



# Filtering Data

## WHERE CONDITIONS

Baraa Khatib Salkini  
SQL Course | FILTERING DATA



# WHERE operators

## Comparison Operators

=

<> !=

>

>=

<

<=

## Logical Operators

AND

OR

NOT

## Range Operator

BETWEEN

## Membership Operator

IN

NOT IN

## Search Operator

LIKE

# WHERE operators

```
graph TD; Root[WHERE operators] --> Comparison[Comparison Operators]; Root --> Logical[Logical Operators]; Root --> Range[Range Operator]; Root --> Membership[Membership Operator]; Root --> Search[Search Operator]; Comparison --> C1[=]; Comparison --> C2["<>"]; Comparison --> C3[=!]; Comparison --> C4[>]; Comparison --> C5[>=]; Comparison --> C6[<]; Comparison --> C7[<=]; Logical --> L1[AND]; Logical --> L2[OR]; Logical --> L3[NOT]; Range --> R1[BETWEEN]; Membership --> M1[IN]; Membership --> M2[NOT IN]; Search --> S1[LIKE];
```

## Comparison Operators

=

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# Comparison Operators

=

Checks if two values are **equal**

<> !=

Checks if two values are **not equal**

>

Checks if a value is **greater than** another value.

>=

Checks if a value is **greater than or equal to** another value

<

Checks if a value is **less than** another value

<=

Checks if a value is **less than or equal to** another value



Compare two Things!

## Comparison Operators



Condition →

Expression

Operator

Expression

Column1 = Column2

Column1 = Value

Function = Value

Expression = value

Subquery = value

**Advanced**

first\_name = last\_name


first\_name = 'John'

UPPER(first\_name) = 'JOHN'

Price \* Quantity = 1000

(SELECT AVG(sales)  
FROM orders) = 1000

WHERE 

 Condition  
Country = 'USA'

Name	Country	Score	
<del>Maria</del>	<del>Germany</del>	<del>350</del>	<del>X</del>
John	USA	900	✓
<del>Georg</del>	<del>UK</del>	<del>750</del>	<del>X</del>
<del>Martin</del>	<del>Germany</del>	<del>500</del>	<del>X</del>
Peter	USA	0	✓

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graph TD; Root[WHERE operators] --> Comparison[Comparison Operators]; Root --> Logical[Logical Operators]; Root --> Range[Range Operator]; Root --> Membership[Membership Operator]; Root --> Search[Search Operator]; Comparison --> C1[=]; Comparison --> C2["<> =!"]; Comparison --> C3[>]; Comparison --> C4[">="]; Comparison --> C5[<]; Comparison --> C6["<="]; Logical --> L1[AND]; Logical --> L2[OR]; Logical --> L3[NOT]; Range --> R1[BETWEEN]; Membership --> M1[IN]; Membership --> M2[NOT IN]; Search --> S1[LIKE];
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# Logical Operators

**AND**

All conditions must be TRUE

**OR**

At least one condition must be TRUE

**NOT**

(Reverse) Excludes matching values

**BETWEEN**

Check if a value is within a range

**IN**

Check if a value exists in a list

**LIKE**

Search for a pattern in text



~All Conditions  
Must be TRUE~

WHERE



Condition 1

Country = 'USA'

AND



Condition 2

Score > 500

	Name	Country	Score
✗	Maria	Germany	350
✓	John	USA	900
✗	Georg	UK	750
✗	Martin	Germany	500
✗	Peter	USA	0

✗

✓

✗

✗

✓

✗

✓

✓

✗

✗

~ At least One Condition  
Must be TRUE ~

WHERE



Condition 1

Country = 'USA'

OR



Condition 2

Score > 500

	Name	Country	Score
X	Maria	Germany	350
✓	John	USA	900
✓	Georg	UK	750
X	Martin	Germany	500
✓	Peter	USA	0

