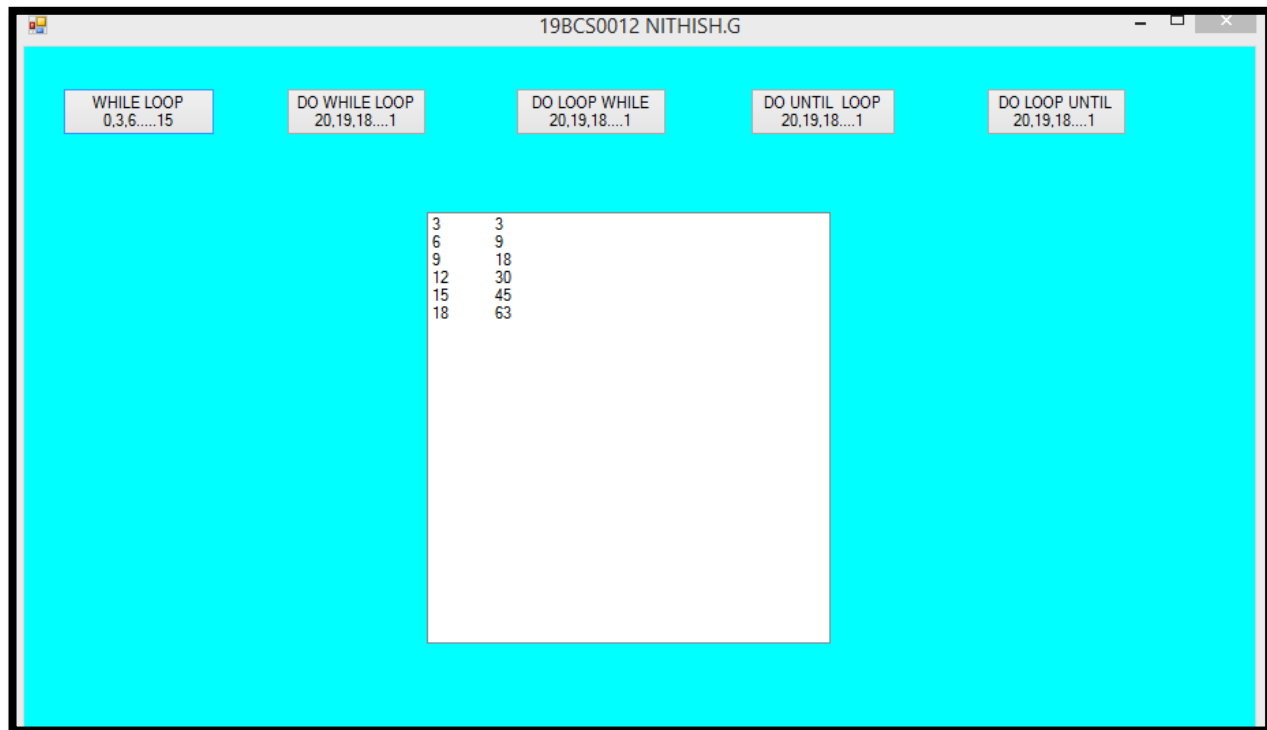
End Class

<u>Output form</u>

<table>
<tr><td colspan="5" align="center">19BCS0012 NITHISH.G</td></tr>
<tr>
<td>WHILE LOOP
0,3,6.....15</td>
<td>DO WHILE LOOP
20,19,18....1</td>
<td>DO LOOP WHILE
20,19,18....1</td>
<td>DO UNTIL LOOP
20,19,18....1</td>
<td>DO LOOP UNTIL
20,19,18....1</td>
</tr>
</table>

```
3      3
6      9
9      18
12     30
15     45
18     63
```

<table>
<tr><td colspan="5" align="center">19BCS0012 NITHISH.G</td></tr>
<tr>
<td>WHILE LOOP
0,3,6.....15</td>
<td>DO WHILE LOOP
20,19,18....1</td>
<td>DO LOOP WHILE
20,19,18....1</td>
<td>DO UNTIL LOOP
20,19,18....1</td>
<td>DO LOOP UNTIL
20,19,18....1</td>
</tr>
</table>

```
20     20
19     39
18     57
17     74
16     90
15     105
14     119
13     132
12     144
11     155
10     165
9      174
8      182
7      189
6      195
5      200
4      204
3      207
2      209
1      210
```

WHILE LOOP	DO WHILE LOOP	DO LOOP WHILE	DO UNTIL LOOP	DO LOOP UNTIL
0,3,6.....15	20,19,18....1	20,19,18....1	20,19,18....1	20,19,18....1

```
20      20
19      39
18      57
17      74
16      90
15      105
14      119
13      132
12      144
11      155
10      165
9       174
8       182
7       189
6       195
5       200
4       204
3       207
2       209
1       210
```

WHILE LOOP 0,3,6.....15	DO WHILE LOOP 20,19,18....1	DO LOOP WHILE 20,19,18....1	DO UNTIL LOOP 20,19,18....1	DO LOOP UNTIL 20,19,18....1

20	20
19	39
18	57
17	74
16	90
15	105
14	119
13	132
12	144
11	155
10	165
9	174
8	182
7	189
6	195
5	200
4	204
3	207
2	209
1	210