Instituto Tecnológico Superior de Jerez

Actividad 2 - Practica TRIGGERS

Jerez de García Salinas

Fecha

11/12/2019

Alumno:

Mario Alberto Loya Rodríguez

Carrera:

Ingeniería en Sistemas Computacionales

Semestre 5

Materia:

Taller de Base de Datos

Tema:

5.- SQL Procedural

No. de control:

16070135

Profesor:

ISC Salvador Acevedo Sandoval

1. Creamos una base de datos:

```
mysql> create database pruebaTRRIGERS;
Query OK, 1 row affected (2.59 sec)

mysql> USE pruebatrrigers;
Database changed
```

2. Prueba 1 Before update:

```
mysql> create table customer (acc_no integer primary key,
    ->                                cust_name varchar(20),
    ->                                 avail_balance decimal);
Query OK, 0 rows affected (3.16 sec)

mysql> create table mini_statement (acc_no integer,
    ->                              avail_balance decimal,
    ->                     foreign key(acc_no) references customer(acc_no) on delete cascade);
Query OK, 0 rows affected (1.45 sec)
```

```
mysql> insert into customer values (1000, "Fanny", 7000);
Query OK, 1 row affected (0.79 sec)

mysql> insert into customer values (1001, "Peter", 12000);
Query OK, 1 row affected (0.18 sec)
```

```
mysql> delimiter $$
mysql> create trigger update_cus
    ->       before update on customer
    ->       for each row
    ->       begin
    ->       insert into mini_statement values (old.acc_no, old.avail_balance);
    ->       end $$
Query OK, 0 rows affected (0.95 sec)
```

```
mysql> delimiter ;
mysql> update customer set avail_balance = avail_balance + 3000 where acc_no = 1001;
Query OK, 1 row affected (1.08 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> update customer set avail_balance = avail_balance + 3000 where acc_no = 1000;
Query OK, 1 row affected (0.73 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select *from mini_statement;
+--------+---------------+
| acc_no | avail_balance |
+--------+---------------+
|   1001 |         12000 |
|   1000 |          7000 |
+--------+---------------+
2 rows in set (0.05 sec)
```

3. Prueba 2 After update:

```
mysql> create table micro_statement (acc_no integer,
    ->                                   avail_balance decimal,
    ->            foreign key(acc_no) references customer(acc_no) on delete cascade);
Query OK, 0 rows affected (0.94 sec)

mysql> insert into customer values (1002, "Janitor", 4500);
Query OK, 1 row affected (0.12 sec)
```

```
mysql> delimiter //
mysql> create trigger update_after
    ->         after update on customer
    ->         for each row
    ->        begin
    ->        insert into micro_statement values(new.acc_no, new.avail_balance);
    ->        end //
Query OK, 0 rows affected (0.20 sec)
```

```
mysql> delimiter ;
mysql>
mysql> update customer set avail_balance = avail_balance + 1500 where acc_no = 1002;
Query OK, 1 row affected (0.08 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select *from micro_statement;
+--------+---------------+
| acc_no | avail_balance |
+--------+---------------+
|   1002 |          6000 |
+--------+---------------+
1 row in set (0.00 sec)
```

4. Prueba 3 Before Insert Trigger:

```
mysql> create table contacts (contact_id INT (11) NOT NULL AUTO_INCREMENT,
    ->                            last_name VARCHAR (30) NOT NULL, first_name VARCHAR (25),
    ->                            birthday DATE, created_date DATE,
    ->                          created_by VARCHAR(30),
    ->                          CONSTRAINT contacts_pk PRIMARY KEY (contact_id));
Query OK, 0 rows affected, 1 warning (0.76 sec)
```

```
mysql> delimiter //
mysql> create trigger contacts_before_insert
    ->             before insert
    ->             on contacts for each row
    ->             begin
    ->                 DECLARE vUser varchar(50);
    ->             select USER() into vUser;
    ->                 SET NEW.created_date = SYSDATE();
    ->                 SET NEW.created_by = vUser;
    ->             end //
Query OK, 0 rows affected (0.23 sec)
```

```
mysql> delimiter ;
mysql> insert into contacts values (1, "Newton", "Enigma",
    ->                              str_to_date ("19-08-1999", "%d-%m-%Y"),
    ->                              str_to_date ("17-03-2018", "%d-%m-%Y"), "xyz");
Query OK, 1 row affected (0.24 sec)
```

```
mysql> select *from contacts;
+------------+-----------+------------+------------+--------------+----------------+
| contact_id | last_name | first_name | birthday   | created_date | created_by     |
+------------+-----------+------------+------------+--------------+----------------+
|          1 | Newton    | Enigma     | 1999-08-19 | 2019-12-16   | root@localhost |
+------------+-----------+------------+------------+--------------+----------------+
1 row in set (0.00 sec)
```

