ROLL NO:2004

Name : auti onkar

Group C-ASSIGNMENT NO. 8

TITLE: Write and execute suitable database triggers.

Write trigger to take backup of each account before updating it (useful for rollback operation in recovery)

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**......................<<create schemas and display it>>...............**

mysql> create table account(acc\_id int primary key,type char(30),balance

int);

Query OK, 0 rows affected (0.03 sec)

mysql> desc account;

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

| Field | Type | Null | Key | Default | Extra |

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

| acc\_id | int | NO | PRI | NULL | |

| type | char(30) | YES | | NULL | |

| balance | int | YES | | NULL | |

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

3 rows in set (0.00 sec)

mysql> create table audit(acc\_id int,balance int,updation\_date date);

Query OK, 0 rows affected (0.03 sec)

mysql> desc audit;

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

| Field | Type | Null | Key | Default | Extra |

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

| acc\_id | int | YES | | NULL | |

| balance | int | YES | | NULL | |

| updation\_date | date | YES | | NULL | |

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

3 rows in set (0.00 sec)

**.................<<insert data and display all>>.........................**

mysql> insert into account values(123,'saving',5000);

Query OK, 1 row affected (0.01 sec)

mysql> insert into account values(342,"current",4500),(668,"saving",

6000),(546,"saving",76500),(560,"saving",3505);

Query OK, 4 rows affected (0.01 sec)

Records: 4 Duplicates: 0 Warnings: 0

mysql> select \* from account;

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

| acc\_id | type | balance |

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

| 123 | saving | 5000 |

| 342 | current | 4500 |

| 546 | saving | 76500 |

| 560 | saving | 3505 |

| 668 | saving | 6000 |

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

5 rows in set (0.00 sec)

**......................<<trigger definition>>.........................**

mysql> create trigger t before update on account for each row

-> begin

-> insert into audit values(old.acc\_id,old.balance,curdate());

-> end //

Query OK, 0 rows affected (0.01 sec)

**......................<<Display trigger definition>>..................**

MariaDB [bank]> show triggers \G

mysql> delimiter ;

mysql> show triggers \G;

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 1. row \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

Trigger: t

Event: UPDATE

Table: account

Statement: begin

insert into audit values(old.acc\_id,old.balance,curdate());

end

Timing: BEFORE

Created: 2024-02-28 14:23:17.85

sql\_mode: ONLY\_FULL\_GROUP\_BY,STRICT\_TRANS\_TABLES,NO\_ZERO\_IN\_DATE,NO\_ZERO\_DATE,ERROR\_FOR\_DIVISION\_BY\_ZERO,NO\_ENGINE\_SUBSTITUTION

Definer: root@localhost

character\_set\_client: cp850

collation\_connection: cp850\_general\_ci

Database Collation: utf8mb4\_0900\_ai\_ci

1 row in set (0.01 sec)

ERROR:

No query specified

**................................<<Fire the Trigger>>.....................**

mysql> update account set balance=balance+1000;

Query OK, 5 rows affected (0.02 sec)

Rows matched: 5 Changed: 5 Warnings: 0

**.........................<<Display data of both tables>>.................**

mysql> select \* from audit;

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

| acc\_id | balance | updation\_date |

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

| 123 | 5000 | 2024-02-28 |

| 342 | 4500 | 2024-02-28 |

| 546 | 76500 | 2024-02-28 |

| 560 | 3505 | 2024-02-28 |

| 668 | 6000 | 2024-02-28 |

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

5 rows in set (0.00 sec)

mysql> select \* from account;

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

| acc\_id | type | balance |

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

| 123 | saving | 6000 |

| 342 | current | 5500 |

| 546 | saving | 77500 |

| 560 | saving | 4505 |

| 668 | saving | 7000 |

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

5 rows in set (0.00 sec)

mysql>