

Write and execute triggers using PL/SQL.

Aishi De

```
SQL> CREATE TABLE Orders (  
2     OrderID NUMBER PRIMARY KEY,  
3     ClientName VARCHAR2(100),  
4     OrderDate DATE  
5 );
```

Table created.

```
SQL> CREATE TABLE OrderAudit (  
2     AuditID NUMBER PRIMARY KEY,  
3     OrderID NUMBER,  
4     ClientName VARCHAR2(100),  
5     ActionTime DATE,  
6     ActionType VARCHAR2(20)  
7 );
```

Table created.

```
SQL> CREATE SEQUENCE audit_seq START WITH 1 INCREMENT BY 1;
```

Sequence created.

```
SQL> CREATE OR REPLACE TRIGGER trg_log_order_insert  
2 AFTER INSERT ON Orders  
3 FOR EACH ROW  
4 BEGIN  
5     INSERT INTO OrderAudit (AuditID, OrderID, ClientName, ActionTime, ActionType)  
6     VALUES (audit_seq.NEXTVAL, :NEW.OrderID, :NEW.ClientName, SYSDATE, 'INSERT');  
7 END;  
8 /
```

Trigger created.

```
SQL> INSERT INTO Orders (OrderID, ClientName, OrderDate)  
2 VALUES (101, 'John Doe', SYSDATE);
```

1 row created.

```
SQL> SELECT * FROM OrderAudit;
```

AUDITID	ORDERID	CLIENTNAME	ACTIONTIM	ACTIONTYPE
1	101	John Doe	06-MAY-25	INSERT

```
SQL> CREATE OR REPLACE TRIGGER trg_log_order_update
2 AFTER UPDATE ON Orders
3 FOR EACH ROW
4 BEGIN
5     INSERT INTO OrderAudit (AuditID, OrderID, ClientName, ActionTime, ActionType)
6     VALUES (audit_seq.NEXTVAL, :NEW.OrderID, :NEW.ClientName, SYSDATE, 'UPDATE');
7 END;
8 /
```

Trigger created.

```
SQL> CREATE OR REPLACE TRIGGER trg_log_order_delete
2 AFTER DELETE ON Orders
3 FOR EACH ROW
4 BEGIN
5     INSERT INTO OrderAudit (AuditID, OrderID, ClientName, ActionTime, ActionType)
6     VALUES (audit_seq.NEXTVAL, :OLD.OrderID, :OLD.ClientName, SYSDATE, 'DELETE');
7 END;
8 /
```

Trigger created.

```
SQL> CREATE OR REPLACE TRIGGER trg_log_order_all
2 AFTER INSERT OR UPDATE OR DELETE ON Orders
3 FOR EACH ROW
4 BEGIN
5     IF INSERTING THEN
6         INSERT INTO OrderAudit (AuditID, OrderID, ClientName, ActionTime, ActionType)
7         VALUES (audit_seq.NEXTVAL, :NEW.OrderID, :NEW.ClientName, SYSDATE, 'INSERT');
8     ELSIF UPDATING THEN
9         INSERT INTO OrderAudit (AuditID, OrderID, ClientName, ActionTime, ActionType)
10        VALUES (audit_seq.NEXTVAL, :NEW.OrderID, :NEW.ClientName, SYSDATE, 'UPDATE');
11    ELSIF DELETING THEN
12        INSERT INTO OrderAudit (AuditID, OrderID, ClientName, ActionTime, ActionType)
13        VALUES (audit_seq.NEXTVAL, :OLD.OrderID, :OLD.ClientName, SYSDATE, 'DELETE');
14    END IF;
15 END;
16 /
```

Trigger created.