

Experiment No: 8
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Write a database trigger on Library table

---create Borrower table---

```
mysql> create table borrower (rollin int, name varchar(30), dateofissue date,  
nameofbook varchar(30), status char(10));  
Query OK, 0 rows affected (0.13 sec)
```

```
mysql>
```

```
mysql> insert borrower values
```

```
(101, 'aditya', '2022-08-16', 'dbms', 'r'),  
(102, 'Anurag', '2022-08-26', 'toc', 'i'),  
(103, 'ketan', '2022-08-27', 'cn', 'i'),  
(104, 'rahul', '2022-09-10', 'ds', 'i'),  
(105, 'shrihari', '2022-08-16', 'iot', 'r'),  
(106, 'aryan', '2022-08-26', 'spm', 'r');
```

```
Query OK, 6 rows affected (0.17 sec)
```

```
Records: 6 Duplicates: 0 Warnings: 0
```

```
mysql> select * from borrower;
```

rollin	name	dateofissue	nameofbook	status
101	aditya	2022-08-16	dbms	r
102	anurag	2022-08-26	toc	i
103	ketan	2022-08-27	cn	i
104	rahul	2022-09-10	ds	i
105	shrihari	2022-08-16	iot	r
106	aryan	2022-08-26	spm	r

```
6 rows in set (0.00 sec)
```

---create library_audit table---

```
mysql> create table library_audit(rollin int, name char(10), dateofissue date,  
nameofbook char(10), status char, ts timestamp);  
Query OK, 0 rows affected (0.14 sec)
```

```
mysql> select * from library_audit;
```

```
Empty set (0.00 sec)
```

```
=====
```

---create trigger for insert---

```
mysql> delimiter //
```

```
mysql>
```

```
mysql> create trigger after_insert after insert on borrower for each row
```

```
begin
```

```
insert into library_audit values(new.rollin, new.name, new.dateofissue,
```

```

new.nameofbook, new.status, current_timestamp);
    end;
    //
Query OK, 0 rows affected (0.12 sec)

```

```

-----
mysql> select * from library_audit//
Empty set (0.00 sec)

```

```

mysql> insert into borrower values(107,'harry','2022-08-27','dbms','i')//
Query OK, 1 row affected (0.06 sec)

```

```

mysql> select * from borrower//
+-----+-----+-----+-----+-----+
| rollin | name      | dateofissue | nameofbook | status |
+-----+-----+-----+-----+-----+
| 101    | aditya    | 2022-08-16  | dbms       | r      |
| 102    | anurag    | 2022-08-26  | toc        | i      |
| 103    | ketan     | 2022-08-27  | cn         | i      |
| 104    | rahul     | 2022-09-10  | ds         | i      |
| 105    | shrihari  | 2022-08-16  | iot        | r      |
| 106    | aryan     | 2022-08-26  | spm        | r      |
| 107    | harry     | 2022-08-27  | dbms       | i      |
+-----+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

```

mysql> select * from library_audit//
+-----+-----+-----+-----+-----+-----+
| rollin | name  | dateofissue | nameofbook | status | ts                |
+-----+-----+-----+-----+-----+-----+
| 107    | harry | 2022-08-27  | dbms       | i      | 2022-10-10 20:12:16 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)

```

=====

---After DELETE Trigge---

```

mysql> create trigger after_delete after delete on borrower for each row
begin
    insert into library_audit values(old.rollin, old.name, old.dateofissue,
old.nameofbook, old.status, current_timestamp());
end ;
//
Query OK, 0 rows affected (0.11 sec)

```

```

-----
mysql> delete from borrower where rollin =104//
Query OK, 1 row affected (0.12 sec)

```

```

mysql> select * from borrower;
//
+-----+-----+-----+-----+-----+
| rollin | name      | dateofissue | nameofbook | status |
+-----+-----+-----+-----+-----+
| 101    | aditya    | 2022-08-16  | dbms       | r      |

```

102	anurag	2022-08-26	toc	i
103	ketan	2022-08-27	cn	i
105	rahul	2022-08-16	iot	r
106	shrihari	2022-08-26	spm	r
107	harry	2022-08-27	dbms	i

6 rows in set (0.00 sec)

mysql> select * from library_audit//

rollin	name	dateofissue	nameofbook	status	ts
107	harry	2022-08-27	dbms	i	2022-10-10 20:12:16
104	rahul	2022-09-10	ds	i	2022-10-10 20:15:57

2 rows in set (0.00 sec)

=====

---After UPDATE Trigger---

```
mysql> create trigger after_update after update on borrower for each row
begin
    insert into library_audit values(old.rollin, old.name, old.dateofissue,
old.nameofbook, old.status, current_timestamp());
end ;
//
```

Query OK, 0 rows affected (0.03 sec)

mysql> update borrower set status='r' where rollin=102//

Query OK, 1 row affected (0.11 sec)

Rows matched: 1 Changed: 1 Warnings: 0

mysql> select * from borrower//

rollin	name	dateofissue	nameofbook	status
101	aditya	2022-08-16	dbms	r
102	anurag	2022-08-26	toc	r
103	ketan	2022-08-27	cn	i
105	shrihari	2022-08-16	iot	r
106	aryan	2022-08-26	spm	r
107	harry	2022-08-27	dbms	i

6 rows in set (0.00 sec)

mysql> select * from library_audit//

rollin	name	dateofissue	nameofbook	status	ts
107	harry	2022-08-27	dbms	i	2022-10-10 20:12:16
104	rahul	2022-09-10	ds	i	2022-10-10 20:15:57
102	anurag	2022-08-26	toc	i	2022-10-10 20:20:17

3 rows in set (0.00 sec)

```
-----  
mysql> update borrower set status='i' where rollin=105//  
Query OK, 1 row affected (1.28 sec)  
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from borrower//
```

rollin	name	dateofissue	nameofbook	status
101	aditya	2022-08-16	dbms	r
102	anurag	2022-08-26	toc	r
103	ketan	2022-08-27	cn	i
105	shrihari	2022-08-16	iot	i
106	aryan	2022-08-26	spm	r
107	harry	2022-08-27	dbms	i

```
6 rows in set (0.00 sec)
```

```
mysql> select * from library_audit//
```

rollin	name	dateofissue	nameofbook	status	ts
107	harry	2022-08-27	dbms	i	2022-10-10 20:12:16
104	rahul	2022-09-10	ds	i	2022-10-10 20:15:57
102	anurag	2022-08-26	toc	i	2022-10-10 20:20:17
105	shrihari	2022-08-16	iot	r	2022-10-10 20:22:27

```
4 rows in set (0.00 sec)
```