5. Prueba 4 After Insert Trigger:

```
Query OK, 0 rows affected (0.78 sec)

mysql> create table contacts (contact_id int (11) NOT NULL AUTO_INCREMENT,
    ->                              last_name VARCHAR(30) NOT NULL,
    ->                              first_name VARCHAR(25), birthday DATE,
    ->                              CONSTRAINT contacts_pk PRIMARY KEY (contact_id));
Query OK, 0 rows affected, 1 warning (1.04 sec)

mysql> create table contacts_audit (contact_id integer,
    ->                             created_date date,
    ->                             created_by varchar (30));
Query OK, 0 rows affected (1.25 sec)
```

```
mysql> delimiter //
mysql> create trigger contacts_after_insert
    -> after insert
    ->  on contacts for each row
    ->   begin
    ->    DECLARE vUser varchar(50);
    ->               SELECT USER() into vUser;
    ->               INSERT into contacts_audit( contact_id,created_date,created_by) VALUES(NEW.contact_id, curdate(),vUser );
    ->           END //
Query OK, 0 rows affected (0.51 sec)
```

```
mysql> delimiter ;
mysql> insert into contacts values (1, "Kumar", "Rupesh",
    ->                              str_to_date("20-06-1999", "%d-%m-%Y"));
Query OK, 1 row affected (0.35 sec)

mysql> select *from contacts_audit;
+------------+--------------+----------------+
| contact_id | created_date | created_by     |
+------------+--------------+----------------+
|          1 | 2019-12-16   | root@localhost |
+------------+--------------+----------------+
1 row in set (0.00 sec)
```

6. Prueba 5 Before Delete Trigger:

```
Query OK, 0 rows affected (1.27 sec)

mysql> drop table contacts_audit;
Query OK, 0 rows affected (0.74 sec)
```

```
mysql> create table contacts (contact_id int (11) NOT NULL AUTO_INCREMENT,
    ->                            last_name VARCHAR (30) NOT NULL, first_name VARCHAR (25),
    ->                            birthday DATE, created_date DATE, created_by VARCHAR(30),
    ->                            CONSTRAINT contacts_pk PRIMARY KEY (contact_id));
Query OK, 0 rows affected, 1 warning (0.83 sec)

mysql> create table contacts_audit (contact_id integer, deleted_date date, deleted_by varchar(20));
Query OK, 0 rows affected (0.73 sec)
```

```
mysql> delimiter //
mysql> create trigger contacts_before_delete
    ->             before delete
    -> on contacts for each row
    -> begin
    -> DECLARE vUser varchar(50);
    -> SELECT USER() into vUser;
    -> INSERT into contacts_audit
    -> ( contact_id,
    -> deleted_date,
    -> deleted_by)
    -> VALUES
    -> ( OLD.contact_id,
    -> SYSDATE(),
    -> vUser );
    ->              end //
Query OK, 0 rows affected (0.21 sec)
```

```
mysql> delimiter ;
mysql> insert into contacts values (1, "Bond", "Ruskin",
    ->                              str_to_date ("19-08-1995", "%d-%m-%Y"),
    ->                              str_to_date ("27-04-2018", "%d-%m-%Y"), "xyz");
Query OK, 1 row affected (0.21 sec)

mysql> delete from contacts where last_name="Bond";
Query OK, 1 row affected (0.20 sec)
```

```
mysql> select *from contacts_audit;
+------------+--------------+----------------+
| contact_id | deleted_date | deleted_by     |
+------------+--------------+----------------+
|          1 | 2019-12-16   | root@localhost |
+------------+--------------+----------------+
1 row in set (0.00 sec)
```

7. Prueba 6 After Delete Trigger:

```
mysql> drop table contacts;
Query OK, 0 rows affected (0.50 sec)

mysql> drop table contacts_audit;
Query OK, 0 rows affected (0.53 sec)
```

```
mysql> create table contacts (contact_id int (11) NOT NULL AUTO_INCREMENT,
    ->                            last_name VARCHAR (30) NOT NULL, first_name VARCHAR (25),
    ->                            birthday DATE, created_date DATE, created_by VARCHAR (30),
    ->                            CONSTRAINT contacts_pk PRIMARY KEY (contact_id));
Query OK, 0 rows affected, 1 warning (0.78 sec)

mysql> create table contacts_audit (contact_id integer, deleted_date date, deleted_by varchar(20));
Query OK, 0 rows affected (0.81 sec)
```

```
mysql> delimiter //
mysql> create trigger contacts_after_delete
    -> after delete
    -> on contacts for each row
    -> begin
    -> DECLARE vUser varchar(50);
    -> SELECT USER() into vUser;
    -> INSERT into contacts_audit
    -> ( contact_id,
    -> deleted_date,
    -> deleted_by)
    -> VALUES
    -> ( OLD.contact_id,
    -> SYSDATE(),
    -> vUser );
    -> end //
Query OK, 0 rows affected (0.28 sec)
```

```
mysql> delimiter ;
mysql> insert into contacts values (1, "Newton", "Isaac",
    ->                              str_to_date ("19-08-1985", "%d-%m-%Y"),
    ->                              str_to_date ("23-07-2018", "%d-%m-%Y"), "xyz");
Query OK, 1 row affected (0.12 sec)

mysql> delete from contacts where first_name="Isaac";
Query OK, 1 row affected (0.16 sec)
```

```
mysql> select *from contacts_audit;
+------------+--------------+----------------+
| contact_id | deleted_date | deleted_by     |
+------------+--------------+----------------+
|          1 | 2019-12-16   | root@localhost |
+------------+--------------+----------------+
1 row in set (0.18 sec)
```