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**Procedure:** Excel - VBA - Referring To Ranges In Your Code

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# [**Excel – VBA – Referring To Ranges In Your Code**](http://heelpbook.altervista.org/2012/excel-vba-referring-to-ranges-in-your-code/)

Newcomers to **VBA** are often confused about how to refer to ranges on a worksheet. This confusion is somewhat justified, because **VBA** offers several different ways to refer to ranges. In this document I provide an overview of these techniques:

* Referring to ranges directly
* Referring to ranges by using the Cells method
* Referring to ranges by using the Offset method

**Referring to ranges directly**

Perhaps the most common way to refer to a range on a worksheet is to specify the range directly. Here's an example that assigns the value 1 to range **A1:C12** on **Sheet1** in a workbook named MyBook:

Workbooks("MyBook").Sheets("Sheet1").Range("A1:C12").Value = 1

Notice that this is a fully qualified reference. This statement will work regardless of which sheet is active. If **Sheet1** is the active sheet, the statement can be simplified as:

Range("A1:C12").Value = 1

If the range has a name, you can use the name in your statement:

Range("myrange").Value = 1

You can also refer to a range by specifying the upper left and the lower right cell. Here's an example that assigns a value to all cells in the range **A1:D12** on the active worksheet.

Range(Range("A1"), Range("D12")).Value = 99

**Referring to ranges by using the Cells method**

In **Excel**, the **Range** object has a method called **Cells**. Note that Cells is a *method* - not an object. When the **Cells** method is evaluated, it returns an object (*specifically, a* ***Range*** *object*).

The **Cells** method takes two arguments: the row and the column. The following statement assigns the value 1 to cell **C2** on **Sheet1**:

Worksheets("Sheet1").Cells(2,3).Value = 1

You can also use the **Cells** method to refer to a larger range. The following statement assigns the value 1 to **A1:J12** on the active worksheet:

Range(Cells(1,1), Cells(12,10)).Value = 1

In the preceding examples, the arguments for **Cells** were actual numbers. The advantage of using the **Cells** method becomes apparent when you use variables as the arguments. The subroutine below fills a 10X10 range (*rowwise*) with consecutive numbers from 1 to 100.

Sub FillRange()

 Num = 1

 For Row = 1 To 10

 For Col = 1 To 10

 Sheets("Sheet1").Cells(Row, Col).Value = Num

 Num = Num + 1

 Next Col

 Next Row

End Sub

**Referring to ranges by using the Offset method**

The **Offset** method is another useful way to refer to ranges. The **Offset** method returns a **Range** object, and takes two arguments. The first argument represents the number of rows to offset; the second represents the number of columns to offset.

The following statement assigns the value 1 to the cell that is one row below cell **C2** and two cells to the right of **C2** (i.e., cell E3):

 Range("C2").Offset(1,2).Value = 1

The **Offset** method is most useful when the arguments are variables, rather than numbers. The subroutine below fills a 10X10 range (*rowwise*) with consecutive numbers from 1 to 100.

Sub FillRange2()

 Num = 1

 For Row = 0 To 9

 For Col = 0 To 9

 Sheets("Sheet1").Range("A1").Offset(Row,Col).Value = Num

 Num = Num + 1

 Next Col

 Next Row

End Sub