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Computer Science 2nd Year

Subject - 'DBMS'

OPERATORS in PL/SQL

An operator is a symbol that tells the compiler to perform specific mathematical or logical manipulation PL/SQL language is rich in Built-in operators and provide the following types of operators

⇒ Arithmetic operators
⇒ Relational operators
⇒ Comparison operators
⇒ Logical operators
⇒ String operators

Arithmetic operators

Following table shows all the arithmetic operators supported by PL/SQL. Let us assume Variable A hold 10 and Variable B hold 5 then -

Show example

Operator	Description	Example
+	Adds two operands	A+B will give 15
-	Subtract Second operand from the first	A-B will give 5
*	Multiplies Both operand.	A*B will give 50
/	Divides numerator By de-numerator	A/B will give 2
**	Exponentiation operator, raises one Operand to the Power	A**B will give 100000

Relational operator

Relational operator compare two expressions or value and return a Boolean result. Following table show all the relational operators supported by PL/SQL. Let assume variable A hold 10 and Variable B hold 20 then -

Show example

Operator	Description	Example
=	check if the value of two operands are equal or not- If yes then condition becomes true.	(A = B) is not true
!= <> ~=	Check if the value of two operands are equal or not, if values are not equal then condition becomes true	(A != B) is true
>	Check if the value of left operand is greater than the value of right operand, if yes then condition becomes true	(A > B) is not true

Operators	Description	Example
<	Checks if the value of left operand is less than the value of right operand, if yes then condition becomes true	(A < B) is true
>=	Checks if the value of left operand is greater than or equal to the value of right operand if yes then condition becomes true	(A >= B) is not true
<=	Checks if the value of left operand is less than or equal to the value of right operand if yes then condition becomes true	(A <= B) is true

Comparison operator

Comparison operator are used to comparing one expression to another. The result is always either TRUE, FALSE or NULL

Example

Operator	Description	Example
LIKE	The LIKE operator compares a character, String or CLOB Value to a pattern and returns TRUE if the value matches and the pattern and FALSE if it does not.	if 'Zara Ali' like 'Z% A-i' returns a Boolean true, whereas, 'Nuha Ali' like 'Z% A-i' returns a Boolean false.
BETWEEN	The BETWEEN operator test whether a value lies in a specified range. X BETWEEN a AND b means that X >= a and X <= b	If X = 10 then, X between 5 and 20 returns true X between 5 and 10 return true but X between 11 and 20 return false
IN	The IN operator tests set membership. X IN (Set) means that x is equal to any member of Set	If X = 'm' then x in ('a' 'b', 'c') return Boolean false but x in ('m', 'n', 'o') returns bodean true.
IS NULL	The IS NULL operator return the BOOLEAN Value TRUE if its operand is NULL of FALSE if it is not NULL	If X = 'm' then 'X' is null' returns Boolean false

Logical operators

Following table shows the logical operators supported by PL/SQL. all these operators work on Boolean operands and produce Boolean result

Let us assume Variable A hold true and Variable B hold false then

Show example

operator	Description	Example
And	Called the logical AND operator If Both the operands are true then condition becomes true	(A and B) is false
Or	called the logical OR operator. if any of the two operands is true then condition becomes true	(A or B) is true
not	Called the logical NOT operator. used to reverse the logical state of its operand if a condition is true then logical NOT operator will make it false	not (A and B) is true

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