

SQL Wildcards

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SQL Wildcard Characters

A wildcard character is used to substitute one or more characters in a string.

Wildcard characters are used with the **LIKE** operator. The **LIKE** operator is used in a **WHERE** clause to search for a specified pattern in a column.

Example

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Return all customers that starts with the letter 'a':

```
SELECT * FROM Customers
WHERE CustomerName LIKE 'a%';
```

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Wildcard Characters

Symbol	Description
%	Represents zero or more characters
_	Represents a single character
[]	Represents any single character within the brackets *

	Represents any character not in the brackets *
	Represents any single character within the specified range *
	Represents any escaped character **

* Not supported in PostgreSQL and MySQL databases.

** Supported only in Oracle databases.

Demo Database

Below is a selection from the **Customers** table used in the examples:

CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country
1	Alfreds Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico
4	Around the Horn	Thomas Hardy	120 Hanover Sq.	London	WA1 1DP	UK
5	Berglunds snabbköp	Christina Berglund	Berguvsvägen 8	Luleå	S-958 22	Sweden

Using the % Wildcard

The % wildcard represents any number of characters, even zero characters.

Example

Return all customers that ends with the pattern 'es':

```
SELECT * FROM Customers  
WHERE CustomerName LIKE '%es';
```

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Example

Return all customers that *contains* the pattern 'mer':

```
SELECT * FROM Customers  
WHERE CustomerName LIKE '%mer%';
```

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Using the _ Wildcard

The _ wildcard represents a single character.

It can be any character or number, but each _ represents one, and only one, character.

Example

Return all customers with a **City** starting with any character, followed by "ondon":

```
SELECT * FROM Customers  
WHERE City LIKE '_ondon';
```

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Example

Return all customers with a **City** starting with "L", followed by any 3 characters, ending with "on":

```
SELECT * FROM Customers  
WHERE City LIKE 'L___on';
```

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Using the [] Wildcard

The **[]** wildcard returns a result if *any* of the characters inside gets a match.

Example

Return all customers starting with either "b", "s", or "p":

```
SELECT * FROM Customers  
WHERE CustomerName LIKE '[bsp]%' ;
```

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Using the - Wildcard

The - wildcard allows you to specify a range of characters inside the [] wildcard.

Example

Return all customers starting with "a", "b", "c", "d", "e" or "f":

```
SELECT * FROM Customers  
WHERE CustomerName LIKE '[a-f]%' ;
```

Try it Yourself »

Combine Wildcards

Any wildcard, like % and _ , can be used in combination with other wildcards.

Example

Return all customers that starts with "a" and are at least 3 characters in length:

```
SELECT * FROM Customers  
WHERE CustomerName LIKE 'a__%';
```

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Example

Return all customers that have "r" in the second position:

```
SELECT * FROM Customers  
WHERE CustomerName LIKE '_r%';
```

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Without Wildcard

If no wildcard is specified, the phrase has to have an exact match to return a result.

Example

Return all customers from Spain:

```
SELECT * FROM Customers  
WHERE Country LIKE 'Spain';
```

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Microsoft Access Wildcards

The Microsoft Access Database has some other wildcards:

Symbol	Description	Example
*	Represents zero or more characters	bl* finds bl, black, blue, and blob
?	Represents a single character	h?t finds hot, hat, and hit
[]	Represents any single character within the brackets	h[oa]t finds hot and hat, but not hit
!	Represents any character not in the brackets	h[!oa]t finds hit, but not hot and hat
-	Represents any single character within the specified range	c[a-b]t finds cat and cbt
#	Represents any single numeric character	2#5 finds 205, 215, 225, 235, 245, 255, 265, 275, 285, and 295

Test Yourself With Exercises

Exercise:

Select all records where the second letter of the **City** is an "a".

```
SELECT * FROM Customers  
WHERE City LIKE '  %';
```

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[Start the Exercise](#)