

The image shows a screenshot of Microsoft Visual Studio with a VB.NET project named "firstProcedures". The code editor displays the following code:

```
1 Public Class firstProc
2
3     Private Sub btnGreet_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
4         ToGreet()
5     End Sub
6     Public Sub ToGreet()
7         Dim wkDate As Date
8         wkDate = Now()
9         lstGreet.Items.Add("Hello, it is " & wkDate)
10    End Sub
11
12    1 reference
13    Public Sub ToTotal()
14        Static wkTotal As Double
15        'Now comment out static and use this line
16        'Dim wkTotal As Double
17        Dim wkAmt As Double
18        wkAmt = InputBox("Enter the amount of the check", "Total of Checks")
19        wkTotal = wkTotal + wkAmt
20        lstTotal.Items.Add("The total is " & wkTotal)
21    End Sub
22
23    0 references
24    Private Sub btnTotal_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
25        ToTotal()
26    End Sub
27
28    0 references
29    Private Sub btnPassByRef_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
30        Dim wkAmt As Single
31        Dim wkPer As Single
32        Dim wkMsg As String
```

Two pink arrows point from the text "The click event calls this procedure" to the `ToGreet()` call in the `btnGreet_Click` method and the `ToGreet()` method definition.

Overlaid on the code editor is a Windows application window titled "First Procedures". It contains three sections:

- Greet:** A list box containing two entries: "Hello, it is 3/19/2019 12:36:25 PM" and "Hello, it is 3/19/2019 12:37:05 PM".
- Total:** An empty list box.
- Pass By Ref:** An empty list box.
- Pass By Val:** An empty list box.

The Windows taskbar at the bottom shows the system tray with the date and time: 12:37 PM, 3/19/2019.

firstProcedures (Running) - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test Analyze Window Help

Process: [11212] firstProcedures.exe Lifecycle Events Thread:

```
1 reference
1 Public Class firstProc
2
3 0 references
4 Private Sub btnGreet_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
5     ToGreet()
6 End Sub
7
8 1 reference
9 Public Sub ToGreet()
10     Dim wkDate As Date
11     wkDate = Now()
12     lstGreet.Items.Add("Hello, it is " & wkDate)
13 End Sub
14
15 1 reference
16 Public Sub ToTotal()
17     Static wkTotal As Double
18     'Now comment out static and use this line
19     'Dim wkTotal As Double
20     Dim wkAmt As Double
21     wkAmt = InputBox("Enter the amount of the check", "Total of Checks")
22     wkTotal = wkTotal + wkAmt
23     lstTotal.Items.Add("The total is " & wkTotal)
24 End Sub
25
26 0 references
27 Private Sub btnTotal_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
28     ToTotal()
29 End Sub
30
31 0 references
32 Private Sub btnPassByRef_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
33     Dim wkAmt As Single
34     Dim wkPer As Single
35     Dim wkMsg As String
```

