In this activity, you will be working in Mysql.

Load the dump file (join.sql) from moodle.

Q1. Create a table named **employee_audit** that keeps track of any updation made to the **employees** table. The **employee_audit table** should have the following schema:

```
+----------------+-------------+------+-----+---------+----------------+
| Field          | Type        | Null | Key | Default | Extra          |
+----------------+-------------+------+-----+---------+----------------+
| id             | int(11)     | NO   | PRI | NULL    | auto_increment |
| employeeNumber | int(11)     | NO   |     | NULL    |                |
| lastname       | varchar(50) | NO   |     | NULL    |                |
| changedat      | datetime    | YES  |     | NULL    |                |
| action         | varchar(50) | YES  |     | NULL    |                |
+----------------+-------------+------+-----+---------+----------------+
```

Create a BEFORE UPDATE trigger that is invoked before a change is made to the **employees** table. This trigger when invoked should insert into **employee_audit** the employeeNumber, Lastname of the employee and the time at which the record was updated into the **employees** table. Also SET action value to update

e.g if the below given query
     UPDATE employees SET lastName = 'Patterson' WHERE employeeNumber = 1056;
is executed. Then the employee_audit should contain the following values:

```
mysql> SELECT
    ->      *
    -> FROM
    ->     employees_audit;
+----+----------------+-----------+---------------------+--------+
| id | employeeNumber | lastname  | changedat           | action |
+----+----------------+-----------+---------------------+--------+
|  1 |           1056 | Patterson | 2018-09-17 00:15:27 | update |
+----+----------------+-----------+---------------------+--------+
```

Q2. Load the dump file (dump.sql) from moodle.

The database is named **d1** and contains the following tables:

```
mysql> show tables;
+-------------+
| Tables_in_d1 |
+-------------+
| Customers   |
| Orders      |
+-------------+
2 rows in set (0.00 sec)
```

Create a table named **customer_audit** that keeps track of any row deletion made to the **Customers** table. The **customer_audit** table should have the following schema:

```
+-------------+--------------+------+-----+---------+----------------+
| Field       | Type         | Null | Key | Default | Extra          |
+-------------+--------------+------+-----+---------+----------------+
| id          | int(11)      | NO   | PRI | NULL    | auto_increment |
| customerID  | int(11)      | NO   |     | NULL    |                |
| user_name   | varchar(50)  | NO   |     | NULL    |                |
| ContactName | varchar(100) | NO   |     | NULL    |                |
| changedat   | datetime     | YES  |     | NULL    |                |
| action      | varchar(50)  | YES  |     | NULL    |                |
+-------------+--------------+------+-----+---------+----------------+
```

Create an AFTER DELETE trigger that is invoked after a record is deleted from the **Customers** table. This trigger when invoked should insert into **customer_audit** the CustomerID, Contact_name of the customer and the time at which the record was deleted from the Customers table. The user who deleted the record should also be inserted into the **customers_audit** table. Also SET action value to **delete.**

if the below given query:

   DELETE from Customers where CustomerID=1;
is executed. Then the **customer_audit** should contain the following values:

```
mysql> select * from customer_audit;
+----+------------+----------------+--------------+---------------------+--------+
| id | customerID | user_name      | ContactName  | changedat           | action |
+----+------------+----------------+--------------+---------------------+--------+
| 1  |          1 | root@localhost | Maria Anders | 2018-09-17 00:47:01 | DELETE |
+----+------------+----------------+--------------+---------------------+--------+
1 row in set (0.00 sec)
```