컴퓨터의 기초 (4)

(010.142.008)

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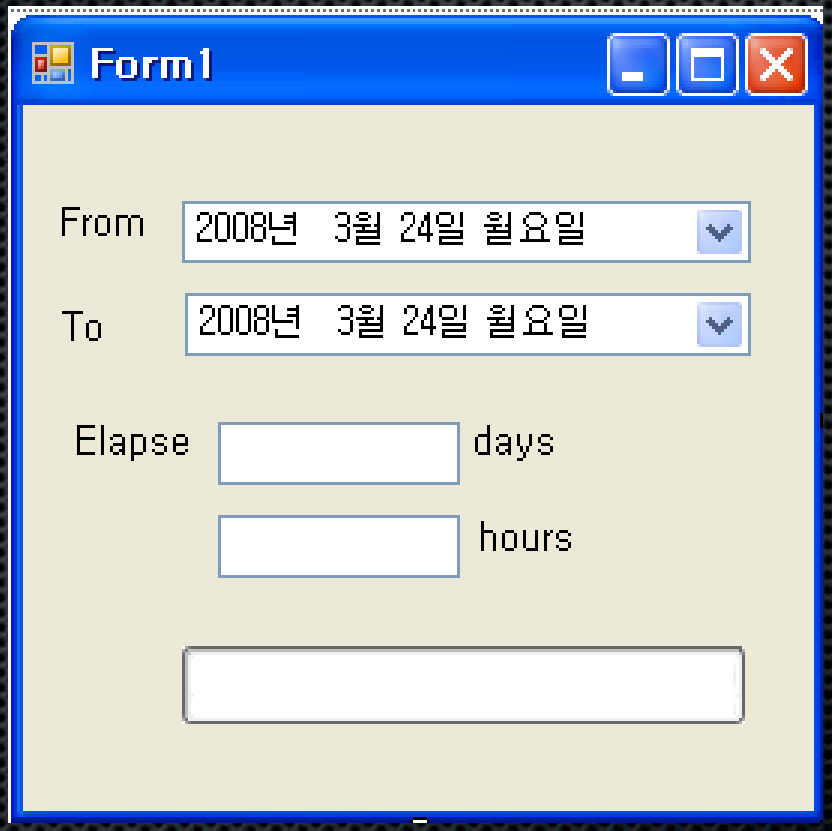
http://rockeng.snu.ac.kr/freeboard/

Ex.5) DateTimePicker, Timer, ProgressBar



```
Public Class Form1

    Private Sub DateTimePicker2_ValueChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)

        Dim Days As Long

        Days = DateDiff(DateInterval.Day, DateTimePicker1.Value, DateTimePicker2.Value)
        TextBox1.Text = Format(Days, "###,###")
        TextBox2.Text = Format(24 * Days, "###,###")

    End Sub

    Private Sub DateTimePicker1_ValueChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)

        Dim Days As Long

        Days = DateDiff(DateInterval.Day, DateTimePicker1.Value, DateTimePicker2.Value)
        TextBox1.Text = Format(Days, "###,###")
        TextBox2.Text = Format(24 * Days, "###,###")

    End Sub


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

        Timer1.Enabled = True
        Timer1.Interval = 100
        Timer1.Start()
        ProgressBar1.Minimum = 0
        ProgressBar1.Maximum = 200

    End Sub

    Private Sub Timer1_Tick(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Timer1.T

        Static Timetic As Integer

        Timetic += 1
        If Timetic > 200 Then
            If Timetic = 205 Then Me.Close()
        Else
            Me.BackColor = Color.FromArgb(255, 255 - 255 * ProgressBar1.Value / ProgressBar1.Maximum, _
                                          255 - 255 * ProgressBar1.Value / ProgressBar1.Maximum, _
                                          255 - 255 * ProgressBar1.Value / ProgressBar1.Maximum)
            ProgressBar1.Value = Timetic
        End If
    End Sub
End Class
```

