CREATE TABLE Library (

book\_id INT PRIMARY KEY,

title VARCHAR(255),

author VARCHAR(255),

published\_year INT,

available\_copies INT

);

CREATE TABLE Library\_Audit (

audit\_id INT AUTO\_INCREMENT PRIMARY KEY,

book\_id INT,

title VARCHAR(255),

author VARCHAR(255),

published\_year INT,

available\_copies INT,

action\_type VARCHAR(10),

action\_time TIMESTAMP DEFAULT CURRENT\_TIMESTAMP

);

DELIMITER //

CREATE TRIGGER before\_update\_or\_delete

BEFORE UPDATE ON Library

FOR EACH ROW

BEGIN

INSERT INTO Library\_Audit (book\_id, title, author, published\_year, available\_copies, action\_type)

VALUES (OLD.book\_id, OLD.title, OLD.author, OLD.published\_year, OLD.available\_copies, 'UPDATE');

END; //

CREATE TRIGGER before\_delete

BEFORE DELETE ON Library

FOR EACH ROW

BEGIN

INSERT INTO Library\_Audit (book\_id, title, author, published\_year, available\_copies, action\_type)

VALUES (OLD.book\_id, OLD.title, OLD.author, OLD.published\_year, OLD.available\_copies, 'DELETE');

END; //

DELIMITER ;

-- Insert sample data into Library table

INSERT INTO Library (book\_id, title, author, published\_year, available\_copies) VALUES

(1, 'The Great Gatsby', 'F. Scott Fitzgerald', 1925, 5),

(2, '1984', 'George Orwell', 1949, 3),

(3, 'To Kill a Mockingbird', 'Harper Lee', 1960, 4);

-- Update a record in Library table

UPDATE Library SET available\_copies = 4 WHERE book\_id = 1;

-- Delete a record from Library table

DELETE FROM Library WHERE book\_id = 2;

-- Show the contents of the Library\_Audit table

SELECT \* FROM Library\_Audit;

**Output:-**

| audit\_id | book\_id | title | action\_type | action\_time |

|----------|---------|--------------------|-------------|----------------------|

| 1 | 1 | The Great Gatsby | UPDATE | 2024-10-15 10:00:00 |

| 2 | 2 | 1984 | DELETE | 2024-10-15 10:05:00 |