DOT NET PROGRAMMING

LABORATORY MANUAL

B.sc - IT

(III YEAR – VI SEM)

DEPARTMENT OF INFORMATION TECHNOLOGY

KG COLLEGE OF ARTS & SCIENCE

(Accredited by NAAC & Affiliated to Bharathiar University)
KGiSL Campus, Saravanampatti, Coimbatore- 641035.

Dot Net Lab Manual

Course Objective and Outcome

Objective

To design simple VB.net applications.

Outcome

- Students can able to design VB.net applications with various tools.
- Can dynamically display hierarchical representations of items with Tree View.
- Can handle user defined Exceptions.
- Able to display data using Constructors and member functions.
- Can design application to illustrate various events.
- Create application with various menus and event procedure for the menus.

LIST OF PROGRAMS

1. Create a VB .Net program to add a string to Combo box with value of Textbox when user clicks button control.
2. Create a VB .Net program to display hierarchical representations of items with tree view control using Runtime coding.
3. Create a VB .Net program to handle user defined Exceptions.
4. Create a VB .Net program for Employee details to read and display the data using constructors and member functions.
5. Create an application in VB .Net to demonstrate the following events:
    a. Click
    b. Mouse Down
    c. Key Down
    d. Form Load
6. Create an application in VB .Net for File Menu with Menu items New, Open, Save, Print and Exit & Edit Menu with Menu items Cut, Copy, Paste, Find and Undo.
7. Create an application in VB .Net for student information database and perform the following operations:

a. Addition

b. Deletion

c. Updation

8. Design a website using web form to show the current date and time when a user clicks the button.

PREREQUISITES

Software and Pre require knowledge

Software Requirements:

- Microsoft visual studio 2008
- Browsers

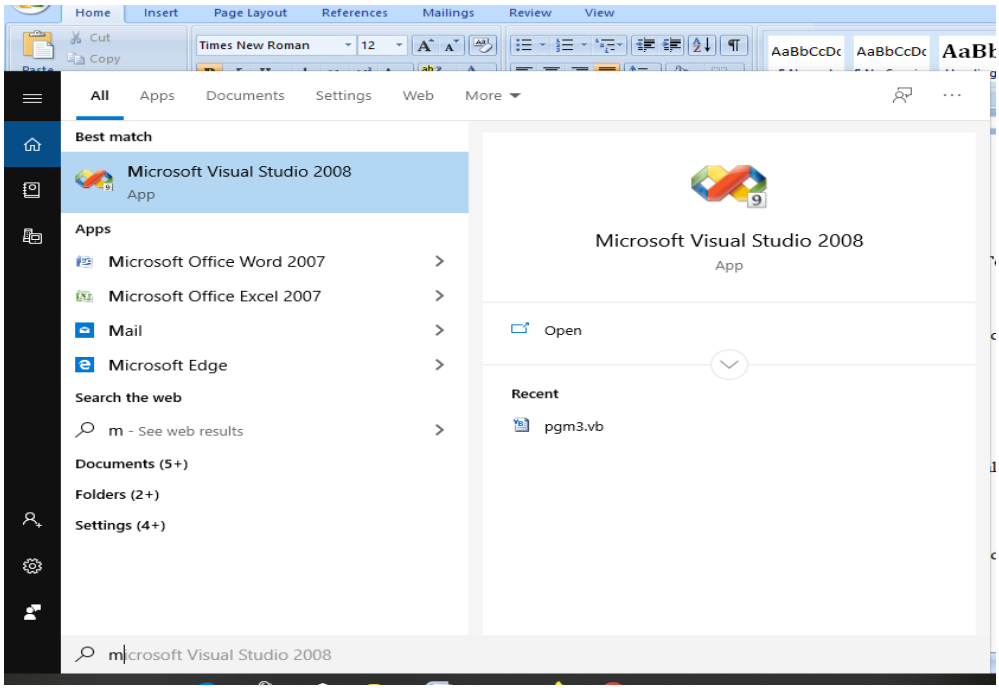
Basic Skill Set Required:

- To open a file and command prompt.
- Typing skills.
- Basic Knowledge about Graphical User Interface (GUI).
- Fundamental concepts in VB.net

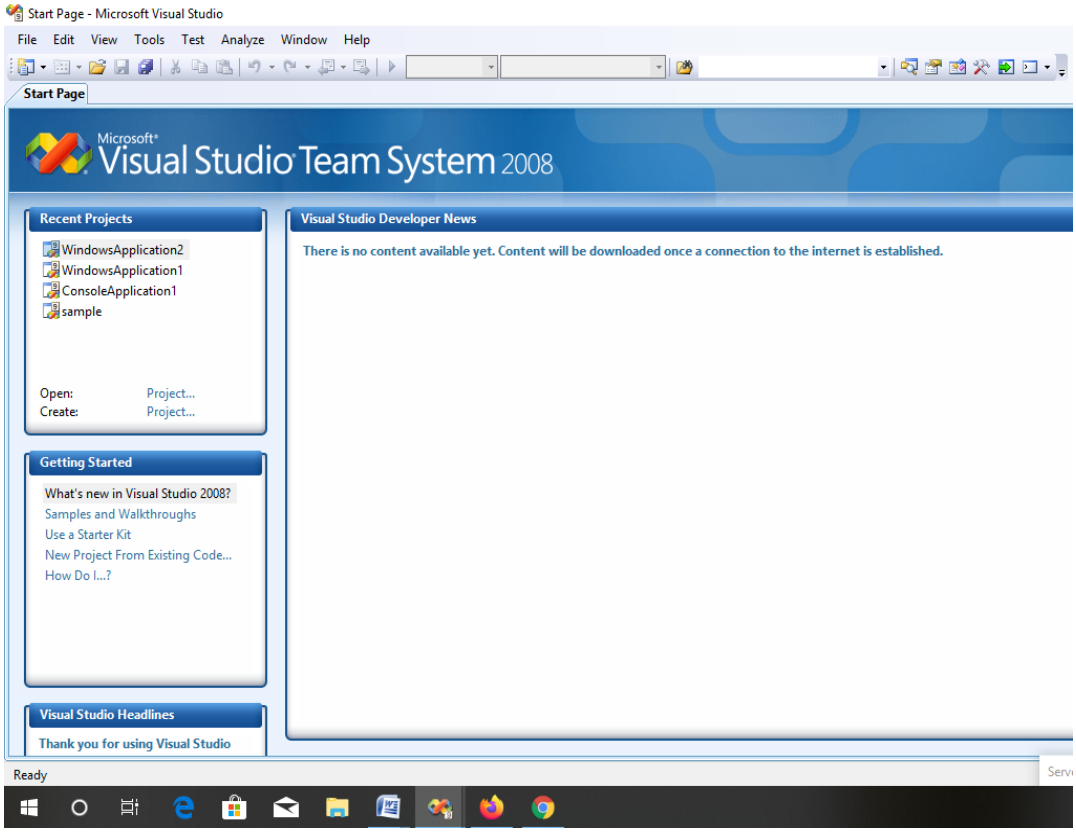
GUIDE TO UTILIZE TOOL (MANUAL FOR TOOL)

- **Steps for accessing the tool**

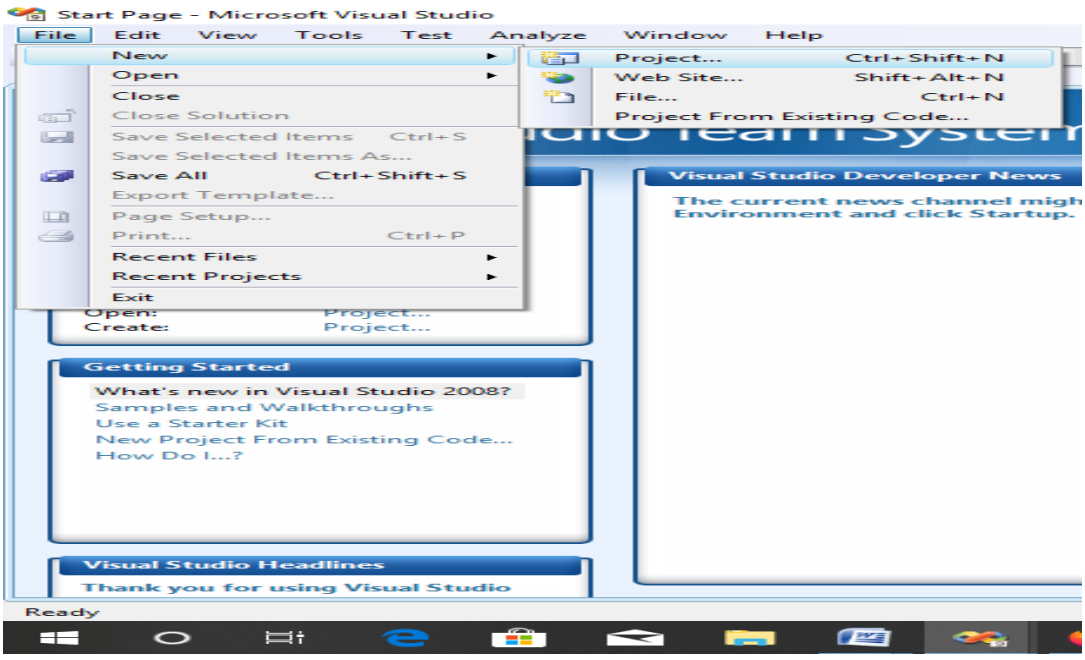
STEP 1: Start the process by doule clicking on Microsoft visual studio 2008 icon



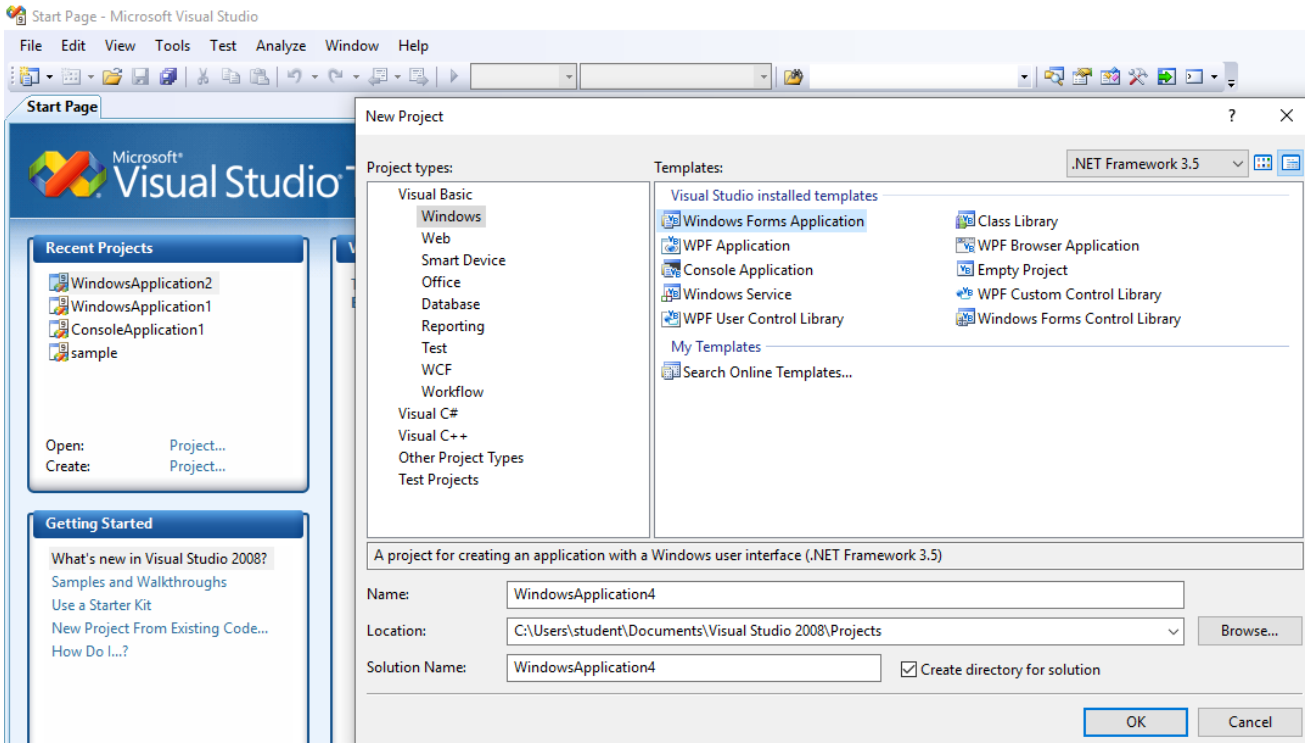
STEP 2: Then the new Window will be opened.



STEP 3: Select File→ New→ Project.



STEP 4: Then select the required project type and templates from below window.



MANUAL FOR PROGRAMS

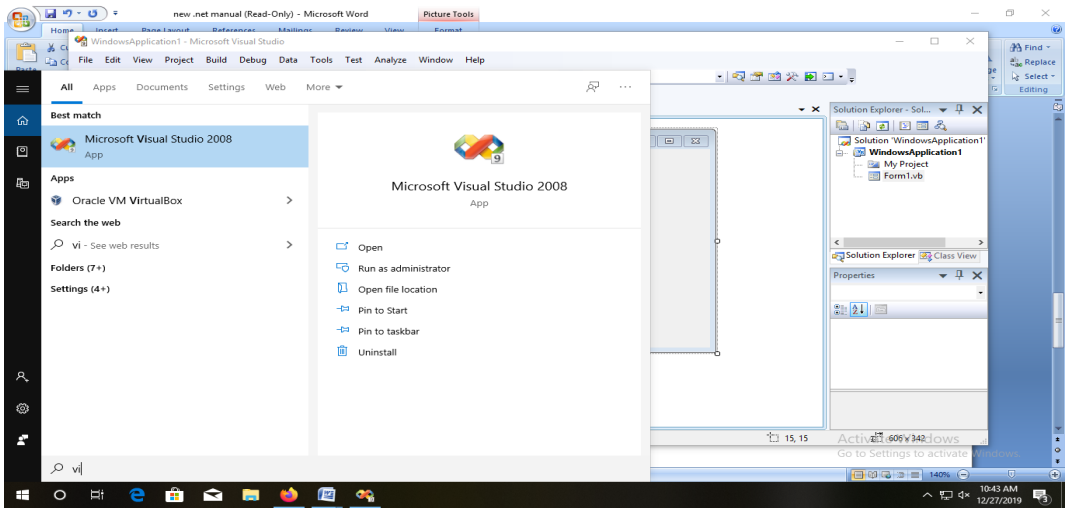
PROGRAM 1:

Create a VB .Net program to add a string to Combo box with value of Textbox when user clicks button control.

