

Assignment No. 5

Q. Write and execute PL/SQL block to implement all types of triggers on Order Management DB.

(Consider row level and statement-level triggers)

```
mysql> show triggers;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Trigger | Event | Table | Statement | Definer | character_set_client | collation_connection | Timing | Created |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| delete_order | DELETE | orders | begin update product p inner join orders_product op on p.p_id=op.p_id set stock=stock-quantity where op.o_id=old.o_id and op.p_id=p.p_id; end | root@localhost | utf8mb4 | utf8mb4_0900_ai_ci | BEFORE | 2020-09-26 12:04:49.42 |
| set_order_amount | INSERT | orders_product | begin update orders set amount=(select sum(p.p_cost*op.quantity) as order_amount from orders_product op inner join product p on op.p_id=p.p_id where o_id=new.o_id) where o_id=new.o_id; end | root@localhost | utf8mb4 | utf8mb4_0900_ai_ci | AFTER | 2020-09-26 14:47:49.10 |
| update_stock | INSERT | orders_product | begin update product set stock=stock-new.quantity where p_id=new.p_id; end | root@localhost | utf8mb4 | utf8mb4_0900_ai_ci | AFTER | 2020-09-18 15:22:54.23 |
| undo_order_details | DELETE | orders_product | begin update orders o inner join orders_product op on o.o_id=op.o_id inner join product p on op.p_id=p.p_id set amount=amount-quantity*p_cost and items=items-quantity where o.o_id=old.o_id; update product p inner join orders_product op on p.p_id=op.p_id set stock=stock-quantity where op.p_id=old.p_id; end | root@localhost | utf8mb4 | utf8mb4_0900_ai_ci | AFTER | 2020-09-23 11:06:32.56 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
5 rows in set (0.01 sec)
```

```
mysql> select * from orders_product;
+-----+-----+-----+
| o_id | p_id | quantity |
+-----+-----+-----+
| 1 | 1 | 1 |
| 1 | 2 | 1 |
| 3 | 2 | 1 |
| 4 | 4 | 1 |
| 6 | 4 | 1 |
| 5 | 6 | 3 |
| 4 | 3 | 2 |
| 5 | 5 | 1 |
| 6 | 5 | 1 |
| 7 | 4 | 1 |
| 7 | 6 | 1 |
+-----+-----+-----+
11 rows in set (0.03 sec)

mysql> select * from orders;
+-----+-----+-----+-----+-----+
| o_id | c_id | items | amount | o_date |
+-----+-----+-----+-----+-----+
| 1 | 1 | 2 | 2000 | 2020-09-01 |
| 3 | 6 | 1 | 800 | 2018-09-01 |
| 4 | 1 | 1 | 50 | 2021-07-01 |
| 5 | 4 | 3 | 1700 | 2020-06-12 |
| 6 | 7 | 2 | 250 | 2020-05-05 |
| 7 | 4 | 2 | 550 | 2020-05-05 |
+-----+-----+-----+-----+-----+
6 rows in set (0.04 sec)

mysql> select * from product;
+-----+-----+-----+-----+
| p_id | p_name | p_cost | stock |
+-----+-----+-----+-----+
| 1 | jeans | 1200 | 100 |
| 2 | T-shirt | 800 | 100 |
| 3 | jacket | 1000 | 100 |
| 4 | notebook | 50 | 99 |
| 5 | hat | 200 | 99 |
| 6 | sweater | 500 | 99 |
+-----+-----+-----+-----+
6 rows in set (0.03 sec)
```

```
mysql> insert into orders_product values (7,6,1);
Query OK, 1 row affected (0.08 sec)

mysql> insert into orders_product(7,6,1);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '(7,6,1)' at line 1
mysql> select * from orders_product;
+-----+-----+-----+
| o_id | p_id | quantity |
+-----+-----+-----+
| 1 | 1 | 1 |
| 1 | 2 | 1 |
| 3 | 2 | 1 |
| 4 | 4 | 1 |
| 6 | 4 | 1 |
| 5 | 6 | 3 |
| 4 | 3 | 2 |
| 5 | 5 | 1 |
| 6 | 5 | 1 |
| 7 | 4 | 1 |
| 7 | 6 | 1 |
| 7 | 6 | 1 |
+-----+-----+-----+
12 rows in set (0.00 sec)

mysql> select * from orders;
+-----+-----+-----+-----+-----+
| o_id | c_id | items | amount | o_date |
+-----+-----+-----+-----+-----+
| 1 | 1 | 2 | 2000 | 2020-09-01 |
| 3 | 6 | 1 | 800 | 2018-09-01 |
| 4 | 1 | 1 | 50 | 2021-07-01 |
| 5 | 4 | 3 | 1700 | 2020-06-12 |
| 6 | 7 | 2 | 250 | 2020-05-05 |
| 7 | 4 | 3 | 1050 | 2020-05-05 |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> select * from product;
+-----+-----+-----+-----+
| p_id | p_name | p_cost | stock |
+-----+-----+-----+-----+
| 1 | jeans | 1200 | 100 |
| 2 | T-shirt | 800 | 100 |
| 3 | jacket | 1000 | 100 |
| 4 | notebook | 50 | 99 |
| 5 | hat | 200 | 99 |
| 6 | sweater | 500 | 98 |
+-----+-----+-----+-----+
```