100 %

Ready Ln 4 Col 9 Ch 9 INS Add to Source Control

12:38 PM 3/19/2019

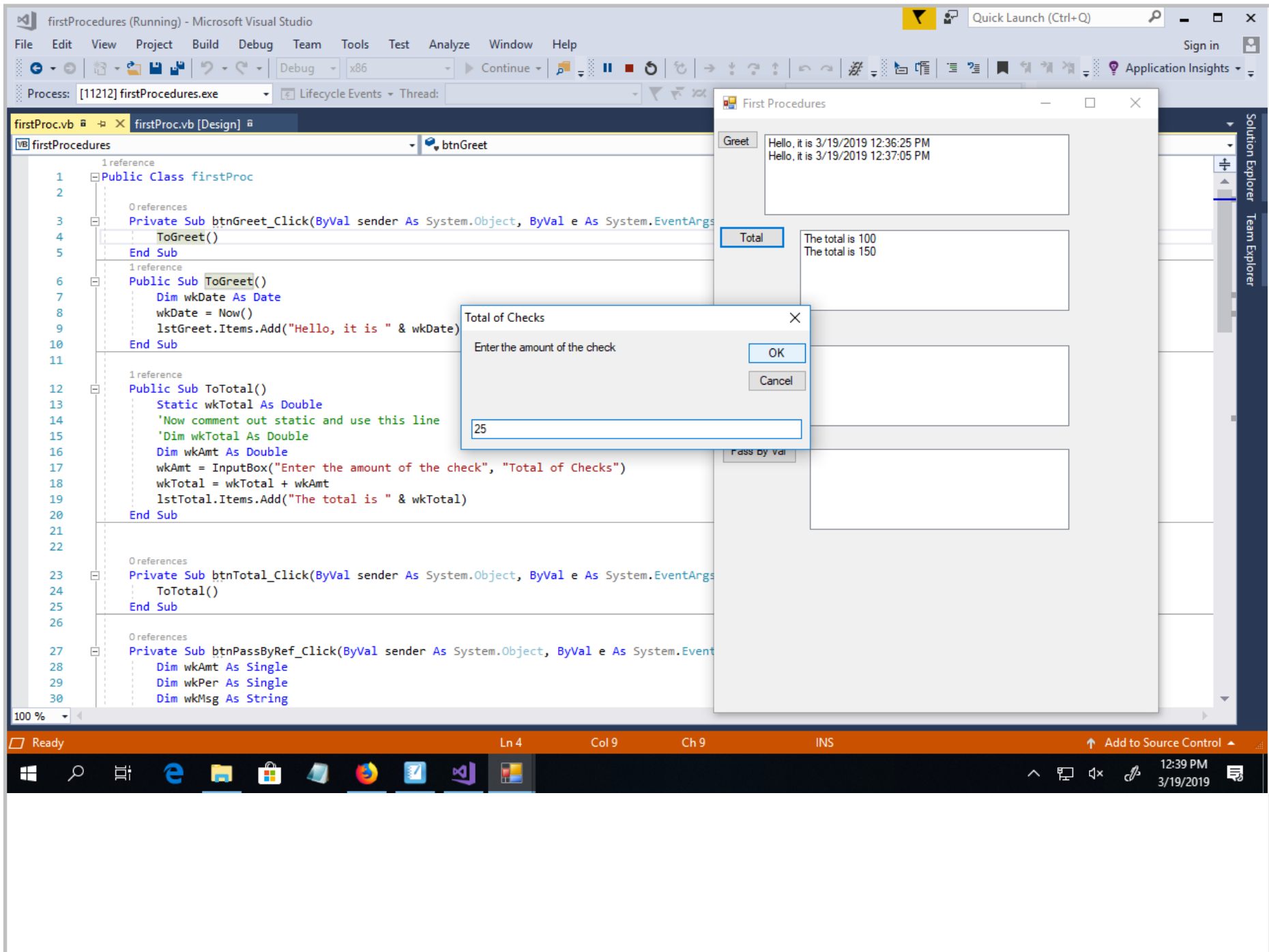
First Procedures

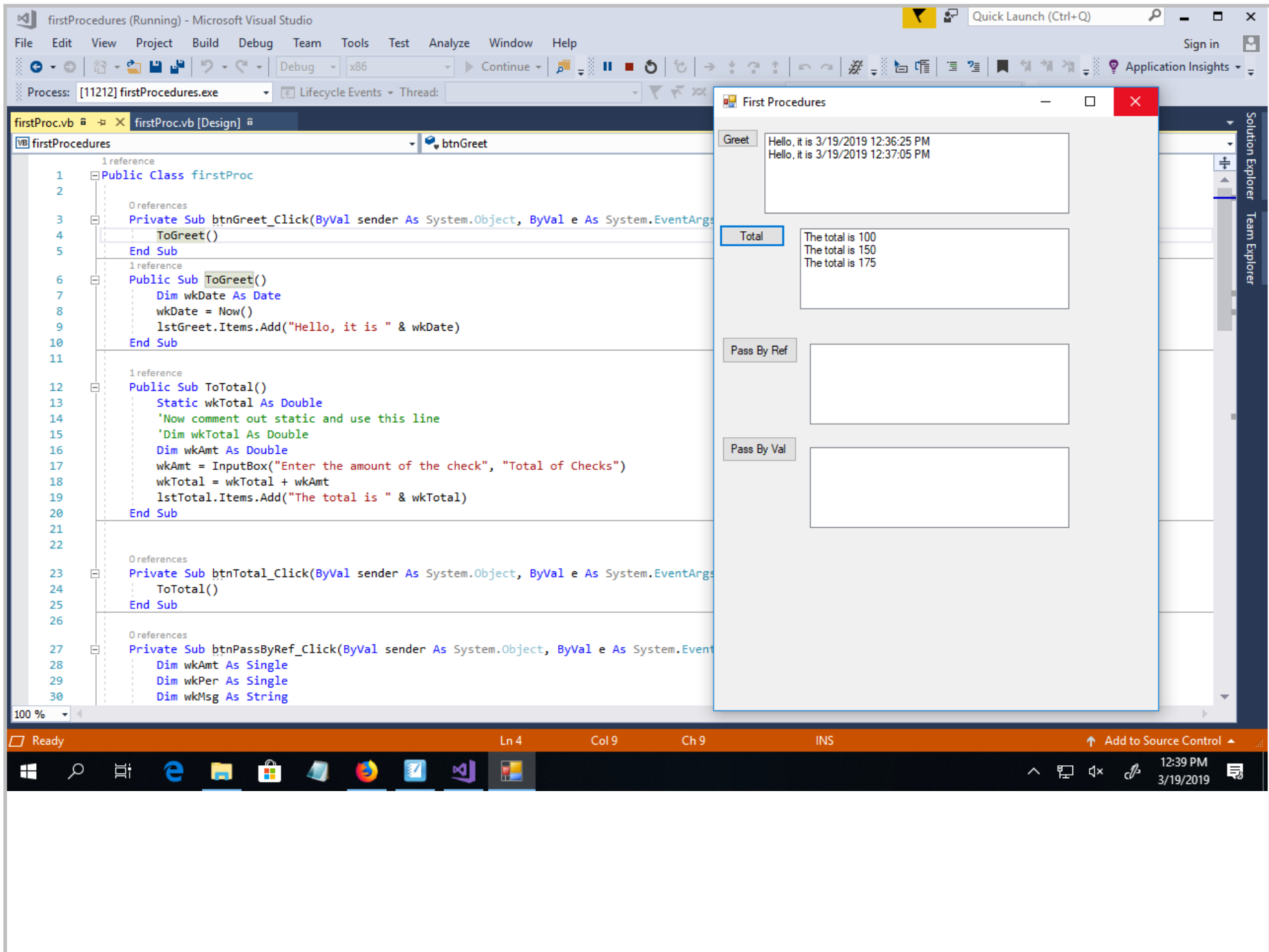
Greet  
Hello, it is 3/19/2019 12:36:25 PM  
Hello, it is 3/19/2019 12:37:05 PM

Total  
The total is 100  
The total is 150

Pass By Ref

Pass By Val





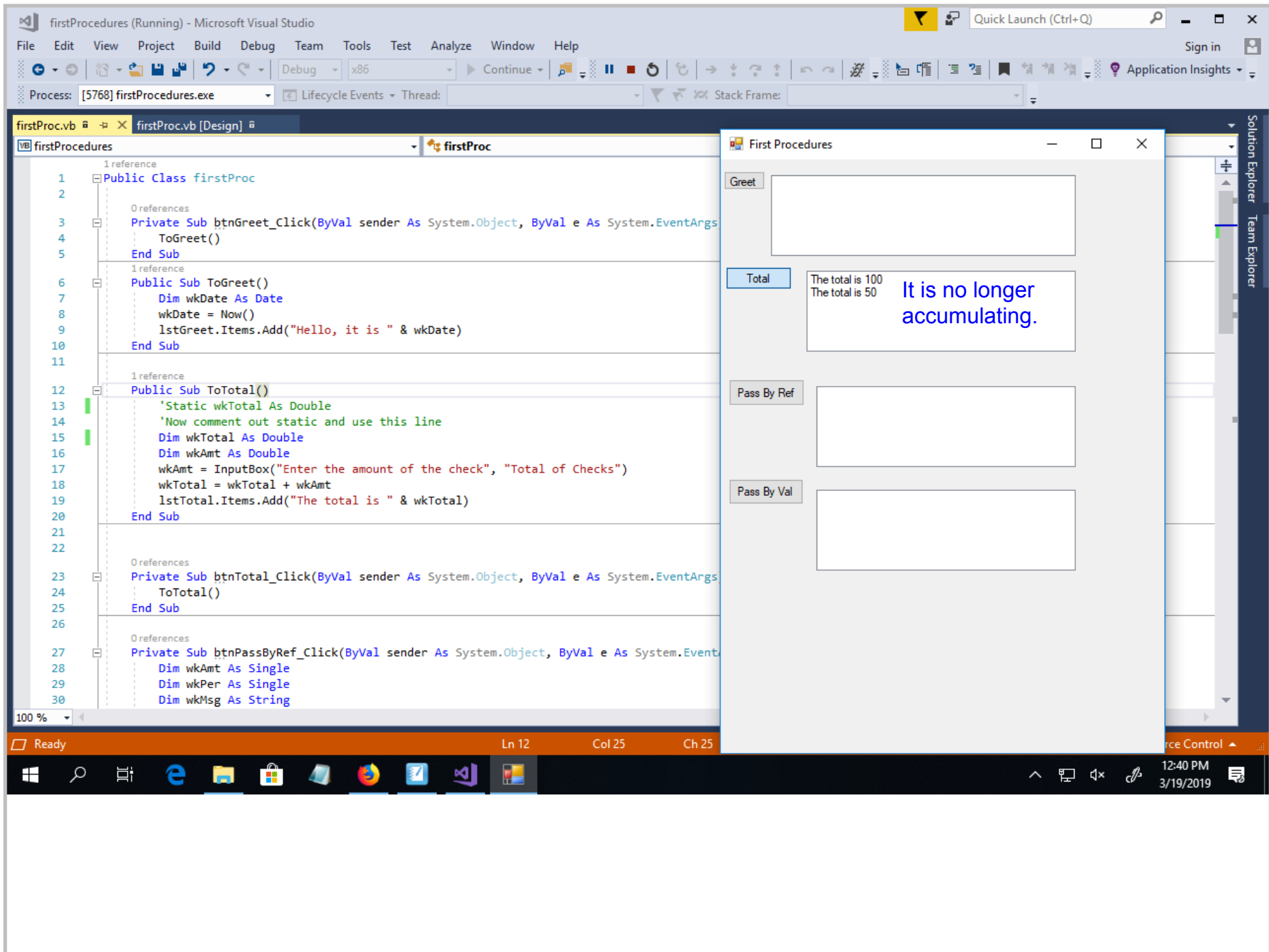
The image shows a screenshot of Microsoft Visual Studio with a VB.NET project named "firstProcedures" running. The code editor displays the following code:

