POSTGRESQL TUTORIAL

PostgreSQL UPDATE

Summary: in this tutorial, you will learn how to use the PostgreSQL `UPDATE` statement to update existing data in a table.

Introduction to the PostgreSQL UPDATE statement

The PostgreSQL `UPDATE` statement allows you to modify data in a table. The following illustrates the syntax of the `UPDATE` statement:

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

In this syntax:

- First, specify the name of the table that you want to update data after the `UPDATE` keyword.
- Second, specify columns and their new values after `SET` keyword. The columns that do not appear in the `SET` clause retain their original values.

- Third, determine which rows to update in the condition of the `WHERE` (https://www.postgresqltutorial.com/postgresql-tutorial/postgresql-where/) clause.

The `WHERE` clause is optional. If you omit the `WHERE` clause, the `UPDATE` statement will update all rows in the table.

When the `UPDATE` statement is executed successfully, it returns the following command tag:

```
UPDATE count
```

The `count` is the number of rows updated including rows whose values did not change.

Returning updated rows

The `UPDATE` statement has an optional `RETURNING` clause that returns the updated rows:

```
UPDATE table_name
SET column1 = value1,
    column2 = value2,
    ...
WHERE condition
RETURNING * | output_expression AS output_name;
```

PostgreSQL UPDATE examples

Let’s take some examples of using the PostgreSQL `UPDATE` statement.

Setting up a sample table

The following statements create a table (https://www.postgresqltutorial.com/postgresql-tutorial/postgresql-create-table/) called `courses` and insert (https://www.postgresqltutorial.com/postgresql-tutorial/postgresql-insert/) some data into it:

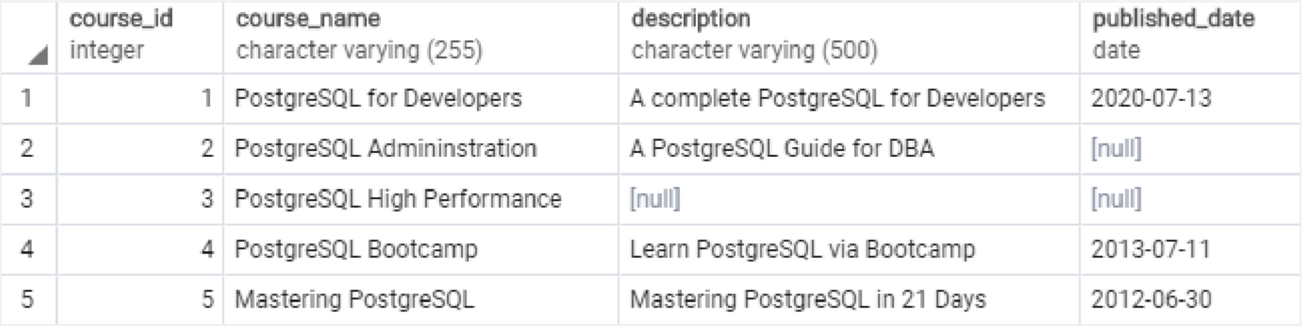
```
DROP TABLE IF EXISTS courses;

CREATE TABLE courses(
        course_id serial primary key,
        course_name VARCHAR(255) NOT NULL,
        description VARCHAR(500),
        published_date date
);

INSERT INTO
        courses(course_name, description, published_date)
VALUES
        ('PostgreSQL for Developers','A complete PostgreSQL for Developers','2
        ('PostgreSQL Admininstration','A PostgreSQL Guide for DBA',NULL),
        ('PostgreSQL High Performance',NULL,NULL),
        ('PostgreSQL Bootcamp','Learn PostgreSQL via Bootcamp','2013-07-11'),
        ('Mastering PostgreSQL','Mastering PostgreSQL in 21 Days','2012-06-30'
```

The following statement returns the data from the `courses` table:

```
SELECT * FROM courses;
```



	course_id integer	course_name character varying (255)	description character varying (500)	published_date date
1	1	PostgreSQL for Developers	A complete PostgreSQL for Developers	2020-07-13
2	2	PostgreSQL Admininstration	A PostgreSQL Guide for DBA	[null]
3	3	PostgreSQL High Performance	[null]	[null]
4	4	PostgreSQL Bootcamp	Learn PostgreSQL via Bootcamp	2013-07-11
5	5	Mastering PostgreSQL	Mastering PostgreSQL in 21 Days	2012-06-30

1) PostgreSQL UPDATE – updating one row

The following statement uses the `UPDATE` statement to update the course with id 3. It changes the `published_date` from `NULL` to `'2020-08-01'` .

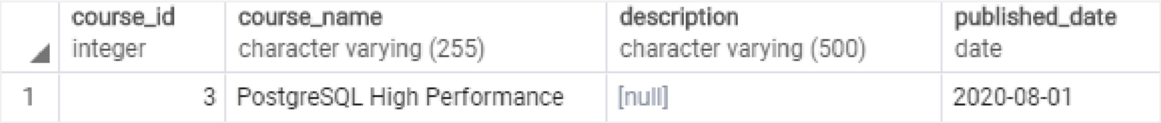
```
UPDATE courses
SET published_date = '2020-08-01'
WHERE course_id = 3;
```

The statement returns the following message indicating that one row has been updated:

```
UPDATE 1
```

The following statement selects the course with id 3 to verify the update:

```
SELECT *
FROM courses
WHERE course_id = 3;
```

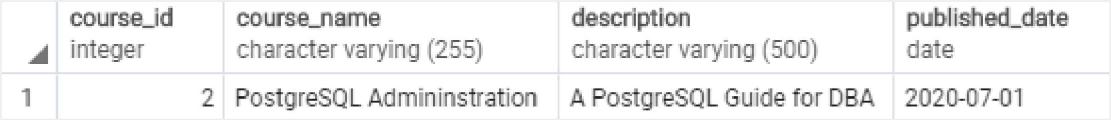


	course_id integer	course_name character varying (255)	description character varying (500)	published_date date
1	3	PostgreSQL High Performance	[null]	2020-08-01

2) PostgreSQL UPDATE – updating a row and returning the updated row

The following statement updates course id 2. It modifies `published_date` of the course to `2020-07-01` and returns the updated course.

```
UPDATE courses
SET published_date = '2020-07-01'
WHERE course_id = 2
RETURNING *;
```



	course_id integer	course_name character varying (255)	description character varying (500)	published_date date
1	2	PostgreSQL Admininstration	A PostgreSQL Guide for DBA	2020-07-01

Summary

- Use the PostgreSQL `UPDATE` statement to update data in one or more columns of a table.
- Use the `RETURNING` clause to return the updated rows from the `UPDATE` statement