X

✓

X

X

✓

X

✓

✓

X

X

WHERE



NOT



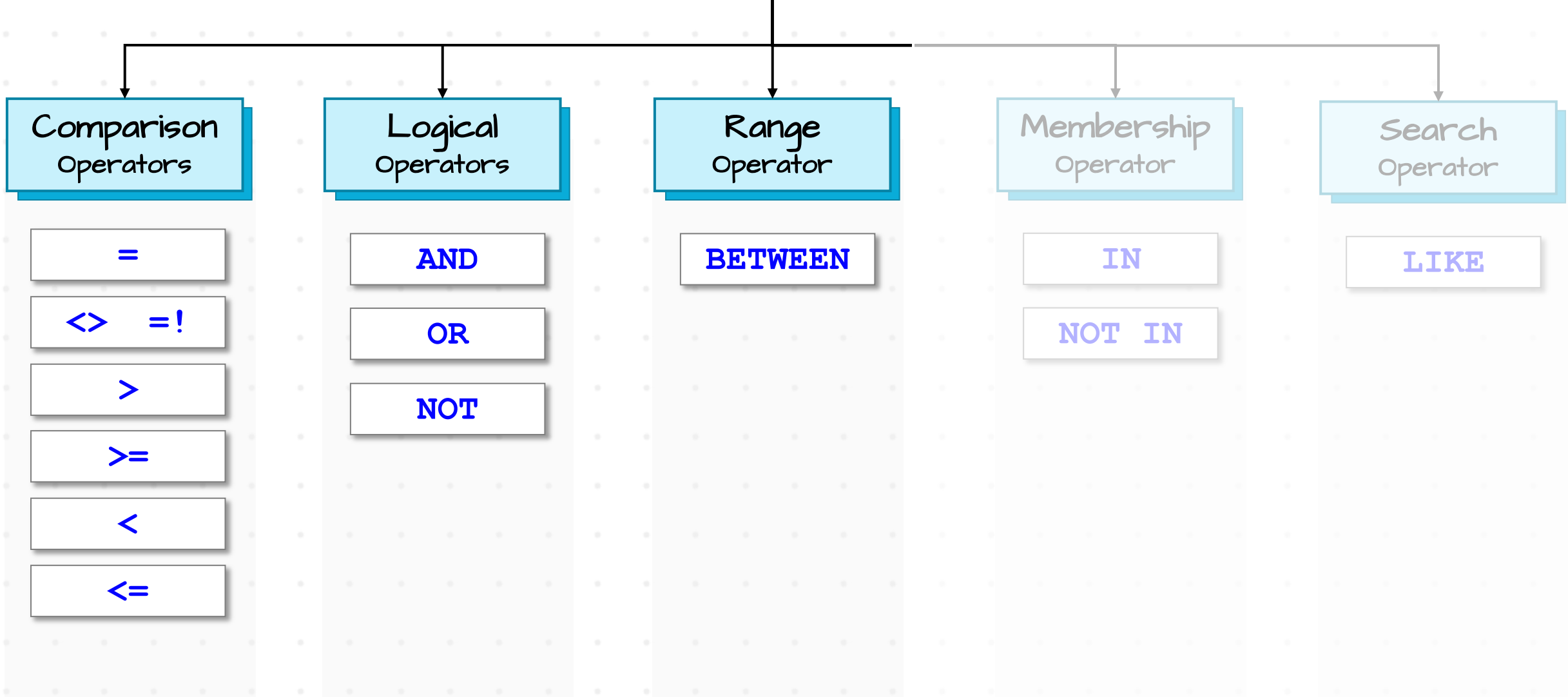
Condition

Country = 'USA'

~Excludes  
Matching  
Rows~

Name	Country	Score	
Maria	Germany	350	✓
<del>John</del>	<del>USA</del>	<del>900</del>	✗
Georg	UK	750	✓
Martin	Germany	500	✓
<del>Peter</del>	<del>USA</del>	<del>0</del>	✗

