Assignment #3 - Spindle Speed Calculator

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COURSE NO: **PROG8240**

COURSE NAME: **STRUCTURED PROGRAMMING**

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'AKSHAY PHILIP THOMAS,PROG8240,Structured Programming, STUDENT NO: 8795161
Public Class Form1
    Private Sub btnCalculate_Click(sender As Object, e As EventArgs) Handles
      btnCalculate.Click

        'declare the varibles

        Dim cutspeed, dia, upperlimt, lowerlimt, maxspeed As Double
        Dim rpm As Integer

        'assigning the varibles

        lowerlimt = Val(cboMinStockSize.Text)
        upperlimt = Val(cboMaxStockSize.Text)

        maxspeed = Val(nudMaxAllowedSpeed.Value)
        cutspeed = nudCuttingSpeed.Value
        Const pi As Double = 3.1415926

        ' checking if conditions for the 4 radio buttons

        If (rad125.Checked = True) Then

            LstResults.Items.Clear()
            LstResults.Items.Add("Stock size " & vbTab & "RPM ")
            LstResults.Items.Add(" " & vbTab & " ")

            'using for loop find the the values of RPM using differnt increment

            For dia = lowerlimt To upperlimt Step 0.125
                rpm = (12 * cutspeed) / (pi * dia)

                If (rpm < maxspeed) Then
                    LstResults.Items.Add(dia.ToString("N3") & vbTab & vbTab &
                    rpm)

                Else
                    LstResults.Items.Add(dia.ToString("N3") & vbTab & vbTab &
                    "OVER MAX")
                End If

            Next

            'using for loop find the the values of RPM using differnt increment
        ElseIf (rad250.Checked = True) Then

            LstResults.Items.Clear()
            LstResults.Items.Add("Stock size " & vbTab & "RPM ")
            LstResults.Items.Add(" " & vbTab & " ")
```

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47
48              For dia = lowerlimt To upperlimt Step 0.25
49                  rpm = (12 * cutspeed) / (pi * dia)
50                  If (rpm < maxspeed) Then
51                      LstResults.Items.Add(dia.ToString("N3") & vbTab & vbTab &
                        rpm)
52
53                  Else
54                      LstResults.Items.Add(dia.ToString("N3") & vbTab & vbTab &
                        "OVER MAX")
55                  End If
56              Next
57
58              'using for loop find the the values of RPM using differnt increment
59          ElseIf (rad375.Checked = True) Then
60              LstResults.Items.Clear()
61              LstResults.Items.Add("Stock size " & vbTab & "RPM ")
62              LstResults.Items.Add(" " & vbTab & " ")
63
64              For dia = lowerlimt To upperlimt Step 0.375
65                  rpm = (12 * cutspeed) / (pi * dia)
66                  If (rpm < maxspeed) Then
67                      LstResults.Items.Add(dia.ToString("N3") & vbTab & vbTab &
                        rpm)
68
69                  Else
70                      LstResults.Items.Add(dia.ToString("N3") & vbTab & vbTab &
                        "OVER MAX")
71                  End If
72              Next
73
74              'using for loop find the the values of RPM using differnt increment
75          ElseIf (rad500.Checked = True) Then
76              LstResults.Items.Clear()
77              LstResults.Items.Add("Stock size " & vbTab & "RPM ")
78              LstResults.Items.Add(" " & vbTab & " ")
79
80              For dia = lowerlimt To upperlimt Step 0.5
81                  rpm = (12 * cutspeed) / (pi * dia)
82                  If (rpm < maxspeed) Then
83                      LstResults.Items.Add(dia.ToString("N3") & vbTab & vbTab &
                        rpm)
84
85                  Else
86                      LstResults.Items.Add(dia.ToString("N3") & vbTab & vbTab &
                        "OVER MAX")
87                  End If
88              Next
89
```

```
90          End If
91      End Sub
92
93      'when close button is pressed the program quits
94      Private Sub btnExit_Click(sender As Object, e As EventArgs) Handles
          btnExit.Click
95          Me.Close()
96      End Sub
97
98
99  End Class
100
```