Assignment 9
Function and Trigger
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SQL : https://www.mysqltutorial.org/how-to-load-sample-database-into-mysql-database-server.aspx

1. Buatlah sebuah function untuk mengetahui harga grosir yang disesuaikan dengan jumlah barang yang akan dibeli. Semisal barang akan dapat diskon 10% apabila beli minimal 1 lusin, dan diskon 15% apabila beli minimal 100.

```
delimiter $$
create function hargaGrosir(quantity int, price double)
    -> returns double deterministic
    -> begin
    -> declare totalPrice double;
    -> set totalprice = quantity * price;
    -> if quantity >= 100 then
    -> set totalprice = totalprice*0.85;
    -> elseif quantity >= 12 then
    -> set totalprice = totalprice * 0.9;
    -> end if;
    -> return totalprice;
    -> end $$
delimiter ;
```

Berikut contoh pemanggilan function hargaGrosir()

```
mysql> select ordernumber, productcode, quantityordered, hargagrosir(quantityordered, quantity
ordered*priceeach) as totalHargaGrosir
    -> from orderdetails
    -> order by totalhargagrosir desc
    -> limit 10;
+-------------+-------------+-----------------+--------------------+
| ordernumber | productcode | quantityordered | totalHargaGrosir   |
+-------------+-------------+-----------------+--------------------+
|       10405 | S12_4675    |              97 |         975186.396 |
|       10407 | S18_1749    |              76 |          733494.24 |
|       10403 | S10_4698    |              66 |  683286.5160000001 |
|       10405 | S24_3856    |              76 |  664303.5360000001 |
|       10401 | S700_2466   |              85 |  641926.8000000002 |
|       10404 | S12_1099    |              64 |         602505.216 |
|       10412 | S18_3232    |              60 | 510267.60000000003 |
|       10400 | S10_4757    |              64 | 496336.89599999995 |
|       10419 | S24_3856    |              70 |           495419.4 |
|       10404 | S18_3278    |              90 | 492366.60000000003 |
+-------------+-------------+-----------------+--------------------+
10 rows in set (0.04 sec)
```

2. Buatlah sebuah trigger untuk merekam history perubahan product serta buatlah tabel baru untuk menyimpan perubahan tersebut.

   Pertama kita buat table untuk merekam history perubahan product yang bernama log_product

```
create table log_product(
    -> oldProductCode varchar(15),
    -> oldProductName varchar(70),
    -> oldProductLine varchar(50),
    -> oldProductScale varchar(10),
    -> oldProductVendor varchar(50),
    -> oldProductDescription text,
    -> oldQuantityInStock smallint,
    -> oldBuyPrice DOUBLE,
    -> oldMSRP DOUBLE,
    -> newProductCode varchar(15),
    -> newProductName varchar(70),
    -> newProductLine varchar(50),
    -> newProductScale varchar(10),
    -> newProductVendor varchar(50),
    -> newProductDescription text,
    -> newQuantityInStock smallint,
    -> newBuyPrice DOUBLE,
    -> newMSRP DOUBLE
    -> );
delimiter $$
create trigger perubahanProduct
    -> after update on products
    -> for each row
    -> begin
    -> insert into log_product
    -> values(
    -> old.productCode,
    -> old.productName,
    -> old.productLine,
```

```
    -> old.productScale,
    -> old.productVendor,
    -> old.productDescription,
    -> old.quantityInStock,
    -> old.buyprice,
    -> old.msrp,
    -> new.productcode,
    -> new.productName,
    -> new.productLine,
    -> new.productScale,
    -> new.productVendor,
    -> new.productDescription,
    -> new.quantityInStock,
    -> new.buyprice,
    -> new.msrp
    -> );
    -> end $$
delimiter                                                                    ;
```

Berikut contoh bagaimana trigger perubahanProduct bekerja:

```
mysql> update products
    -> set quantityinstock = quantityinstock-10
    -> where productcode = 'S18_3278';
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select oldproductcode, oldquantityinstock, newproductcode, newquantityinstock from log_product;
+---------------+-------------------+---------------+-------------------+
| oldproductcode | oldquantityinstock | newproductcode | newquantityinstock |
+---------------+-------------------+---------------+-------------------+
| S18_3278      |              1917 | S18_3278      |              1907 |
+---------------+-------------------+---------------+-------------------+
1 row in set (0.00 sec)
```