MySQL - Update Query

The MySQL UPDATE Statement

The MySQL UPDATE Query is used to modify the existing records in a table. This statement is a part of Data Manipulation Language in SQL, as it only modifies the data present in a table without affecting the table's structure.

Since it only interacts with the data of a table, the UPDATE statement needs to used cautiously. If the rows to be modified aren't selected beforehand, all the rows in the table will be affected and the correct table data is either lost or needs to be reinserted.

Therefore, to filter records that needs to be modified, MySQL always provides a WHERE clause. Using a WHERE clause, you can either update a single row or multiple rows.

The UPDATE statement makes use of locks on each row while modifying them in a table, and once the row is modified, the lock is released. Therefore, it can either make changes to a single row or multiple rows with a single query.

Syntax

Following is the SQL syntax of the UPDATE command to modify the data in the MySQL table –

UPDATE table_name SET field1 = new-value1, field2 = new-value2

[WHERE Clause]

- You can update one or more field altogether.

- You can specify any condition using the WHERE clause.

- You can update the values in a single table at a time.

The WHERE clause is very useful when you want to update the selected rows in a table.

Updating Data from the Command Prompt

This will use the SQL UPDATE command with the WHERE clause to update the selected data in an MySQL table.

Example

First of all, let us create a table named CUSTOMERS using the following CREATE query –

```
CREATE TABLE CUSTOMERS (
   ID INT NOT NULL,
   NAME VARCHAR(20) NOT NULL,
   AGE INT NOT NULL,
   ADDRESS CHAR (25),
   SALARY DECIMAL (18, 2),
   PRIMARY KEY (ID)
);
```

```
INSERT INTO CUSTOMERS (ID,NAME,AGE,ADDRESS,SALARY) VALUES

(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, 'Hyderabad', 4500.00 ),

(7, 'Muffy', 24, 'Indore', 10000.00 );


Select * from CUSTOMERS;
```

Here, we are using the SQL UPDATE query to update the NAME field in the CUSTOMERS table. It sets the name to 'Nikhilesh' for the row where the 'ID' is equal to 6.

```
UPDATE CUSTOMERS

SET NAME = 'Nikhilesh'

WHERE ID = 6;


Select * from CUSTOMERS;
```

Updating Multiple Records from the Command Prompt

Using UPDATE statement, multiple rows and columns in a MySQL table can also be updated. To update multiple rows, specify the condition in a WHERE clause such that only the required rows would satisfy it. Thus, only updating the values in those records.

Example

Now, let us update multiple records in the previously created CUSTOMERS table using the following query –

UPDATE CUSTOMERS

SET ADDRESS = 'Vishakapatnam'

WHERE ID = 6 OR ID = 3;

Select * from CUSTOMERS;

Updating a table Using a Client Program

update_query = "UPDATE table_name SET field1 = new-value1,

  field2 = new-value2 [WHERE Clause]"

cursorObj.execute(update_query);

```python
import mysql.connector
import datetime
#establishing the connection
connection = mysql.connector.connect(
    host='localhost',
    user='root',
    password='password',
    database='tut'
)
#Creating a cursor object
cursorObj = connection.cursor()
update_query = "UPDATE tutorials_tbl SET tutorial_title = 'Learning Java' WHERE tutorial_id = 3"
cursorObj.execute(update_query)
connection.commit()
print("Row updated successfully.")
cursorObj.close()
connection.close()
```