WEEK 7

SQL UPDATE Statement

The UPDATE statement is used to modify the existing records in a table.

Syntax:

UPDATE *table_name*
SET *column1 = value1, column2 = value2, ...*
WHERE *condition*;

Example:

The following SQL statement updates the first student (Id = 1) with a new name and a new city.

(Un-updated table):

Id	Firstname	Lastname	Email	DateOfBirth	reg_date	City
1	Afaq	Shah	afaq@gmail.com	1998-03-12	2021-03-25 14:45:36	Lahore
2	Asad	Khan	asad@gmail.com	1998-03-12	2021-03-25 14:45:36	Peshawar
3	Fahad	Iqbal	fahad@gmail.com	1991-03-15	2021-03-25 14:45:36	Karachi
4	Zahid	Irfan	zahid@gmail.com	1995-05-23	2021-03-25 14:45:36	Lahore
5	Saad	Akhtar	saad@gmail.com	1994-01-28	2021-03-25 14:45:36	Peshawar
6	Fahad	Khan	fahad@gmail.com	1994-01-28	2021-03-25 14:45:36	Lahore

Query:

✅ 1 row affected. (Query took 0.2801 seconds.)

UPDATE student SET Firstname = 'Jasim', City= 'Quetta' WHERE Id = 1

[Edit inline] [Edit] [Create PHP code]

Result:

Id	Firstname	Lastname	Email	DateOfBirth	reg_date	City
1	Jasim	Shah	afaq@gmail.com	1998-03-12	2021-04-02 15:03:01	Quetta
2	Asad	Khan	asad@gmail.com	1998-03-12	2021-03-25 14:45:36	Peshawar
3	Fahad	Iqbal	fahad@gmail.com	1991-03-15	2021-03-25 14:45:36	Karachi
4	Zahid	Irfan	zahid@gmail.com	1995-05-23	2021-03-25 14:45:36	Lahore
5	Saad	Akhtar	saad@gmail.com	1994-01-28	2021-03-25 14:45:36	Peshawar
6	Fahad	Khan	fahad@gmail.com	1994-01-28	2021-03-25 14:45:36	Lahore

Update Multiple Records:

It is the WHERE clause that determines how many records will be updated.

For Example:

The following SQL statement will update the First Name to "Osama" for all records where city is "Lahore":

(Un-updated table):

Id	Firstname	Lastname	Email	DateOfBirth	reg_date	City
1	Afaq	Shah	afaq@gmail.com	1998-03-12	2021-03-25 14:45:36	Lahore
2	Asad	Khan	asad@gmail.com	1998-03-12	2021-03-25 14:45:36	Peshawar
3	Fahad	Iqbal	fahad@gmail.com	1991-03-15	2021-03-25 14:45:36	Karachi
4	Zahid	Irfan	zahid@gmail.com	1995-05-23	2021-03-25 14:45:36	Lahore
5	Saad	Akhtar	saad@gmail.com	1994-01-28	2021-03-25 14:45:36	Peshawar
6	Fahad	Khan	fahad@gmail.com	1994-01-28	2021-03-25 14:45:36	Lahore

Query:

✔ 2 rows affected. (Query took 0.0886 seconds.)

```
UPDATE student SET Firstname='Osama' WHERE City='Lahore'
```

[Edit inline] [Edit] [Create PHP code]

Result:

Id	Firstname	Lastname	Email	DateOfBirth	reg_date	City
1	Jasim	Shah	afaq@gmail.com	1998-03-12	2021-04-02 15:03:01	Quetta
2	Asad	Khan	asad@gmail.com	1998-03-12	2021-03-25 14:45:36	Peshawar
3	Fahad	Iqbal	fahad@gmail.com	1991-03-15	2021-03-25 14:45:36	Karachi
4	Osama	Irfan	zahid@gmail.com	1995-05-23	2021-04-02 15:13:37	Lahore
5	Saad	Akhtar	saad@gmail.com	1994-01-28	2021-03-25 14:45:36	Peshawar
6	Osama	Khan	fahad@gmail.com	1994-01-28	2021-04-02 15:13:37	Lahore

Important:

Be careful when updating records. If you omit the WHERE clause, ALL records will be updated!

