**Practical code 8**

**Problem statement:** **Database Connectivity: Write a program to implement MySQL/Oracle database connectivity with any front end language to implement Database navigation operations (add, delete, edit etc.)**

**Create A Table Employee Having Five Tuples**

mysql> CREATE TABLE emp1 (

-> eno INT PRIMARY KEY,

-> ename VARCHAR(30),

-> salary INT

-> );

Query OK, 0 rows affected (0.04 sec)

mysql> INSERT INTO emp1 (eno, ename, salary)

-> VALUES

-> (101, 'Amit', 9000),

-> (102, 'Riya', 9000),

-> (103, 'Atharv', 4000),

-> (104, 'Nisarg', 5000);

Query OK, 4 rows affected (0.01 sec)

Records: 4 Duplicates: 0 Warnings: 0

mysql> DROP TABLE IF EXISTS audit;

Query OK, 0 rows affected (0.02 sec)

**Create A Table Audit**

mysql>

mysql> CREATE TABLE audit (

-> action VARCHAR(20),

-> action\_time DATETIME,

-> eno INT,

-> old\_salary INT,

-> new\_salary INT

-> );

Query OK, 0 rows affected (0.02 sec)

mysql> DELIMITER //

mysql>

**create a SQL Trigger while we are updating anything**

mysql> CREATE TRIGGER t11

-> AFTER UPDATE ON emp1

-> FOR EACH ROW

-> BEGIN

-> INSERT INTO audit(action, action\_time, eno, old\_salary, new\_salary)

-> VALUES ('update', NOW(), OLD.eno, OLD.salary, NEW.salary);

-> END //

Query OK, 0 rows affected (0.01 sec)

mysql>

mysql> UPDATE emp1 SET salary = 8000 WHERE eno = 101 //

Query OK, 1 row affected (0.02 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select \*from audit;

-> select \*from audit//

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

| action | action\_time | eno | old\_salary | new\_salary |

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

| update | 2024-10-20 18:51:12 | 101 | 9000 | 8000 |

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

1 row in set (0.04 sec)

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

| action | action\_time | eno | old\_salary | new\_salary |

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

| update | 2024-10-20 18:51:12 | 101 | 9000 | 8000 |

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

1 row in set (0.05 sec)

mysql> UPDATE emp1 SET salary=salary+10000 //

Query OK, 4 rows affected (0.02 sec)

Rows matched: 4 Changed: 4 Warnings: 0

mysql> select \*from audit//

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

| action | action\_time | eno | old\_salary | new\_salary |

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

| update | 2024-10-20 18:51:12 | 101 | 9000 | 8000 |

| update | 2024-10-20 18:54:00 | 101 | 8000 | 18000 |

| update | 2024-10-20 18:54:00 | 102 | 9000 | 19000 |

| update | 2024-10-20 18:54:00 | 103 | 4000 | 14000 |

| update | 2024-10-20 18:54:00 | 104 | 5000 | 15000 |

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

5 rows in set (0.01 sec)

**create a SQL Trigger while we are INSERTING anything**

mysql> DELIMITER //

mysql> CREATE TRIGGER t12

-> AFTER INSERT ON emp1

-> FOR EACH ROW

-> BEGIN

-> INSERT INTO audit(action, action\_time, eno, old\_salary, new\_salary)

-> VALUES ('insert', NOW(), NEW.eno, NULL, NEW.salary);

-> END //

Query OK, 0 rows affected (0.06 sec)

mysql> insert into emp1 values(106,"Devang",8000) //

Query OK, 1 row affected (0.01 sec)

mysql> select \*from audit//

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

| action | action\_time | eno | old\_salary | new\_salary |

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

| update | 2024-10-20 18:51:12 | 101 | 9000 | 8000 |

| update | 2024-10-20 18:54:00 | 101 | 8000 | 18000 |

| update | 2024-10-20 18:54:00 | 102 | 9000 | 19000 |

| update | 2024-10-20 18:54:00 | 103 | 4000 | 14000 |

| update | 2024-10-20 18:54:00 | 104 | 5000 | 15000 |

| insert | 2024-10-20 18:58:43 | 106 | NULL | 8000 |

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6 rows in set (0.00 sec)

**Create SQL Trigger For Deleting Anything**

mysql> DELIMITER //

mysql> CREATE TRIGGER t13

-> AFTER DELETE ON emp1

-> FOR EACH ROW

-> BEGIN

-> INSERT INTO audit(action, action\_time, eno, old\_salary, new\_salary)

-> VALUES ('DELETE', NOW(), OLD.eno, OLD.salary, NULL);

-> END //

Query OK, 0 rows affected (0.02 sec)

mysql> delete from emp1 where eno=105 //

Query OK, 1 row affected (0.02 sec)

mysql> select \*from audit//

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

| action | action\_time | eno | old\_salary | new\_salary |

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

| update | 2024-10-20 18:51:12 | 101 | 9000 | 8000 |

| update | 2024-10-20 18:54:00 | 101 | 8000 | 18000 |

| update | 2024-10-20 18:54:00 | 102 | 9000 | 19000 |

| update | 2024-10-20 18:54:00 | 103 | 4000 | 14000 |

| update | 2024-10-20 18:54:00 | 104 | 5000 | 15000 |

| insert | 2024-10-20 18:58:43 | 106 | NULL | 8000 |

| DELETE | 2024-10-20 19:01:53 | 105 | 7000 | NULL |

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7 rows in set (0.00 sec)