

## Filtering Results with WHERE Statements

**TRAINSIGNAL**  
THE GLOBAL LEADER IN PROFESSIONAL COMPUTER TRAINING



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## WHERE Statements

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### Statement Components

```
SELECT <columns>  
FROM <tables>  
WHERE <conditions>  
GROUP BY <columns>  
HAVING <conditions>  
ORDER BY <columns>
```

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## WHERE Statements

Using **WHERE** Statements  
Creating Predicates  
Predicate Keywords  
Combining Predicates  
Querying Strings with **LIKE**

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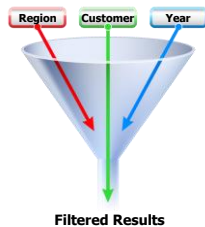
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## Using WHERE Statements

### WHERE Statement

- Used to filter or limit rows
- Nearly every query will use a **WHERE** statement



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## Creating Predicates

`<column> <operator> <value>`

### Operators

- = (Equals)
- <> (Not equals - != also works)
- < (Less than)
- > (Greater than)
- <= (Less than or equal to)
- >= (Greater than or equal to)

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## Predicate Keywords

### BETWEEN

- Inclusive range  
    <column> BETWEEN <value> and <value>

### [NOT] IN

- Value is contained in list of values

### Other Keywords

- ALL
- ANY or SOME
- [NOT] EXISTS

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## Combining Predicates

### AND

- Both sides **must** match

### OR

- Either side can match

### Note:

- Frequently in English people will say "and" when they mean "or"
- Example:
  - I need to see sales for shirts and slacks

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## Querying Strings with LIKE

Frequently have a portion of a string

<column> LIKE <expression>

LIKE allows wild card characters

- % - Zero or more characters
- \_ - One character
- [ ] - Used for a range
  - [afr] - Will find a, f, or r
  - [a-f] - Will find a, b, c, d, e, or f
- [^] - Any character except what is in the range

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## Querying Strings with LIKE

Escape character to search for special characters

- ProductCode LIKE '[pc-%]' ESCAPE '\'  
Will search for [pc-%]

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## Handling NULL Data

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## How Predicates are Evaluated

Three states:

- True
- False
- Unknown

Only rows that test "true" are returned

Any operation involving null evaluates to "unknown"

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## Filtering NULL Data

NULL operators

- IS NULL
- IS NOT NULL

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