

## Assignment No .07

Roll No. -31447

### Create the Library table

```
mysql> create table Library(
```

```
-> bno int(5),  
-> bname varchar(40),  
-> author varchar(20),  
-> allowed_days int(5)  
-> );
```

### Create the library Audit table

```
mysql> create table Library_Audit(
```

```
-> bno int(5),  
-> bname varchar(40),  
-> author varchar(20),  
-> allowed_days int(5),  
-> action_type varchar(10), -- 'UPDATE' or 'DELETE'  
-> action_time timestamp -- Time of action  
-> );
```

### Insert data into library table

```
mysql> insert into Library values(1, 'Database System Concepts', 'aaa', 10);
```

```
mysql> insert into Library values(2, 'Operating Systems', 'bbb', 20);
```

```
mysql> insert into Library values(3, 'Computer Networks', 'ccc', 18);
```

```
mysql> insert into Library values(4, 'Theory of Computation', 'ddd', 24);
```

```
mysql> select * from Library;
```

```
+-----+-----+-----+-----+
| bno | bname          | author | allowed_days |
+-----+-----+-----+-----+
|  1 | Database System Concepts | aaa   |      10 |
|  2 | Operating Systems      | bbb   |      20 |
|  3 | Computer Networks      | ccc   |      18 |
|  4 | Theory of Computation   | ddd   |      24 |
+-----+-----+-----+-----+
```

### Create trigger for before update

```
mysql> create trigger before_update_row
```

```
-> before update on Library
```

```
-> for each row
```

```
-> begin
```

```
-> insert into Library_Audit(bno, bname, author, allowed_days, action_type, action_time)
```

```
-> values(old.bno, old.bname, old.author, old.allowed_days, 'DELETE', current_timestamp);
```

```
-> end //
```

```
mysql> delimiter ;
```

```
mysql> update Library set allowed_days = 15 where bno = 1;
```

```
Query OK, 1 row affected (0.01 sec)
```

```
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> update Library set allowed_days = 12 where bno = 2;
```

```
Query OK, 1 row affected (0.01 sec)
```

```
Rows matched: 1 Changed: 1 Warnings: 0
```

```
mysql> select * from Library;
```

```
+-----+-----+-----+-----+
| bno | bname          | author | allowed_days |
+-----+-----+-----+-----+
| 1 | Database System Concepts | aaa | 15 |
| 2 | Operating Systems    | bbb | 12 |
| 3 | Computer Networks    | ccc | 18 |
| 4 | Theory of Computation | ddd | 24 |
+-----+-----+-----+-----+
```

```
mysql> select * from Library_Audit;
```

```
+-----+-----+-----+-----+-----+-----+
| bno | bname          | author | allowed_days | action_type | action_time |
+-----+-----+-----+-----+-----+-----+
| 1 | Database System Concepts | aaa | 10 | UPDATE | 2024-09-26 12:00:35 |
| 2 | Operating Systems    | bbb | 20 | UPDATE | 2024-09-26 12:00:47 |
+-----+-----+-----+-----+-----+-----+
```

## Create trigger for after delete

```
mysql> create trigger after_delete_row
```

```
->after delete on Library
```

```
-> for each row
```

```
-> begin
```

```
-> insert into Library_Audit(bno, bname, author, allowed_days, action_type, action_time)
```

```
-> values(old.bno, old.bname, old.author, old.allowed_days, 'DELETE', current_timestamp);
```

```
-> end //
```

```
mysql> delete from Library where bno = 2;
```

```
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from Library;
```

```
+-----+-----+-----+-----+
| bno | bname          | author | allowed_days |
+-----+-----+-----+-----+
| 1 | Database System Concepts | aaa | 15 |
| 3 | Computer Networks      | ccc | 18 |
| 4 | Theory of Computation  | ddd | 24 |
+-----+-----+-----+-----+
```

```
mysql> select * from Library_Audit;
```

```
+-----+-----+-----+-----+-----+-----+
| bno | bname          | author | allowed_days | action_type | action_time      |
+-----+-----+-----+-----+-----+-----+
| 1 | Database System Concepts | aaa | 10 | UPDATE | 2024-09-26 12:00:35 |
| 2 | Operating Systems      | bbb | 20 | UPDATE | 2024-09-26 12:00:47 |
| 2 | Operating Systems      | bbb | 12 | DELETE | 2024-09-26 12:03:40 |
+-----+-----+-----+-----+-----+-----+
```