SQL CHECK Constraint

In this tutorial, we'll learn about the CHECK constraint in SQL and how to use them with examples.

In SQL, the `CHECK` constraint is used to specify the condition that must be validated in order to insert data to a table. For example,

```
CREATE TABLE Orders (
  order_id INT PRIMARY KEY,
  amount INT CHECK (amount > 0)
);
```

Run Code »

Here, the amount column has a check condition: **greater than 0**. Now, let's try to insert records to the Orders table.

Example 1

```
-- amount equal to 100
-- record is inserted
INSERT INTO Orders(amount) VALUES(100);
```

Run Code »

Example 2

```
-- amount equal to -5
-- results in an error
INSERT INTO Orders(amount) VALUES(-5);
```

Run Code »

> **Note:** The `CHECK` constraint is used to validate data while insertion only. To check if the row exists or not, visit SQL EXISTS.

Create Named CHECK Constraint

It's a good practice to create **named constraints** so that it is easier to alter and drop constraints.

Here's an example to create named `CHECK` constraint:

```
-- creates a named constraint named amount CK
-- the constraint makes sure that amount is greater than 0
CREATE TABLE Orders (
  order_id INT PRIMARY KEY,
  amount INT,
  CONSTRAINT amountCK CHECK (amount > 0)
);
```

Run Code »

CHECK Constraint in Existing Table

We can add the `CHECK` constraint to an existing table by using the `ALTER TABLE` clause. For example,

```
-- Adding CHECK constraint without name

ALTER TABLE Orders
ADD CHECK (amount > 0);
```

Here's how we can add a named `CHECK` constraint. For example,

```
-- Adding CHECK constraint named amountCK

ALTER TABLE Orders
ADD CONSTRAINT amountCK CHECK (amount > 0);
```

> **Note:** If we try to add the `CHECK` constraint `amount > 0` to a column that already has value less than 0, we will get an error.

Remove CHECK Constraint

We can remove the `CHECK` constraint using the `DROP` clause. For example,

SQL Server, PostgreSQL, Oracle

```
-- removing CHECK constraint named amountCK
ALTER TABLE Orders
DROP CONSTRAINT amountCK;
```

MySQL

```
-- removing CHECK constraint named amountCK
ALTER TABLE Orders
DROP CHECK amountCK;
```

Recommended Readings: SQL Constraints

Previous Tutorial: SQL Foreign Key
Next Tutorial: SQL Default

Related Tutorials

Programming — SQL Constraints
Programming — SQL NOT NULL Constraint
Programming — SQL DEFAULT Constraint
Programming — SQL FOREIGN KEY