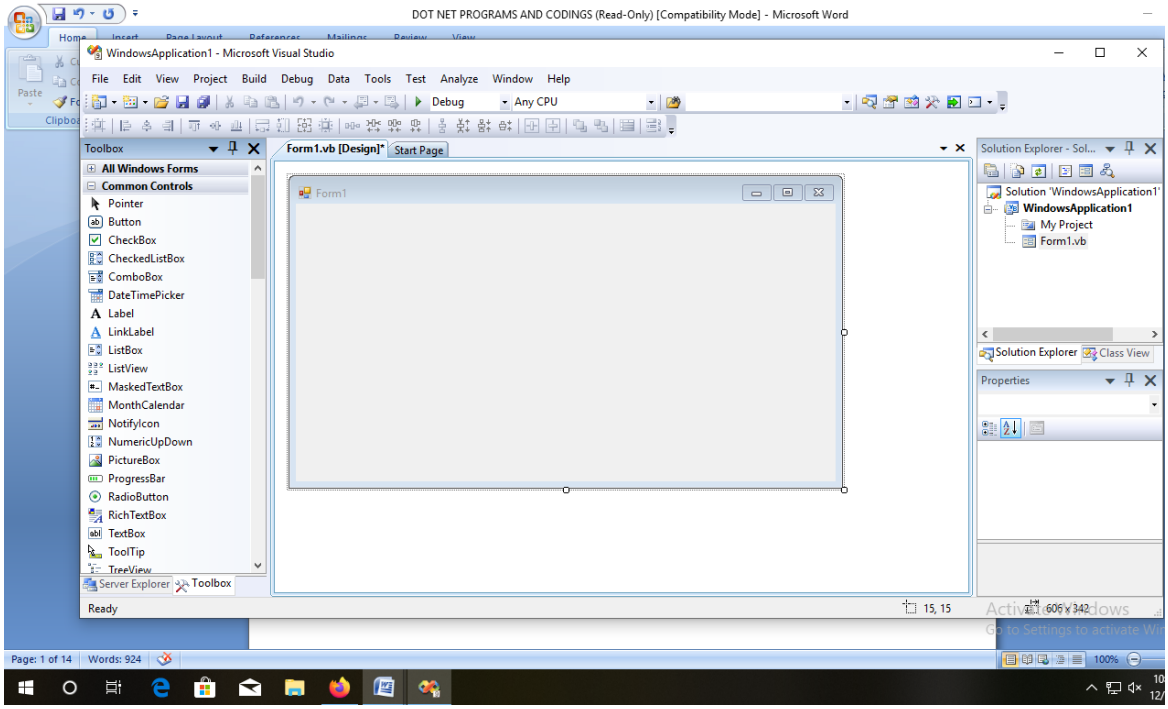
PROCEDURE:

STEP 1: Start the process by doule clicking on Microsoft visual studio 2008 icon

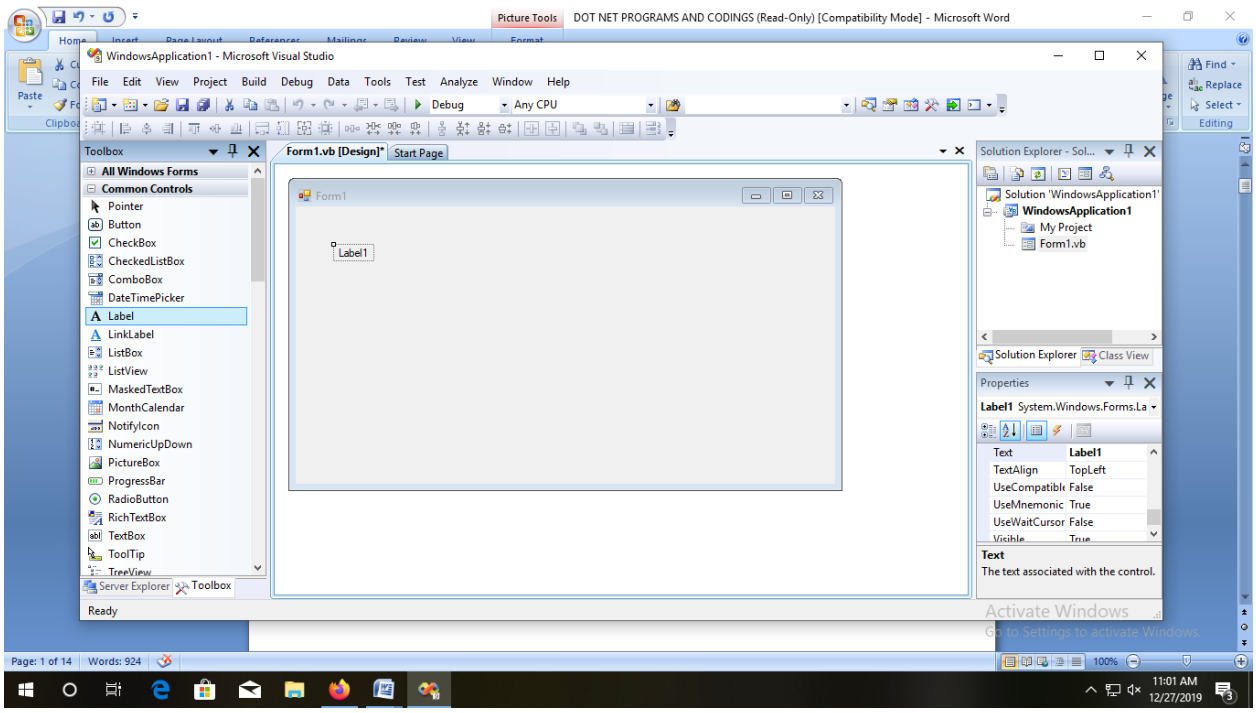
STEP 2: Select File→ New→ Project.



STEP 3: Then the new form will be opened.

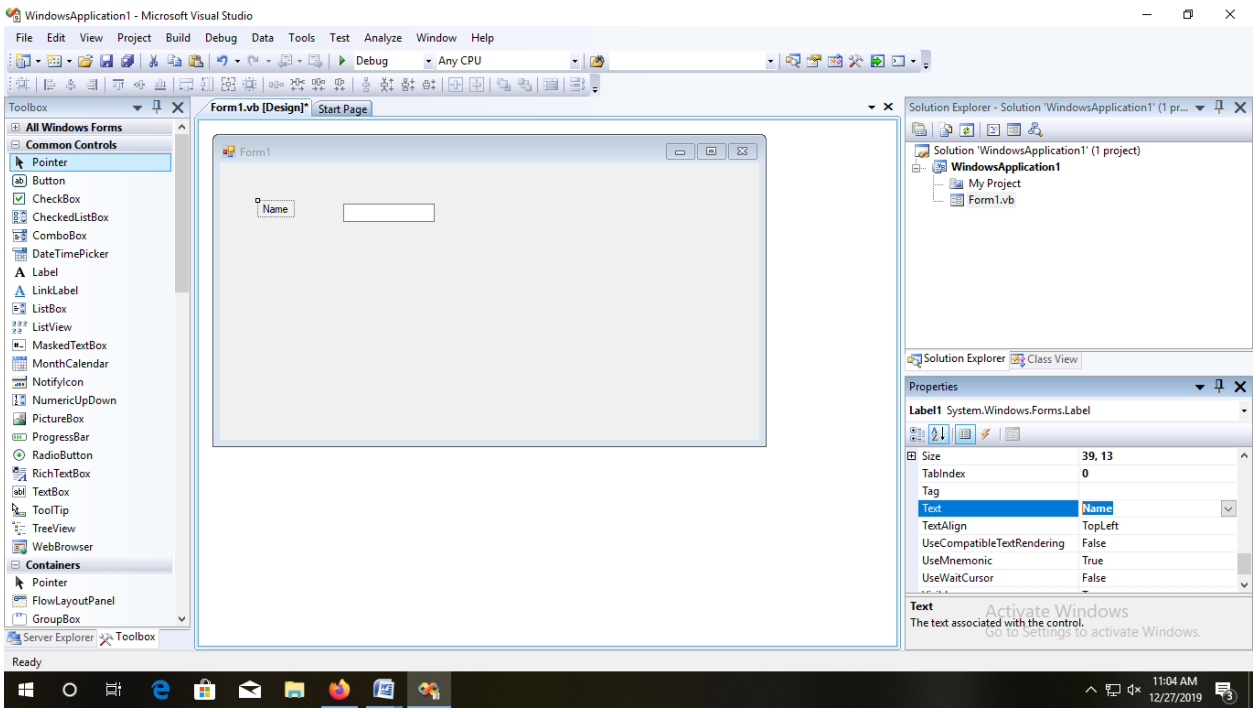


STEP 4: Left side of Microsoft visual studio 2008 window contains toolbox.From the tool box add a label to the form1.

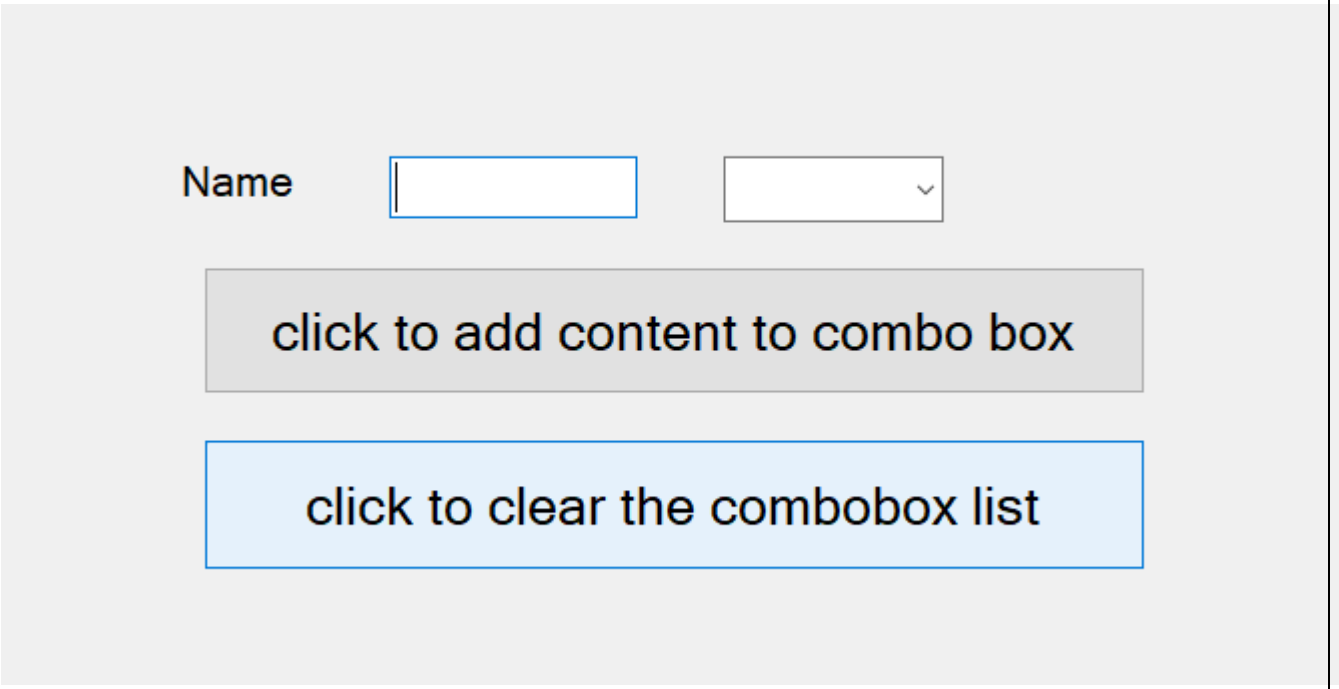


STEP 5: Right side of Microsoft visual studio 2008 window contains properties window, in that give the caption as of the label as “Name”(Text property).

STEP 6: Left side of Microsoft visual studio 2008 window contains toolbox.From the tool box add a Textbox to the form1.



STEP 7: In the same way, add two buttons, a combo box to the form1 and name the two buttons.



STEP 8: Double-click on the button1, then type the following code to add the items which is typed in the textbox.

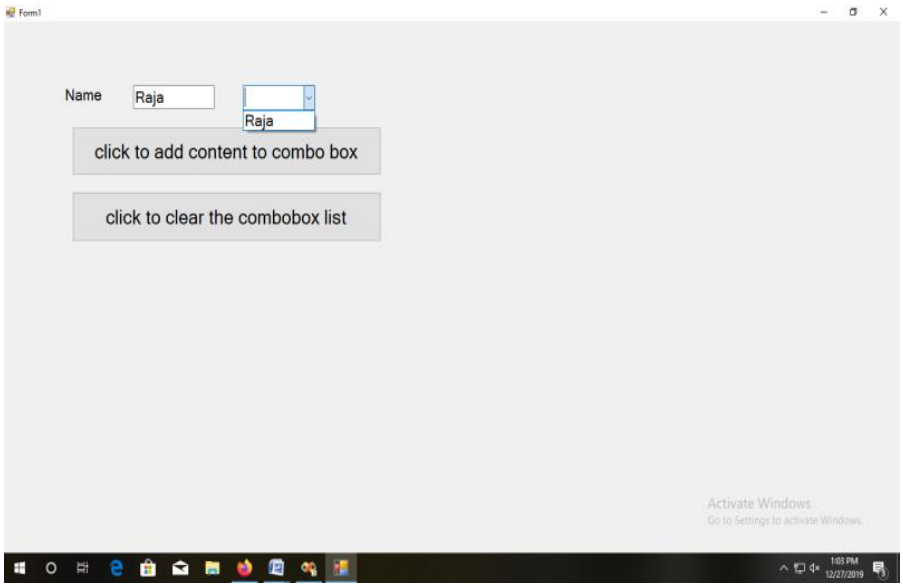
```
Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles Button1.Click

    TextBox1.Focus()

    ComboBox1.Items.Add(TextBox1.Text)

    TextBox1.Clear()

End Sub
```

STEP 9: Double-click on the button2, then type the following code clear the items which is typed in the textbox.

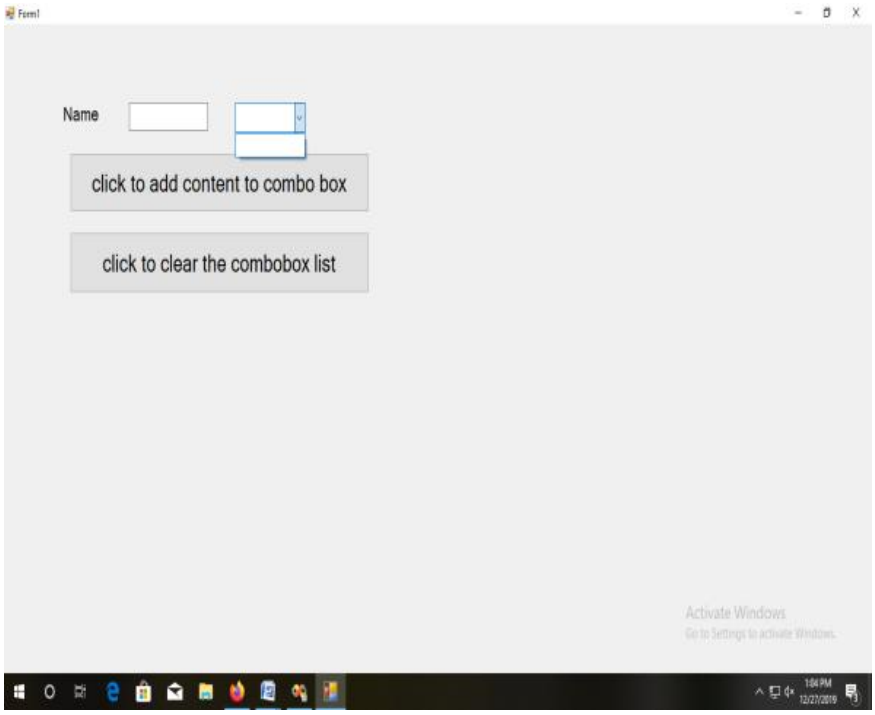
```
Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles Button2.Click

    ComboBox1.Items.Clear()

End Sub
```

Output

Adding items to combo box



Clearing items to combo box



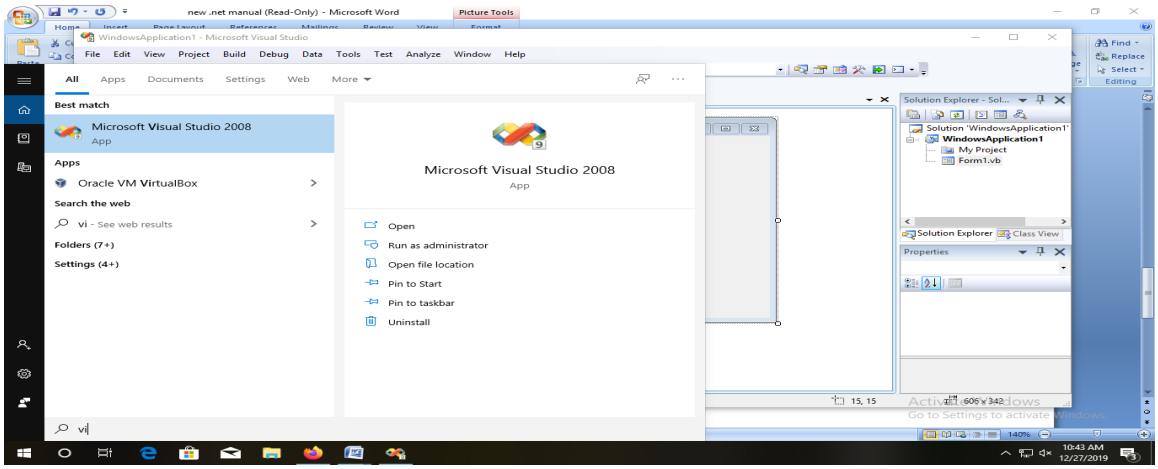
PROGRAM 2:

Create a VB .Net program to display hierarchical representations of items with tree view control using Runtime coding.

