

Macro Programming

Step-by-Step Guide to Using Breakpoints in VBA

What is a Breakpoint?

A **breakpoint** is a marker set in your code that pauses the program execution at that specific line. This allows inspection of variable values and program behavior before continuing execution — an essential debugging tool.

VBA Code Sample

Listing 1: Sample VBA macro to calculate sum

```
Sub CalculateSum()
    Dim i As Integer
    Dim total As Integer
    total = 0

    For i = 1 To 5
        total = total + i
    Next i

    MsgBox "Total -sum- is -" & total
End Sub
```

Steps to Set and Use a Breakpoint

1. Open the VBA Editor by pressing Alt + F11 in Excel or Word.
2. Open the module containing your code or insert a new one.
3. Click in the margin next to the line `total = total + i` or place the cursor there and press F9 to set a breakpoint (a red dot appears).
4. Run the macro by pressing F5 or running from Excel; execution will pause at the breakpoint.
5. Inspect variables by hovering over them or opening the Locals window (under View > Locals Window).
6. Press F8 to step through the code line by line and watch the variable values update.
7. Press F5 to continue running or Shift + F5 to stop debugging.

Note:

- Breakpoints help stop your program at a key point to check what's happening.
- Stepwise execution allows close observation of how variables change and where logic may fail.
- This technique is powerful to find bugs and understand code flow deeply.