**Computer Programming – Final Exam Review Code**

**ReviewAge**

Public Class Form1

 Dim n As String 'name

 Dim a As Integer 'age

 Private Sub Button1\_Click(sender As Object, e As EventArgs) Handles Button1.Click

 n = TextBox1.Text

 a = TextBox2.Text

 Label1.Text = n & " is " & a & " years old."

 If a < 18 Then

 Label2.Text = "He/she is a minor"

 End If

 If a >= 18 And a <= 65 Then

 Label2.Text = "He/she is an adult"

 End If

 If a > 65 Then

 Label2.Text = "He/she is a senior citizen."

 End If

 End Sub

End Class

ReviewDrawing

Public Class Form1

 Private Sub Form1\_Paint(sender As Object, e As PaintEventArgs) Handles Me.Paint

 Dim g As System.Drawing.Graphics

 g = Me.CreateGraphics

 Dim p As New Pen(Color.Black, 2)

 Dim blueBrush As New SolidBrush(Color.Cyan)

 g.FillRectangle(Brushes.Cyan, 100, 100, 60, 60)

 g.DrawRectangle(Pens.Black, 100, 100, 60, 60)

 g.FillEllipse(Brushes.Cyan, 100, 90, 60, 20)

 g.DrawEllipse(Pens.Black, 100, 90, 60, 20)

 g.FillEllipse(Brushes.Cyan, 100, 150, 60, 20)

 g.DrawEllipse(Pens.Black, 100, 150, 60, 20)

 End Sub

End Class

ReviewRainbow

Public Class Form1

 Private Sub Button1\_Click(sender As Object, e As EventArgs) Handles Button1.Click

 If TextBox1.Text = "purple" Then

 Label1.BackColor = Color.Purple

 End If

 If TextBox1.Text = "orange" Then

 Label1.BackColor = Color.Orange

 End If

 End Sub

End Class

ReviewScreenSaver

Public Class Form1

 Dim hdir As String = "right"

 Dim vdir As String = "up"

 Private Sub Timer1\_Tick(sender As Object, e As EventArgs) Handles Timer1.Tick

 If hdir = "right" Then

 box.Location = New Point(box.Location.X + 5, box.Location.Y)

 End If

 If hdir = "left" Then

 box.Location = New Point(box.Location.X - 5, box.Location.Y)

 End If

 If vdir = "up" Then

 box.Location = New Point(box.Location.X, box.Location.Y - 5)

 End If

 If vdir = "down" Then

 box.Location = New Point(box.Location.X, box.Location.Y + 5)

 End If



 'check top

 If box.Location.Y = 0 Then

 vdir = "down"

 End If

 'check left

 If box.Location.X = 0 Then

 hdir = "right"

 End If

 'check right side

 If box.Location.X = 280 Then

 hdir = "left"

 End If

 'check bottom

 If box.Location.Y = 380 Then

 vdir = "up"

 End If

 End Sub

End Class

**ReviewSumItUp**

Public Class Form1

 Dim num, sum, x As Integer

 Private Sub Button1\_Click(sender As Object, e As EventArgs) Handles Button1.Click

 sum = 0

 num = TextBox1.Text

 If num <= 0 Then

 MsgBox("Enter a positive number")

 Else

 For Me.x = 1 To num

 sum = sum + x

 Next

 label1.text = sum

 End If

 End Sub

End Class

ReviewAddition

Public Class Form1

 Dim num1, num2, answer As Integer

 Private Sub Form1\_Load(sender As Object, e As EventArgs) Handles MyBase.Load

 makeQuestion()

 End Sub

 Private Sub Button1\_Click(sender As Object, e As EventArgs) Handles Button1.Click

 answer = TextBox1.Text

 If answer = num1 + num2 Then

 MsgBox("correct")

 Else

 MsgBox("Wrong. The right answer is " & (num1 + num2))

 End If

 makeQuestion()

 End Sub

 Public Sub makeQuestion()

 Randomize()

 TextBox1.Text = ""

 num1 = Int(Rnd() \* 10) + 1

 num2 = Int(Rnd() \* 10) + 1

 Label1.Text = num1 & " + " & num2 & " = ?"

 End Sub

End Class



**ReviewTriangle**

Public Class Form1

 Dim hdir As String = "right"

 Dim vdir As String = "down"

 Private Sub Timer1\_Tick(sender As Object, e As EventArgs) Handles Timer1.Tick

 If hdir = "right" Then

 box.Location = New Point(box.Location.X + 5, box.Location.Y)

 End If

 If hdir = "left" Then

 box.Location = New Point(box.Location.X - 5, box.Location.Y)

 End If

 If vdir = "up" Then

 box.Location = New Point(box.Location.X, box.Location.Y - 5)

 End If

 If vdir = "down" Then

 box.Location = New Point(box.Location.X, box.Location.Y + 5)

 End If

 'starts at 100, 50 (down and right)

 'turn left at 150, 100

 '50, 100 - turn up and right

 If box.Location.X = 150 And box.Location.Y = 100 Then

 hdir = "left"

 vdir = "nothing"

 End If

 If box.Location.X = 50 And box.Location.Y = 100 Then

 hdir = "right"

 vdir = "up"

 End If

 If box.Location.X = 100 And box.Location.Y = 50 Then

 hdir = "right"

 vdir = "down"

 End If

 End Sub

End Class

**ReviewCat**

Public Class Form1

 Dim b As Button

 Dim l1, l2, l3, l4, l5, l6, l7, l8, l9 As Label

 Private Sub Form1\_Load(sender As Object, e As EventArgs) Handles MyBase.Load

 b = New Button

 b.Size = New Size(75, 40)

 b.Location = New Point(115, 200)

 b.Text = "Show Cat"

 Controls.Add(b)

 AddHandler b.Click, AddressOf showCat

 End Sub

 Public Sub showCat(ByVal sender As Object, ByVal e As EventArgs)

 'use L1, L2, L3 for the C

 l1 = New Label

 l1.BackColor = Color.Red

 l1.Size = New Size(90, 30)

 l1.Location = New Point(30, 30)

 Controls.Add(l1)

 l2 = New Label

 l2.BackColor = Color.Red

 l2.Size = New Size(30, 60)

 l2.Location = New Point(30, 60)

 Controls.Add(l2)

 l3 = New Label

 l3.BackColor = Color.Red

 l3.Size = New Size(90, 30)

 l3.Location = New Point(30, 120)

 Controls.Add(l3)

 'A

 l1 = New Label

 l1.BackColor = Color.Red

 l1.Size = New Size(90, 30)

 l1.Location = New Point(150, 30)

 Controls.Add(l1)

 l1 = New Label

 l1.BackColor = Color.Red

 l1.Size = New Size(30, 120)

 l1.Location = New Point(150, 30)

 Controls.Add(l1)

 l1 = New Label

 l1.BackColor = Color.Red

 l1.Size = New Size(30, 120)

 l1.Location = New Point(210, 30)

 Controls.Add(l1)

 l1 = New Label

 l1.BackColor = Color.Red

 l1.Size = New Size(30, 30)

 l1.Location = New Point(180, 90)

 Controls.Add(l1)

 'T

 l1 = New Label

 l1.BackColor = Color.Red

 l1.Size = New Size(90, 30)

 l1.Location = New Point(270, 30)

 Controls.Add(l1)

 l1 = New Label

 l1.BackColor = Color.Red

 l1.Size = New Size(30, 90)

 l1.Location = New Point(300, 60)

 Controls.Add(l1)

 End Sub

End Class