Public Class frmFacNext2
    Inherits System.Windows.Forms.Form

    Windows Form Designer generated code

    Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnEnd.Click
        End
    End Sub

    Private Sub btnProcess_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnProcess.Click
        Dim wkFirstNum As Integer
        Dim wkSecondNum As Integer
        Dim wkResult As Integer
        Dim wkToShow As String

        For wkFirstNum = 1 To 5
            For wkSecondNum = 1 To 5
                wkResult = wkFirstNum + wkSecondNum
                wkToShow = wkFirstNum & " + " & wkSecondNum & " = " & wkResult
                lstMathFacts.Items.Add(wkToShow)
            Next
        Next
    End Sub
End Class
Private Sub btnCalc_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnCalc.Click
    Dim wrkCost As Single
    Dim wrkWeight As Integer
    wrkWeight = Val(txtlb.Text) * 16 + Val(txtGl.Text)
    If wrkWeight < 17 Then
        wrkCost = cstFirstLb
    Else
        wrkWeight = wrkWeight - 16
        wrkCost = wrkCost + cstEvery4oz
        Do Until wrkWeight < 0
            wrkCost = wrkCost + cstEvery4oz
            wrkWeight = wrkWeight - 4
        Loop
    End If
    txtResult.Text = Format(wrkCost, "Currency")
End Sub

Private Sub btnClear_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnClear.Click
    txtName.Clear()
    txtStdGr.Clear()
    txtCSGr.Clear()
    txtlb.Clear()
    txtGl.Clear()
    txtResult.Clear()
End Sub

Private Sub btnExit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnExit.Click
End
Private Sub btnCalc_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnCalc.Click
    Dim wrkCost As Single
    Dim wrkWeight As Integer
    Dim cstEvery4lbs As Single
    Dim cstFirstLb As Single
    Dim Pounds, Ounces As Integer
    Dim Weight As Integer

    cstFirstLb = 1.5
    cstEvery4lbs = 0.5
    wrkWeight = Val(txtWt.Weight) * 16 + Val(txtOz.Text)

    If wrkWeight < 17 Then
        wrkCost = cstFirstLb
    Else
        wrkWeight = wrkWeight - 15
        wrkCost = cstFirstLb
        Do Until wrkWeight <= 0
            wrkCost = wrkCost + cstEvery4lbs
            wrkWeight = wrkWeight - 4
        Loop
    End If

    Amount Due = Format(wrkCost, "Currency")
End Sub

Private Sub btnClear_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnClear.Click
    txtName.Clear()
    txtStAdr.Clear()
    txtCity/styles.Clear()
    txtCnt.Clear()
    txtWt.Clear()
    txtOz.Clear()
End Sub

Private Sub btnExit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnExit.Click
End
Private Sub btnCalc_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnCalc.Click
    Dim wkgWeight As Integer
    Dim wkgCost As Single
    wkgWeight = Val(txtlb.Text) * 16 + Val(txtoz.Text)
    If wkgWeight < 17 Then
        wkgCost = cstFirstLb
    Else
        wkgCost = wkgWeight - 15
    End If
    Exit = Exit 
    Do Until wkgWeight <= 0
        wkgCost = wkgCost + cstEvery4oz
        wkgWeight = wkgWeight - 4
    Loop
    txtDue.Text = Format(wkgCost, "Currency")
End Sub

Private Sub btnClear_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnClear.Click
    txtName.Clear()
    txtStAdrs.Clear()
    txtCIS.Clear()
    txtLb.Clear()
    txtOz.Clear()
End Sub

Private Sub btnExit_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnExit.Click

End
Public Class frmDoWhile

    Inherits System.Windows.Forms.Form

    Windows Form Designer generated code

Private Sub btnCalc_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnCalc.Click
    If txtWeight <= 1 Then
        wtkCost = (txtWeight * 1.50) * 16 + Val(txtOr.Text)
    Else
        wtkCost = (txtWeight * 1.50) * 16 + Val(txtOr.Text)
        Do While wtkWeight > 0
            wtkCost = wtkCost + Val(twEvery4oz)
            wtkWeight = wtkWeight - 4
        Loop
    End If
    txtResult.Text = Format(wtkCost, "Currency")
End Sub

Private Sub btnClear_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnClear.Click
    txtName.Clear()
    txtStkID.Clear()
    txtCSZ.Clear()
    txtLB.Clear()
    txtOr.Clear()
End Sub
Since I started ct at 16 and the condition says until ct > 15, I will never go into the loop.
Public Class frmRepeatUntil
    Inherits System.Windows.Forms.Form

    Windows Form Designer generated code

Private Sub btnProcess_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
    Dim ct As Integer = 1
    Do Until ct > 15
        ListBox1.Items.Add("This is week " & ct & " of the semester")
        ct = ct + 1
    Loop
End Sub

Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
    End Sub
End Class
Because the test is at the bottom, I execute once even though ct starts out at 16.
Private Sub btnProcess_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnProcess.Click
    Dim ct As Integer = 1
    Do
        ListBox1.Items.Add("This is week " & ct & " of the semester")
        ct = ct + 1
    Loop Until ct > 15
End Sub

Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnEnd.Click
    End Sub
End Class
Testing what happens when I change the location of \( ct = ct + 1 \)
Public Class frmRepeatUntilPost
    Inherits System.Windows.Forms.Form

    Windows Form Designer generated code

    Private Sub btnProcess_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
        Dim ct As Integer = 0
        Do
            ct = ct + 1
            lstMsg.Items.Add("This is week " & ct & " of the semester")
        Loop Until ct > 15
    End Sub

    Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
    End
    End Sub
End Class
Public Class frmRepeatUntilPost
    Inherits System.Windows.Forms.Form