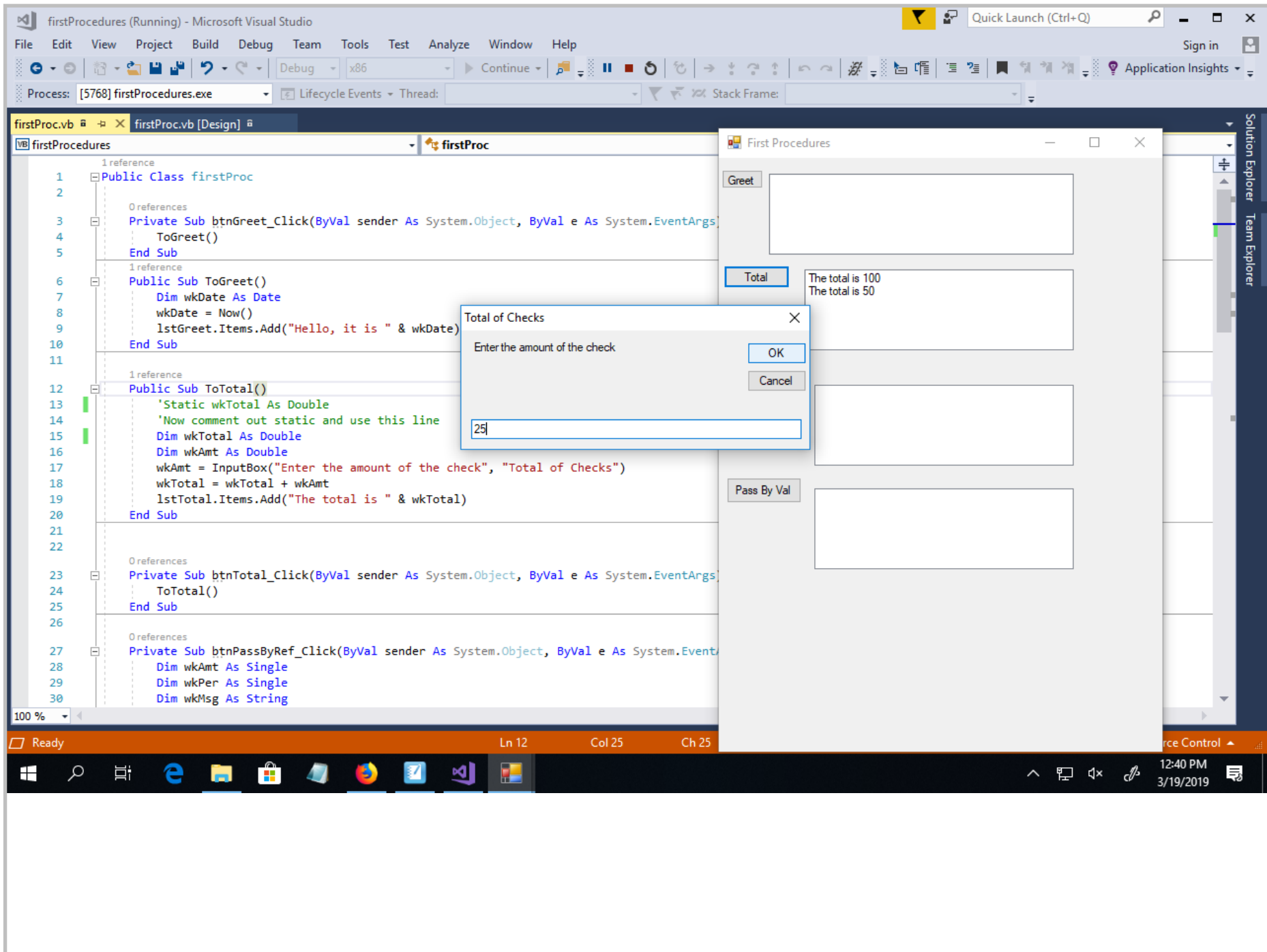
```
1 reference
1 Public Class firstProc
2
3     Private Sub btnGreet_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
4         ToGreet()
5     End Sub
6
7     Public Sub ToGreet()
8         Dim wkDate As Date
9         wkDate = Now()
10        lstGreet.Items.Add("Hello, it is " & wkDate)
11    End Sub
12
13    Public Sub ToTotal()
14        'Static wkTotal As Double
15        'Now comment out static and use this line
16        Dim wkTotal As Double
17        Dim wkAmt As Double
18        wkAmt = InputBox("Enter the amount of the check", "Total of Checks")
19        wkTotal = wkTotal + wkAmt
20        lstTotal.Items.Add("The total is " & wkTotal)
21    End Sub
22
23    Private Sub btnTotal_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
24        ToTotal()
25    End Sub
26
27    Private Sub btnPassByRef_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
28        Dim wkAmt As Single
29        Dim wkPer As Single
30        Dim wkMsg As String
```

The application window titled "First Procedures" is open, showing three sections:

- Greet:** A text box containing "Hello, it is 3/19/2019".
- Total:** A button labeled "Total" next to a text box containing "The total is 100".
- Pass By Ref:** A button labeled "Pass By Ref" next to an empty text box.
- Pass By Val:** A button labeled "Pass By Val" next to an empty text box.

A blue annotation in the code editor reads: "The static line has been commented out." pointing to lines 14 and 15.





The image shows a screenshot of Microsoft Visual Studio with a VB.NET code file open and a running application window.

**Code File: firstProc.vb**

```
1 reference
1 Public Class firstProc
2
3     0 references
4     Private Sub btnGreet_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
5         ToGreet()
6     End Sub
7
8     1 reference
9     Public Sub ToGreet()
10        Dim wkDate As Date
11        wkDate = Now()
12        lstGreet.Items.Add("Hello, it is " & wkDate)
13    End Sub
14
15    1 reference
16    Public Sub ToTotal()
17        'Static wkTotal As Double
18        'Now comment out static and use this line
19        Dim wkTotal As Double
20        Dim wkAmt As Double
21        wkAmt = InputBox("Enter the amount of the check", "Total of Checks")
22        wkTotal = wkTotal + wkAmt
23        lstTotal.Items.Add("The total is " & wkTotal)
24    End Sub
25
26    0 references
27    Private Sub btnTotal_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
28        ToTotal()
29    End Sub
30
31    0 references
32    Private Sub btnPassByRef_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
33        Dim wkAmt As Single
34        Dim wkPer As Single
35        Dim wkMsg As String
36    End Sub
```

**Running Application: First Procedures**

The application window displays three sections:

- Greet:** A list box containing the text "Hello, it is 3/19/2019".
- Total:** A list box containing the text "The total is 100", "The total is 50", and "The total is 25".
- Pass By Ref:** An empty list box.
- Pass By Val:** An empty list box.

The status bar at the bottom of the code editor shows "Ready", "Ln 12", "Col 25", and "Ch 25". The Windows taskbar at the bottom shows the time "12:41 PM" and date "3/19/2019".

firstProcedures (Running) - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test Analyze Window Help

Process: [5456] firstProcedures.exe Lifecycle Events Thread:

firstProc

```
1 reference
1 Public Class firstProc
2     Dim wkTotal As Double
3     Private Sub btnGreet_Click(ByVal sender As System.Object, ByVal
4         ToGreet()
5     End Sub
6     Public Sub ToGreet()
7         Dim wkDate As Date
8         wkDate = Now()
9         lstGreet.Items.Add("Hello, it is " & wkDate)
10    End Sub
11
12    1 reference
13    Public Sub ToTotal()
14        'Static wkTotal As Double
15        'Now comment out static and use this line
16        'Dim wkTotal As Double
17        Dim wkAmt As Double
18        wkAmt = InputBox("Enter the amount of the check", "Total of
19        wkTotal = wkTotal + wkAmt
20        lstTotal.Items.Add("The total is " & wkTotal)
21    End Sub
22
23    0 references
24    Private Sub btnTotal_Click(ByVal sender As System.Object, ByVal
25        ToTotal()
26    End Sub
27
28    0 references
29    Private Sub btnPassByRef_Click(ByVal sender As System.Object, By
30        Dim wkAmt As Single
31        Dim wkPer As Single
32        Dim wkMsg As String
```

This approach also accumulates.

