# CROSS APPLY and OUTER APPLY Commands

# APPLY vs JOIN

Need for APPLY exists when the following expression types exist on right side:

- A table-valued function
- A correlated sub query

# CROSS APPLY Command

- Is semantically equivalent to INNER JOIN

# CROSS APPLY Operation

- Left table expression is evaluated first and then right table expression is evaluated against each row of the left table expression

- returns only those rows from left table expression if it matches with right table expression

- Final result-set contains all selected columns from left table expression followed by all columns of right table expression

# OUTER APPLY

- Is semantically equivalent to LEFT OUTER JOIN

- Returns all rows from left table expression irrespective of its match with right table expression