

## Macro Programming

### Using the Watch Window to Debug VBA Code

#### Sample VBA Code

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 for Using the Watch Window

1. Open the VBA Editor with Alt + F11.
2. Open or create a module and paste the code.
3. Set a breakpoint on `total = total + i` by clicking the margin or pressing F9.
4. Run the macro (F5); execution pauses at the breakpoint.
5. Add a watch by right-clicking `total` or `i` and selecting `Add Watch`, or via `Debug > Add Watch`.
6. Type the variable name (e.g., `i`, `total`) in the Watch window.
7. Use F8 to step through code and observe variable values updating in the Watch window.
8. Press F5 to continue or Shift + F5 to stop debugging.

#### Note

- Monitors values of selected variables or expressions.
- Updates values after each paused line, letting you trace execution state.
- Allows editing variable values to test scenarios.
- Complements breakpoints and step-through debugging.