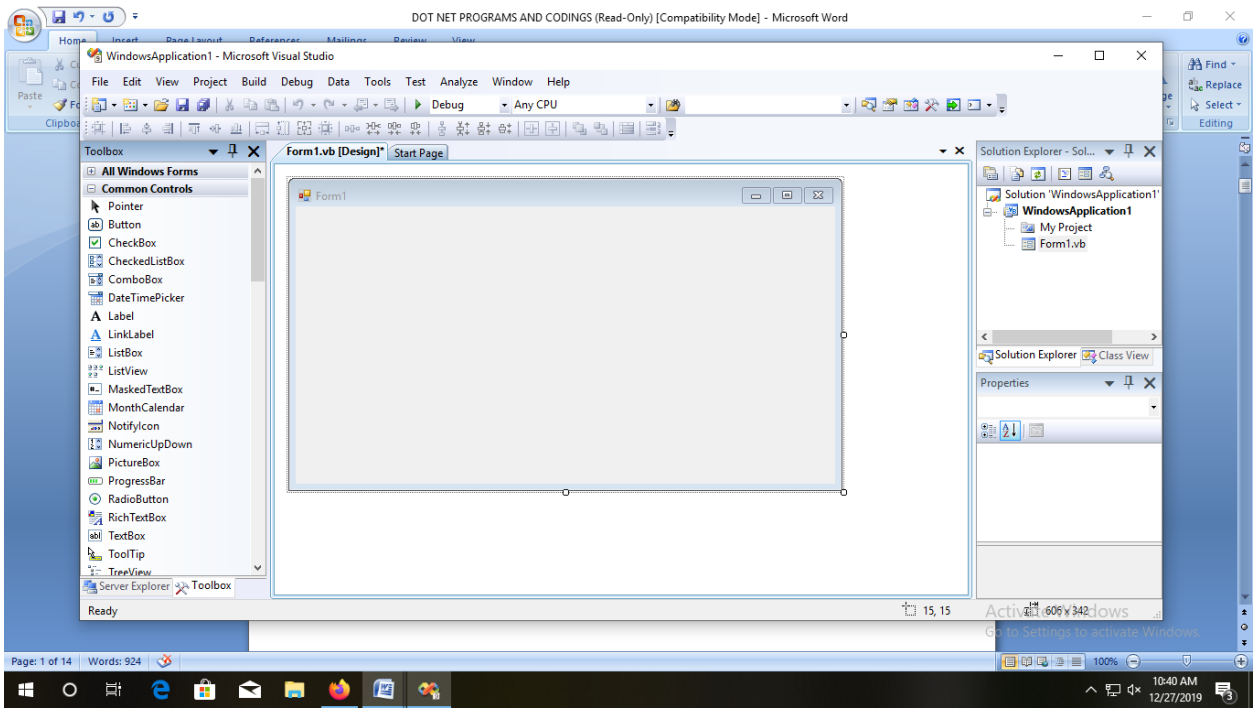
PROCEDURE:

STEP 1: Start the process by doule clicking on Microsoft visual studio 2008 icon.

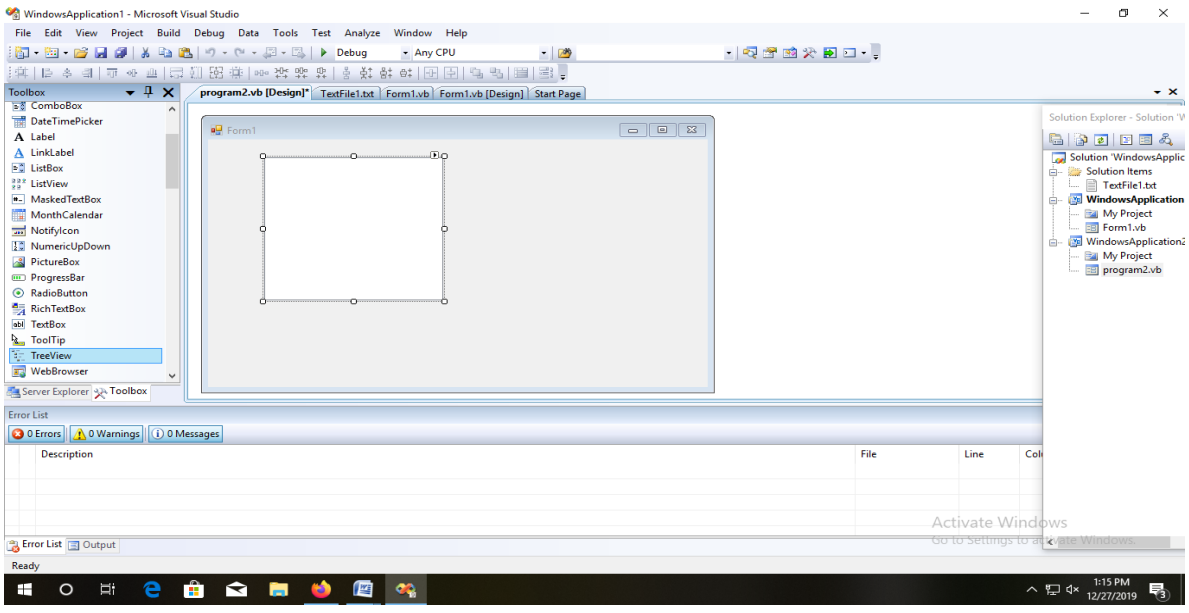
STEP 2: Select File → New→ Project.



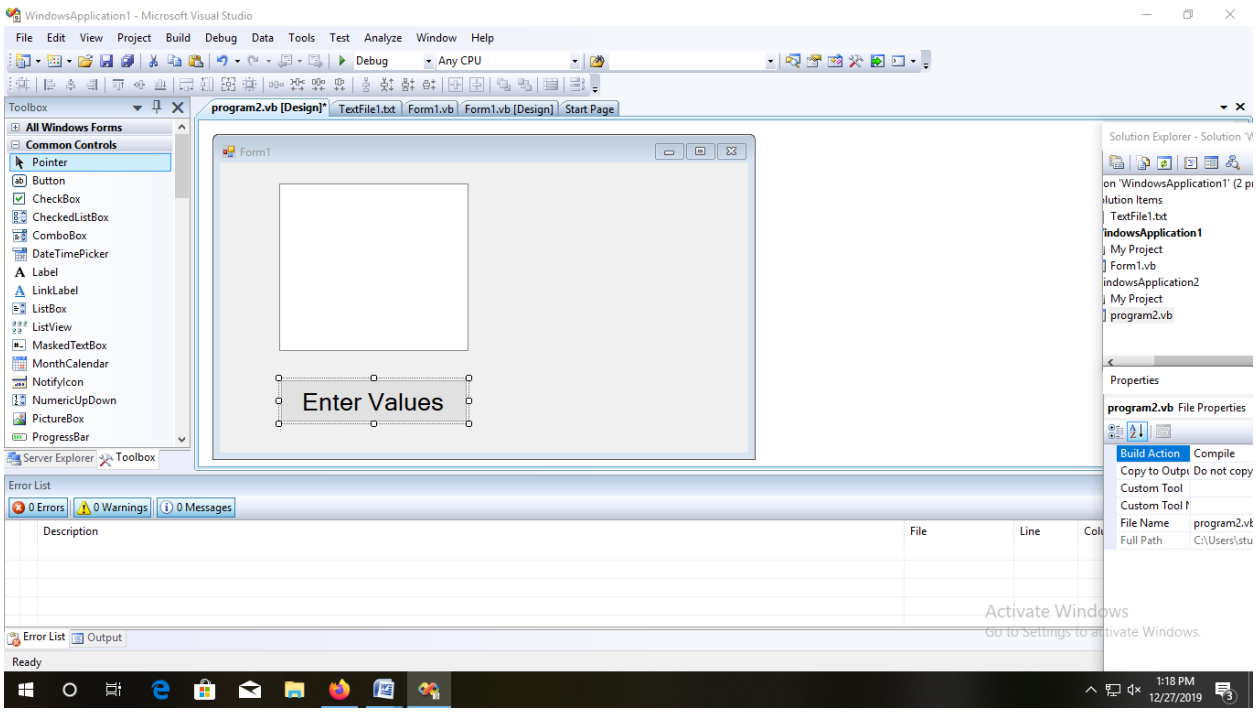
STEP 3: Then the new form will be opened.



STEP 4: Left side of Microsoft visual studio 2008 window contains toolbox.From the tool box add a Treeview to the form1.



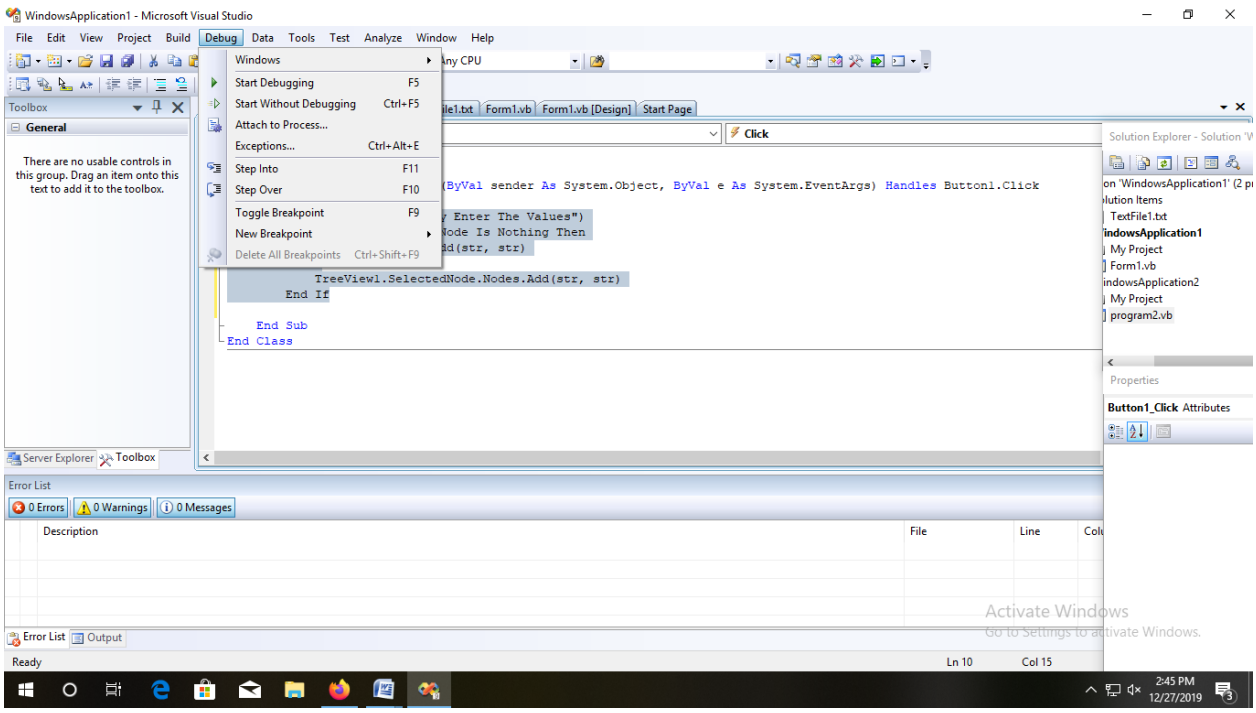
STEP 5: Also add a Button, Right side of Microsoft visual studio 2008 window contains properties window, in that give the caption as of the Button as “Enter values”(Text property).



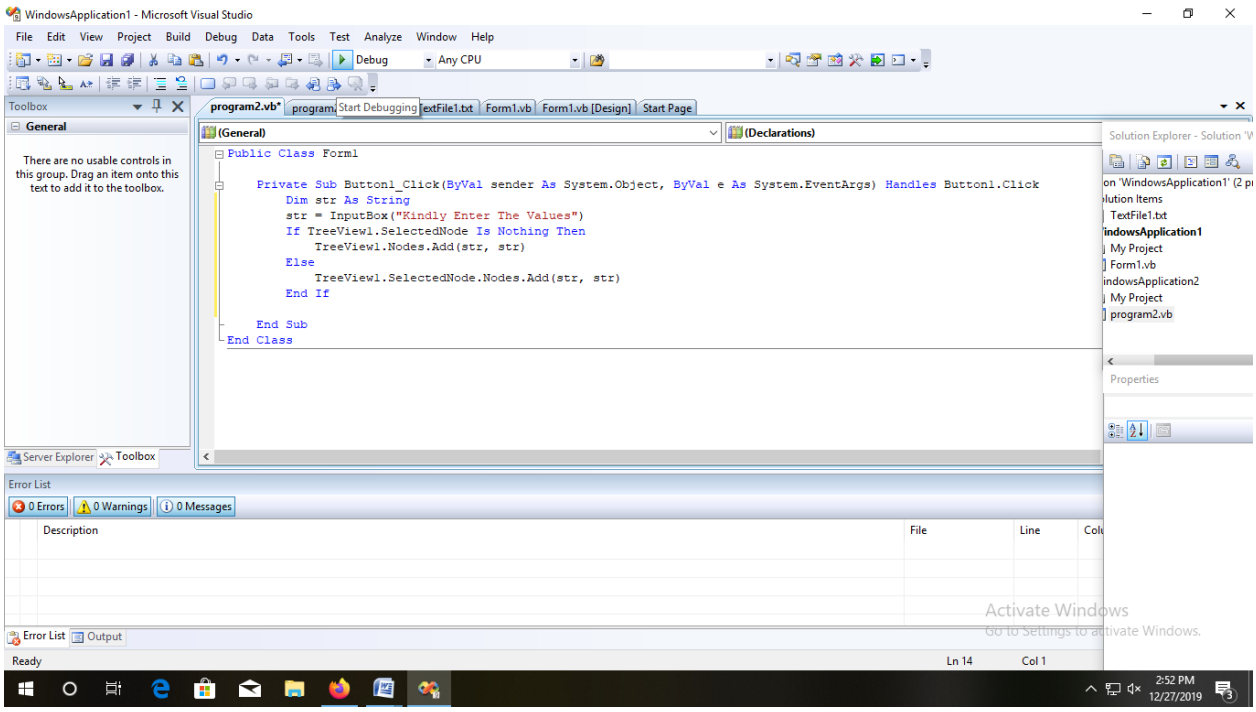
STEP 6: Double-click on the button (Enter Values), then type the following code to add the items to tree view which is typed in the Windows application2.

```
Dim str As String

    str = InputBox("Kindly Enter The Values")

    If TreeView1.SelectedNode Is Nothing Then

       TreeView1.Nodes.Add(str, str)

    Else

       TreeView1.SelectedNode.Nodes.Add(str, str)

    End If
```

STEP 7: Run the program by clicking on the Debug menu⟶ Start Debugging or press F5 button.