The SQL DELETE Statement

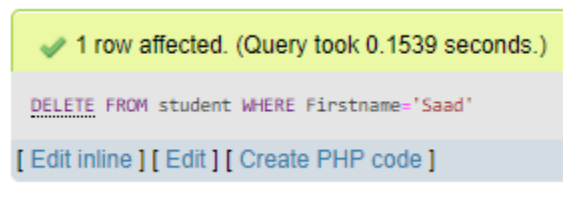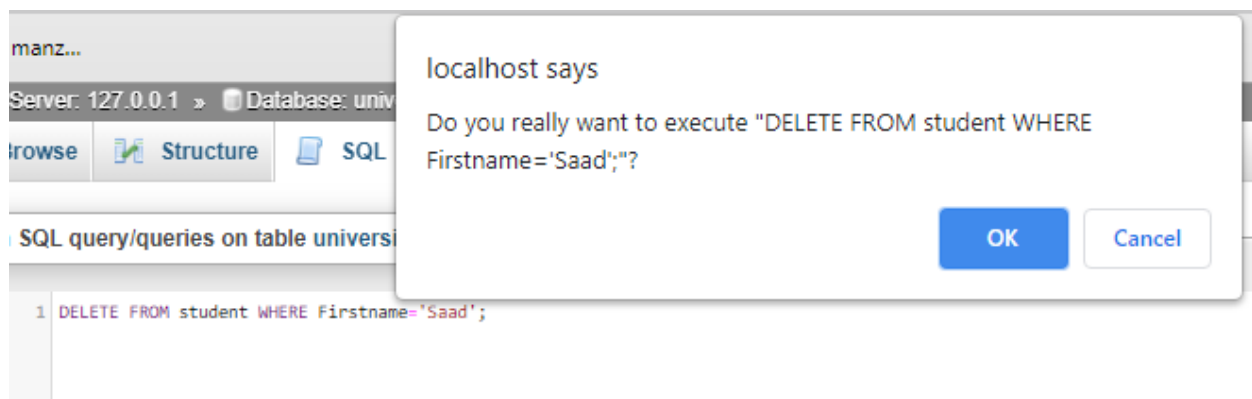The DELETE statement is used to delete existing records in a table.

Syntax:

DELETE FROM *table_name* WHERE *condition*;

For Example:

The following SQL statement deletes the student "Saad" from the "Student" table:

Query:

Result:

Id	Firstname	Lastname	Email	DateOfBirth	reg_date	City
1	Jasim	Shah	afaq@gmail.com	1998-03-12	2021-04-02 15:03:01	Quetta
2	Asad	Khan	asad@gmail.com	1998-03-12	2021-03-25 14:45:36	Peshawar
3	Fahad	Iqbal	fahad@gmail.com	1991-03-15	2021-03-25 14:45:36	Karachi
4	Osama	Irfan	zahid@gmail.com	1995-05-23	2021-04-02 15:13:37	Lahore
6	Osama	Khan	fahad@gmail.com	1994-01-28	2021-04-02 15:13:37	Lahore

Delete All Records:

It is possible to delete all rows in a table without deleting the table. This means that the table structure, attributes, and indexes will be intact:

Syntax:

```
DELETE FROM table_name;
```

For example:

The following SQL statement deletes all rows in the "Student" table, without deleting the table:

```
1  DELETE FROM student;
```

Some SQL Built-in Functions (MIN (), MAX (), COUNT (), AVG (), SUM ())

The SQL MIN() and MAX() Functions

The MIN() function returns the smallest value of the selected column.

The MAX() function returns the largest value of the selected column.

MIN () Syntax:

```
SELECT MIN(column_name)
FROM table_name
WHERE condition;
```

MAX () Syntax:
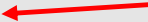
```
SELECT MAX(column_name)
FROM table_name
WHERE condition;
```

Example MIN ():

The following SQL statement finds the lowest GPA of all in "Student" table:

Example MAX ():

The following SQL statement finds the highest GPA of all in "Student" table:

The SQL COUNT (), AVG () and SUM () Functions

The COUNT () function returns the number of rows that matches a specified criterion.

