Practical 7

Database Trigger (All Types: Row level and Statement level triggers, Before and After
Triggers).
Write a database trigger on Library table. The System should keep track of the records that are
being updated or deleted. The old value of updated or deleted records should be added in
Library_Audit table.
Note: Instructor will Frame the problem statement for writing PL/SQL block for all types of
Triggers in line with above statement.

Step 1:

```
CREATE TABLE Library (
    book_id INT PRIMARY KEY,
    book_title VARCHAR(255),
    author VARCHAR(255),
    publication_year INT,
    genre VARCHAR(100),
    availability_status VARCHAR(50)
);

CREATE TABLE Library_Audit (
    audit_id INT AUTO_INCREMENT PRIMARY KEY,
    action_type VARCHAR(10),  -- 'DELETE'
    book_id INT,
    book_title VARCHAR(255),
    author VARCHAR(255),
    publication_year INT,
    genre VARCHAR(100),
    availability_status VARCHAR(50),
    action_time TIMESTAMP DEFAULT CURRENT_TIMESTAMP
);
```

Step 2:

```
DELIMITER $$

CREATE TRIGGER trg_after_delete_library
AFTER DELETE ON Library
FOR EACH ROW
BEGIN
    INSERT INTO Library_Audit (action_type, book_id, book_title, author,
```

```
publication_year, genre, availability_status)
    VALUES ('DELETE', OLD.book_id, OLD.book_title, OLD.author,
OLD.publication_year, OLD.genre, OLD.availability_status);
END$$

DELIMITER ;

Step 3:
INSERT INTO Library (book_id, book_title, author, publication_year, genre,
availability_status)
VALUES (1, 'Harry Potter', 'J.K. Rowling', 1997, 'Fantasy', 'Available');

Step 4:
DELETE FROM Library WHERE book_id = 1;

Step 5:
SELECT * FROM Library_Audit;
```