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SQL – Data Manipulation Language WHERE clause

Databases

Topics

▶ How to Specify Search Conditions
  - SELECT statement with WHERE Clause

Specify Row Selection

▶ **Retrieve only rows that satisfy search conditions**

SELECT select_list

FROM table_name

WHERE search_condition

Comparison Search

▸ **Arithmetic Operators**

- **=** (equal)

- **<>** or **!=** (not equal)

- **>** (greater than)

- **>=** (greater than or equal)

- **<** (smaller than)

- **<=** (smaller than or equal)

- **!<** (not smaller than)

Comparison Search

▶ **Using logical operator**

- *OR*

SELECT BranchNo, Name

FROM Staff

WHERE BranchNo = 1 *OR* BranchNo = 2

Comparison Search

- *AND*

SELECT BranchNo, Name, Salary

FROM Staff

WHERE Gender = 'F' *AND* Salary > 1500

Range Search (BETWEEN)

▶ Test whether a value falls within a *range* of specified value

SELECT *

FROM Staff

WHERE Salary >= 1500 *AND* Salary <= 2000

Alternative Solution:

SELECT *

FROM Staff

WHERE Salary *BETWEEN* 1500 **AND** 2000

Range Search (NOT BETWEEN)

SELECT *

FROM Staff

WHERE Salary *NOT BETWEEN* 1500 **AND** 2000

Set Membership Search (IN)

▶ **Test if value equals *one* of a set of values**

SELECT BranchNo, Name

FROM Staff

WHERE BranchNo *IN* (1, 3)

Set Membership Search (NOT IN)

SELECT BranchNo, Name

FROM Staff

WHERE BranchNo *NOT IN* (1, 3)

Pattern Match Search (LIKE)

▸ **Test whether a string matches a specified** *pattern*

▸ **%** - represents any sequence of 0 or more characters

Pattern Match Search (LIKE)

SELECT ISBN, Title

FROM Book

WHERE Title *LIKE* '%DataBase%'

Results :

ISBN	Title
------	DataBase
------	DataBase Systems
------	Relational DataBase
------	SQL Server 2000 DataBase Design

NULL Search (IS NULL)

▶ **Test whether a column has a NULL value**

SELECT Name, ContactNo

FROM Member

WHERE EmailAddr *IS NULL*

NULL Search (IS NOT NULL)

SELECT Name, ContactNo, EmailAddr

FROM Member

WHERE EmailAddr *IS NOT NULL*

Summary

▶ How to select rows from table with search conditions

- **SELECT** with **WHERE** clause