Total of Checks

Enter the amount of the check

50

OK Cancel

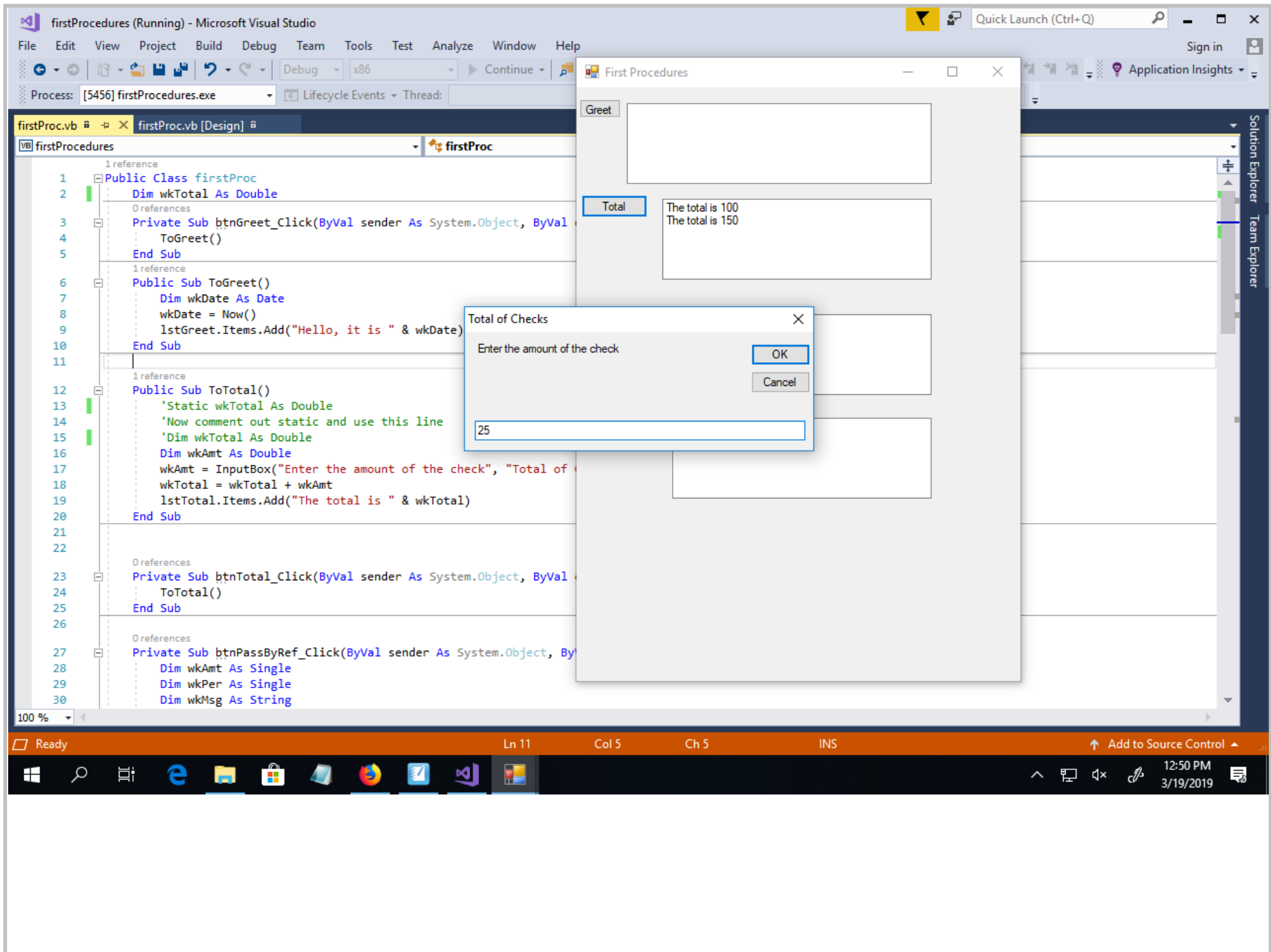
Greet

Total

The total is 100

Ready Ln 11 Col 5 Ch 5 INS Add to Source Control

12:49 PM 3/19/2019



The image shows a screenshot of Microsoft Visual Studio with a VB.NET code file open and a running application window titled "First Procedures".

**Code File: firstProc.vb**

```
1 reference
1 Public Class firstProc
2     Dim wkTotal As Double
3     0 references
4     Private Sub btnGreet_Click(ByVal sender As System.Object, ByVal
5         ToGreet()
6     End Sub
7     1 reference
8     Public Sub ToGreet()
9         Dim wkDate As Date
10        wkDate = Now()
11        lstGreet.Items.Add("Hello, it is " & wkDate)
12    End Sub
13    1 reference
14    Public Sub ToTotal()
15        'Static wkTotal As Double
16        'Now comment out static and use this line
17        'Dim wkTotal As Double
18        Dim wkAmt As Double
19        wkAmt = InputBox("Enter the amount of the check", "Total of
20        wkTotal = wkTotal + wkAmt
21        lstTotal.Items.Add("The total is " & wkTotal)
22    End Sub
23    0 references
24    Private Sub btnTotal_Click(ByVal sender As System.Object, ByVal
25        ToTotal()
26    End Sub
27    0 references
28    Private Sub btnPassByRef_Click(ByVal sender As System.Object, By
29        Dim wkAmt As Single
30        Dim wkPer As Single
31        Dim wkMsg As String
```

**Running Application: First Procedures**

The application window contains three sections:

- Greet:** A text box for input.
- Total:** A button labeled "Total" and a text box containing the output: "The total is 100", "The total is 150", and "The total is 175".
- Pass By Ref:** A button labeled "Pass By Ref" and an empty text box.
- Pass By Val:** A button labeled "Pass By Val" and an empty text box.

The Windows taskbar at the bottom shows the system tray with the time 12:50 PM on 3/19/2019.

firstProcedures (Running) - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test Analyze Window Help

Process: [4432] firstProcedures.exe Lifecycle Events Thread: Stack Frames

firstProcedures

0 references

```
27 Private Sub btnPassByRef_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnPassByRef.Click
28     Dim wkAmt As Single
29     Dim wkPer As Single
30     Dim wkMsg As String
31     wkAmt = InputBox("Enter the amount of the transaction", "Transaction Amount")
32     wkPer = InputBox("Enter the percent you are using", "Percent")
33     CalcByRef(wkAmt, wkPer)
34     wkMsg = "Back in btnPassByRef from CalcByRef " & wkAmt
35     lstTrans.Items.Add(wkMsg)
36     OtherCalcByRef(wkAmt, wkPer)
37     wkMsg = "Back in btnPassByRef from OtherCalcByRef " & wkAmt
38     lstTrans.Items.Add(wkMsg)
39 End Sub
```

1 reference

```
40 Sub CalcByRef(ByRef sentAmt As Single, ByRef sentPer As Single)
41     sentAmt = sentAmt * sentPer
42     lstTrans.Items.Add("The result from CalcByRef is " & sentAmt)
43 End Sub
```

1 reference

```
44 Sub OtherCalcByRef(ByRef wkAmt As Single, ByVal wkPer As Single)
45     wkAmt = wkAmt * wkPer
46     lstTrans.Items.Add("The result from CalcByRef is " & wkAmt)
47 End Sub
```

0 references

```
49 Private Sub btnPassByVal_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnPassByVal.Click
50     Dim wkAmt As Single
51     Dim wkPer As Single
52     Dim wkMsg As String
53     wkAmt = InputBox("Enter the amount of the transaction", "Transaction Amount")
54     wkPer = InputBox("Enter the percent you are using", "Percent")
55     CalcByVal(wkAmt, wkPer)
56     wkMsg = "Back in btnPassByVal from CalcByVal " & wkAmt
57     lstTransVal.Items.Add(wkMsg)
58     OtherCalcByVal(wkAmt, wkPer)
```

