

# 컴퓨터의 기초 (4)

(010.142.008)

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

# Ex.5) DateTimePicker, Timer, ProgressBar

The image shows a screenshot of a Windows application window titled "Form1". The window has a blue title bar with standard minimize, maximize, and close buttons. The main content area has a light yellow background and contains the following elements:

- A "From" label followed by a date picker control showing "2008년 3월 24일 월요일" (Monday, March 24, 2008).
- A "To" label followed by a date picker control showing "2008년 3월 24일 월요일" (Monday, March 24, 2008).
- An "Elapse" label followed by an empty text input field and the word "days".
- Another empty text input field followed by the word "hours".
- A large empty rectangular text area at the bottom.

```

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.Diagnostics : application debugging

System.Windows.Forms : classes for developing window-based applications

System.IO : file read/write, data stream processing

# Ex.6) Hello class

Form1

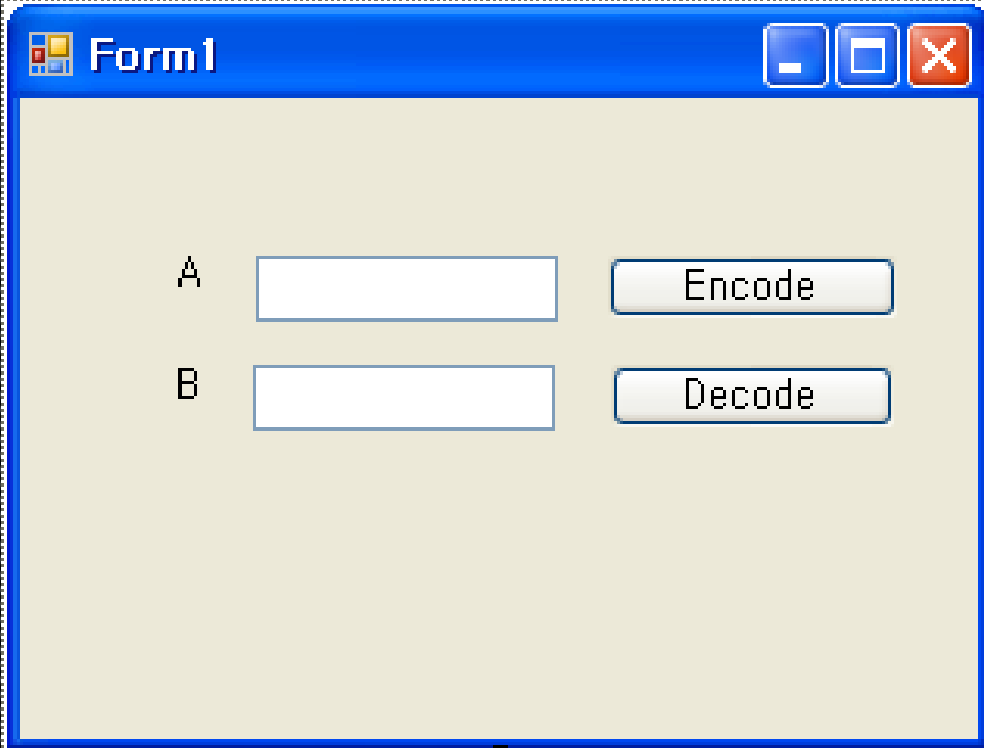
Type your name

Proceed

```
Public Class Form1
    Dim Hello As New Hey.MakeText.PlusHello
    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
        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



The image shows a screenshot of a Windows application window titled "Form1". The window has a blue title bar with standard minimize, maximize, and close buttons. The main content area is light yellow and contains two rows of controls. The first row consists of a label "A", a white text input field, and a button labeled "Encode". The second row consists of a label "B", a white text input field, and a button labeled "Decode".

```
Public Class Form1
    Dim MyEnde As New MyEndecoder
    Private Sub btnEncode_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnEncode.Click
        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.Object, ByVal e As System.EventArgs) Handles btnDecode.Click
        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 MyEncoder

    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

End Class
```

```
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) = "1234567890abcdefghijklmnopqrstuvwxy "
    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. 2<sup>nd</sup>
  - Design page & Code page hard copy
  - Printed in A4