    Windows Form Designer generated code

    Private Sub btnProcess_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnProcess.Click
        Dim ct As Integer = 0
        Do
            ct = ct + 1
            lstMsg.Items.Add("This is week " & ct & " of the semester")
        Loop Until ct > 14
    End Sub

    Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnEnd.Click
        End
    End Sub
End Class
Public Class frmRepeatMsg
    Inherits System.Windows.Forms.Form

    Windows Form Designer generated code

    Private Sub btnProcess_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
        Dim ct As Integer = 12
        Do While ct < 15
            ListBox1.Items.Add("This is week " & ct & " of the semester")
            ct = ct + 1
        Loop
    End Sub

    Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
        End
    End Sub
End Class
Public Class frmRepeatMsg
    Inherits System.Windows.Forms.Form

    Windows Form Designer generated code

    Private Sub btnProcess_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnProcess.Click
        Dim ct As Integer = 2
        Do While ct <= 15
            lstMsg.Items.Add("This is week " & ct & " of the semester")
            ct = ct + 2
        Loop
    End Sub

    Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnEnd.Click
        End Sub
    End Class
Public Class frmRepeatMsg
    Inherits System.Windows.Forms.Form

    Windows Form Designer generated code

    Private Sub btnProcess_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnProcess.Click
        Dim et As Integer = 1
        Do
            Listbox1.Items.Add("This is week ", et + ", " of the semester")
            et += 1
        Loop While et <= 15
    End Sub

    Private Sub btnEnd_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnEnd.Click
        End Sub
    End Class
Looking at algorithm from week #3.

Problem #1: Take in the high temperature for a day and the low temperature for a day. Display the average temperature for the day.

Problem #2: You need to take in the price of four items a customer bought, determine the total price before tax, determine the tax using the tax rate of 2.5% and then determine the total price after taxes. The output should show the total price before tax, the tax and the total price after taxes.

Problem #3: You have received 5 numeric grades for the semester. Grades can range from 0 to 100. The first grade counts for 10% of your final grade. The second grade counts for 15% of your final grade. The third grade counts for 25% of your final grade. The fourth grade counts for 20% of your final grade. The fifth grade counts for 30% of your final grade. Calculate and display your final numeric grade.

Problem #4: You need to calculate an employee’s pay. To do this you will need the number of hours the employee worked, the number of hours the employee is contracted to work before the employee receives overtime, the pay per hour, the rule for calculating overtime (time and one half would be 1.5 while double time would be 2). Test this problem with someone who did not work over their contracted hours and again for someone who did work over their contracted hours.

Problem #5: You sell three products. Product 1 sells for $25, product two sells for $50 and product 3 sells for $100. You give discounts if someone buys multiple of your products according to the chart below:

<table>
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<tr>
<th></th>
<th>Product 1</th>
<th>Product 2</th>
<th>Product 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-9</td>
<td>3%</td>
<td>3%</td>
<td>5%</td>
</tr>
<tr>
<td>10-19</td>
<td>4%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>20 or more</td>
<td>5%</td>
<td>10%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Tell the customer what they would have paid without a discount and what they owe with the discount.
### Problem #1:
Take in the high temperature for a day and the low temperature for a day. Display the average temperature for the day.

### Problem #2:
You need to take in the price of four items a customer bought. The total price before tax, determine the tax using the tax rate of 2.5% and then determine the total price after taxes. The output should show the total price before tax, the tax, and the total price after taxes.

### Problem #3:
You have received 5 numeric grades for the semester. Grades can range from 0 to 100. The first grade counts for 10% of your final grade. The second grade counts for 15% of your final grade. The third grade counts for 25% of your final grade. The fourth grade counts for 20% of your final grade. The fifth grade counts for 30% of your final grade. Calculate and display your final numeric grade.

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Tell the customer what they would have paid without a discount and what they owe with the discount.
Problem #1: Take in the high temperature for a day and the low temperature for a day. Display the average temperature for the day.

Problem #2: You need to take in the price of four items a customer bought, determine the total price before tax, determine the tax using the tax rate of 2.5% and then determine the total price after taxes. The output should show the total price before tax, the tax and the total price after taxes.

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Tell the customer what they would have paid without a discount and what they owe with the discount.
Guess game program with a track bar.
Generate a random number between 1 and 25.
Public Class frmGuess
    Inherits System.Windows.Forms.Form
    Dim ranNum As Integer

    Windows Form Designer generated code

    Private Sub btnPlay_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
        If ranNum = 1 + Int(Rnd()) * 25 Then
            MessageBox.Show("You Guessed It!!!!!")
            btnPlay.Visible = False
        Else
            MessageBox.Show("Your Guess is Too High")
            Me.txtGuess.Text = ranNum
        End If
        ' Rest of the function
    End Sub

    Private Sub txtGuess_TextChanged(ByVal sender As System.Object, ByVal e As System.EventArgs)
        If ranNum = 1 + Int(Rnd()) * 25 Then
            MessageBox.Show("You Guessed It!!!!!")
            btnPlay.Visible = False
        Else
            MessageBox.Show("Your Guess is Too Low")
            Me.txtGuess.Text = ranNum
        End If
        ' Rest of the function
    End Sub

    Private Sub btnCheck_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
        ' Rest of the function
    End Sub

End Class
```vbnet
Private Sub btnChk_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
    If txtGuess.Text = ranNum Then
        lblMsg.Text = "You Guessed It!!!"
        btnPlay.Visible = True
    Else
        If txtGuess.Text > ranNum Then
            lblMsg.Text = "Your Guess is Too High"
        Else
            lblMsg.Text = "Your Guess is Too Low"
        End If
    End If
End Sub
```