100 %

Ln 11 Col 5 Ch 5 INS Add to Source Control

12:52 PM 3/19/2019

Now looking at pass by reference

Transaction Amount

Enter the amount of the transaction

100

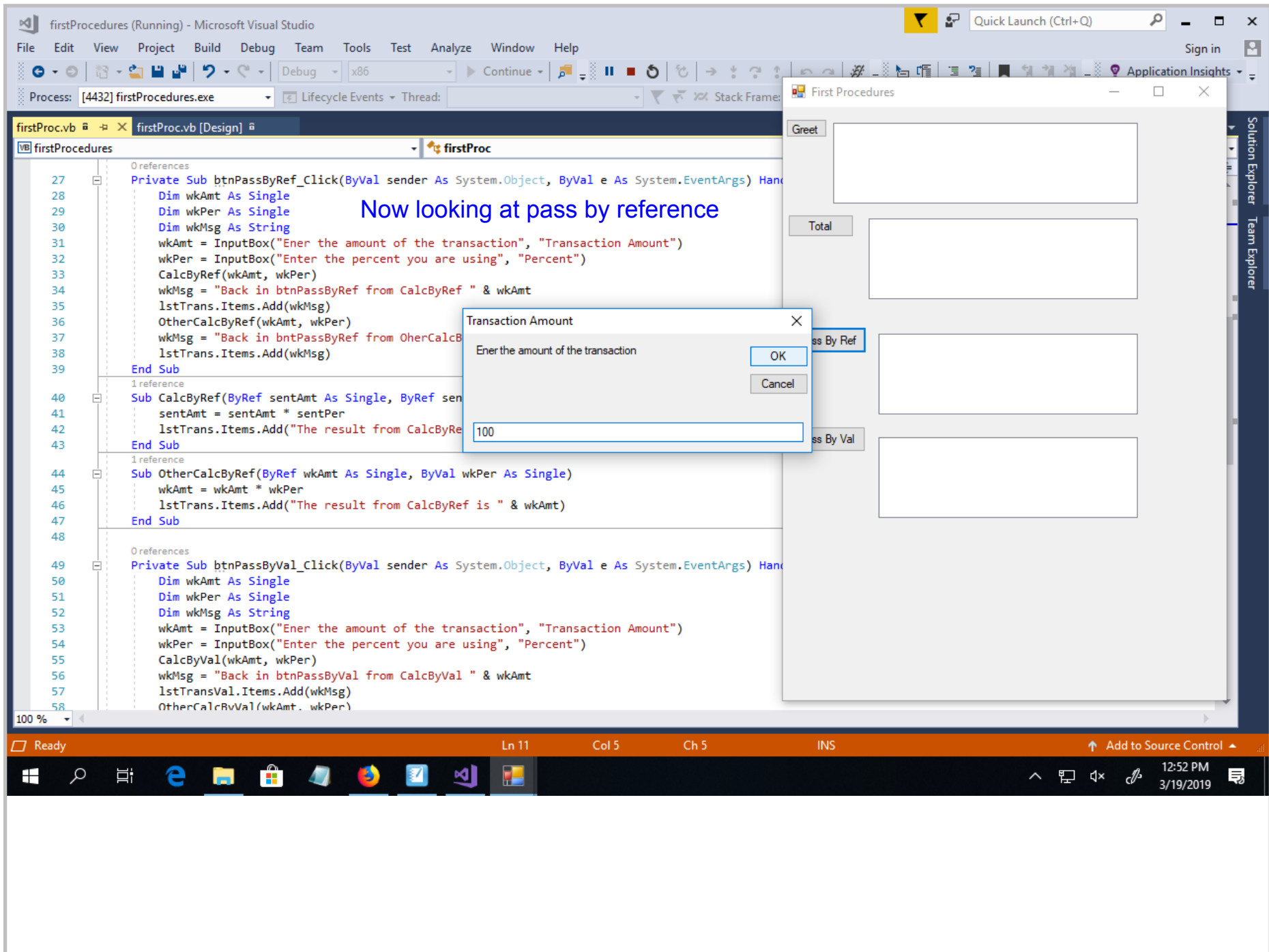
OK Cancel

Greet

Total

ss By Ref

ss By Val



The screenshot displays the Microsoft Visual Studio IDE with a VB.NET project named "firstProcedures". The main window shows the code for "firstProc.vb" with the following content:

```
27 Private Sub btnPassByRef_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnPassByRef.Click
28     Dim wkAmt As Single
29     Dim wkPer As Single
30     Dim wkMsg As String
31     wkAmt = InputBox("Enter the amount of the transaction", "Transaction Amount")
32     wkPer = InputBox("Enter the percent you are using", "Percent")
33     CalcByRef(wkAmt, wkPer)
34     wkMsg = "Back in btnPassByRef from CalcByRef " & wkAmt
35     lstTrans.Items.Add(wkMsg)
36     OtherCalcByRef(wkAmt, wkPer)
37     wkMsg = "Back in btnPassByRef from OtherCalcByRef " & wkAmt
38     lstTrans.Items.Add(wkMsg)
39 End Sub
40 Sub CalcByRef(ByRef sentAmt As Single, ByRef sentPer As Single)
41     sentAmt = sentAmt * sentPer
42     lstTrans.Items.Add("The result from CalcByRef is " & sentAmt)
43 End Sub
44 Sub OtherCalcByRef(ByRef wkAmt As Single, ByVal wkPer As Single)
45     wkAmt = wkAmt * wkPer
46     lstTrans.Items.Add("The result from CalcByRef is " & wkAmt)
47 End Sub
48
49 Private Sub btnPassByVal_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnPassByVal.Click
50     Dim wkAmt As Single
51     Dim wkPer As Single
52     Dim wkMsg As String
53     wkAmt = InputBox("Enter the amount of the transaction", "Transaction Amount")
54     wkPer = InputBox("Enter the percent you are using", "Percent")
55     CalcByVal(wkAmt, wkPer)
56     wkMsg = "Back in btnPassByVal from CalcByVal " & wkAmt
57     lstTransVal.Items.Add(wkMsg)
58     OtherCalcByVal(wkAmt, wkPer)

```

A dialog box titled "Percent" is open, showing the text "Enter the percent you are using" and a text box containing ".1". The dialog has "OK" and "Cancel" buttons.

In the background, a form titled "First Procedures" is visible, featuring a "Greet" button, a "Total" button, and three input fields. The "Pass By Ref" button is highlighted in blue.

The Windows taskbar at the bottom shows the system tray with the time 12:52 PM and date 3/19/2019.

The screenshot shows the Visual Studio IDE with a VB.NET project named 'firstProcedures'. The code is divided into three sections:

```
27 Private Sub btnPassByRef_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnPassByRef.Click
28     Dim wkAmt As Single
29     Dim wkPer As Single
30     Dim wkMsg As String
31     wkAmt = InputBox("Enter the amount of the transaction", "Transaction Amount")
32     wkPer = InputBox("Enter the percent you are using", "Percent")
33     CalcByRef(wkAmt, wkPer)
34     wkMsg = "Back in btnPassByRef from CalcByRef " & wkAmt
35     lstTrans.Items.Add(wkMsg)
36     OtherCalcByRef(wkAmt, wkPer)
37     wkMsg = "Back in bntPassByRef from OherCalcByRef " & wkAmt
38     lstTrans.Items.Add(wkMsg)
39 End Sub
40 Sub CalcByRef(ByRef sentAmt As Single, ByRef sentPer As Single)
41     sentAmt = sentAmt * sentPer
42     lstTrans.Items.Add("The result from CalcByRef is " & sentAmt)
43 End Sub
44 Sub OtherCalcByRef(ByRef wkAmt As Single, ByVal wkPer As Single)
45     wkAmt = wkAmt * wkPer
46     lstTrans.Items.Add("The result from CalcByRef is " & wkAmt)
47 End Sub
48
49 Private Sub btnPassByVal_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnPassByVal.Click
50     Dim wkAmt As Single
51     Dim wkPer As Single
52     Dim wkMsg As String
53     wkAmt = InputBox("Enter the amount of the transaction", "Transaction Amount")
54     wkPer = InputBox("Enter the percent you are using", "Percent")
55     CalcByVal(wkAmt, wkPer)
56     wkMsg = "Back in btnPassByVal from CalcByVal " & wkAmt
57     lstTransVal.Items.Add(wkMsg)
58     OtherCalcByVal(wkAmt, wkPer)

```

Handwritten annotations include a blue arrow pointing from line 33 to line 34, and a blue '100' with a dot next to line 32. A green box highlights the 'Pass By Ref' button in the dialog box, with green arrows pointing to the output text.

