

Practical -10Triggers

Trigger

In MySQL, a trigger is a stored program invoked automatically in response to an event such as insert, update, or delete that occurs in the associated table. For example, you can define a trigger that is invoked automatically before a new row is inserted into a table.

MySQL supports triggers that are invoked in response to the INSERT, UPDATE or DELETE event.

MySQL supports only row-level triggers. That is trigger activated on each row level action.

Create Trigger

```
CREATE TRIGGER trigger_name
{BEFORE | AFTER} {INSERT | UPDATE | DELETE }
ON table_name FOR EACH ROW
Begin
    Statements
End
```

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

Second specify the **trigger action time** which can be either BEFORE or AFTER which indicates that the trigger is invoked before or after each row is modified/insert/delete.

Third specify the operation that **activates the trigger**, which can be INSERT, UPDATE, or DELETE

Fourth specify the **name of the table** to which the trigger belongs after the ON keyword.

Fifth, specify **the statement to execute when the trigger activates**.

o distinguish between the value of the columns BEFORE and AFTER the DML has fired, you use the NEW and OLD modifiers.

e.g if you update the column description, in the trigger body, you can access the value of the description before the update OLD.description and the new value NEW.description.

| Trigger Event | OLD | NEW |
|---------------|-----|-----|
| INSERT | No | Yes |
| UPDATE | Yes | Yes |

| | | |
|--------|-----|----|
| DELETE | Yes | No |
|--------|-----|----|

1. create trigger which activate on before inserting records on post table and it inserts the record into category table.

Step 1 : mysql> delimiter \$\$

Step 2 : mysql>
create trigger firsttrg
before insert
on **post** for each row
begin

insert into category values(NEW.id,NULL);

end \$\$

step 4 : delimiter ;

step 5 : insert values on post table
insert into post values('dance','Various form of classical dances','2021-02-03',6);

it will automatically add the cat_id 6 in category table. By the trigger.

2. Create trigger for after inserting record on temp table if inserted no is odd it will insert into odd table other wise in even table.

Create table temp(no int(2));
Create table odd(no int(2));
Create table even(no int(2));

Step 1 delimiter \$\$

Step 2 create trigger
create trigger trig2
after insert
on temp for each row
begin
if mod(new.no,2)=0 then
insert into even values(new.no);
else
insert into odd values(new.no);
end if;
end \$\$

step 3 : delimiter ;

step 4 insert values in temp table so trigger will be activated

mysql> insert into temp values(25) ; // trigger will be activated after record inserted into temp and it will add record in odd table.

3. Trigger for after updation .

Create a trigger after updation on book price in book table, if updated price less than old price then stores old record in book2 table if the updated price is greater than the old price then stores old book record in book1.

Step 1 : delimiter \$\$

```
Step 2 :  
create trigger updatetrigger  
after update  
on book for each row  
begin  
  if old.price < new.price then  
    insert into book1 values(old.bookid,old.bookname,old.price);  
  else  
    insert into book2 values(old.bookid,old.bookname,old.price);  
  end if;  
end $$
```

Step 3 : delimiter ;

Step 4 : Fire update query on book table

Mysql> update book set price = 700 where bookid='B5';

It will fire trigger after updating row in book table and trigger can add old price record in book1.

Delete the Trigger

Mysql> drop trigger triggername

List out triggers form database

Syntax : **show triggers from** 'databasename';

e.g show triggers from 'testdb';

Exercise

1. Create Trigger Trig1 which execute after update on product_master. While updating value of any sellprice it should also update product_rate filed value of same prodcutno in sales_order_detail table.

2. Create Trigger Trig2 Which execute before delete on employee table. It copy the deleted record to the new table deleted_emp.
(create a deleted_emp table first which contains same attribute and datatype as employee)

3. Create Trigger Trig3 Which execute before insert new record in employee table if new records joining date is after 01-01-2021 then insert new record in deleted_emp table also.