



Fundamentals of Programming in Visual Basic (Continue IV)

- Strings
- Variables and Strings
- Using Text Boxes for Input and Output
- Concatenation



Strings

- The Empty String
- Initial Value of a String
- Option Strict
- Internal Documentation
- Line-Continuation Character



String Literal

A **string literal** is a sequence of characters surrounded by quotation marks.

Examples:

"hello"

"123-45-6789"

"#ab cde?"



String Variable

A **string variable** is a name to which a string value can be assigned.

Examples:

country

ssn

word

firstName



String Variable

- Declaration:

```
Dim firstName As String
```

Variable name

Data type

- Assignment:

```
firstName = "Fred"
```

The string variable `firstName` stores the string "Fred"



String Variable

You can declare a string variable and assign it a value at the same time.

```
Dim firstName As String = "Fred"
```



Add Method

Let *str* be a string literal or variable. Then,

`lstBox.Items.Add(str)`

add the value of *str* in the list box.



String Variable

You can assign the value of one string variable to another.

```
Dim strVar1 As String = "Hello"
```

```
Dim strVar2 As String = "Goodbye"
```

```
strVar2 = strVar1
```

```
lstOutput.Items.Add(strVar2)
```

Output: Hello



Variables and Strings

```
Private Sub btnDisplay_Click(...) Handles  
    btnDisplay.Click  
    Dim today As String  
    today = "Monday"  
    lstOutput.Items.Add("hello")  
    lstOutput.Items.Add(today)  
End Sub
```

Output: hello
 Monday



Using Text Boxes for Input and Output

- The contents of a text box is always a string

- Input example

strVar = txtBox.Text

- Output example

txtBox.Text = strVar



Data Conversion

- Because the contents of a text box is always a string, sometimes you must convert the input or output.

dblVar = CDb1(txtBox.Text)



Converts a String to a Double

txtBox.Text = CStr(numVar)



Converts a number to a string



Type Conversion Function

- CByte(expression) – Convert to byte
- CSByte(expression) – Convert to Sbyte
- CShort(expression) – Convert to short
- CInt(expression) – Convert to Integer
- CLng(expression) – Convert to Long
- CSng(expression) – Convert to Single
- CDbI(expression) – Convert to Double
- CStr(expression) – Convert to String



Concatenation

Combining two strings to make a new string

```
quote1 = "We'll always "  
quote2 = "have Paris."  
quote = quote1 & quote2  
txtOutput.Text = quote & " - Humphrey Bogart"
```

Displays

We'll always have Paris. - Humphrey Bogart



Appending

- To append *str* to the string variable *var*
`var = var & str`
- Or as a shortcut
`var &= str`



Appending Example

```
Dim var As String = "Good"  
var &= "bye"  
txtBox.Text = var
```

OUTPUT: Goodbye