**DATA MANIPULATION LANGUAGE -**

DML(Data Manipulation Language) : The SQL commands that deals with the manipulation of data present in the database belong to DML or Data Manipulation Language and this includes most of the SQL statements.

**Commands in DML:**

* [**INSERT**](https://www.geeksforgeeks.org/sql-insert-statement/) – is used to insert data into a table.
* [**UPDATE**](https://www.geeksforgeeks.org/sql-update-statement/) – is used to update existing data within a table.
* [**DELETE**](https://www.geeksforgeeks.org/sql-delete-statement/) – is used to delete records from a database table.

**INSERT COMMAND –**

INSERT INTO table\_name (column, column1, column2, column3, ...)

VALUES (value, value1, value2, value3 ...)

**EXAMPLE –**

INSERT INTO EMPLOYEE VALUES (1,’ABC’)

Where employee = name of table

1 and ABC = values which will be inserted into a table

\*\* If value is of type integer then it should not be in quotes.

**UPDATE COMMAND –**

UPDATE command is used to update any record of data in a table. Following is its general syntax,

UPDATE table\_name SET column\_name = new\_value WHERE some\_condition;

WHERE is used to add a condition to any SQL query, we will soon study about it in detail.

**EXAMPLE -** Let’s take a sample table **student**,

|  |  |  |
| --- | --- | --- |
| **student\_id** | **name** | **age** |
| 101 | Adam | 15 |
| 102 | Alex |  |
| 103 | chris | 14 |

UPDATE student SET age=18 WHERE student\_id=102;

|  |  |  |
| --- | --- | --- |
| **S\_id** | **S\_Name** | **age** |
| 101 | Adam | 15 |
| 102 | Alex | 18 |
| 103 | chris | 14 |

In the above statement, if we do not use the WHERE clause, then our update query will update age for all the columns of the table to **18**.

**Updating Multiple Columns**

We can also update values of multiple columns using a single UPDATE statement.

UPDATE student SET name='Abhi', age=17 where s\_id=103;

The above command will update two columns of the record which has s\_id 103.

|  |  |  |
| --- | --- | --- |
| **s\_id** | **name** | **age** |
| 101 | Adam | 15 |
| 102 | Alex | 18 |
| 103 | Abhi | 17 |

**UPDATE Command: Incrementing Integer Value**

When we have to update any integer value in a table, then we can fetch and update the value in the table in a single statement.

For example, if we have to update the age column of **student** table every year for every student, then we can simply run the following UPDATE statement to perform the following operation:

UPDATE student SET age = age+1;

As you can see, we have used age = age + 1 to increment the value of age by 1.

**NOTE:** This style only works for integer values.

**DELETE COMMAND –**

DELETE command is used to delete data from a table.

Following is its general syntax,

DELETE FROM table\_name;

**EXAMPLE -** Let's take a sample table **student**:

|  |  |  |
| --- | --- | --- |
| **s\_id** | **name** | **age** |
| 101 | Adam | 15 |
| 102 | Alex | 18 |
| 103 | Abhi | 17 |

**Delete all Records from a Table**

DELETE FROM student;

The above command will delete all the records from the table **student**.

**Delete a particular Record from a Table**

In our **student** table if we want to delete a single record, we can use the WHERE clause to provide a condition in our DELETE statement.

DELETE FROM student WHERE s\_id=103;

The above command will delete the record where s\_id is 103 from the table **student**.

|  |  |  |
| --- | --- | --- |
| **S\_id** | **S\_Name** | **age** |
| 101 | Adam | 15 |
| 102 | Alex | 18 |