The 'First Procedures' dialog box contains the following text:

Greet

Total

Pass By Ref

The result from CalcByRef is 10  
Back in btnPassByRef from CalcByRef 10  
The result from CalcByRef is 1  
Back in bntPassByRef from OherCalcByRef 1

Pass By Val

To quote your textbook "when an argument is passed by reference, the procedure has access to the original argument." Changes that are made are made to the original.

The screenshot shows the Visual Studio IDE with the following code in `firstProc.vb`:

```
48  
49 Private Sub btnPassByVal_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles btnPass  
50     Dim wkAmt As Single  
51     Dim wkPer As Single  
52     Dim wkMsg As String  
53     wkAmt = InputBox("Enter the amount of the transaction", "Transaction Amount")  
54     wkPer = InputBox("Enter the percent you are using", "Percent")  
55     CalcByVal(wkAmt, wkPer)  
56     wkMsg = "Back in btnPassByVal from CalcByVal " & wkAmt  
57     lstTransVal.Items.Add(wkMsg)  
58     OtherCalcByVal(wkAmt, wkPer)  
59     wkMsg = "Back in bntPassByVal from OherCalcByVal " & wkAmt  
60     lstTransVal.Items.Add(wkMsg)  
61 End Sub  
62 Sub CalcByVal(ByVal sentAmt As Single, ByVal sentPer As Single)  
63     sentAmt = sentAmt * sentPer  
64     lstTransVal.Items.Add("The result from CalcByVal is " & sentAmt)  
65 End Sub  
66 Sub OtherCalcByVal(ByVal wkAmt As Single, ByVal wkPer As Single)  
67     wkAmt = wkAmt * wkPer  
68     lstTransVal.Items.Add("The result from CalcByVal is " & wkAmt)  
69 End Sub  
70 End Class  
71
```

The output window shows the following results:

- Greet
- Total
- Pass By Ref: The result from CalcByRef is 10, Back in btnPassByRef from CalcByRef 10, The result from CalcByRef is 1, Back in bntPassByRef from OherCalcByRef 1
- Pass By Val: The result from CalcByVal is 10, Back in btnPassByVal from CalcByVal 100, The result from CalcByVal is 10, Back in bntPassByVal from OherCalcByVal 100

A red arrow points from the `CalcByVal` subroutine call in the code to the `Pass By Val` output. A red handwritten "100" is next to the `CalcByVal` call. A blue box highlights the `Pass By Val` output, with a blue arrow pointing to it from the text below.

Again, quoting the text "when an argument is passed by value to a parameter only a copy of the argument is passed." Changes to the parameter value made in side the procedure do not effect the original.

firstFuncions (Running) - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test Analyze Window Help

Process: [3448] firstFuncions.exe Lifecycle Events Thread: Stack Frame:

firstFuncion.vb firstFuncion.vb [Design]

VB firstFuncions btnUseFunc Click

```
2
3 0 references
4 Private Sub btnUseFunc_Click(ByVal sender As System.Object, ByVal e As System.EventArgs)
5     Dim wkPayHr As Single, wkHrs As Single, wkPay As Double, wkMsg As String
6     wkPayHr = InputBox("Enter the pay per hour", "Pay/hour")
7     wkHrs = InputBox("Enter the hours worked", "Hours Worked")
8     wkPay = CalcPay(wkPayHr, wkHrs)
9     wkMsg = TypePay(wkHrs)
10    lstPay.Items.Add("The employee " & wkMsg & " so pay is " & wkPay)
11 End Sub
12 1 reference
13 Function CalcPay(ByVal wkPayHr As Single, ByVal wkHrs As Single) As Double
14     Dim wkPay As Double
15     If wkHrs > 40 Then
16         wkPay = wkPayHr * 40 + (wkHrs - 40) * wkPayHr * 1.5
17     Else
18         wkPay = wkPayHr * wkHrs
19     End If
20     Return wkPay
21 End Function
22 1 reference
23 Function TypePay(ByVal wkHrs As Single) As String
24     Dim wkTypeMsg As String
25     If wkHrs > 40 Then
26         wkTypeMsg = " worked overtime "
27     Else
28         wkTypeMsg = " did not work overtime "
29     End If
30     Return wkTypeMsg
31 End Function
End Class
```

First Functions

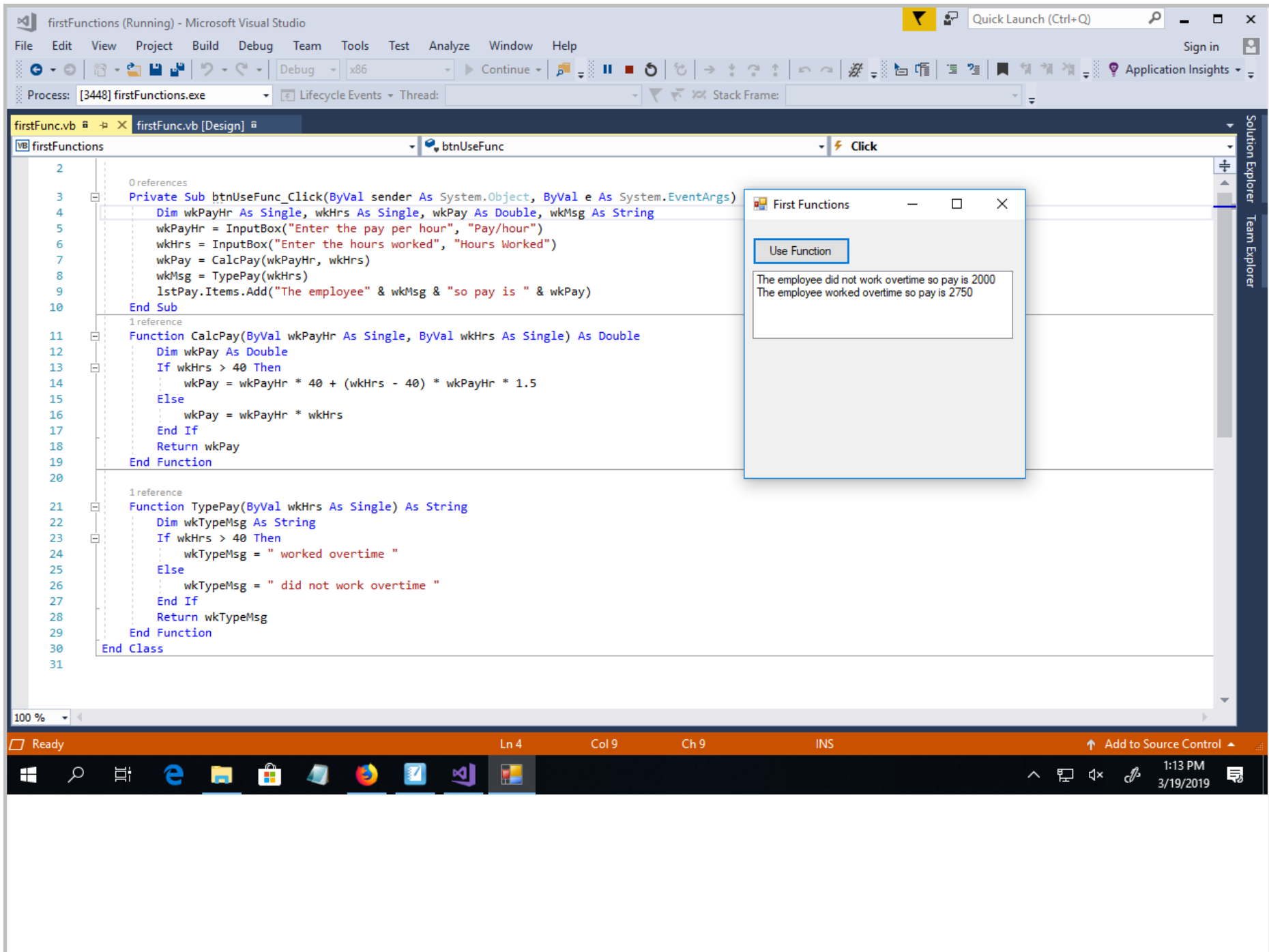
Use Function

The employee did not work overtime so pay is 2000  
The employee worked overtime so pay is 2750

