

SQL*Plus: Release 18.0.0.0.0 - Production on Mon Sep 23 08:45:32 2024
Version 18.4.0.0.0

Copyright (c) 1982, 2018, Oracle. All rights reserved.

Enter user-name: system

Enter password:

Last Successful login time: Fri Aug 09 2024 09:25:56 +05:30

Connected to:

Oracle Database 18c Express Edition Release 18.0.0.0.0 - Production

Version 18.4.0.0.0

SQL> Create table LIBRARY (BOOK_ID number, BOOK_NAME Varchar2(10), BOOK_PRICE
number);

Table created.

SQL> desc library;

Name	Null?	Type
------	-------	------

BOOK_ID		NUMBER
BOOK_NAME		VARCHAR2(10)
BOOK_PRICE		NUMBER

SQL> Create table LIBRARY_AUDIT_ROW (BOOK_ID number, BOOK_NAME Varchar2(10),
BOOK_PRICE number,AUDIT_CHANGE Varchar2(20), UPDATE_TIME Date);

Table created.

SQL> desc library_audit_row;

Name	Null?	Type
------	-------	------

BOOK_ID		NUMBER
BOOK_NAME		VARCHAR2(10)
BOOK_PRICE		NUMBER
AUDIT_CHANGE		VARCHAR2(20)
UPDATE_TIME		DATE

SQL> Insert into LIBRARY Values (1, 'BOOK1', 500);

1 row created.

SQL> Insert into LIBRARY Values (2, 'BOOK2', 950);

1 row created.

SQL> Insert into LIBRARY Values (3, 'BOOK3',850);

1 row created.

SQL> Insert into LIBRARY Values (4, 'BOOK4', 400);

1 row created.

SQL> select * from library;

BOOK_ID	BOOK_NAME	BOOK_PRICE
1	BOOK1	500
2	BOOK2	950
3	BOOK3	850
4	BOOK4	400

```
SQL> select * from library_audit_row;
```

no rows selected

```
SQL> edit trig.sql
```

Create or replace trigger trig_Row after delete or update on library for each row

```
declare
au_ch varchar(20);
begin
if deleting then
au_ch:='DELETE';
end if;
if updating then
au_ch:='UPDATE';
end if;
insert into library_audit_row
values(:old.BOOK_ID,:old.BOOK_NAME,:old.BOOK_PRICE,au_ch,current_timestamp);
end;
```

/

Trigger created.

```
SQL> update library set book_name='SQL' where book_id=1;
```

1 row updated.

```
SQL> select * from library_audit_row;
```

BOOK_ID	BOOK_NAME	BOOK_PRICE	AUDIT_CHANGE	UPDATE_TI
1	SQL	500	UPDATE	23-SEP-24

```
SQL> delete from library where book_id=1;
```

1 row deleted.

```
SQL> select * from library_audit_row;
```

BOOK_ID	BOOK_NAME	BOOK_PRICE	AUDIT_CHANGE	UPDATE_TI
1	SQL	500	UPDATE	23-SEP-24
1	SQL	500	DELETE	23-SEP-24

```
create table library_audit_stmt(audit_history_id INT,audit_change
varchar(20),user_name varchar(10),update_time date);
```

Table created.

```
SQL> desc library_audit_stmt;
```

Name	Null?	Type
AUDIT_HISTORY_ID		NUMBER(38)
AUDIT_CHANGE		VARCHAR2(20)
USER_NAME		VARCHAR2(10)
UPDATE_TIME		DATE

```
SQL> create sequence seq_id start with 1;
```

Sequence created.

```
SQL> edit trig2.sql
```

```

create or replace trigger trigs before delete or update on library
declare
au_ch varchar(20);
begin
if deleting then
au_ch:='delete';
end if;
if updating then
au_ch:='update';
end if;
insert into LIBRARY_AUDIT_STMT VALUES (Seq_id.nextval, au_ch, USER,
CURRENT_TIMESTAMP);
end;
/

```

SQL> @trig2

Trigger created.

SQL> delete from library where book_id=3;

1 row deleted.

SQL> select * from library_audit_stmt;

AUDIT_HISTORY_ID	AUDIT_CHANGE	USER_NAME	UPDATE_TI
1	delete	SYSTEM	23-SEP-24