# WHERE operators





WHERE



BETWEEN

Lower  
Boundary

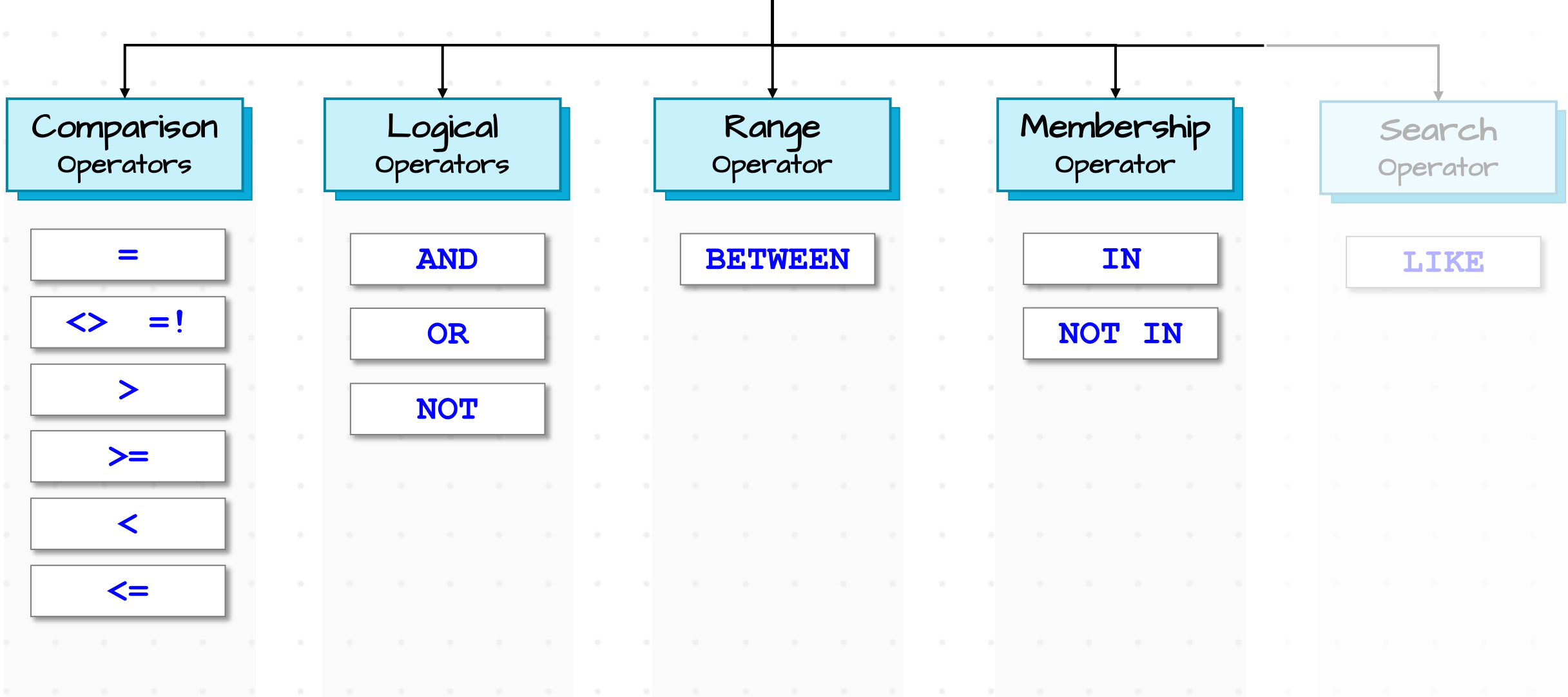
Upper  
Boundary

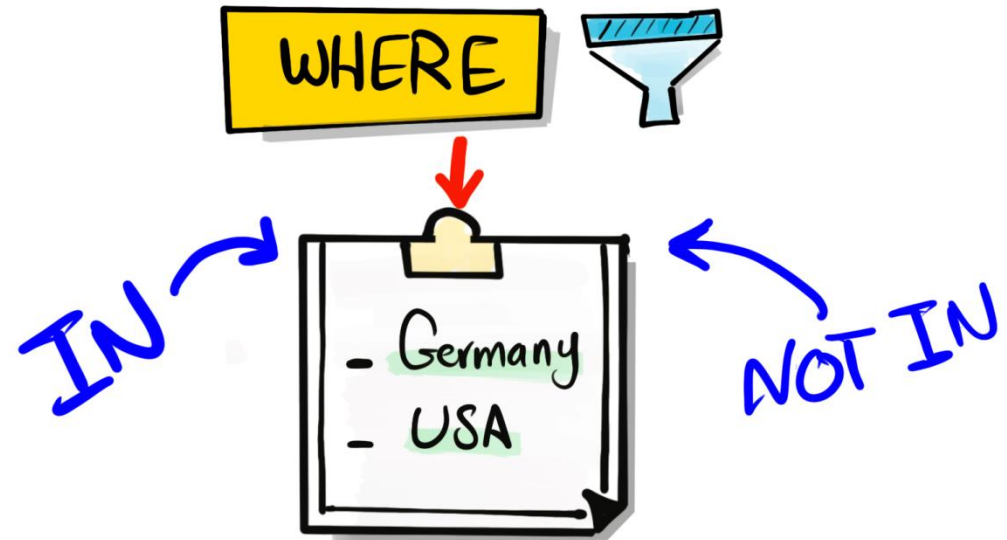


Name	Country	Score	
Maria	Germany	350	✓
<del>John</del>	<del>USA</del>	<del>900</del>	<del>✗</del>
<del>Georg</del>	<del>UK</del>	<del>750</del>	<del>✗</del>
Martin	Germany	500	✓
<del>Peter</del>	<del>USA</del>	<del>0</del>	<del>✗</del>



# WHERE operators





Name	Country	Score	IN	NOT IN
Maria	Germany	350	✓	✗
John	USA	900	✓	✗
<del>Georg</del>	<del>UK</del>	<del>750</del>	✗	✓
Martin	Germany	500	✓	✗
Peter	USA	0	✓	✗

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