

Simplify SQL Queries with Common Table Expressions (CTEs)



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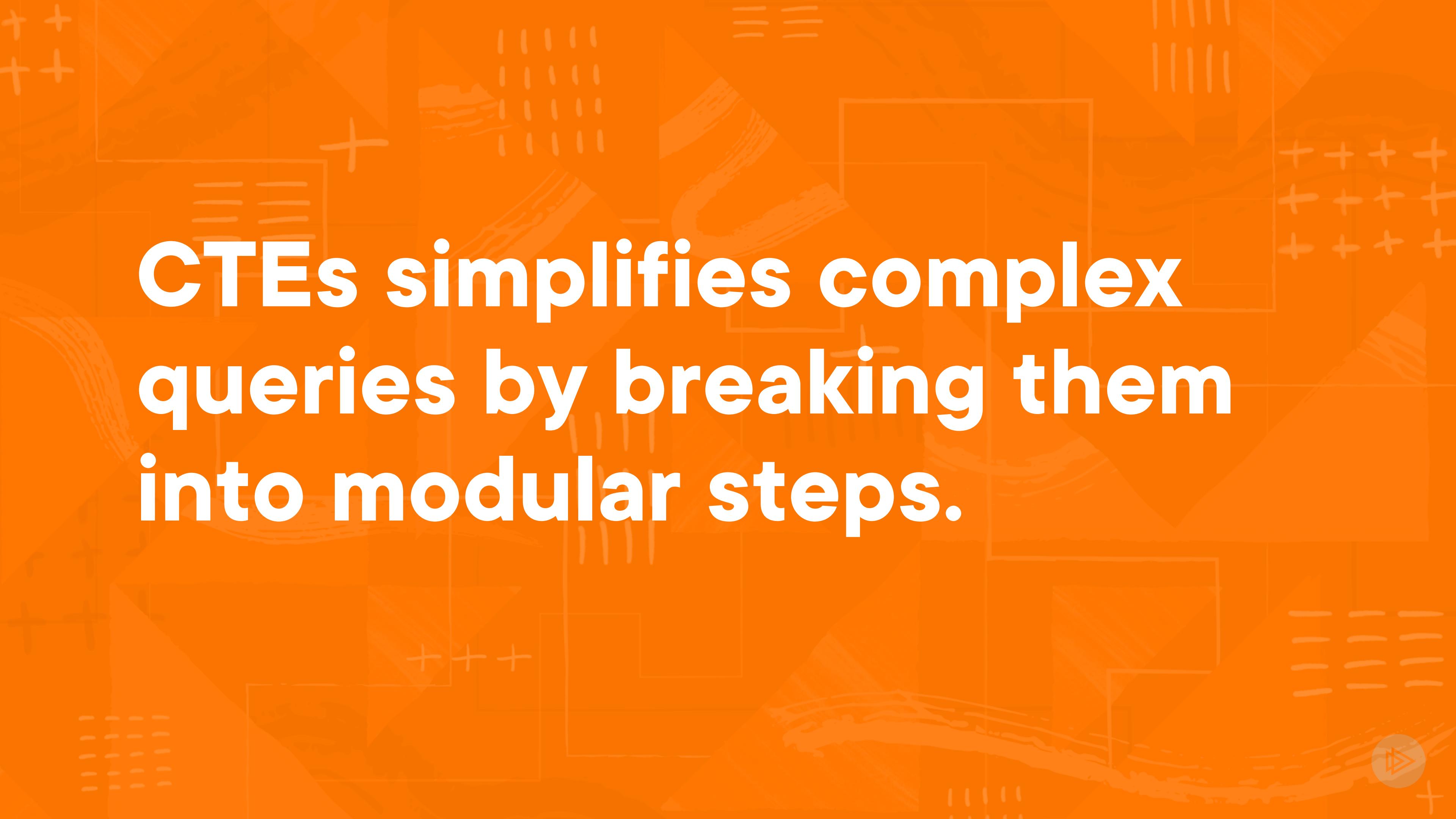
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Common Table Expressions (CTEs)

A CTE is a temporary dataset that can be used within a SELECT, INSERT, UPDATE, or DELETE query.





**CTEs simplifies complex
queries by breaking them
into modular steps.**



CTE Syntax

```
WITH cte_name AS (
    SELECT column1, column2
    FROM table_name
    WHERE condition
)
SELECT * FROM cte_name;
```



CTEs vs Subqueries

CTEs

vs

Subqueries

Improve readability and maintainability

Can be recursive

Defined once, can be referenced multiple times

Embedded directly into SELECT or WHERE clauses

Difficult to reuse or read

Defined inline, less flexible in large queries



Comparing CTEs Across SQL Platforms

1ST

SQL Server, PostgreSQL, and MySQL all support CTEs using the WITH clause to define temporary result sets.

2ND

Recursive CTEs are supported by SQL Server and PostgreSQL, while MySQL added support starting from version 8.0.

3RD

Non-recursive CTEs are usually optimized, but performance varies depending on whether the engine inlines or materializes them.



Thank you for your attention

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