

## Variables in VB .NET

```
Dim number1 As Integer
```

```
Dim number2 As Integer
```

```
number1 = 3
```

```
number2 = 5
```

### Dim

Short for Dimension. It's a type of variable. You declare (or "tell" Visual Basic) that you are setting up a variable with this word.

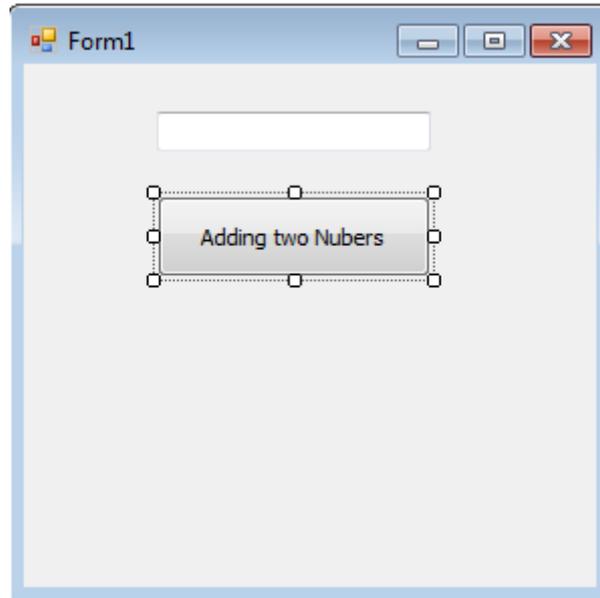
```
number1
```

This is a variable. In other words, our storage area. After the Dim word, Visual Basic is looking for the name of your variable. You can call your variable almost anything you like, but there are a few reserved words that VB won't allow.

### As Integer

We're telling Visual Basic that the variable is going to be a number (integer).

Ex\_1/ Adding button and textbox to form.



**Double click on the button you will see the following code:**

```
Public Class Form1
```

```
    Private Sub Button1_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button1.Click
```

```
    End Sub
```

```
End Class
```

Notice, too, that the underscore character ( `_` ) has been used to spread the code over more than one line. You can do this in your own code, too, if it becomes too long:

**Private**

Private means that no other part of the programme can see this code except for our button

## **Sub**

Short for Subroutine. The "Sub" word tells VB that some code follows, and that it needs to be executed

## **Button1**

This is the name of our button.

## **\_Click ( )**

This is something called an Event. In other words, when the button is clicked, the Click Event will fire, and the code we're going to write will be executed

## **End Sub**

The subroutine ends right here. This signifies the end of our code.

Add the following code to the button as follow:

```
Dim number1 As Integer
    Dim number2 As Integer
    Dim answer As Integer

    number1 = 3
    number2 = 5

    answer = number1 + number2

    MessageBox.Show(answer)
    TextBox1.Text = answer
```

After typing all that, your code window should now look like this:

---

```
Public Class Form1

    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click
        Dim number1 As Integer
        Dim number2 As Integer
        Dim answer As Integer

        number1 = 3
        number2 = 5

        answer = number1 + number2

        MessageBox.Show(answer)
        TextBox1.Text = answer
    End Sub
End Class
```

---

## String Variables

if we want Visual Basic to store text we need to use the word "String". To set up a variable to hold text we need to use As String and not As Integer. If the information we want to store in our variables is a First Name and a Last Name, we can set up two variables like this.

```
Dim FirstName As String
Dim LastName As String
```

Add button to our form then add the following code:

```
Dim FirstName As String
```

```
Dim LastName As String
Dim FullName As String
```

```
FirstName = "Yousif"
LastName = "Nihad"
```

```
FullName = FirstName & " " &
LastName
```

```
TextBox1.Text = FullName
```

Your code window should now look like this:

```
Private Sub Button2_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button2.Click
    Dim FirstName As String
    Dim LastName As String
    Dim FullName As String

    FirstName = "Yousif"
    LastName = "Nihad"

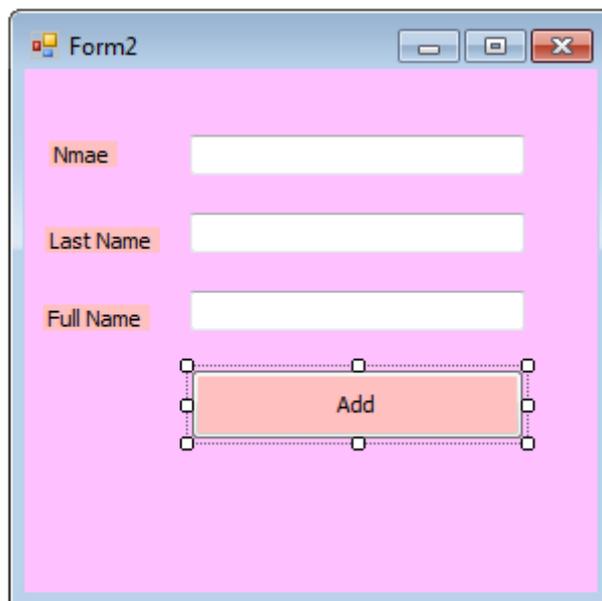
    FullName = FirstName & " " & LastName

    TextBox1.Text = FullName
End Sub
End Class
```

