

How can I use wildcards in VBA and what are some examples of their usage?

Authored by
stats writer

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Wildcards in VBA (Visual Basic for Applications) are special characters that can be used as placeholders or symbols to represent one or more characters in a string of text. They are commonly used in programming to search for and manipulate data that may vary in its exact format or spelling.

In VBA, wildcards are primarily used in the context of the "Like" operator, which is used to compare strings of text. The asterisk symbol (*) is the most commonly used wildcard and represents any number of characters, including none. For example, the pattern "apple*" would match strings such as "apple", "apples", "apple pie", "apple juice", etc.

Another useful wildcard is the question mark symbol (?), which represents a single character. This can be helpful when searching for strings with variable spelling or spacing, such as "color" vs "colour" or "John" vs "Jon".

Wildcards can also be combined to create more specific patterns. For instance, the pattern "a*e" would match strings such as "ace", "age", "ape", "axe", etc.

Some other examples of using wildcards in VBA include:

1. Searching for all files with a specific file extension, such as "*.xlsx" to find all Excel files in a folder.
2. Checking if a string contains certain characters or follows a certain format, such as "###-##-####" to represent a social security number.
3. Validating user input, such as requiring a certain number or type of characters in a password.

In summary, wildcards in VBA provide a powerful and flexible way to search for and manipulate data, making it easier to handle variations and inconsistencies in text.

Use Wildcards in VBA (With Examples)

You can use the Like operator in VBA along with the following built-in wildcard characters to search for specific patterns in strings:

*** : Matches any number of characters? : Matches a single character# : Matches a single digit : Matches any**

character in range

The following examples show how to use these wildcard characters in practice.

Example 1: Use * Wildcard To Search for Substring

Suppose we have the following list of foods in column A:

	A	B	C	D	E	F
1	Food					
2	hot fries					
3	pizza					
4	hot dog					
5	ice cream					
6	lasagna					
7	pasta					
8	super hot wings					
9	cold yogurt					
10	cheese					
11						
12						
13						
14						
15						
16						
17						
18						
19						

We can create the following macro to search for the substring "hot" in each string in column A and output the results in column B:

Sub FindString()

Dim i As Integer

For i = 2 To 10

If Range("A" & i) Like "*hot*" Then

Range("B" & i) = "Contains hot"

Else

Range("B" & i) = "Does Not Contain hot"

End IfNext i

End Sub

When we run this macro, we receive the following output:

	A	B	C	D	E
1	Food				
2	hot fries	Contains hot			
3	pizza	Does Not Contain hot			
4	hot dog	Contains hot			
5	ice cream	Does Not Contain hot			
6	lasagna	Does Not Contain hot			
7	pasta	Does Not Contain hot			
8	super hot wings	Contains hot			
9	cold yogurt	Does Not Contain hot			
10	cheese	Does Not Contain hot			
11					
12					
13					
14					
15					
16					
17					
18					

Example 2: Use * Wildcard To Search for Strings that End in Pattern

Suppose we have the following list of basketball team names in column A:

	A	B	C	D	E	F
1	Team					
2	Hornets					
3	Spurs					
4	Blazers					
5	Jazz					
6	Rockets					
7	Nets					
8	Mavs					
9	Heat					
10	Magic					
11						
12						
13						
14						
15						
16						
17						
18						

We can create the following macro to search for strings in column A that end in "ets" and output the results in column B:

```
Sub FindEndingString()
```

```
Dim i As Integer
```

```
For i = 2 To 10
```

```
If Range("A" & i) Like "*ets" Then
```

```
Range("B" & i) = "Ends in ets"
```

```
Else
```

```
Range("B" & i) = "Does Not End in ets"
```

```
End IfNext i
```

```
End Sub
```

When we run this macro, we receive the following output:

	A	B	C	D	E	F
1	Team					
2	Hornets	Ends in ets				
3	Spurs	Does Not End in ets				
4	Blazers	Does Not End in ets				
5	Jazz	Does Not End in ets				
6	Rockets	Ends in ets				
7	Nets	Ends in ets				
8	Mavs	Does Not End in ets				
9	Heat	Does Not End in ets				
10	Magic	Does Not End in ets				
11						
12						
13						
14						
15						
16						
17						
18						

Example 3: Use # Wildcard To Search for Numbers

Suppose we have the following list of strings in column A:

	A	B	C	D	E
1	Strings				
2	Hey there				
3	I own 5 dogs				
4	I love fish				
5	I have 12 cats				
6	What a great day				
7	Have fun everyone				
8	There are 50 states				
9	This is a party				
10	Hi there				
11					
12					
13					
14					
15					
16					
17					
18					

We can create the following macro to search for strings in column A that contain numbers and output the results in column B:

Sub FindNumbers()

Dim i As Integer

For i = 2 To 10

If Range("A" & i) Like "*#*" Then

Range("B" & i) = "Contains Numbers"

Else

Range("B" & i) = "Does Not Contain Numbers"

End IfNext i

End Sub

When we run this macro, we receive the following output:

	A	B	C	D	E
1	Strings				
2	Hey there	Does Not Contain Numbers			
3	I own 5 dogs	Contains Numbers			
4	I love fish	Does Not Contain Numbers			
5	I have 12 cats	Contains Numbers			
6	What a great day	Does Not Contain Numbers			
7	Have fun everyone	Does Not Contain Numbers			
8	There are 50 states	Contains Numbers			
9	This is a party	Does Not Contain Numbers			
10	Hi there	Does Not Contain Numbers			
11					
12					
13					
14					
15					
16					
17					
18					

Example 4: Use Wildcard To Search for Several Characters

Suppose we have the following list of basketball team names in column A:

	A	B	C	D	E	F
1	Team					
2	Hornets					
3	Spurs					
4	Blazers					
5	Jazz					
6	Rockets					
7	Nets					
8	Mavs					
9	Heat					
10	Magic					
11						
12						
13						
14						
15						
16						
17						
18						

We can create the following macro to search for strings in column A that contain an r, s or t somewhere in the team name and output the results in column B:

Sub FindSpecificLetters()

Dim i As Integer

For i = 2 To 10

```

If Range("A" & i) Like "***" Then
Range("B" & i) = "Contains r, s, or t"
Else
Range("B" & i) = "Does Not Contain r, s or t"
End IfNext i

End Sub

```

When we run this macro, we receive the following output:

	A	B	C	D	E	F
1	Team					
2	Hornets	Contains r, s, or t				
3	Spurs	Contains r, s, or t				
4	Blazers	Contains r, s, or t				
5	Jazz	Does Not Contain r, s, or t				
6	Rockets	Contains r, s, or t				
7	Nets	Contains r, s, or t				
8	Mavs	Contains r, s, or t				
9	Heat	Contains r, s, or t				
10	Magic	Does Not Contain r, s, or t				
11						
12						
13						
14						
15						
16						
17						
18						

Note: You can find the complete documentation for the VBA wildcard characters .

The following tutorials explain how to perform other common tasks using VBA:

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