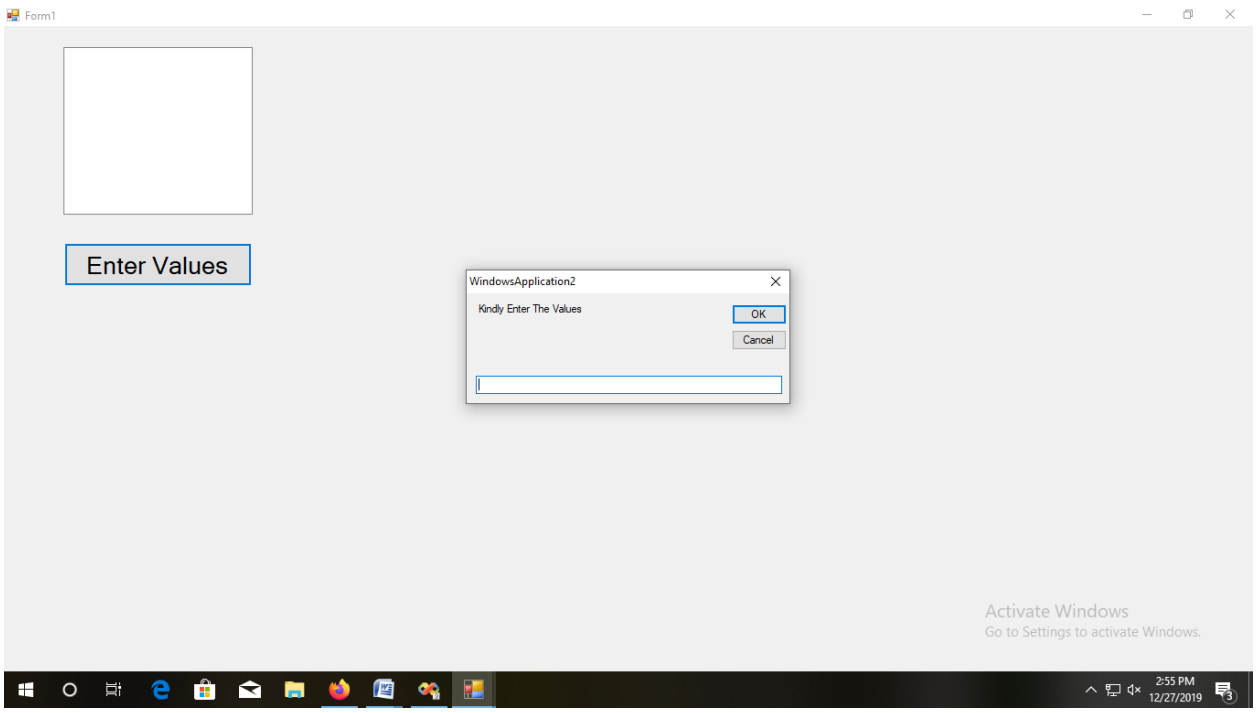


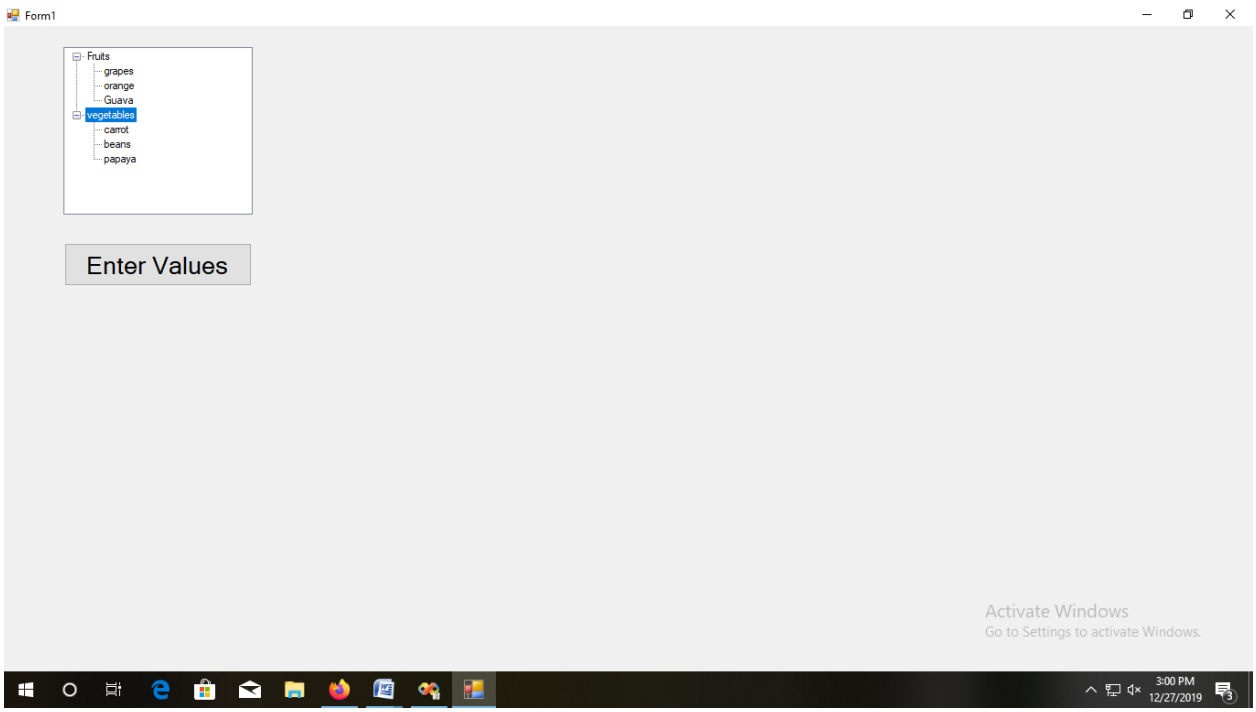
STEP 8: Else double click on Start Debugging icon on the toolbar



OUTPUT

Click on the Enter values button, types the items to tree view. Then click on the OK button.





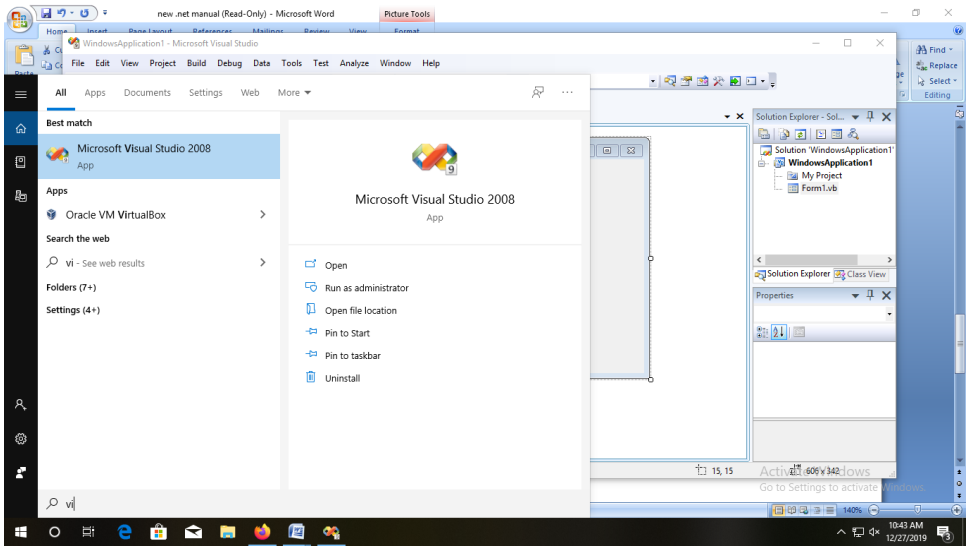
PROGRAM 3:

Create a VB .Net program to handle user defined Exceptions.

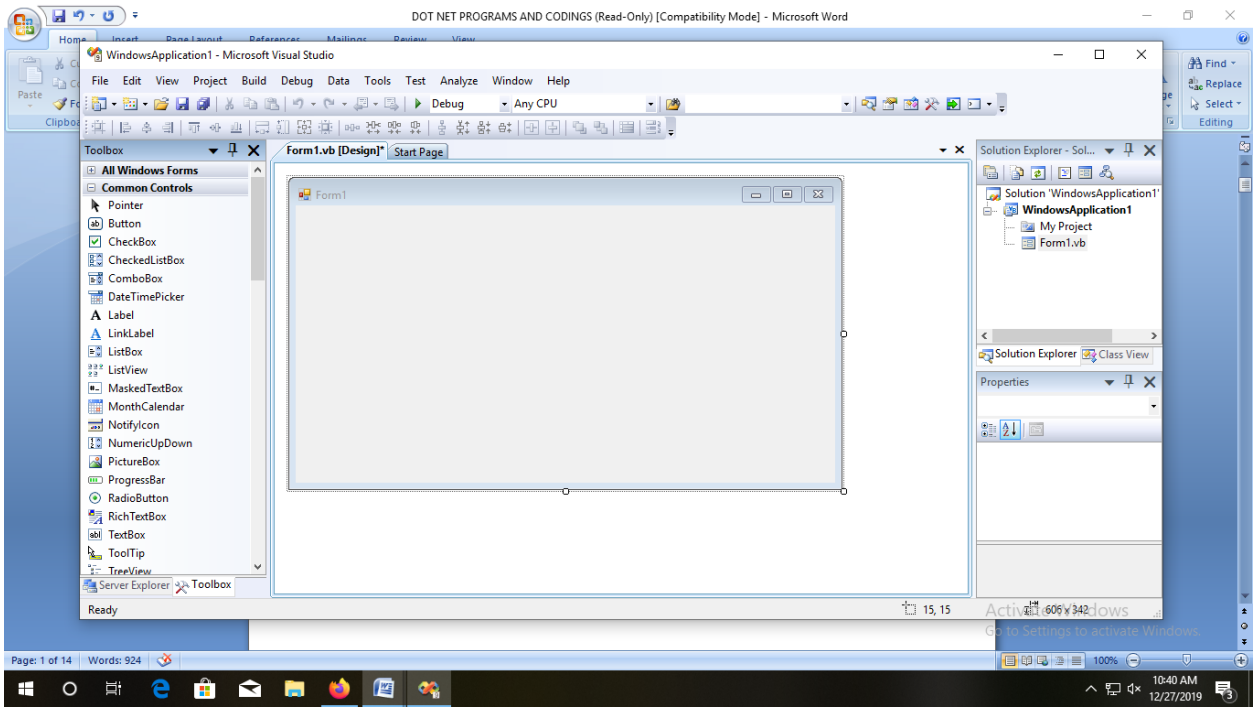
PROCEDURE:

STEP 1: Start the process by doule clicking on Microsoft visual studio 2008 icon.

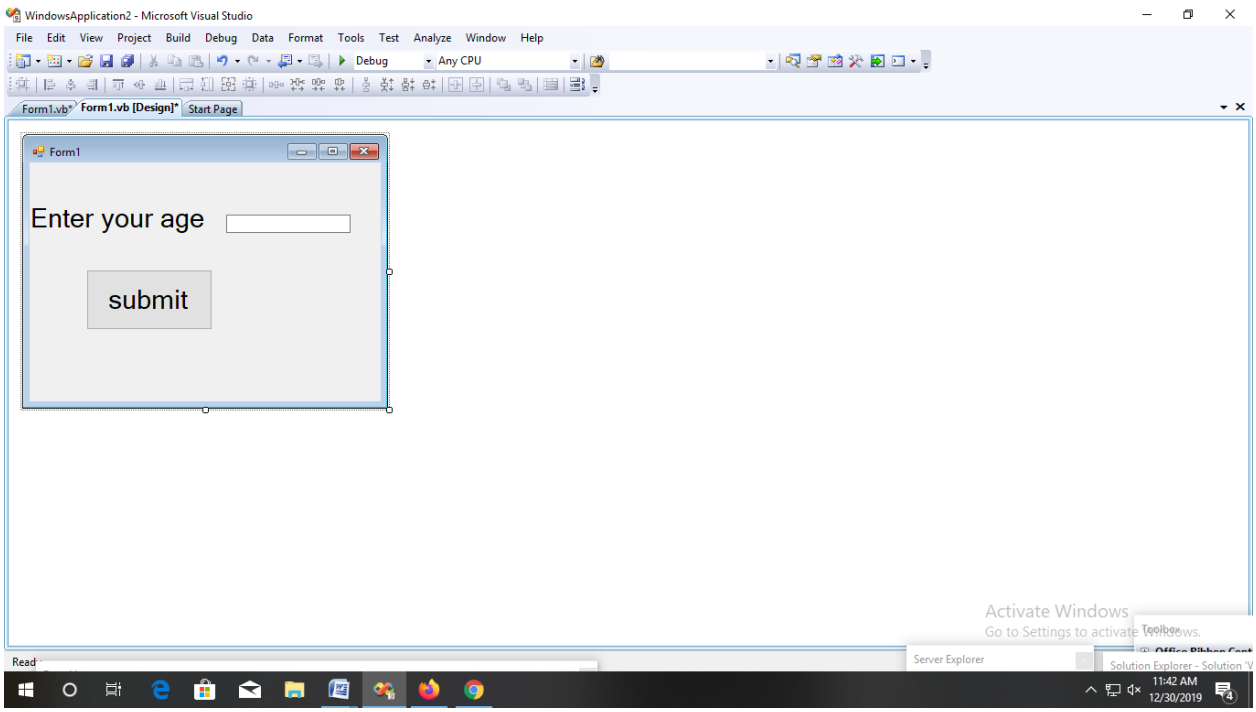
STEP 2: Select→ File → New Project.



STEP 3: Then the new form will be opened.

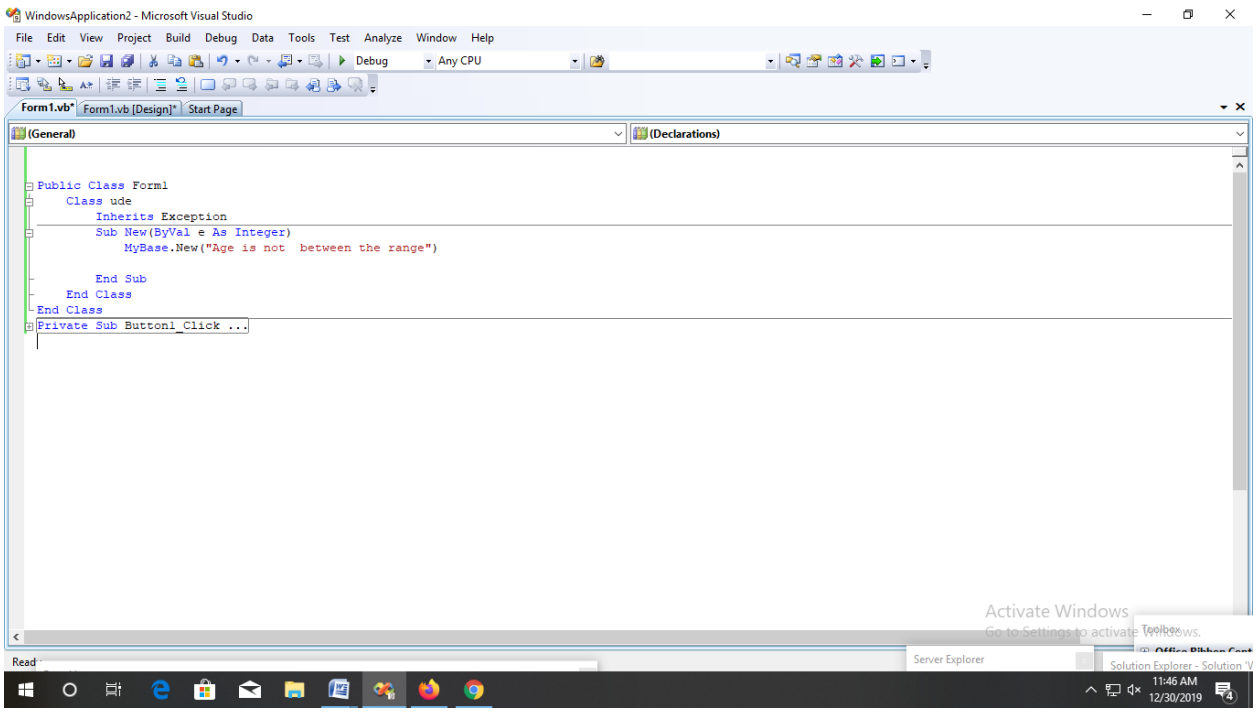


STEP 4: Left side of Microsoft visual studio 2008 window contains toolbox.From the tool box add a label and name it as “Enter your age” to the form1. Also, add a textbox and button named “Submit” to the form1.