**Note** /The ampersand is used to join strings together. It's called Concatenation.

**Note** / quotation marks are used to enclose the text that we store in string variables!

Example /



Write the following code into the button:

```
Dim FirstName As String  
Dim LastName As String  
Dim WholeName As String
```

```
FirstName = txtfn.Text  
LastName = txtln.Text
```

```
WholeName = FirstName & " " &
```

LastName

```
txtfun.Text = WholeName  
MessageBox.Show(WholeName)
```

Your code window will look as follow:

```
Public Class Form2  
    Private Sub Button1_Click(ByVal sender As System.Object, ByVal e As System.EventArgs) Handles Button1.Click  
        Dim FirstName As String  
        Dim LastName As String  
        Dim WholeName As String  
  
        FirstName = txtfn.Text  
        LastName = txtln.Text  
  
        WholeName = FirstName & " " & LastName  
        txtfun.Text = WholeName  
        MessageBox.Show(WholeName)  
    End Sub  
End Class
```

## More about Variables in VB NET

We've met two variable types so far - **As String** and **As Integer**. But there are quite a few more you can use.

Short Types use 2 Bytes, Integer Types use 4 Bytes, Long Types use 8 Bytes, Single Types use 4 Bytes, Double Types use 8 Bytes, and Decimal Types use 16 Bytes.

**H.W/write program in vb to calculate the following**

**0.123345678 \* 1234**

**Use each of the types of variables above.**

## **A Calculator Project in VB NET**

### **Designing the Form**



Note the numbers are buttons numbered from 1 to 9 and the number 9 is button 13 .the clear button number 10

And the plus button number 12 and the minus button number 12.

Public Class Form3

```
Dim myvar1 As Double
```

```
Dim myvar2 As Double
```

```
Dim operat As String = Nothing
```

```
Dim c As Integer = 0
```

```
Private Sub Button1_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button1.Click  
    TextBox1.Text &= Button1.Text  
End Sub
```

```
Private Sub Button2_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button2.Click  
    TextBox1.Text &= Button2.Text  
  
End Sub
```

```
Private Sub Button3_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button3.Click  
    TextBox1.Text &= Button3.Text
```

End Sub

```
Private Sub Button4_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button4.Click  
    TextBox1.Text &= Button4.Text
```

End Sub

```
Private Sub Button11_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button11.Click  
    operat = "+"  
    myvar1 = Val(TextBox1.Text)
```

```
    TextBox1.Text = ""  
    c = 0
```

End Sub

```
Private Sub Button12_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button12.Click  
    If c = 0 Then  
        myvar2 = Val(TextBox1.Text)  
    End If
```

```
    TextBox1.Text = Nothing  
    If (operat = "+") Then
```

```
myvar1 = myvar1 + myvar2
```

```
Else
```

```
myvar1 = myvar1 - myvar2
```

```
End If
```

```
TextBox1.Text = myvar1
```

```
c = 1
```

```
End Sub
```

```
Private Sub Button14_Click(ByVal sender  
As System.Object, ByVal e As
```

```
System.EventArgs) Handles Button14.Click
```

```
operat = "-"
```

```
myvar1 = Val(TextBox1.Text)
```

```
TextBox1.Text = ""
```

```
c = 0
```

```
End Sub
```

```
Private Sub Button10_Click(ByVal sender  
As System.Object, ByVal e As
```

```
System.EventArgs) Handles Button10.Click
```

```
TextBox1.Text = Nothing
```

End Sub

```
Private Sub Button5_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button5.Click  
    TextBox1.Text &= Button5.Text
```

End Sub

```
Private Sub Button6_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button6.Click  
    TextBox1.Text &= Button6.Text
```

End Sub

```
Private Sub Button7_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button7.Click  
    TextBox1.Text &= Button7.Text
```

End Sub

```
Private Sub Button8_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button8.Click  
    TextBox1.Text &= Button8.Text
```

End Sub

```
Private Sub Button9_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button9.Click  
    TextBox1.Text &= Button9.Text
```

```
End Sub
```

```
Private Sub Button13_Click(ByVal sender  
As System.Object, ByVal e As  
System.EventArgs) Handles Button13.Click  
    TextBox1.Text &= Button13.Text
```

```
End Sub
```

```
End Class
```