

Introduction to SQL – 4

Advanced Select Queries

Advanced SELECT Queries

- Fine tune SELECT command by adding restrictions to search criteria using:
 - Conditional restrictions
 - Arithmetic operators
 - Logical operators
 - Special operators

Selecting Rows with Conditional Restrictions

- Select partial table contents by placing restrictions on rows to be included in output

- Add conditional restrictions to SELECT statement, using WHERE clause

- Syntax:

```
SELECT columnlist FROM tablelist [WHERE conditionlist ];
```

Comparison Operators

- Several comparison operators can be used in the *condition_list* after the WHERE clause.

TABLE 7.6

COMPARISON OPERATORS

SYMBOL	MEANING
=	Equal to
<	Less than
<=	Less than or equal to
>	Greater than
>=	Greater than or equal to
<> or !=	Not equal to

Arithmetic Operations

TABLE 7.7	
THE ARITHMETIC OPERATORS	
OPERATOR	DESCRIPTION
+	Add
-	Subtract
*	Multiply
/	Divide
^	Raise to the power of (some applications use ** instead of ^)

Arithmetic Operators: The Rule of Precedence

- Perform operations within parentheses
- Perform power operations
- Perform multiplications and divisions
- Perform additions and subtractions

Logical Operators: AND, OR, and NOT

- Searching data involves multiple conditions
- Logical operators: AND, OR, and NOT
- Can be combined
- Parentheses placed to enforce precedence order
 - Conditions in parentheses always executed first
- NOT negates result of conditional expression

Special Operators

- BETWEEN: checks whether attribute value is within a range
- IS NULL: checks whether attribute value is null
- LIKE: checks whether attribute value matches given string pattern
- IN: checks whether attribute value matches any value within a value list
- EXISTS: checks if subquery returns any rows