The If-Then Else End If

VB6 uses the same simplistic and easily comprehensible syntax for If-Then Statements as in (BASIC) language. The If-Then Statement can be written as:

If (Expression) Then

(Code to execute if True)

Else

(Code to execute if False)

End If

When the (Expression) which is written after (If) is true the compiler will execute all the codes written below (If) keyword until it reaches (Else) and transfer to the codes after (End If) to execute. When the (Expression) which is written after (If) is (False) the compiler will execute statements which are written below (Else) keyword. For more understanding let us take an example:

Ex: Design a program to calculate the value of (G) from the equations according to the conditions of the equation

\[ G = \frac{t}{k^2} + \frac{s}{\sqrt{j}} \quad 4 \leq k \leq 8 \]

\[ G = \frac{k^3}{t} + s * j \quad 9 \leq k \leq 15 \]

Where: \( t = 1.98*10^{23} \), \( s = 3.2*10^{-8} \), \( j = 8.4 \). Input the value of (k) by input function box appear in the location (9000, 3000), print the results on the form by the font (Arial), (Bold) with the size (12). Let the program carry out results continuously,
use (If Then Else End if) to solve the example. Use (q) to stop the input for (k), when (k) is less than (4) or bigger than (15) print (out of range).

So:

1- Design part: No design part for such example.
2- Coding part: The coding part might be written as below:

Private Sub Form_Activate( )
    Font.Name = "arial"
    Font.Bold = True
    Font.Size = 12
    t = 1.98E+23
    s = 0.000000032
    j = 8.4
    start:
    k = InputBox("input k (4-8) or (9-15)", "input", , 9000, 3000)
    If k = "q" Then Exit Sub
    If k >= 4 And k <= 8 Then
        g = (t / k ^ 2) + (s / (j ^ (1 / 3)))
        Print "k="; k, "g="; g
    Else
        GoTo 100
    End If
GoTo start

100 If k >= 9 And k <= 15 Then

g = (k ^ 3 / t) + (s * j)

Print "k=":; k, "g=":; g

GoTo start

Else

GoTo 200

End If

200 Print "Out of range"

GoTo start

End Sub

Ex: Design a program to input (w) and calculate (r) from the equation:

\[
 r = \frac{5 \times w}{q} \quad \text{for} \quad w = 1 \quad \text{and} \quad q = 8.76 \times 10^{-44}
\]

\[
 r = \frac{7 \times q}{w} \quad \text{for} \quad w = 2 \quad \text{and} \quad q = 8.76 \times 10^{-44}
\]

Print the results on the form. Use the font (Arial), (Bold) with the size (12). Use (If Then Else End if) to solve the example, let the program carry out results continuously.

So:

1- Design part: No design part for such example.

2- Coding part: The coding part might be written as below:
Private Sub Form_Activate()

Font.Name = "arial"
Font.Bold = True
Font.Size = 12

q = 8.76E-44

start:

w = InputBox("input w (1-2) or (q) to quit", "input", , 9000, 3000)
If w = "q" Then Exit Sub
If w = 1 Then
r = (5 * w) / q
Print "w=","r="; r
Else
GoTo 100
End If

100 If w = 2 Then
r = ((7 * q) / w)
Print "w=","r="; r
GoTo 200
Else
GoTo start
End If

200 End If
GoTo start
End Sub