100 %

Ready Ln 4 Col 9 Ch 9 INS Add to Source Control

1:10 PM 3/19/2019



The screenshot shows the Microsoft Visual Studio IDE with a VB.NET project named 'VBfunctions'. The code in 'Form1.vb' includes several event handlers for buttons: 'btnCase\_Click', 'btnAccess\_Click', 'btnMore\_Click', 'Form1\_Load', and 'btnReplace\_Click'. A modal dialog box is displayed over the code, containing the text: 'Be sure to enter data in the two text boxes - the second one should have an embedded &'. A blue annotation 'Also make fields bigger than 3 or 4 chars.' is placed to the right of the dialog. The Windows taskbar at the bottom shows the system tray with the time 1:16 PM on 3/19/2019.

```
2
3 0 references
4 Private Sub btnCase_Click(sender As Object, e As EventArgs) Handles btnCase.Click
5     lstOutput.Items.Add(UCase(txtFirst.Text))
6     lstOutput.Items.Add(LCase(txtSecond.Text))
7 End Sub
8
9 0 references
10 Private Sub btnAccess_Click(sender As Object, e As EventArgs) Handles btnAccess.Click
11     lstOutput.Items.Add(Len(txtFirst.Text))
12     lstOutput.Items.Add(Mid(txtFirst.Text, 3, 4))
13     lstOutput.Items.Add(Mid(txtFirst.Text, 3))
14     lstOutput.Items.Add(Mid("Hello World!!!",
15     lstOutput.Items.Add(InStr(txtSecond.Text,
16     lstOutput.Items.Add(txtFirst.Text.Substring
17 End Sub
18
19 0 references
20 Private Sub btnMore_Click(sender As Object, e As EventArgs) Handles btnMore.Click
21     lstOutput.Items.Add(StrReverse(txtFirst.Text))
22     lstOutput.Items.Add(txtFirst.Text & Space(5) & txtSecond.Text)
23     lstOutput.Items.Add(Microsoft.VisualBasic.Left(txtFirst.Text, 4))
24     lstOutput.Items.Add(Microsoft.VisualBasic.Left("Hello World", 5))
25     lstOutput.Items.Add(Microsoft.VisualBasic.Right(txtFirst.Text, 4))
26 End Sub
27
28 0 references
29 Private Sub Form1_Load(sender As Object, e As EventArgs) Handles MyBase.Load
30     MessageBox.Show("Be sure to enter data in the two text boxes - the second one should have an embedded &")
31 End Sub
32
33 0 references
34 Private Sub btnReplace_Click(sender As Object, e As EventArgs) Handles btnReplace.Click
35     lstOutput.Items.Add(Replace(txtSecond.Text, "&", "%"))
```

VBfunctions (Running) - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test Analyze Window Help

Process: [6964] VBfunctions.exe

Form1.vb [Design]

```
2
3 0 references
4 Private Sub btnCase_Click(sender As Object, e As EventArgs) Handles btnCase.Click
5     lstOutput.Items.Add(UCase(txtFirst.Text))
6     lstOutput.Items.Add(LCase(txtSecond.Text))
7 End Sub
8
9 0 references
10 Private Sub btnAccess_Click(sender As Object, e As EventArgs) Handles btnAccess.Click
11     lstOutput.Items.Add(Len(txtFirst.Text))
12     lstOutput.Items.Add(Mid(txtFirst.Text, 3, 4))
13     lstOutput.Items.Add(Mid(txtFirst.Text, 3))
14     lstOutput.Items.Add(Mid("Hello World!!!", 7, 5))
15     lstOutput.Items.Add(InStr(txtSecond.Text, "&"))
16     lstOutput.Items.Add(txtFirst.Text.Substring(3, 4))
17     lstOutput.Items.Add(txtFirst.Text.Substring(3))
18 End Sub
19
20 0 references
21 Private Sub btnMore_Click(sender As Object, e As EventArgs) Handles btnMore.Click
22     lstOutput.Items.Add(StrReverse(txtFirst.Text))
23     lstOutput.Items.Add(txtFirst.Text & Space(5) & txtSecond.Text)
24     lstOutput.Items.Add(Microsoft.VisualBasic.Left(txtFirst.Text, 4))
25     lstOutput.Items.Add(Microsoft.VisualBasic.Left("Hello World", 5))
26     lstOutput.Items.Add(Microsoft.VisualBasic.Right(txtFirst.Text, 4))
27 End Sub
28
29 0 references
30 Private Sub Form1_Load(sender As Object, e As EventArgs) Handles MyBase.Load
31     MessageBox.Show("Be sure to enter data in the two text boxes - the second one should have an embedded &")
32 End Sub
33
34 0 references
35 Private Sub btnReplace_Click(sender As Object, e As EventArgs) Handles btnReplace.Click
36     lstOutput.Items.Add(Replace(txtSecond.Text, "&", "%"))
37 End Sub
```

Form1

computer INFO&systems

COMPUTER  
info&systems  
COMPUTER  
info&systems

Convert Access

More Replace

Ready Ln 18 Col 86 Ch 86 INS Add to Source Control

1:18 PM 3/19/2019

VBfunctions (Running) - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test Analyze Window Help

Process: [6964] VBfunctions.exe

Form1.vb [Design]

```
2
3 Private Sub btnCase_Click(sender As Object, e As EventArgs) Handles btnCase.Click
4     lstOutput.Items.Add(UCase(txtFirst.Text))
5     lstOutput.Items.Add(LCase(txtSecond.Text))
6 End Sub
7
8 Private Sub btnAccess_Click(sender As Object, e As EventArgs) Handles btnAccess.Click
9     lstOutput.Items.Add(Len(txtFirst.Text))
10    lstOutput.Items.Add(Mid(txtFirst.Text, 3, 4))
11    lstOutput.Items.Add(Mid(txtFirst.Text, 3))
12    lstOutput.Items.Add(Mid("Hello World!!!", 7, 5))
13    lstOutput.Items.Add(InStr(txtSecond.Text, "&"))
14    lstOutput.Items.Add(txtFirst.Text.Substring(3, 4))
15    lstOutput.Items.Add(txtFirst.Text.Substring(3))
16 End Sub
17
18 Private Sub btnMore_Click(sender As Object, e As EventArgs) Handles btnMore.Click
19    lstOutput.Items.Add(StrReverse(txtFirst.Text))
20    lstOutput.Items.Add(txtFirst.Text & Space(5) & txtSecond.Text)
21    lstOutput.Items.Add(Microsoft.VisualBasic.Left(txtFirst.Text, 4))
22    lstOutput.Items.Add(Microsoft.VisualBasic.Left("Hello World", 5))
23    lstOutput.Items.Add(Microsoft.VisualBasic.Right(txtFirst.Text, 4))
24 End Sub
25
26 Private Sub Form1_Load(sender As Object, e As EventArgs) Handles MyBase.Load
27     MessageBox.Show("Be sure to enter data in the two text boxes - the second one should have an embedded '&')
28 End Sub
29
30 Private Sub btnReplace_Click(sender As Object, e As EventArgs) Handles btnReplace.Click
31     lstOutput.Items.Add(Replace(txtSecond.Text, "&", "%"))
32
```