COUNT () Syntax:

```
SELECT COUNT(column_name)
FROM table_name
WHERE condition;
```

The AVG () function returns the average value of a numeric column.

AVG () Syntax:

```
SELECT AVG(column_name)
FROM table_name
WHERE condition;
```
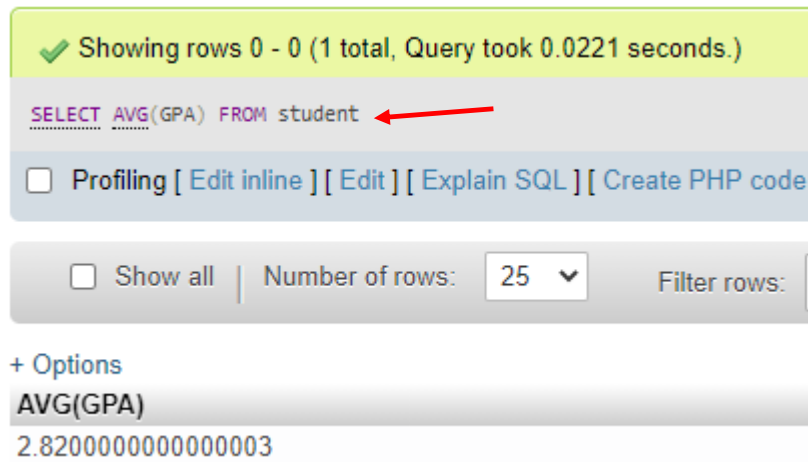
The SUM () function returns the total sum of a numeric column.

SUM () Syntax:

```
SELECT SUM(column_name)
FROM table_name
WHERE condition;
```

Example COUNT ():

The following SQL statement finds the number of students:

Your SQL query has been executed successfully.

SELECT COUNT(Id) FROM student

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code
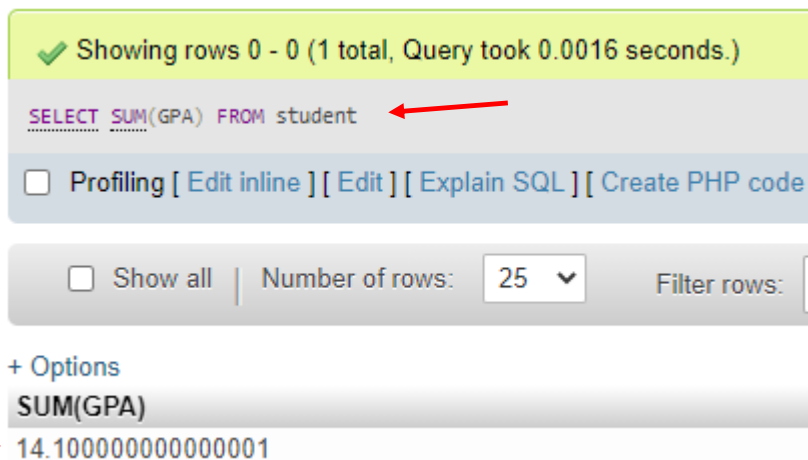
\+ Options

COUNT(Id)

5
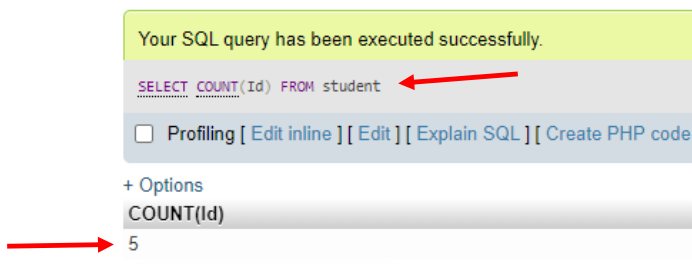
Example AVG ():

The following SQL statement finds the average GPA of all students:

Example SUM ():

The following SQL statement finds the sum of the GPA's of all students:

Note: NULL values are ignored in COUNT (), AVG () and SUM ().

THE END