Select Queries

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Agenda

- Introduction to Select Queries
- Using Joins
- Writing Sub-Queries
- Using Functions

SELECT Statements

SELECT < Column List >

From < Table Name >

Where < Conditions >

Group By < Column Name >

Having < Condition >

Order By < Column Name >

Retrieving Data

- Creating column alias
- Displaying multiple column values in one column
- Writing expressions
- Eliminating duplicate values
- Retrieving top row/rows

Filtering Data

- Comparison Operators (= , <, > etc.)
- Ranges (BETWEEN and NOT BETWEEN)
- Lists (IN and NOT IN)
- Null Values (IS NULL and IS NOT NULL)
- Combination of the conditions (AND, OR, NOT)
- Pattern Matches (LIKE and NOT LIKE)

Pattern Matching Using WHERE Clause

- Patterns are creating using wildcard characters
- LIKE keyword is used for passing a pattern to WHERE clause.

Wildcards	Meaning
%	Any string of zero or more characters.
_	Any single character
[ ]	Any single character within the specified range
[^]	Any single character not within the specified range

Set Operators

- Union
- Union All
- Except
- Intersect

Joins

- INNER JOIN
- OUTER JOINS
  - LEFT OUTER JOIN
  - RIGHT OUTER JOIN
  - FULL JOIN or FULL OUTER JOIN
- CROSS JOINS
- SELF JOINS

Subquery

- A nested queries
- Innermost query supplies result to outer query
- Up to 32 level of nesting is possible.

Built-in Functions

- System Functions
- String Functions
- Date and Time Functions
- Conversions Functions
- Aggregate Functions

System Functions

- DB_NAME and DB_ID
- HOST_ID and HOST_NAME
- OBJECT_ID and OBJECT_NAME
- USER_ID and USER_NAME

String Functions

- ASCII(), CHAR() and CHARINDEX()
- LEFT() and RIGHT()
- SUBSTRING()
- LEN()
- LOWER() and UPPER()
- LTRIM() and RTRIM()
- REPLACE(), REPLICATE() and REVERSE()
- SPACE() and STUFF()

Date and Time Functions

- GETDATE()
- DAY()
- MONTH()
- YEAR()
- DATEPART()
- DATENAME()
- DATEADD()
- DATEDIFF()

Conversion Functions

- CAST()
- CONVERT()

Aggregate Functions

- Count
- Min
- Max
- Avg
- Sum

Summary

- SELECT statements
- Joins
- Subqueries
- Functions

Bibliography, Important Links

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- https://technet.microsoft.com/en-us/library/ms191472(v=sql.105).aspx

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- http://www.codeproject.com/Tips/712941/Types-of-Join-in-SQL-Server

- https://msdn.microsoft.com/en-us/library/ms181984.aspx

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Any Questions?

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Thank you!