Evaluating SELECT Expressions

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SELECT Expressions

Expressions are evaluated row-by-row, and all-at-once

Expressions can (and need to) be uniquely aliased

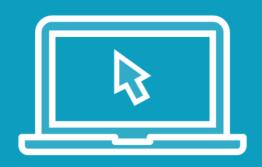Eliminate or keep duplicate rows with ALL | DISTINCT

Row by Row and All at Once

SELECT OrderID, Item, (Quantity * Price) AS Total

Order ID	Item	Quantity	Price	Total
1	Pen	2	1.50	3.00
1	Pencil	1	0.75	0.75
2	Marker	3	3.00	9.00

Demo

The "All at Once" principal

```
ISNULL (X, Y)                    ◄ IF X IS NULL, returns Y

COALESCE (X, Y, Z)               ◄ Returns the first known
                                   expression (left to right)

CASE
    WHEN X IS NULL               ◄ Generic conditional expression
        THEN Y
    ELSE Z
END

NULLIF (X, Y)                    ◄ Evaluates to NULL if X = Y
```

DISTINCT

Eliminates duplicate rows based on all select list expressions

NULLS are treated as being the same, but not as *equal*

Applied after evaluating all expressions for all rows

Demo

Dealing with NULLs

DISTINCT

Review

SELECT expression processing

DISTINCT

Dealing with NULLs