

VBA - VARIABLES

DATA TYPES TABLE

Data Type	Stores	Example
Integer	Whole numbers	100
Long	Large whole numbers	999999
Double	Decimal numbers	3.14159
String	Text	"Hello"
Boolean	True/False	True
Date	Dates and times	#1/1/2025#
Variant	Any type (default)	Any value

1. SIMPLE VARIABLES

```
Sub VariableExample1()  
    Dim age As Integer  
    Dim name As String  
    Dim JoiningDate As Date  
  
    ' Assign values  
    age = 30  
    name = "Akshay"  
    JoiningDate = #1/1/2025#  
  
    ' Show in message  
    MsgBox "Name: " & name & vbCrLf & _  
        "Age: " & age & vbCrLf & _  
        "Joining Date: " & JoiningDate  
End Sub
```

Dim = declare variable
As = specify type
= assign value
vbCrLf = line break
& = combine text

2. CALCULATIONS WITH VARIABLES

```
Sub VariableExample2()  
    Dim num1 As Double, num2 As Double, total As Double  
  
    num1 = 10.5  
    num2 = 20  
    total = num1 + num2  
  
    MsgBox "The sum is: " & total  
End Sub
```

Multiple declarations on one line
Can use +, -, *, /
Store result in variable

3. BOOLEAN VARIABLE

```
-----
Sub VariableExample3()
    Dim isCompleted As Boolean

    isCompleted = False

    If isCompleted = True Then
        MsgBox "Task completed!"
    Else
        MsgBox "Task not completed!"
    End If
End Sub
```

Boolean = True or False only
 Use in If conditions
 True = 1, False = 0

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QUICK REFERENCE

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Declare:

```
Dim age As Integer
Dim name As String
Dim price As Double
```

Assign:

```
age = 25
name = "John"
price = 99.99
```

Use:

```
MsgBox age
Range("A1").Value = name
```

Combine:

```
msg = "Age is " & age
```

Multiple:

```
Dim a As Integer, b As Integer
```

KEY POINTS

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- ✓ Dim = declare variable
- ✓ As Type = specify data type
- ✓ Option Explicit = must declare variables
- ✓ Integer = -32,768 to 32,767
- ✓ Long = larger numbers
- ✓ Double = decimals
- ✓ String = text (in quotes)
- ✓ Boolean = True/False
- ✓ Date = #date#
- ✓ & = join text/values
- ✓ vbCrLf = new line
- ✓ Variant = any type

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COMMON MISTAKES

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Wrong: Dim age As Integer = 25

Right: Dim age As Integer: age = 25

Wrong: name = "John (missing quotes)

Right: name = "John"

Wrong: total = "100" + "50" (text)

Right: total = 100 + 50 (numbers)

Wrong: MsgBox name age

Right: MsgBox name & " " & age

Wrong: No Dim statement

Right: Option Explicit at top

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