Lecture 3 – VB Part 3

Component: Scrollbars (hsbVariableName and vsbVariableName)

Code Programming:

Objective: Miles per hour

GUI:
- Horizontal scroll bar:
  - Name: hsbSpeed
  - Max = 100, Min = 0
  - SmallChange = 1
  - Value = 50

Code:

```vbnet
Private Sub hsbSpeed_Change()
    txtSpeed.Text = Str(hsbSpeed.Value) & " mph"
End Sub

Private Sub hsbSpeed_Scroll()
    txtSpeed.Text = Str(hsbSpeed.Value) + " mph"
End Sub
```

- & and + are interchangeable

Experiment:
- Click and drag mouse over scroll bar
- Use cursors. Change SmallChange property
- Add Vertical scroll bar and experiment with different values
Component: Timers (tmrMyTimer)

Code Programming:

Objective: Timer (displays increments in seconds)

GUI:
- Label
  - Name: lblDisplay
  - Font: MS Sans Serif, bold, size 12
  - Caption: message to go here
- Timer
  - Name: tmrTimer
  - Enabled: False
  - Interval: 1000 (milliseconds)

Code:

```vbnet
Private Sub cmdEnableDisable_Click()
If gKeepTrack = 1 Then
    gKeepTrack = 0
    cmdEnableDisable.Caption = "&Enable"
Else
    gKeepTrack = 1
    cmdEnableDisable.Caption = "&Disable"
End If
End Sub

Private Sub tmrTimer_Timer()
If gKeepTrack = 1 Then
    Beep ' if have sound card, then will beep
    counter = counter + 1
    lblDisplay.Caption = Str(counter) + " sec"
End If
End Sub
```
Component: Menus (mnuMyMenuItem)

Code Programming:

GUI:

Project and Form name
Tools-Menu Editor
Caption: Colors
Name: mnuColors

Code:

Private Sub Form_Load()
    mnuWhite.Enabled = False ' disable White item in menu
    mnuSmall.Enabled = False ' initially window small, so disable
End Sub

Private Sub mnuBlue_Click()
    frmColors.BackColor = QBColor(1) ' set form color to blue
    mnuBlue.Enabled = False ' disable Blue item in menu
    mnuRed.Enabled = True ' enable other color items in menu
    mnuWhite.Enabled = True
End Sub

Private Sub mnuLarge_Click()
    frmColors.ClientSize = 2 ' set form size to large
    mnuLarge.Enabled = False ' disable large from menu
    mnuSmall.Enabled = True ' enable small from menu
End Sub
Lecture 3

QBColor Function:

<table>
<thead>
<tr>
<th>Color</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>0</td>
</tr>
<tr>
<td>Blue</td>
<td>1</td>
</tr>
<tr>
<td>Green</td>
<td>2</td>
</tr>
<tr>
<td>Cyan</td>
<td>3</td>
</tr>
<tr>
<td>Red</td>
<td>4</td>
</tr>
<tr>
<td>Magenta</td>
<td>5</td>
</tr>
<tr>
<td>Yellow</td>
<td>6</td>
</tr>
<tr>
<td>White</td>
<td>7</td>
</tr>
<tr>
<td>Gray</td>
<td>8</td>
</tr>
<tr>
<td>Light Blue</td>
<td>9</td>
</tr>
<tr>
<td>Light Green</td>
<td>10</td>
</tr>
<tr>
<td>Light Cyan</td>
<td>11</td>
</tr>
<tr>
<td>Light Red</td>
<td>12</td>
</tr>
<tr>
<td>Light Magenta</td>
<td>13</td>
</tr>
<tr>
<td>Light Yellow</td>
<td>14</td>
</tr>
<tr>
<td>Bright White</td>
<td>15</td>
</tr>
</tbody>
</table>

Discover:
- WindowState: try with 1
- Experiment with different colors
- Experiment with RGB(amountOfRed, amountOfGreen, amountOfBlue)
Numeric Keypads

- Simpler user input device than keyboard
- Widely available and many applications

Keys are switches: contacts in matrix form
- 74922 is typical keypad decoder chip. Multiplex 4-bits for 16 possibilities