

## Which Clause/Command to Use in Particular Scenario

Clause/ Command	Scenario
<b>FROM</b>	Get Data from a Particular Table
<b>SELECT</b>	Display certain Columns
<b>WHERE</b>	To display only Filtered Rows
<b>CASE</b> <b>When</b> <Condition> <b>Then</b> <Value 1> <b>Else</b> <Value 2> <b>End as</b> <New Column Name>	To display both Filtered and Unfiltered Rows
<b>ORDER BY</b>	Sort the Output Rows
<b>LIMIT</b>	Specify how many Output Rows should be displayed
<b>OFFSET</b>	Skip certain number of initial rows of the Output rows
<b>Sub-Query in WHERE clause</b>	Inner query's Output is needed for Filtering Outer Query Table
<b>Sub-Query in FROM clause</b>	Inner query's Output needs to be displayed
<b>Correlated Sub-Query -&gt; Looping Inner Query</b> It can be in <b>SELECT</b> clause or <b>WHERE</b> clause	The inner query is executed once for each row of outer query Can do the work of Window Function
<b>JOIN</b>	Horizontally Merge multiple Related tables
<b>INNER JOIN</b>	Merge only Matching Rows
<b>LEFT JOIN</b>	Merge all rows of Left Table & Matching Rows of Right Table
<b>RIGHT JOIN</b>	Merge all rows of Right Table & Matching Rows of Left Table
<b>OUTER JOIN</b>	Merge both Matching and Non-Matching Rows
<b>SELF JOIN</b>	
SELF JOIN -> One Row JOINED to One Row	Self-Referencing Table. Table has Relationship with itself. Example -> Question related to employee and his manager
SELF JOIN -> One Row JOINED to Many Rows	Example -> List of possible couples from Matrimony data table
<b>Aggregate Functions</b>	Aggregate Entire Table into 1 row
<b>GROUP BY</b> and Aggregate Functions	Aggregate some rows to get Consolidated rows
<b>GROUP BY + HAVING</b> and Aggregate Functions	To Filter on the basis of Aggregated/Consolidated row info
Get Items Count of Flexibly Merged Groups	SUM ( IF (Profession in ('Army', 'Navy'), 1, 0) as Defense_count
<b>Window Functions</b>	Display both Row level data & Aggregated/Analytical data in a Row
Function (..) Over (Partition by ..... Order by ... Rows Between .. )	Basic Syntax
Aggregate Functions	Display both Row level data & Aggregated data in a Row
RANK, ROW_NUMBER, DENSE_RANK	Rank the rows based on value in 1 or more Column(s)
NTILE	Divide rows into Categories based on value in 1 or more Column(s)
LAG, LEAD	To show data from next/previous row in a row
<b>Window Frame</b>	To get Aggregated or Analytical data from certain range of Preceding, Current and Following rows. Modifies the basic frame created by 'Partition by' clause
FIRST_VALUE, LAST_VALUE, NTH_VALUE	Get First, Last or Nth value in a Frame
<b>Different Window Frames</b>	<b>Scenarios to use these Window Frames</b>
Unbounded Preceding and Unbounded Following	Get Largest or Smallest Value in a Frame
Unbounded Preceding and Current Row	Get Cumulative/Running Sum <b>(Default Frame)</b>
1 Preceding and 1 Following	Moving Window Frame of 3
<b>UNION</b>	Vertically Merge multiple tables having same Columns
<b>CTE</b>	To simplify a Complex query with many Sub-Queries
<b>VIEWS</b>	For Frequently used Query <b>AND</b> For Access management