STEP 5: Type the following code in form1.

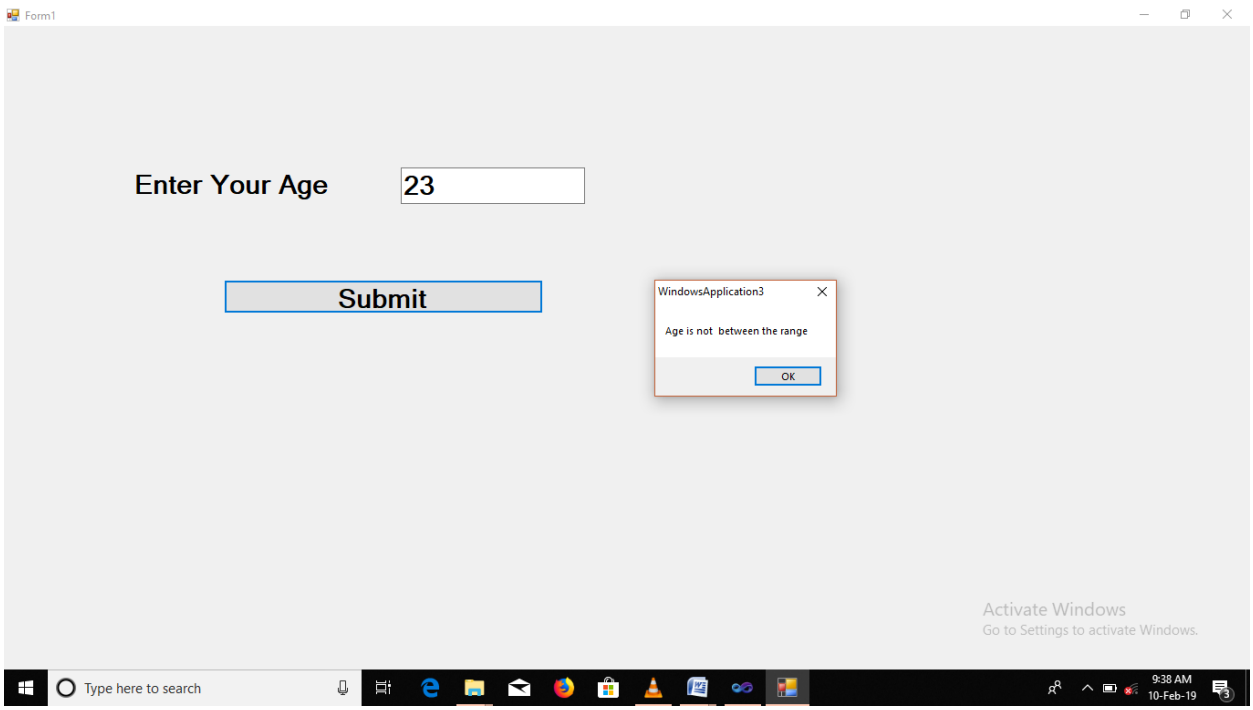
```
Public Class Form1

    Class ude // declaring a class

        Inherits Exception // project that inherits from the built-in class System

        Sub New(ByVal e As Integer) // passing a copy of a variable to your Subroutine

            MyBase.New("Age is not  between the range")// call a base class constructor from a derived class

        End Sub // End of Subroutine

    End Class // End of class
```



STEP 6: Double click on the Submit button and type the following code:

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

    Try

        If (Val(TextBox1.Text) >= 18 And Val(TextBox1.Text) <= 21) Then // condition to check the value entered in the text box

        Else

            Throw New ude(Val(TextBox1.Text)) // if the inputted value is greater than 18 it throws an error

        End If

    Catch ee As ude // catch the error with message

        MsgBox(ee.Message)

    End Try

End Sub
```

Output



Program 4

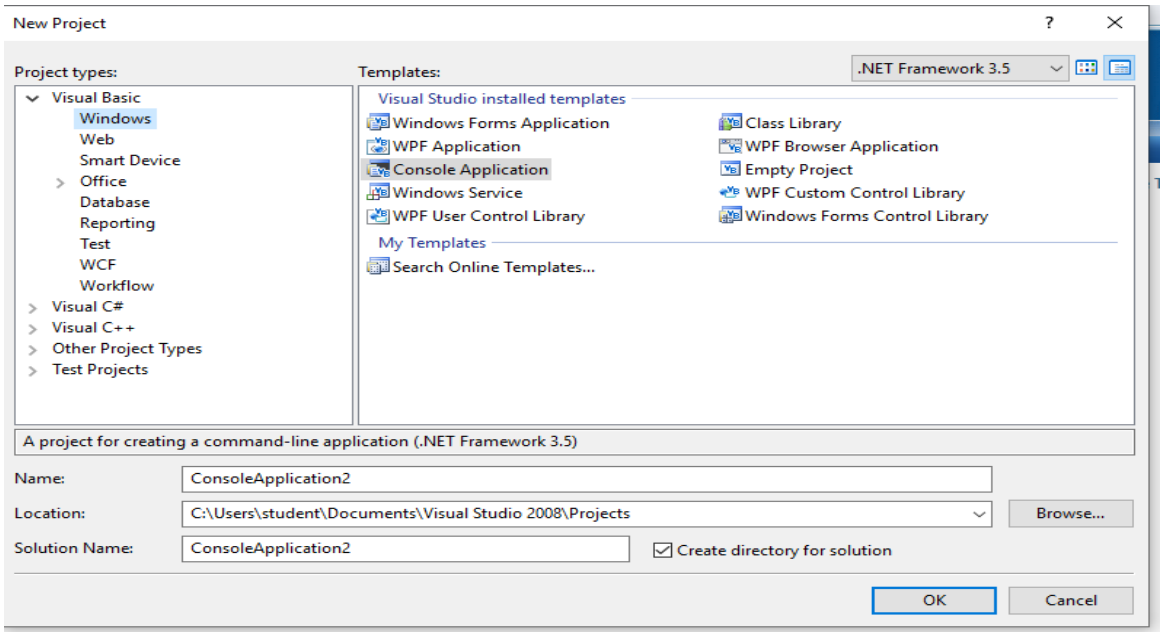
Create a VB .Net program for Employee details to read and display the data using constructors and member functions.

Procedure:

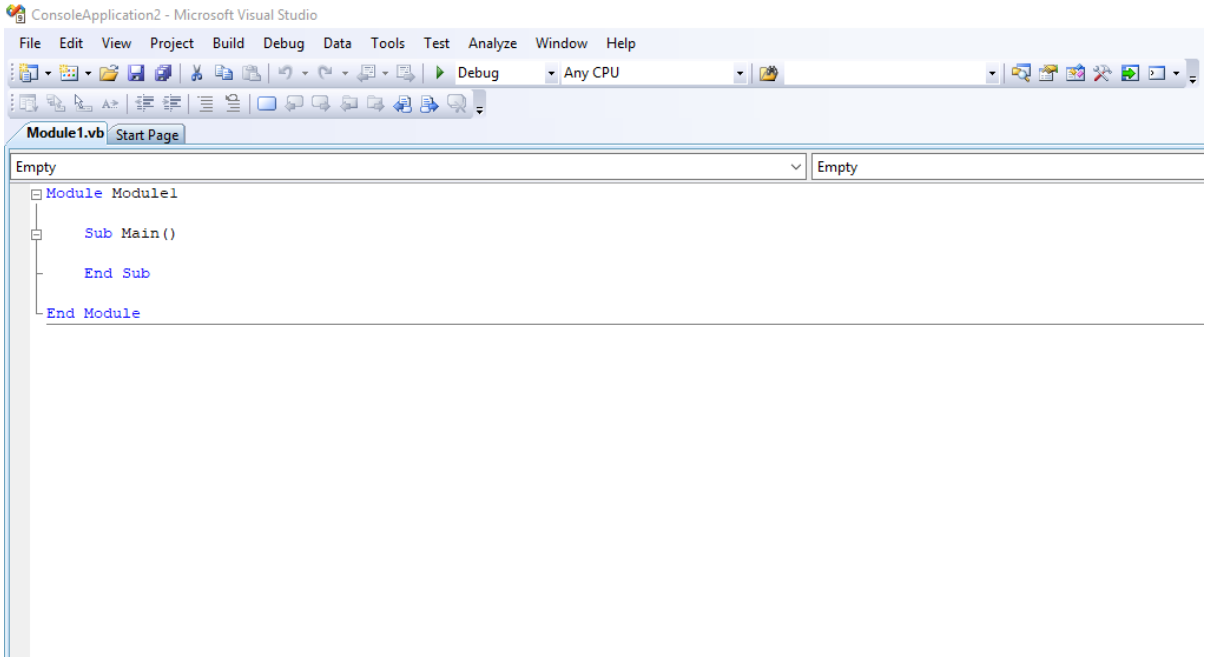
Step1: Start →All Programs→Microsoft Visual Studio2008→ Microsoft Visual Studio2008

Step2: To start new project select File→New→Project.

Step3: In the New Project Dialog box, Select Windows under **Project types**, Console Application under **Templates.**



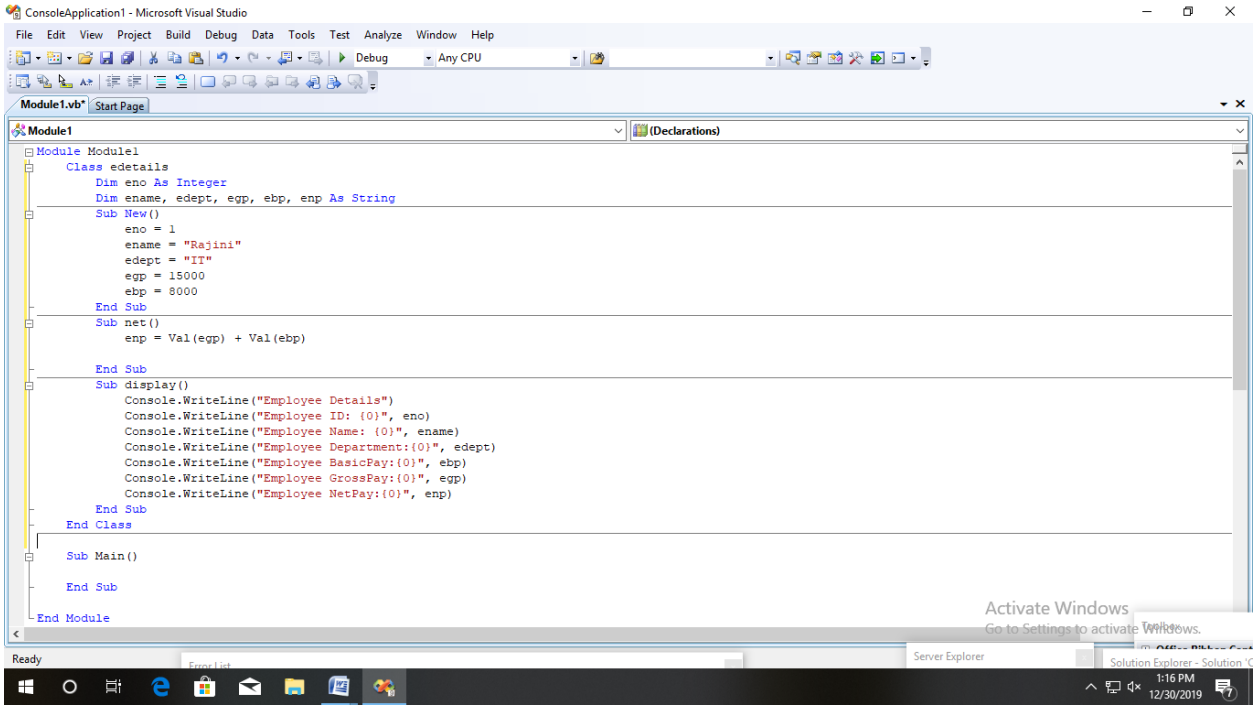
Step4: Console application window will be opened.



Step5: In the Module Module1, type the following code:

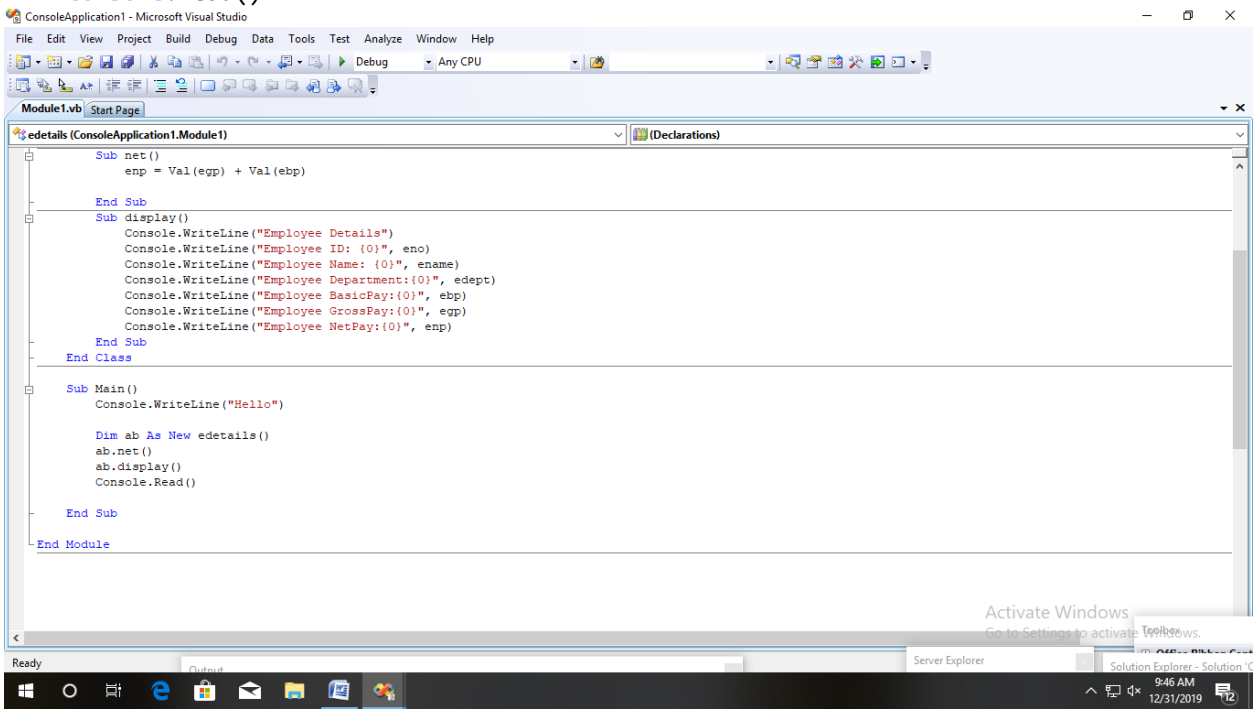
```
Module Module1

