**Lab 6. Trigger (Test Questions)**

Note: You must make every effort to store all your queries and results in a text file. During evaluation, it creates problems. This time it would penalize some marks.

Basic Mysql queries:

**Update:**

UPDATE TABLE\_NAME

SET

ATTRIBUTE\_NAME = “new value”

WHERE

CONDITION;

**Delete:**

DELETE FROM TABLE\_NAME

WHERE

CONDITION;

**Q1) Create a customer audit table such that it is updated for each update in customer table.**

Steps: Create a customer\_audit table with adequate attribute list. Write the code for trigger. Update the customer table. See whether the customer table has been updated. Now, see the customer\_audit table that you have created. It must be updated because of the trigger has already fired.

**Q2) Create an account audit table such that it concatenates "update record-acc\_no deleted' for each delete in accounts table.**

Step: Create a table named Account\_audit with adequate attribute list. Create a trigger to be fired after account deletion. See whether account table has been changed after deletion (which it must have). Most importantly, see whether Account\_audit has been changed after deletion.

**Q3) Use the following query to create a student\_marks table and to update it with subject marks. For each update output the grade.**

CREATE TABLE STUDENT\_MARKS(

ID INT AUTO INCREMENT,

NAME VARCHAR(20),

SUB1 INT,

SUB2 INT,

SUB3 INT,

SUB4 INT,

SUB5 INT,

TOTAL INT,

PER\_MARKS INT,

GRADE CHAR(2)

);

UPDATE STUDENT\_MARKS

SET

SUB1 = 54,

SUB2 = 69,

SUB3 = 89,

SUB4 = 87,

SUB5 = 59

WHERE

STUDENT\_ID = 1;

Total Marks: TOTAL = SUB1 + SUB2 + SUB3 + SUB4 + SUB5

Percentage of Marks : PER\_MARKS = (TOTAL)/5

Grade (will be stored GRADE column):

- If PER\_MARKS>=90 -> 'EXCELLENT'

- If PER\_MARKS>=75 AND PER\_MARKS<90 -> 'VERY GOOD'

- If PER\_MARKS>=60 AND PER\_MARKS<75 -> 'GOOD'

- If PER\_MARKS>=40 AND PER\_MARKS<60 -> 'AVERAGE'

- If PER\_MARKS<40-> 'NOT PROMOTED'

Step: Do as asked in the question first. Create the correct trigger. To see whether the STUDENT\_MARKS table has been changed, use SELECT \* FROM STUDENT\_MARKS;

**Q4) Write a trigger such that for each update in table1**

* **The values are copied in table2**
* **Those values are deleted from table3**
* **Frequency of those values are stored in second column of table4**

CREATE TABLE table1(a1 INT);

CREATE TABLE table2(a2 INT);

CREATE TABLE table3(

a3 INT NOT NULL AUTO\_INCREMENT PRIMARY KEY

);

CREATE TABLE table4(

a4 INT NOT NULL AUTO\_INCREMENT PRIMARY KEY,

b4 INT DEFAULT 0

);

Step: Do as asked in the question. Then create the trigger.

To check use:

INSERT INTO table3 (a3) VALUES

(NULL), (NULL), (NULL), (NULL), (NULL),

(NULL), (NULL), (NULL), (NULL), (NULL);

INSERT INTO table4 (a4) VALUES

(0), (0), (0), (0), (0), (0), (0), (0), (0), (0);

INSERT INTO test1 VALUES

(1), (3), (1), (7), (1), (8), (4), (4);

Output - mysql> SELECT \* FROM table1;

+------+

| a1 |

+------+

| 1 |

| 3 |

| 1 |

| 7 |

| 1 |

| 8 |

| 4 |

| 4 |

+------+

8 rows in set (0.00 sec)

mysql> SELECT \* FROM table2;

+------+

| a2 |

+------+

| 1 |

| 3 |

| 1 |

| 7 |

| 1 |

| 8 |

| 4 |

| 4 |

+------+

8 rows in set (0.00 sec)

mysql> SELECT \* FROM table3;

+----+

| a3 |

+----+

| 2 |

| 5 |

| 6 |

| 9 |

| 10 |

+----+

5 rows in set (0.00 sec)

mysql> SELECT \* FROM table4;

+----+------+

| a4 | b4 |

+----+------+

| 1 | 3 |

| 2 | 0 |

| 3 | 1 |

| 4 | 2 |

| 5 | 0 |

| 6 | 0 |

| 7 | 1 |

| 8 | 1 |

| 9 | 0 |

| 10 | 0 |

+----+------+

10 rows in set (0.00 sec)

*Don’t hard-code guys. It may get dangerous. Just to show the results.*

**Q5) Create the following two tables:**

ext\_words

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| id | word |

-------------

| 1 | this |

-------------

| 2 | that |

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| 3 | this |

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ext\_words\_count

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| id | word | count |

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| 1 | this | 2 |

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| 2 | that | 1 |

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**Create a trigger which updates count when word is updated in ext\_words and if ext\_words.word does not exist in ext\_words\_count when ext\_words is updated,insert the word into ext\_words\_count and set count as 1.**

**To check use -** insert into ext\_words values ('there');