**EX.NO:7 Write a Program to Perform Concurrency Control for a Database**

CREATE DATABASE IF NOT EXISTS concurrency\_example;

Query OK, 1 row affected (0.01 sec)

mysql> USE concurrency\_example;

Database changed

mysql> CREATE TABLE IF NOT EXISTS inventory (

-> product\_id INT PRIMARY KEY,

-> product\_name VARCHAR(255),

-> quantity INT

-> );

Query OK, 0 rows affected (0.03 sec)

mysql> INSERT INTO inventory (product\_id, product\_name, quantity) VALUES

-> (3, 'Product A', 10),

-> (4, 'Product B', 5);

Query OK, 2 rows affected (0.01 sec)

Records: 2 Duplicates: 0 Warnings: 0

mysql> START TRANSACTION;

Query OK, 0 rows affected (0.00 sec)

mysql> select \* from inventory;

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

| product\_id | product\_name | quantity |

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

| 1 | Product A | 10 |

| 2 | Product B | 5 |

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

2 rows in set (0.00 sec)

mysql> DO SLEEP(5);

Query OK, 0 rows affected (5.01 sec)

mysql> UPDATE inventory SET quantity = quantity - 2 WHERE product\_id = 1;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> UPDATE inventory SET quantity = quantity + 2 WHERE product\_id = 2;

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> COMMIT;

Query OK, 0 rows affected (0.00 sec)

mysql> select \* from inventory;

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

| product\_id | product\_name | quantity |

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

| 1 | Product A | 8 |

| 2 | Product B | 7 |

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

2 rows in set (0.00 sec)