Class edetails   // Name of the class

Dim eno As Integer // Declaring eno variable names of Integer data type
```

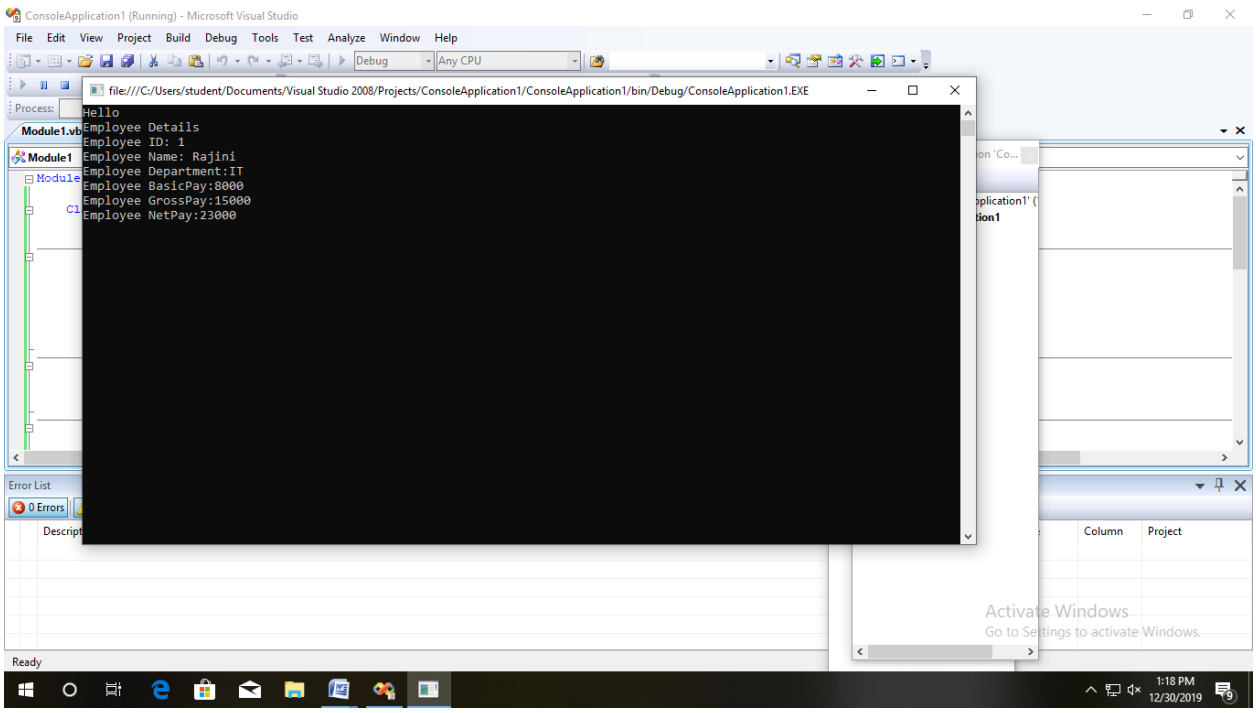
```
Dim ename, edept, egp, ebp, enp As String // Declaring ename, edept, egp, ebp, enp variable names of String data type

Sub New() // constructor of the class edetails

// Assigning values to the variables.

eno = 1

ename = "Rajini"

edept = "IT"

egp = 15000

ebp = 8000

End Sub

Sub net() // It calculates the net pay and then returns control to the calling code

enp = Val(egp) + Val(ebp)

End Sub

// Displays employee details

Sub display()

// Writes the text representation of the items specified within double quotes

Console.WriteLine("Employee Details")

Console.WriteLine("Employee ID: {0}", eno)

Console.WriteLine("Employee Name: {0}", ename)

Console.WriteLine("Employee Department:{0}", edept)

Console.WriteLine("Employee BasicPay:{0}", ebp)

Console.WriteLine("Employee GrossPay:{0}", egp)

Console.WriteLine("Employee NetPay:{0}", enp)

End Sub

End Class
```



Step6: In the Sub Main() procedure ,type the following code ,

```
Console.WriteLine("Hello")
Dim ab As New edetails()
ab.net()
ab.display()
Console.Read()
```





Program 5

Create an application in VB .Net for student information database and perform the following operations:

i. i Addition

ii. Deletion

iii. iii.Updation

b. Design a website using web form to show the current date and time when a user clicks
c. the button.

Procedure:

Design VB.net application to illustrate various events (Form Load, Mouse Down, Click, Key Down).

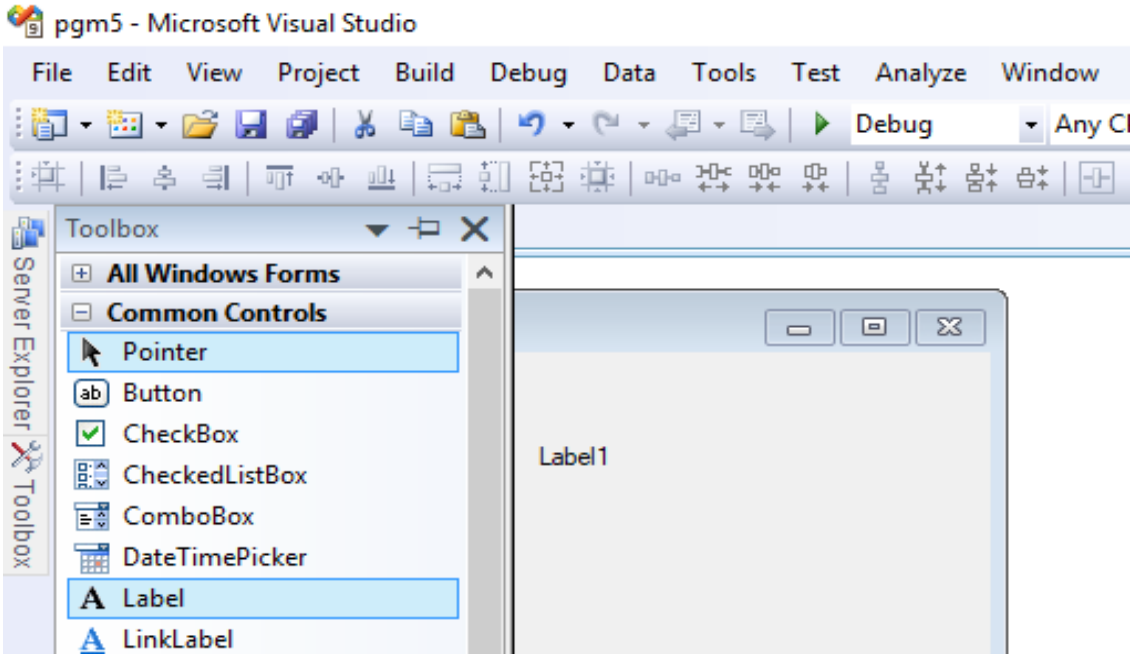
Step1: Start →All Programs→Microsoft Visual Studio2008→ Microsoft Visual Studio2008

Step2: To start new project select File→New→Project.

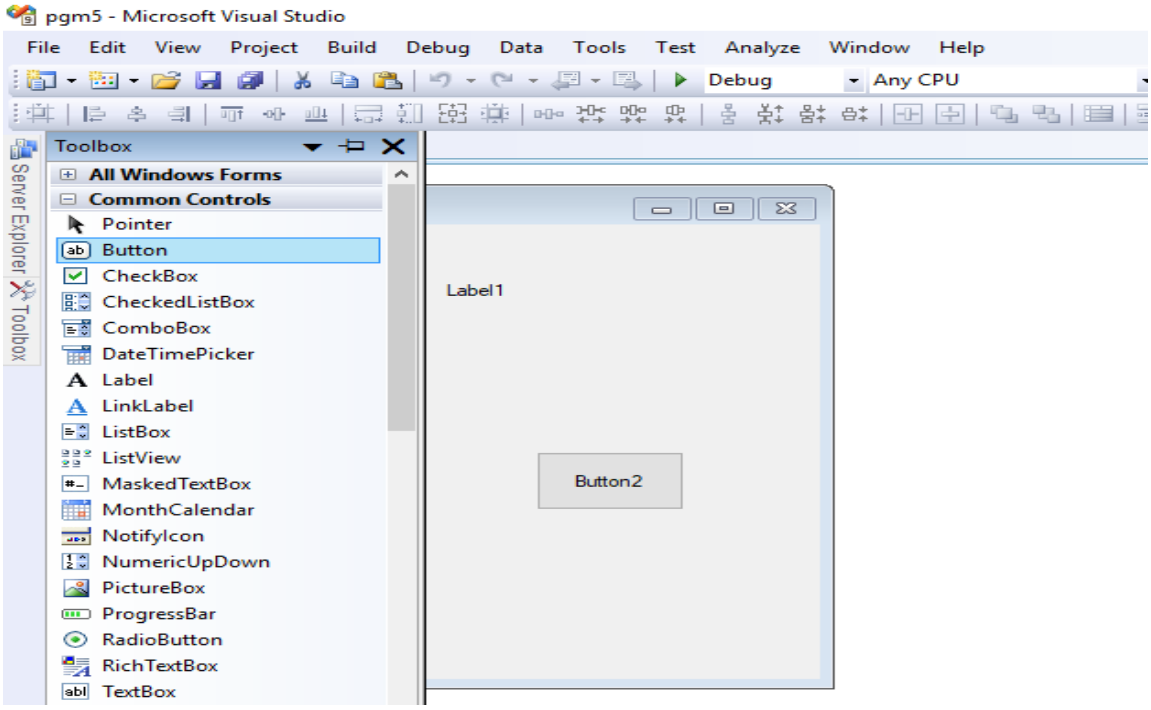
Step3: In the New Project Dialog box, Select Visual Basic under **Project types**, Windows Forms Application under **Templates.**

Step4: Give Program name as Key _Mouse Events(any relevant name) in **Name Text Box** and give **OK.**

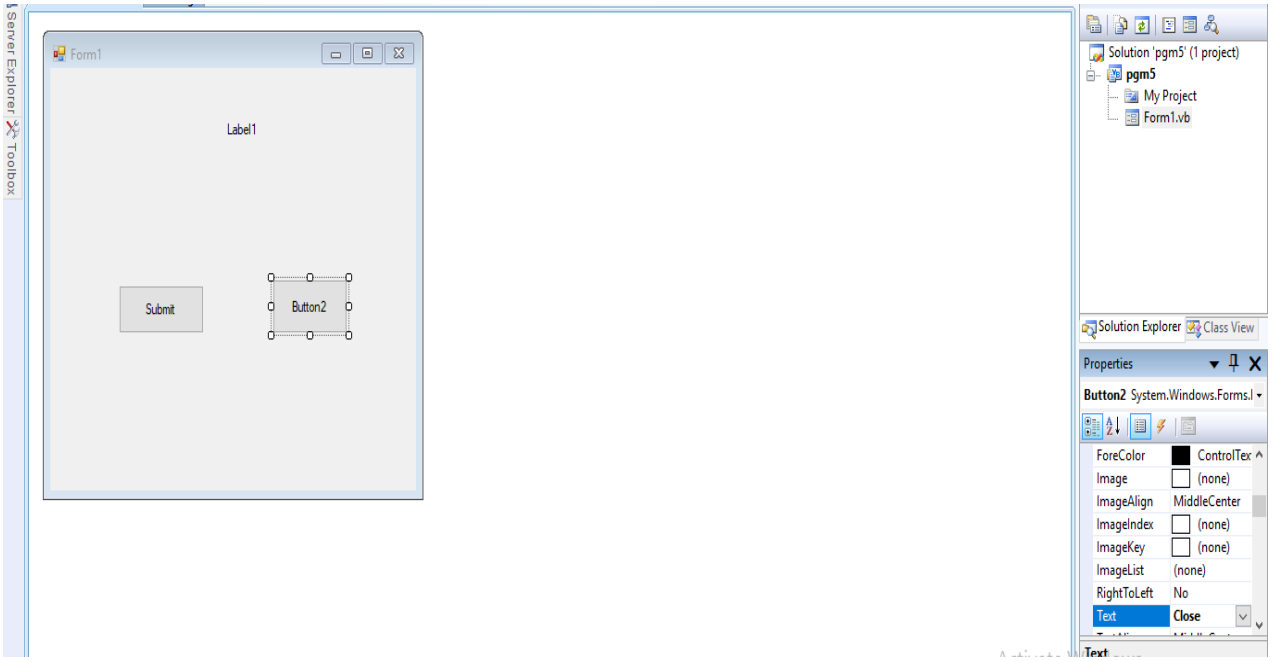
Step 5: Add a Label control from Tool box available in the left side.



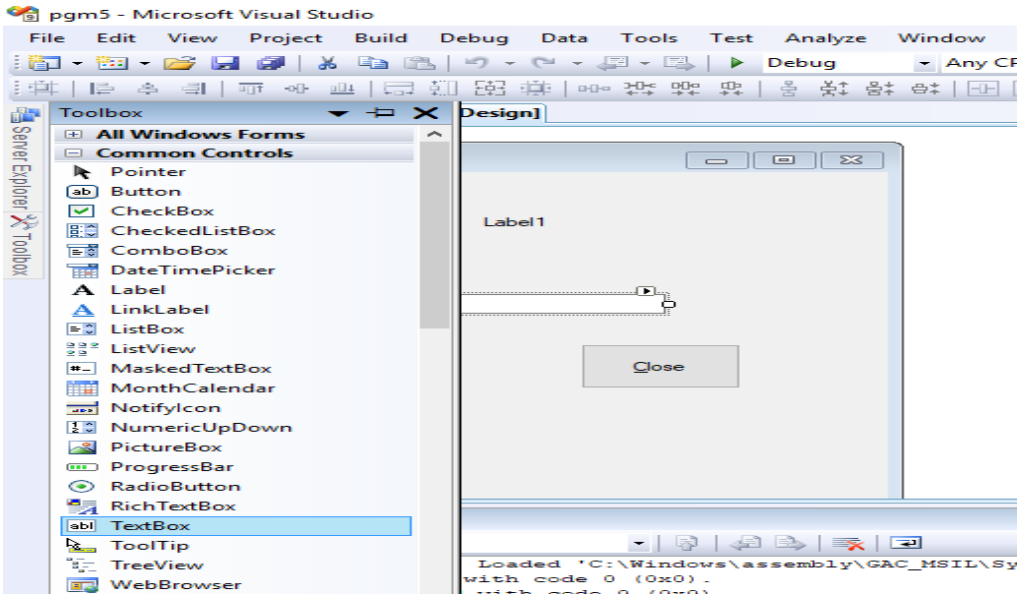
Step 6: Add two Button controls from Tool box available in the left side.



Step 7: Change the captions of Button1 and Button2 as Submit and Close using Properties Window (Text property) displayed in the right side of the IDE Window.



Step 8: Add one Text Box from Toolbox.



Step 9: Double click the form and add the following code in the Form Load event procedure.

```
Label1.Text = "Event: Form Loaded"
Label1.AutoSize = True
```

Add the following code in the Button1 Click event procedure.

```
Label1.Text = "Event: Button Clicked"
Label1.AutoSize = True
```

Add the following code in the Button1 Mouse Down event procedure.