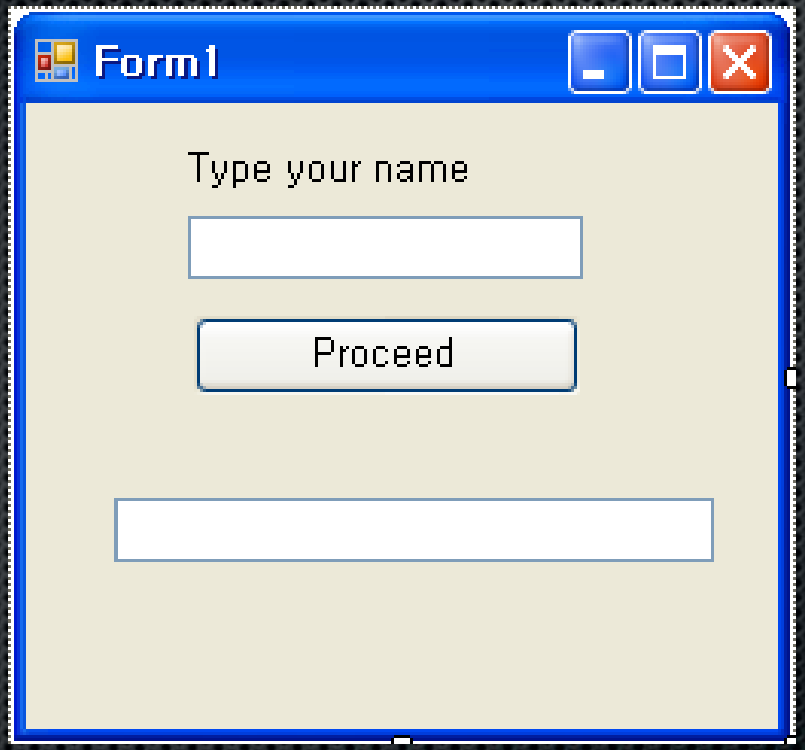
Namespace

Definition: Collection of different classes

Frequently used namespaces

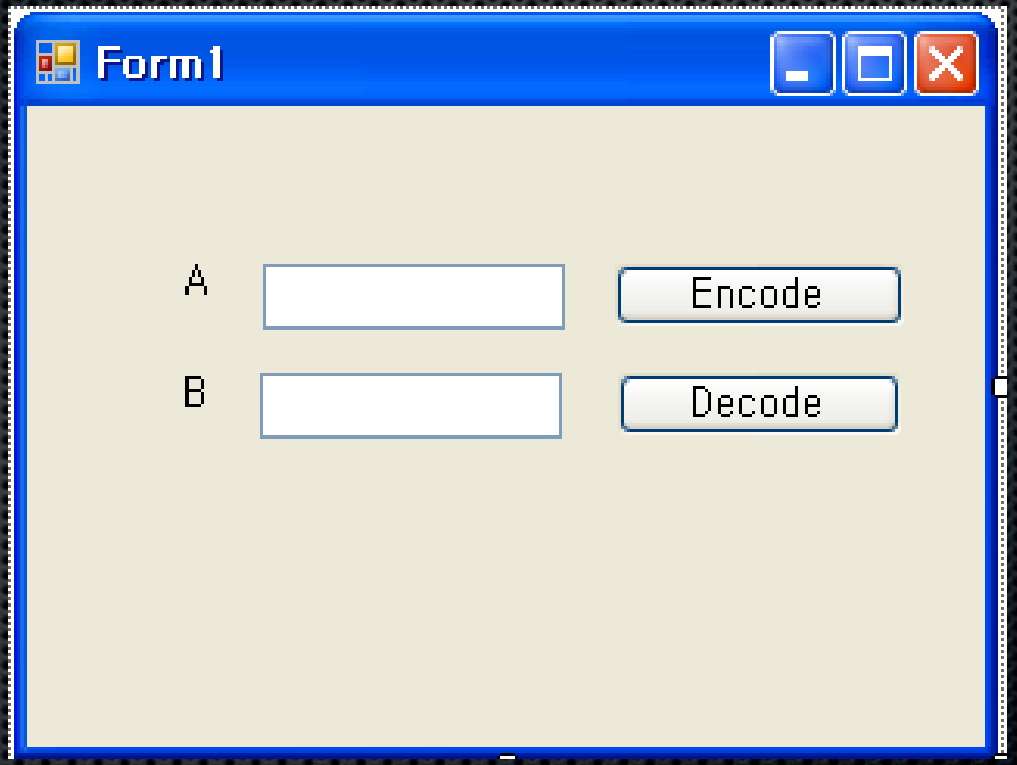
Microsoft.VisualBasic : VB compile and code generation
System : Base namespace of .NET, data type, property, event processing etc.
System.data : classes for ADO.NET
System.Diagnotics : application debugging
System.Windows.Forms : classes for developing window-based applications
System.IO : file read/write, data stream processing

