SQL - EXPRESSIONS

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 used 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 [CONTION|EXPRESSION];
```

There are different types of SQL expression, 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 MATCHTING EXPRESSION;
```

Consider CUSTOMERS table has 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 examples 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)
```