```
Label1.Text = "Event: Mouse Down"
Label1.AutoSize = True
```

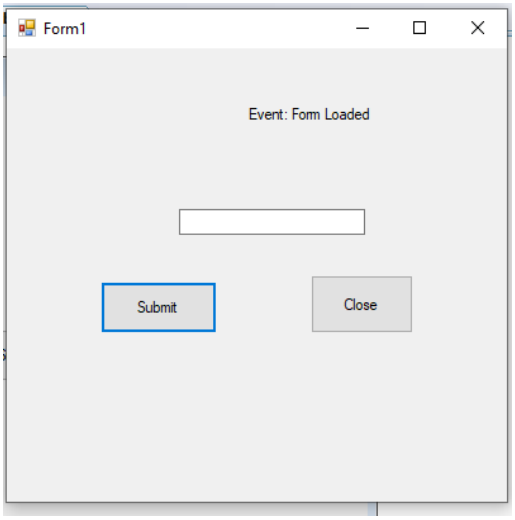
Add the following code in the TextBox1 TextChanged event procedure.

```
Label1.Text = "Event : Key Down"

Label1.AutoSize = True
```

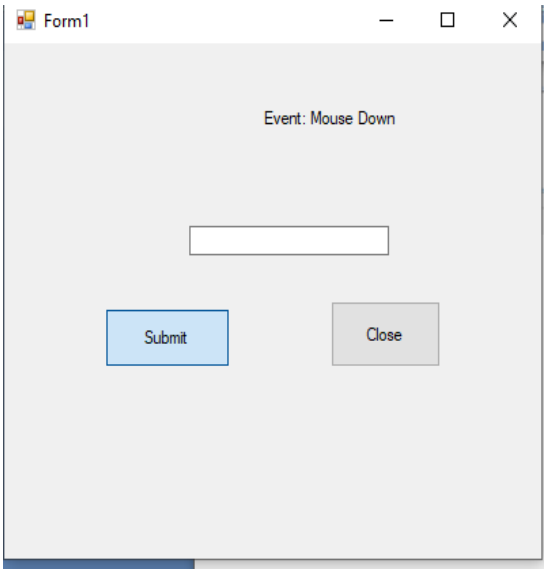
Step 10: Run the program by pressing **'F5' key** or by clicking on **Run** button on the standard tool bar or by selecting **Debug→Start Debugging option.**

OUTPUT

Form Load event

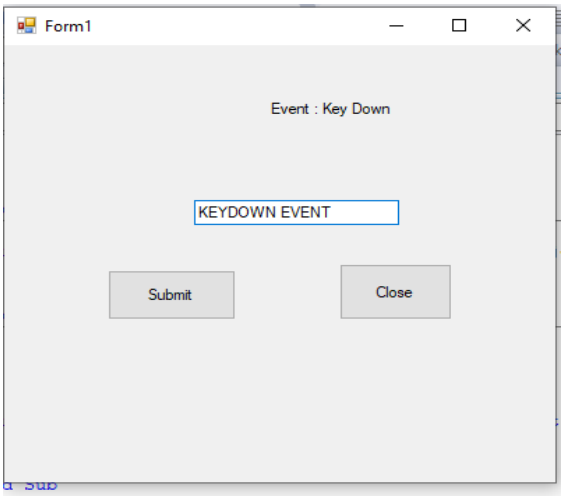


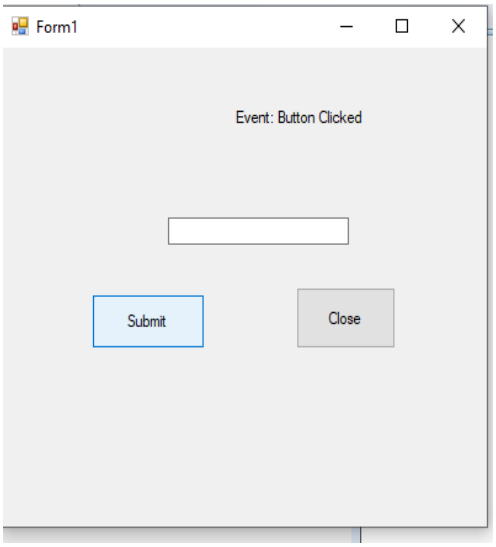
Mouse Down Event



Key Down Event

Click Event





Program 6

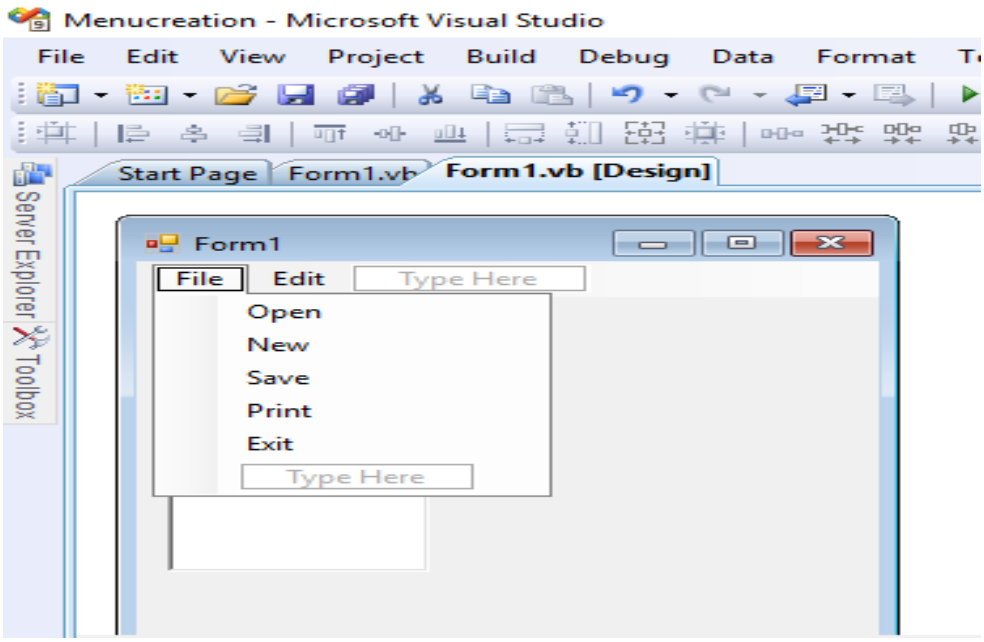
Design VB.net application to illustrate various events (Form Load, Mouse Down, Click, Key Down).

Procedure:

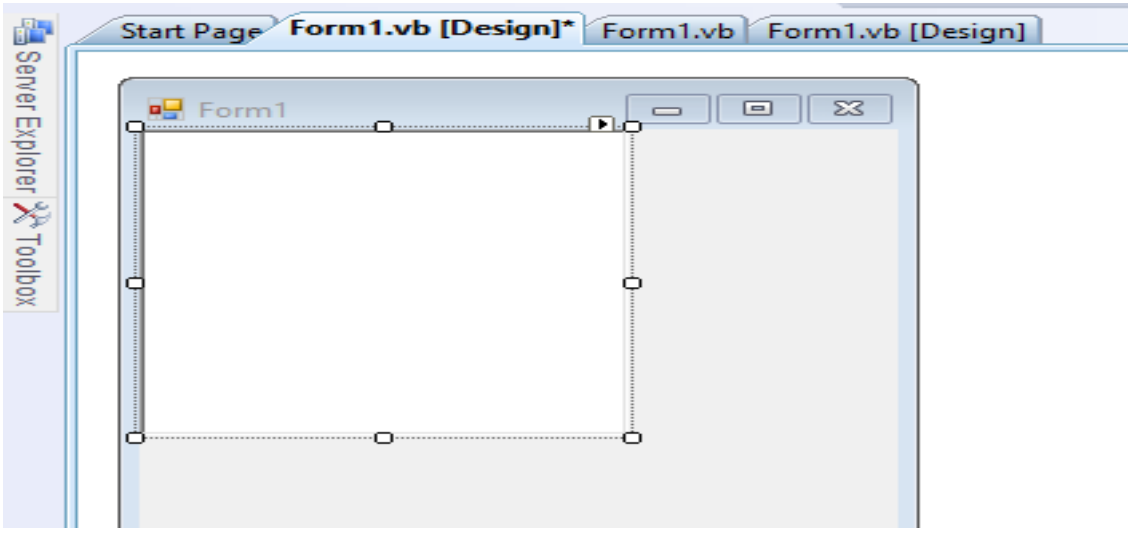
Step1: Start →All Programs→Microsoft Visual Studio2008→ Microsoft Visual Studio2008

Step2: To start new project select File→New→Project.

Step3: Drag and drop or double click on a Menu Strip control from Tool Box to add it to the form. Add the menu items, New, Open, Save, Print and Exit under File menu and Cut, Copy and Paste ,Find and Undo under Edit menu.



Step 4: Add a Rich Text Box control on the form.



Step5: Double click the menu items and add following codes in the Click event of all the menu items .

CODING

```
Dim S As String
Private Sub OPENToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles OPENToolStripMenuItem.Click
        Me.OpenFileDialog1.ShowDialog()
        Me.OpenFileDialog1.Filter = "*.TXT|*.TXT"
        Me.RichTextBox1.LoadFile(Me.OpenFileDialog1.FileName,
                RichTextBoxStreamType.PlainText)
End Sub

Private Sub NEWToolStripMenuItem1_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles NEWToolStripMenuItem1.Click
        Me.RichTextBox1.Text = ""
End Sub
```

```
Private Sub SAVEToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles SAVEToolStripMenuItem.Click
        Me.SaveFileDialog1.ShowDialog()
        Me.RichTextBox1.SaveFile(Me.SaveFileDialog1.FileName,
                RichTextBoxStreamType.PlainText)
End Sub

Private Sub PRINTToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles PRINTToolStripMenuItem.Click
        Me.PrintDialog1.ShowDialog()
End Sub

Private Sub EXITToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles EXITToolStripMenuItem.Click
        Me.Close()
End Sub

Private Sub CUTToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles CUTToolStripMenuItem.Click
        S = Me.RichTextBox1.SelectedText
        Me.RichTextBox1.SelectedText = ""
End Sub

