

SQL - EXPRESSIONS

<http://www.tutorialspoint.com/sql/sql-expressions.htm>

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An expression is a combination of one or more values, operators, and SQL functions that evaluate to a value.

SQL EXPRESSIONs are like formulas and they are written in query language. You can also use them to query the database for specific set of data.

Syntax:

Consider the basic syntax of the SELECT statement as follows:

```
SELECT column1, column2, columnN
FROM table_name
WHERE [CONDITION | EXPRESSION];
```

There are different types of SQL expressions, which are mentioned below:

SQL - Boolean Expressions:

SQL Boolean Expressions fetch the data on the basis of matching single value. Following is the syntax:

```
SELECT column1, column2, columnN
FROM table_name
WHERE SINGLE VALUE MATCHING EXPRESSION;
```

Consider the CUSTOMERS table having the following records:

```
SQL> SELECT * FROM CUSTOMERS;
+---+---+---+---+---+
| ID | NAME      | AGE | ADDRESS  | SALARY |
+---+---+---+---+---+
| 1  | Ramesh    | 32  | Ahmedabad | 2000.00 |
| 2  | Khilan    | 25  | Delhi    | 1500.00 |
| 3  | kaushik   | 23  | Kota     | 2000.00 |
| 4  | Chaitali  | 25  | Mumbai   | 6500.00 |
| 5  | Hardik    | 27  | Bhopal   | 8500.00 |
| 6  | Komal     | 22  | MP       | 4500.00 |
| 7  | Muffy     | 24  | Indore   | 10000.00 |
+---+---+---+---+---+
7 rows in set (0.00 sec)
```

Here is simple example showing usage of SQL Boolean Expressions:

```
SQL> SELECT * FROM CUSTOMERS WHERE SALARY = 10000;
+---+---+---+---+---+
| ID | NAME      | AGE | ADDRESS  | SALARY |
+---+---+---+---+---+
| 7  | Muffy     | 24  | Indore   | 10000.00 |
+---+---+---+---+---+
1 row in set (0.00 sec)
```

SQL - Numeric Expression:

This expression is used to perform any mathematical operation in any query. Following is the syntax:

```
SELECT numerical_expression as OPERATION_NAME
[FROM table_name
WHERE CONDITION] ;
```

Here numerical_expression is used for mathematical expression or any formula. Following is a simple examples showing usage of SQL Numeric Expressions:

```
SQL> SELECT (15 + 6) AS ADDITION
+-----+
| ADDITION |
+-----+
|      21  |
+-----+
1 row in set (0.00 sec)
```

There are several built-in functions like avg, sum, count, etc., to perform what is known as aggregate data calculations against a table or a specific table column.

```
SQL> SELECT COUNT(*) AS "RECORDS" FROM CUSTOMERS;
+-----+
| RECORDS |
+-----+
|      7  |
+-----+
1 row in set (0.00 sec)
```

SQL - Date Expressions:

Date Expressions return current system date and time values:

```
SQL> SELECT CURRENT_TIMESTAMP;
+-----+
| Current_Timestamp |
+-----+
| 2009-11-12 06:40:23 |
+-----+
1 row in set (0.00 sec)
```

Another date expression is as follows:

```
SQL> SELECT GETDATE();
+-----+
| GETDATE |
+-----+
| 2009-10-22 12:07:18.140 |
+-----+
1 row in set (0.00 sec)
```

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