MySQL BEFORE DELETE Trigger

Introduction to MySQL BEFORE DELETE triggers

MySQL BEFORE DELETE [triggers](https://www.mysqltutorial.org/mysql-triggers.aspx) are fired automatically before a [delete](https://www.mysqltutorial.org/mysql-delete-statement.aspx) event occurs in a table.

Here is the basic syntax of creating a MySQL BEFORE DELETE trigger:

**CREATE** **TRIGGER** trigger\_name

**BEFORE** **DELETE**

**ON** table\_name **FOR** **EACH** **ROW**

trigger\_body

In this syntax:

First, specify the name of the trigger which you want to create after the CREATE TRIGGER keywords.

Second, use BEFORE DELETE clause to specify that the trigger is invoked right before a delete event.

Third, specify the name of the table that the trigger is associated with after the ON keyword.

Finally, specify the trigger body which consists of one or more statements that execute when the trigger is fired.

Notice that if you have multiple statements in the trigger\_body, you need to use the BEGIN END block to wrap these statements and temporarily change the default delimiter as follows:

DELIMITER $$

**CREATE** **TRIGGER** trigger\_name

**BEFORE** **DELETE**

**ON** table\_name **FOR** **EACH** **ROW**

**BEGIN**

*-- statements*

**END**$$

DELIMITER ;

In a BEFORE DELETE trigger, you can access the OLD row but cannot update it. Also, there is no NEW row in the BEFORE DELETE trigger.

MySQL BEFORE DELETE trigger example

Let’s see the following BEFORE DELETE trigger example.

Setting up a sample table

First, [create a new table](https://www.mysqltutorial.org/mysql-create-table/) called Salaries that stores salary information of employees

**DROP** **TABLE** **IF** **EXISTS** Salaries;

**CREATE** **TABLE** Salaries (

employeeNumber INT PRIMARY **KEY**,

validFrom DATE **NOT** NULL,

amount DEC(12 , 2 ) **NOT** NULL **DEFAULT** 0

);

Second, [insert some rows](https://www.mysqltutorial.org/mysql-insert-multiple-rows/) into the Salaries table:

**INSERT** **INTO** salaries(employeeNumber,validFrom,amount)

**VALUES**

(1002,'2000-01-01',50000),

(1056,'2000-01-01',60000),

(1076,'2000-01-01',70000);

Third, [create a table](https://www.mysqltutorial.org/mysql-create-table/) that stores the deleted salary:

**DROP** **TABLE** **IF** **EXISTS** SalaryArchives;

**CREATE** **TABLE** SalaryArchives (

**id** INT PRIMARY **KEY** AUTO\_INCREMENT,

employeeNumber INT PRIMARY **KEY**,

validFrom DATE **NOT** NULL,

amount DEC(12 , 2 ) **NOT** NULL **DEFAULT** 0,

deletedAt TIMESTAMP **DEFAULT** **NOW**()

);

Creating BEFORE DELETE trigger example

The following BEFORE DELETE trigger inserts a new row into the SalaryArchives table before a row from the Salaries table is deleted.

DELIMITER $$

**CREATE** **TRIGGER** before\_salaries\_delete

**BEFORE** **DELETE**

**ON** salaries **FOR** **EACH** **ROW**

**BEGIN**

**INSERT** **INTO** SalaryArchives(employeeNumber,validFrom,amount)

**VALUES**(OLD.employeeNumber,OLD.validFrom,OLD.amount);

**END**$$

DELIMITER ;

Code language: SQL (Structured Query Language) (sql)

In this trigger:

First, the name of the trigger is before\_salaries\_delete specified in the CREATE TRIGGER clause:

**CREATE** **TRIGGER** before\_salaries\_delete

Second, the triggering event is:

BEFORE **DELETE**

Code language: SQL (Structured Query Language) (sql)

Third, the table that the trigger associated with is Salaries table:

ON Salaries FOR EACH ROW

Finally, inside the trigger body insert deleted row into the SalaryArchives table.

Testing the MySQL BEFORE DELETE trigger

First, delete a row from the Salaries table:

**DELETE** **FROM** salaries

**WHERE** employeeNumber = 1002;

Second, query data from the SalaryArchives table:

**SELECT** \* **FROM** SalaryArchives;

Code language: SQL (Structured Query Language) (sql)

MySQL BEFORE DELETE Trigger example

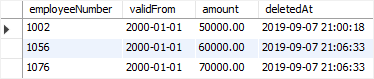
The trigger was invoked and inserted a new row into the SalaryArchives table.

Third, delete all rows from the Salaries table:

**DELETE** **FROM** salaries;

Finally, query data from the SalaryArchives table:

**SELECT** \* **FROM** SalaryArchives;



The trigger was trigger twice because the DELETE statement deleted two rows from the Salaries table.