Private Sub COPYToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As
System.EventArgs) Handles COPYToolStripMenuItem.Click
        S = Me.RichTextBox1.SelectedText
End Sub
```

Private Sub PASTEToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles PASTEToolStripMenuItem.Click

Me.RichTextBox1.SelectedText = S

End Sub

Private Sub FINDToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles FINDToolStripMenuItem.Click

Me.RichTextBox1.Find(InputBox("ENTER A STIRING TO FIND"))

End Sub

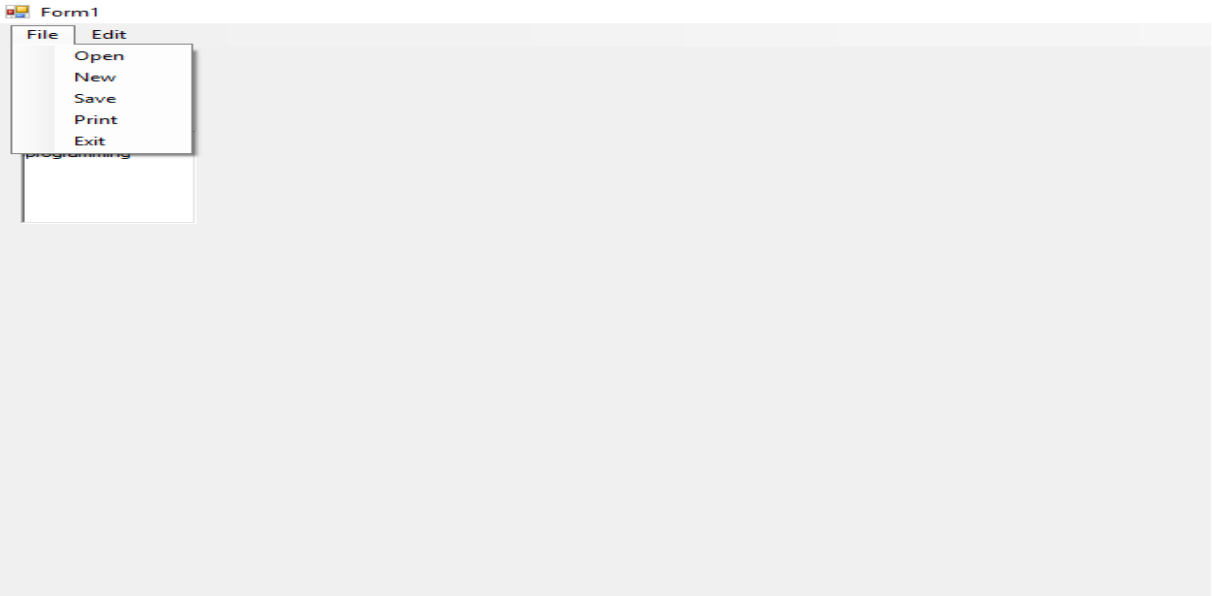
Private Sub UNDOToolStripMenuItem_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles UNDOToolStripMenuItem.Click

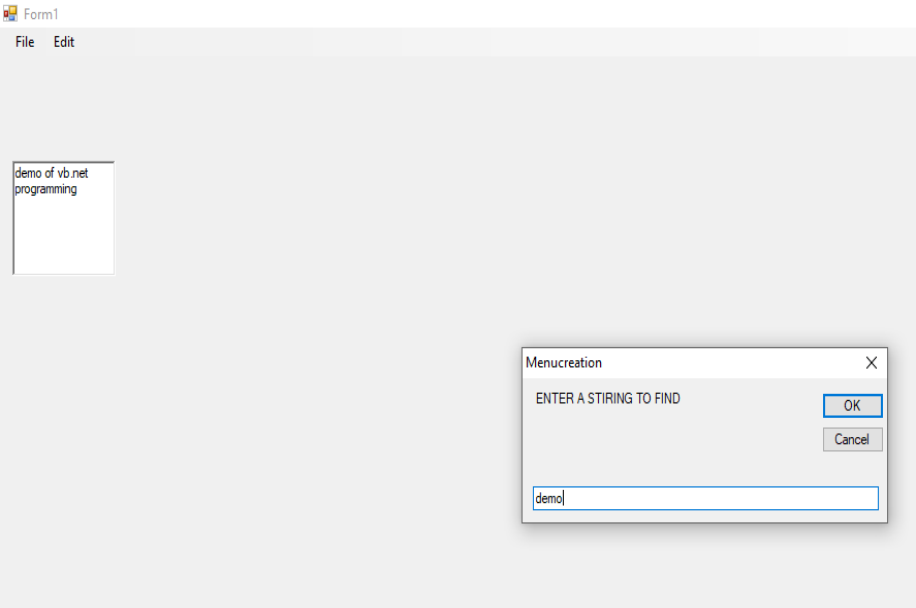
Me.RichTextBox1.Undo()

End Sub

Step 6: Run the program by pressing **'F5' key** or by clicking on **Run** button on the standard tool bar or by selecting **Debug→Start Debugging option.**

OUTPUT



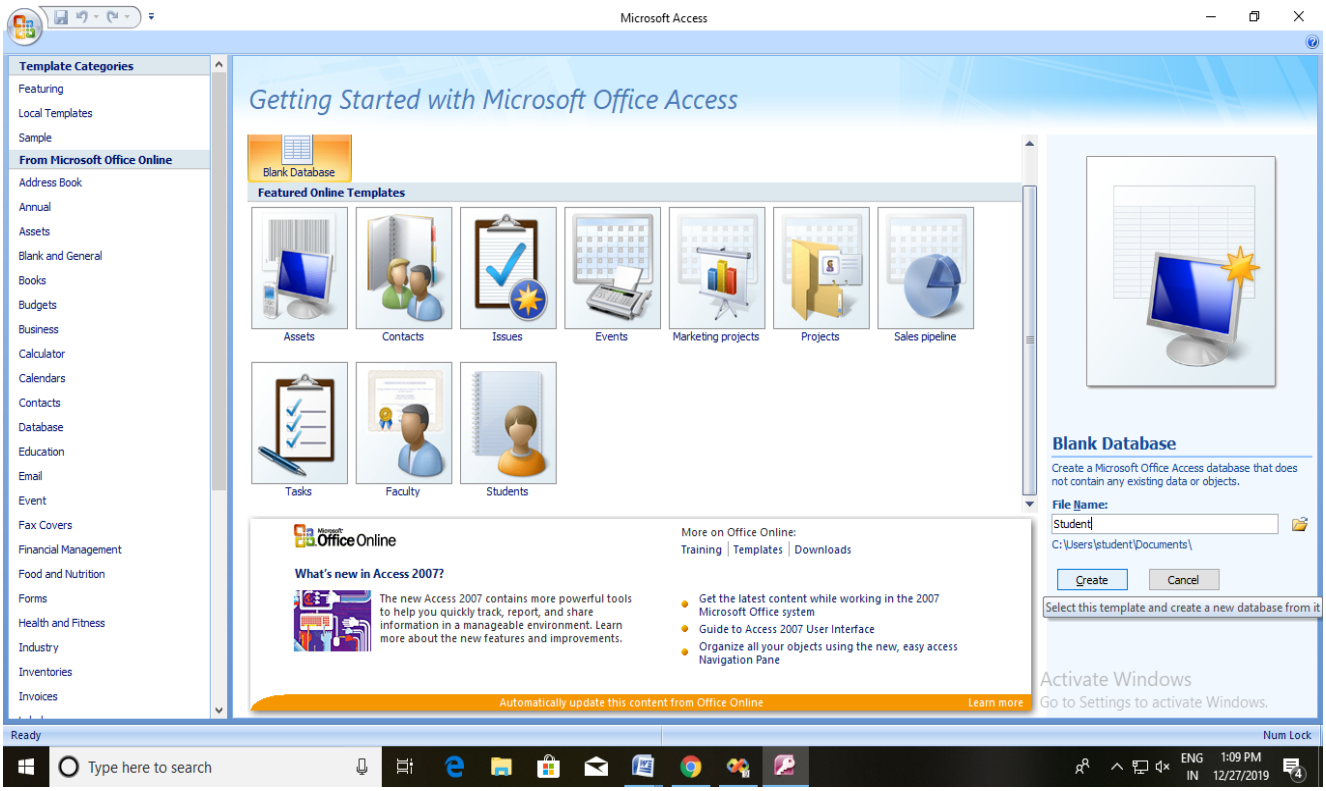


PROGRAM 7:

Design VB.net application for Student information and perform I) Insert ii) Update and iii) Update operations.

Procedure:

- Steps to create Student database in Micro Soft Access.
- To start MSAccess select, Start→All Programs→Micro Soft Access.
- Select Black Database and give Filename as Student and click Create button.
- In the new database created, design a table named student with relevant fields and add records.



Steps to design VB.net application:

Step1: Start →All Programs→Microsoft Visual Studio2008→ Microsoft Visual Studio2008

Step2: To start new project select File→New→Project.

Step3: Add Four Label controls and four Text Box controls on the form.

Add Four Button controls and change captions as Insert, Update, Delete and Clear respectively.

Step 4: Add the following coding in the respective buttons in the code window.

Code:

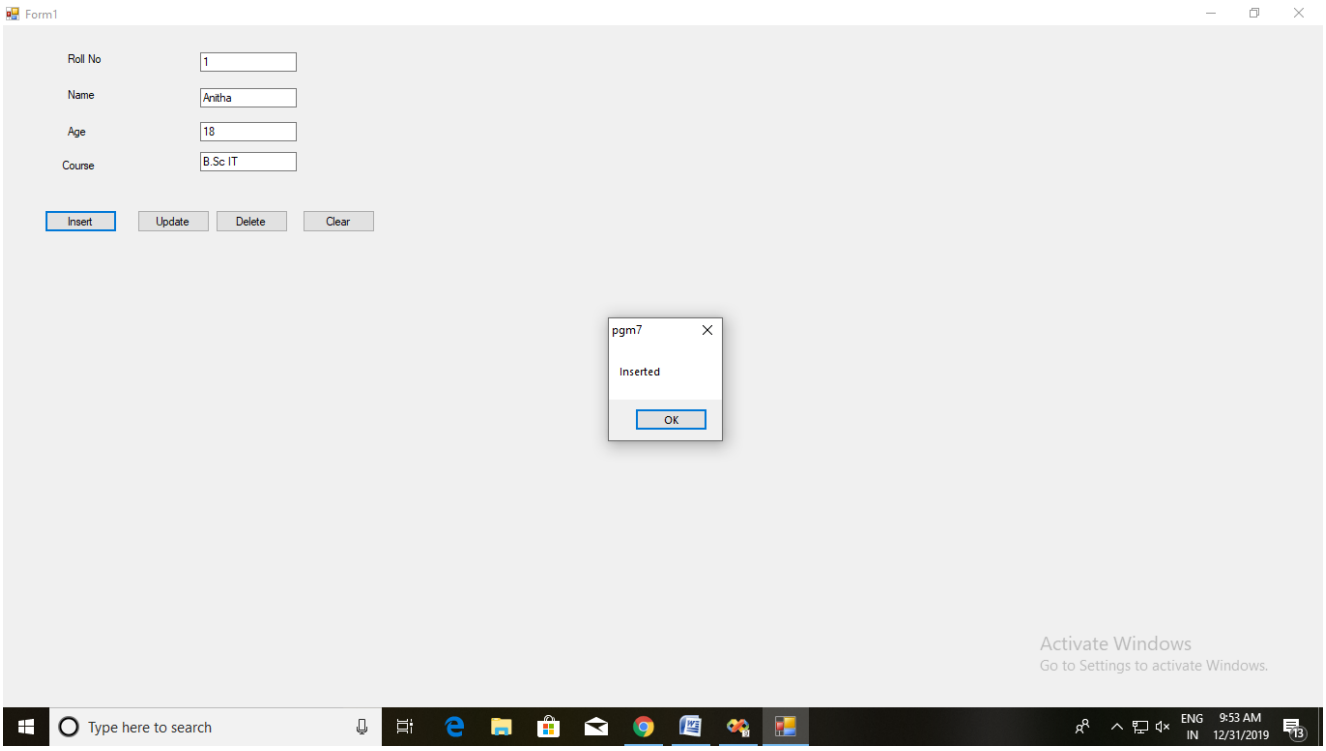
```
Imports System.Data.OleDb
Public Class Form1
    Dim connString As String
    Dim myconnection As OleDbConnection = New OleDbConnection
    Dim cmd As OleDbCommand
    Dim s As String
    Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles Button2.Click
        TextBox1.Clear()
        TextBox2.Clear()
        TextBox3.Clear()
```

```
        TextBox4.Clear()
    End Sub

    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles Button1.Click
        connString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\Users\home\Desktop\student.mdb"
        myconnection.ConnectionString = connString
        myconnection.Open()
        s = "insert into student values('" + TextBox1.Text + "','" + TextBox2.Text + "','" + TextBox3.Text
+ "','" + TextBox4.Text + "')"
        cmd = New OleDbCommand(s, myconnection)
        cmd.ExecuteNonQuery()
        MsgBox("Inserted")
        myconnection.Close()

    End Sub

    Private Sub Button3_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles Button3.Click
        connString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\Users\home\Desktop\student.mdb"
        myconnection.ConnectionString = connString
        myconnection.Open()
        s = "update student SET  Name= '" + TextBox2.Text + "', Course= '" + TextBox3.Text + "', Age
= '" + TextBox4.Text + "' where Rollno = " + TextBox1.Text + " "
        cmd = New OleDbCommand(s, myconnection)
        cmd.ExecuteNonQuery()
        MsgBox("Updated")
        myconnection.Close()
    End Sub

    Private Sub Button4_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
Handles Button4.Click
        connString = "Provider=Microsoft.Jet.OLEDB.4.0;Data
Source=C:\Users\home\Desktop\student.mdb"
        myconnection.ConnectionString = connString
        myconnection.Open()
        s = "delete from student where ID = " + TextBox1.Text + " "
        cmd = New OleDbCommand(s, myconnection)
        cmd.ExecuteNonQuery()
        MsgBox("Deleted")
        myconnection.Close()
    End Sub
End Class
```

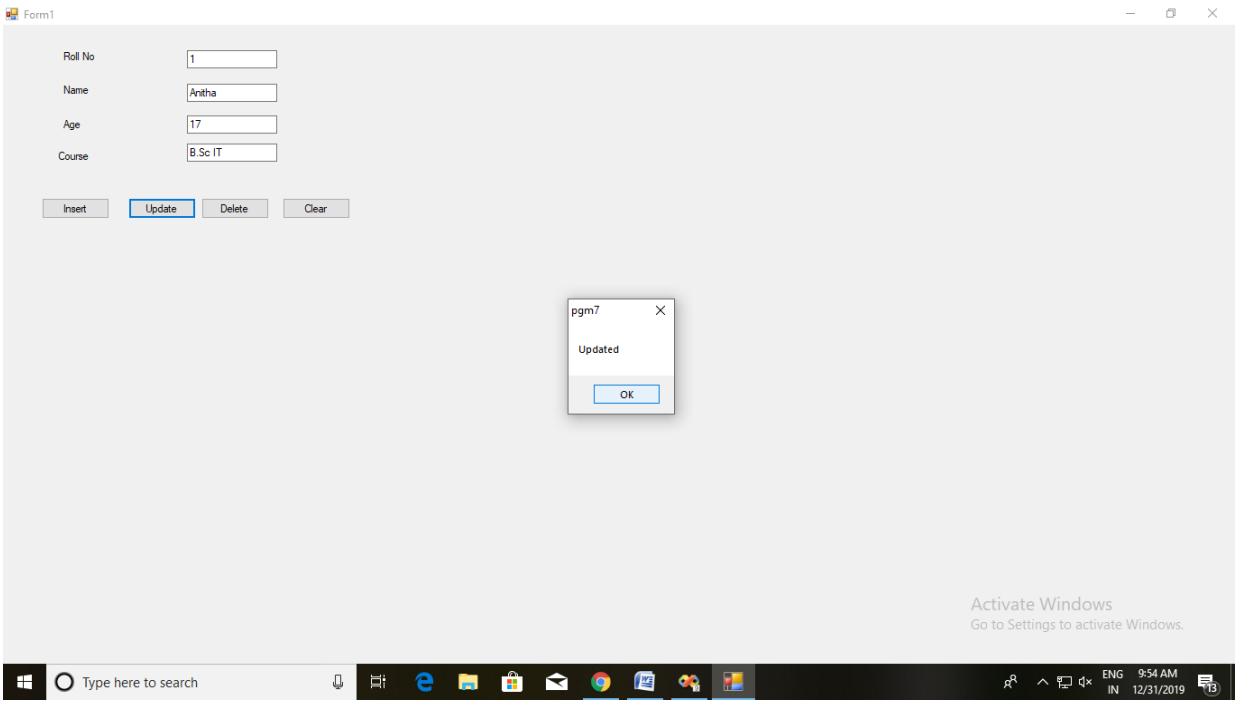
Step 5: Run the program by pressing **'F5' key** or by clicking on **Run** button on the standard tool bar or by selecting **Debug→Start Debugging option.**

OUTPUT

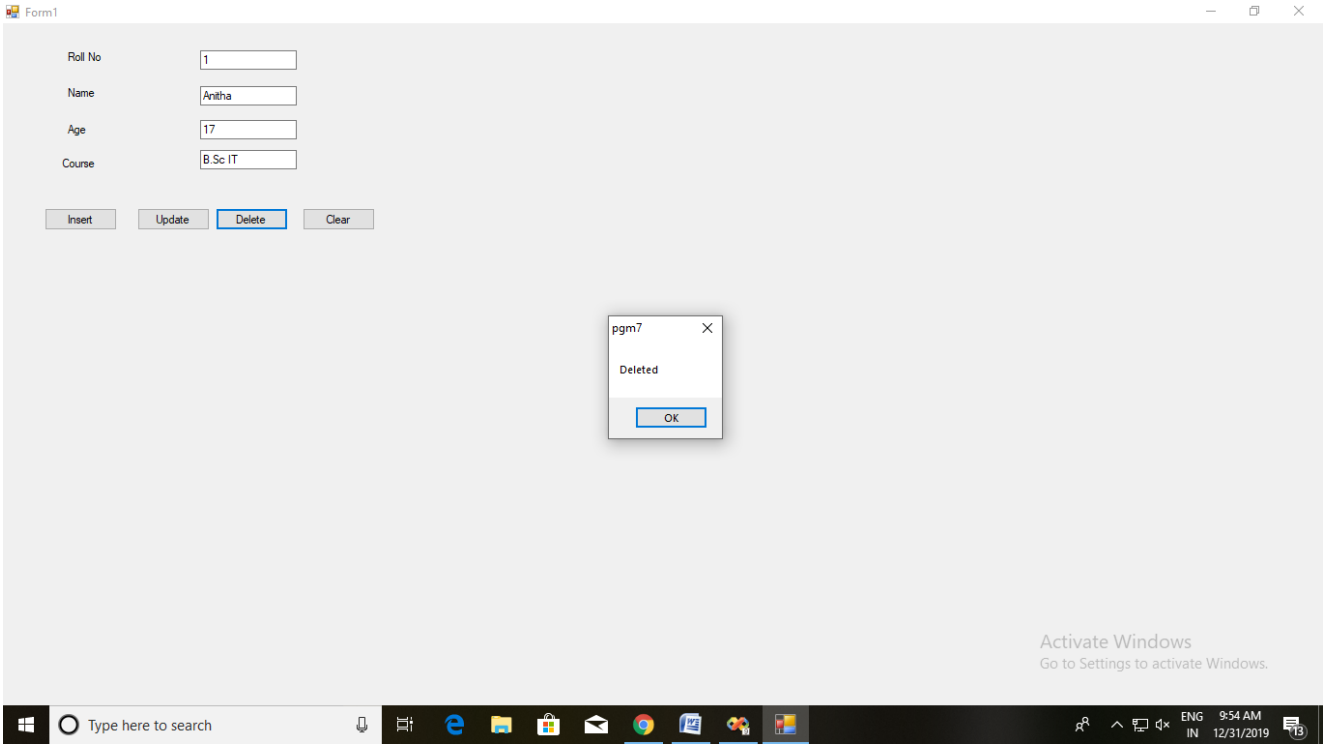
i) Inserting new record



ii) Updating records



iii) Deleting a record



Program 8

Create a website and display current date and time.

Procedure:

Step1: Start →All Programs→Microsoft Visual Studio2008→ Microsoft Visual Studio2008

Step2: To start new project select File→New→Website .

Step3: Select ASP.NET Website option.

Step4: Add three Label controls, one text box and one Button control.

Add the following code in the Button Click event procedure

```
Partial Class _Default
    Inherits System.Web.UI.Page

    Protected Sub Button1_Click(ByVal sender As Object, ByVal e As System.EventArgs) Handles
Button1.Click
        Label1.Text = "todays date :" & DateTime.Today
        Label2.Text = "current time " & TimeOfDay
        Label3.Text = "minute" & TimeOfDay.Minute
        Label4.Text = "Second" & TimeOfDay.Second

    End Sub
End Class
```

Step 5: Run the program by pressing **'F5' key** or by clicking on **Run** button on the standard tool bar or by selecting Debug→**Start Debugging option.**

OUTPUT