Ex.6) Hello class



```
Public Class Form1

    Dim Hello As New Hey.MakeText.PlusHello

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

        TextBox2.Text = Hello.Say(TextBox1.Text)

    End Sub

End Class

Namespace Hey
    Namespace MakeText

        Public Class PlusHello

            Public Function Say(ByVal Name As String) As String

                Say = "Hello, " + Name

            End Function
        End Class

    End Namespace
End Namespace
```

Ex.7) Encoding/Decoding class



```
Public Class Form1

    Dim MyEnde As New MyEndecoder

    Private Sub btnEncode_Click(ByVal sender As System.

        Dim CodedString As String

        If txtA.Text <> "" Then
            Dim TextString As String = txtA.Text
            CodedString = MyEnde.Encode(TextString)
            txtB.Text = CodedString
        End If

    End Sub


    Private Sub btnDecode_Click(ByVal sender As System.

        Dim CodedString As String

        If txtB.Text <> "" Then
            Dim TextString As String = txtB.Text
            CodedString = MyEnde.Decode(TextString)
            txtA.Text = CodedString
        End If

    End Sub

End Class
```

```
Public Class MyEndecoder

    Public Function Encode(ByVal SourceStr As String) As String

        Dim OneChar As Char
        Dim i As Integer

        Encode = ""
        For i = 1 To Len(SourceStr)
            OneChar = Mid(SourceStr, i, 1)
            Encode = Encode + ConverTable(OneChar, 1)
            Debug.Print(OneChar, ConverTable(OneChar, 1))
        Next

    End Function

    Public Function Decode(ByVal SourceStr As String) As String

        Dim OneChar As Char
        Dim i As Integer

        Decode = ""
        For i = 1 To Len(SourceStr)
            OneChar = Mid(SourceStr, i, 1)
            Decode = Decode + ConverTable(OneChar, 2)
        Next

    End Function
```

```
    Private Function ConverTable(ByVal AChar As Char, ByVal ConvWay As Integer) As Char

        Dim CTable(2) As String
        Dim i As Integer

        AChar = LCase(AChar)

        CTable(1) = "1234567890abcdefghijklmnopqrstuvwxyz "
        CTable(2) = "qa7zws83xe54d6crfv1tg92byhnujmikolp0 "

        If ConvWay = 1 Then
            For i = 1 To Len(CTable(1))
                If Mid(CTable(1), i, 1) = AChar Then
                    ConverTable = Mid(CTable(2), i, 1)
                    Debug.Print("  " & ConverTable & "  ")
                    Return ConverTable
                End If
            Next
        Else
            For i = 1 To Len(CTable(2))
                If Mid(CTable(2), i, 1) = AChar Then
                    ConverTable = Mid(CTable(1), i, 1)
                    Return ConverTable
                End If
            Next
        End If
    End Function

End Class
```

Assignment

- Application using a Class
  - Due date: Apr. 2nd
  - Design page & Code page hard copy
  - Printed in A4