



SQL Conditional Expressions:

Part 2





Logical SQL operator with no direct analogue in Python

Operates on a column using given upper and lower bound

Evaluates as TRUE if column's value is between the two bounds

Bounds are inclusive

Python equivalent:

```
def BETWEEN(value, lower, upper):
    return value >= lower and value <= upper</pre>
```





4	id [PK] integer	title text	author text	genre text	year integer
1	1	Frankenstein	Mary Shelley	Novel	1818
2	2	The Great Gatsby	F. Scott Fitzgerald	Novel	1925
3	3	Big Fish	Daniel Wallace	Magical Realism	1998
4	4	Don Quixote	Miguel de Cervantes	Novel	1605

SELECT b.title as twentieth_century_books
FROM books b
WHERE b.year BETWEEN 1900 AND 2000;

4	twentieth_century_books text		
1	The Great Gatsby		
2	Big Fish		





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Question: What is the bug here?

```
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Answer: the upper bound includes the year 2000

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SELECT b.title as twentieth_century_books FROM books b
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Answer: the upper bound includes the year 2000

```
SELECT b.title as twentieth_century_books FROM books b
WHERE b.year BETWEEN 1900 AND 1999;
```







Evaluates as TRUE if string is contained in set of strings represented by given pattern

Character	Meaning
%	Matches any sequence of zero or more characters
_	Matches any single character

Value		Pattern	Result
'Big Fish'	LIKE	'Big Fish'	TRUE
'Big Fish'	LIKE	'Big%'	TRUE
'Big Fish'	LIKE	'B_g F_sh'	TRUE
'Big Fish'	LIKE	'Big_Fish'	TRUE
'Big Fish'	LIKE	'Big_Fish_'	FALSE
'Big Fish'	LIKE	'Small %'	FALSE
'Big Fish'	LIKE	'Big%Dog'	FALSE

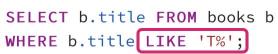




ILIKE uses a case-insensitive match

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"Book titles that begin with T"









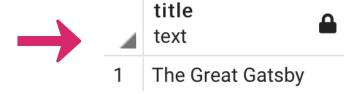
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"Book titles that begin with T"

SELECT b.title FROM books b

WHERE b.title LIKE 'T%';







ILIKE uses a case-insensitive match

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"Book titles that contain T"

SELECT b.title FROM books b
WHERE b.title LIKE '%T%';







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"Book titles that contain T or t"



SELECT b.title FROM books b
WHERE b.title ILIKE '%T%';





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"Book titles that contain T or t"

SELECT b.title FROM books b
WHERE b.title ILIKE '%T%';



4	title text
1	Frankenstein
2	The Great Gatsby
3	Don Quixote

IN



Evaluates as TRUE if list of options contains specified value Similar to **in** keyword in Python:

```
def IN(value, options):
    return value in options
```

```
options = [1, 2, 3]
1 in options # True
4 in options # False
```



IN



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SELECT b.title, b.year FROM books b
WHERE b.year IN (1990, 1986, 1996, 1998);









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SELECT b.title, b.year FROM books b
WHERE b.year IN (1990, 1986, 1996, 1998);



4	title text		year integer	<u> </u>	
1	Big Fish	sh		1998	