

SQL*Plus: Release 18.0.0.0.0 - Production on Mon Oct 14 08:53:37 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: Tue Oct 01 2024 07:02:39 +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 int, book_name varchar(20), book_price int);

Table created.

SQL> desc Library;

| Name | Null? | Type |
|------------|-------|--------------|
| BOOK_ID | | NUMBER(38) |
| BOOK_NAME | | VARCHAR2(20) |
| BOOK_PRICE | | NUMBER(38) |

SQL> create table Library_Audit(book_id int, book_name varchar(20), book_price int,
audit_change varchar(10), update_time date);

Table created.

SQL> desc Library_Audit;

| Name | Null? | Type |
|--------------|-------|--------------|
| BOOK_ID | | NUMBER(38) |
| BOOK_NAME | | VARCHAR2(20) |
| BOOK_PRICE | | NUMBER(38) |
| AUDIT_CHANGE | | VARCHAR2(10) |
| UPDATE_TIME | | DATE |

SQL> insert into Library values(1, 'Book1', 225);

1 row created.

SQL> insert into Library values(2, 'Book2', 345);

1 row created.

SQL> insert into Library values(3, 'Book3', 1015);

1 row created.

```
SQL> insert into Library values(4, 'Book4', 553);
```

1 row created.

```
SQL> COMMIT;
```

Commit complete.

```
SQL> select * from library;
```

| BOOK_ID | BOOK_NAME | BOOK_PRICE |
|---------|-----------|------------|
| 1 | Book1 | 225 |
| 2 | Book2 | 345 |
| 3 | Book3 | 1015 |
| 4 | Book4 | 553 |

```
SQL> edit trig1.sql;
```

```
create or replace trigger trig1 after delete or update on Library for each row
declare
auch varchar(15);
begin
if deleting then
auch := 'delete';
end if;
if updating then
auch := 'update';
end if;
insert into Library_Audit values(:old.book_id, :old.book_name, :old.book_price,
auch, current_timestamp);
end;
/
```

```
SQL> @trig1.sql
```

Trigger created.

```
SQL> update Library
2 set book_name = 'Python Programming' where book_id = 4;
```

1 row updated.

```
SQL> select * from Library_Audit;
```

| BOOK_ID | BOOK_NAME | BOOK_PRICE | AUDIT_CHAN | UPDATE_TI |
|---------|-----------|------------|------------|-----------|
| 4 | Book4 | 553 | update | 14-OCT-24 |

```
SQL> select * from Library;
```

| BOOK_ID | BOOK_NAME | BOOK_PRICE |
|---------|--------------------|------------|
| 1 | Book1 | 225 |
| 2 | Book2 | 345 |
| 3 | Book3 | 1015 |
| 4 | Python Programming | 553 |

SQL> delete from Library where book_id = 1;

1 row deleted.

SQL> select * from Library_Audit;

| BOOK_ID | BOOK_NAME | BOOK_PRICE | AUDIT_CHAN | UPDATE_TI |
|---------|-----------|------------|------------|-----------|
| 4 | Book4 | 553 | update | 14-OCT-24 |
| 1 | Book1 | 225 | delete | 14-OCT-24 |

SQL> create table Audit_Change1 (book_id int, aud_change varchar(10), update_time timestamp);

Table created.

SQL> desc Audit_Change1

| Name | Null? | Type |
|-------------|-------|--------------|
| BOOK_ID | | NUMBER(38) |
| AUD_CHANGE | | VARCHAR2(10) |
| UPDATE_TIME | | TIMESTAMP(6) |

SQL> edit trig2.sql

```

create or replace trigger trig2 before delete or update on Library
declare
auch varchar(15);
begin
if deleting then
auch := 'delete';
end if;
if updating then
auch := 'update';
end if;
insert into Audit_Change1 values(s1.nextval, auch, current_timestamp);
end;
/

```

SQL> @trig2.sql

Trigger created.

```
SQL> update Library
      2 set book_name = 'KORTH' where book_id = 2;
```

1 row updated.

```
SQL> select * from Library_Audit;
```

| BOOK_ID | BOOK_NAME | BOOK_PRICE | AUDIT_CHAN | UPDATE_TI |
|---------|-----------|------------|------------|-----------|
| 4 | Book4 | 553 | update | 14-OCT-24 |
| 1 | Book1 | 225 | delete | 14-OCT-24 |
| 2 | Book2 | 345 | update | 14-OCT-24 |

```
SQL> select * from Audit_Change1;
```

| BOOK_ID | AUD_CHANGE | UPDATE_TIME |
|---------|------------|------------------------------|
| 1 | update | 14-OCT-24 09.27.29.944000 AM |

```
SQL> select * from Library;
```

| BOOK_ID | BOOK_NAME | BOOK_PRICE |
|---------|--------------------|------------|
| 2 | KORTH | 345 |
| 3 | Book3 | 1015 |
| 4 | Python Programming | 553 |