CREATE TABLE Library (

book\_id INT PRIMARY KEY AUTO\_INCREMENT, -- Unique identifier for each book

title VARCHAR(255) NOT NULL, -- Title of the book

author VARCHAR(255) NOT NULL, -- Author of the book

publication\_year INT -- Year the book was published

);

CREATE TABLE Library\_Audit (

audit\_id SERIAL PRIMARY KEY, -- Auto-incremented unique ID for each audit record

action\_type VARCHAR(10), -- Type of action: 'UPDATE' or 'DELETE'

book\_id INT, -- The primary key of the Library table

action\_timestamp TIMESTAMP DEFAULT CURRENT\_TIMESTAMP -- When the action occurred

);

delimiter //

create trigger before\_library\_update

before update on Library

for each row

begin

insert into Library\_Audit(action\_type, book\_id)

values('UPDATE', OLD.book\_id);

END;

//

CREATE TRIGGER before\_library\_delete

BEFORE DELETE ON Library

FOR EACH ROW

BEGIN

INSERT INTO Library\_Audit (action\_type, book\_id)

VALUES ('DELETE', OLD.book\_id);

END;

//

select \* from Library;

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

| book\_id | title | author | publication\_year |

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

| 1 | To Kill a Mockingbird | Harper Lee | 1960 |

| 2 | 1984 | George Orwell | 1949 |

| 3 | The Great Gatsby | F. Scott Fitzgerald | 1925 |

| 4 | The Catcher in the Rye | J.D. Salinger | 1951 |

| 5 | Pride and Prejudice | Jane Austen | 1813 |

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

UPDATE Library

SET title = 'To Kill a Mockingbird - Updated Edition'

WHERE book\_id = 1;

DELETE FROM Library

WHERE book\_id = 2;

select \* from Library\_Audit;

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

| audit\_id | action\_type | book\_id | action\_timestamp |

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

| 1 | UPDATE | 1 | 2024-08-14 12:50:43 |

| 2 | DELETE | 2 | 2024-08-14 12:51:14 |

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