Form1

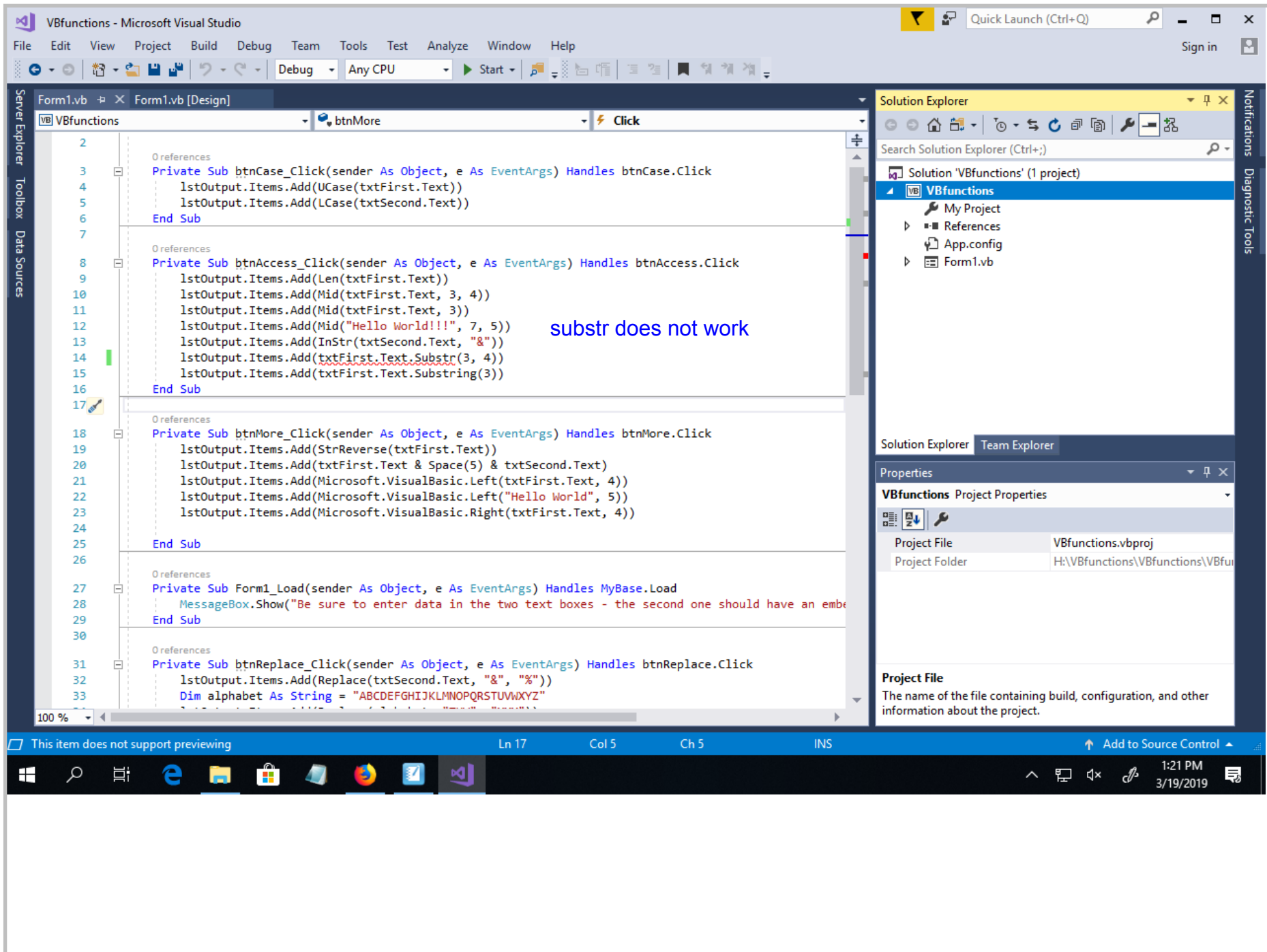
computer INFO&systems

info&systems  
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Convert Access More Replace

Ready Ln 18 Col 86 Ch 86 INS Add to Source Control

1:21 PM 3/19/2019



VBfunctions (Running) - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test Analyze Window Help

Process: [10736] VBfunctions.exe Lifecycle Events Thread: Stack Frame:

Form1.vb [Design]

VB VBfunctions btnMore Click

```
2
3 0 references
4 Private Sub btnCase_Click(sender As Object, e As EventArgs) Handles btnCase.Click
5     lstOutput.Items.Add(UCase(txtFirst.Text))
6     lstOutput.Items.Add(LCase(txtSecond.Text))
7 End Sub
8
9 0 references
10 Private Sub btnAccess_Click(sender As Object, e As EventArgs) Handles btnAccess.Click
11     lstOutput.Items.Add(Len(txtFirst.Text))
12     lstOutput.Items.Add(Mid(txtFirst.Text, 3, 4))
13     lstOutput.Items.Add(Mid(txtFirst.Text, 3))
14     lstOutput.Items.Add(Mid("Hello World!!!", 7, 5))
15     lstOutput.Items.Add(InStr(txtSecond.Text, "&"))
16     lstOutput.Items.Add(txtFirst.Text.Substring(3, 4))
17     lstOutput.Items.Add(txtFirst.Text.Substring(3))
18 End Sub
19
20 0 references
21 Private Sub btnMore_Click(sender As Object, e As EventArgs) Handles btnMore.Click
22     lstOutput.Items.Add(StrReverse(txtFirst.Text))
23     lstOutput.Items.Add(txtFirst.Text & Space(5) & txtSecond.Text)
24     lstOutput.Items.Add(Microsoft.VisualBasic.Left(txtFirst.Text, 4))
25     lstOutput.Items.Add(Microsoft.VisualBasic.Left("Hello World", 5))
26     lstOutput.Items.Add(Microsoft.VisualBasic.Right(txtFirst.Text, 4))
27 End Sub
28
29 0 references
30 Private Sub Form1_Load(sender As Object, e As EventArgs) Handles MyBase.Load
31     MessageBox.Show("Be sure to enter data in the two text boxes - the second one should have an embedded &")
32 End Sub
33
34 0 references
35 Private Sub btnReplace_Click(sender As Object, e As EventArgs) Handles btnReplace.Click
36     lstOutput.Items.Add(Replace(txtSecond.Text, "&", "%"))
```

Form1

computer INFO&systems

retupmoc  
computer INFO&systems  
comp  
Hello  
uter

Convert Access

More Replace

Ready Ln 21 Col 74 Ch 74 INS Add to Source Control

1:27 PM 3/19/2019

VBfunctions (Running) - Microsoft Visual Studio

File Edit View Project Build Debug Team Tools Test Analyze Window Help

Debug Any CPU Continue

Process: [10736] VBfunctions.exe Lifecycle Events Thread: Stack Frame:

Form1.vb [Design]

VB VBfunctions btnMore Click

```

18 Private Sub btnMore_Click(sender As Object, e As EventArgs) Handles btnMore.Click
19     lstOutput.Items.Add(StrReverse(txtFirst.Text))
20     lstOutput.Items.Add(txtFirst.Text & Space(5) & txtSecond.Text)
21     lstOutput.Items.Add(Microsoft.VisualBasic.Left(txtFirst.Text, 4))
22     lstOutput.Items.Add(Microsoft.VisualBasic.Left("Hello World", 5))
23     lstOutput.Items.Add(Microsoft.VisualBasic.Right(txtFirst.Text, 4))
24
25 End Sub
26
27 Private Sub Form1_Load(sender As Object, e As EventArgs) Handles MyBase.Load
28     MessageBox.Show("Be sure to enter data in the two text boxes - the second one should ha
29 End Sub
30
31 Private Sub btnReplace_Click(sender As Object, e As EventArgs) Handles btnReplace.Click
32     lstOutput.Items.Add(Replace(txtSecond.Text, "&", "%"))
33     Dim alphabet As String = "ABCDEFGHIJKLMNOPQRSTUVWXYZ"
34     lstOutput.Items.Add(Replace(alphabet, "TUV", "XXX"))
35     Mid(alphabet, 20, 3) = "ZZZ"
36     lstOutput.Items.Add(alphabet)
37
38 End Sub
39 End Class
40

```

Form1

computer INFO&systems

retupmoc  
computer INFO&systems  
comp  
Hello  
uter  
INFO%systems  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Convert Access

More Replace

100 %

Ready Ln 21 Col 74 Ch 74 INS Add to Source Control

1:28 PM 3/19/2019