

## 13-2: Creating DML Triggers: Part I

### Vocabulary

- 1.Row trigger
- 2.DML trigger
- 3.Statement trigger

### Try It / Solve It

1.

trigger\_name

object\_name: the table or view associated with the trigger

trigger\_body: the actions performed by the trigger are defined in an anonymous block

timing: when the trigger fires in relation to the triggering event (before , after , instead of )

event: which DML operation causes the trigger to fire (insert , update (of column) and delete )

2.

B.

```
CREATE OR REPLACE TRIGGER employee_trigg
```

```
AFTER INSERT ON employees_dup
```

```
BEGIN
```

```
INSERT INTO audit_table(action, user_name,last_change_date)  
values('inserting',user,SYSTIMESTAMP);
```

```
END;
```

C.

```
insert into employees_dup values(130,'Ruxi ','pop','www',NULL,'10-  
Feb-2001',20,NULL,NULL,NULL,NULL,NULL);
```

```
SELECT * from audit_table;
```

D.

```
delete * from EMPLOYEES_DUP  
where employee_id=130;
```

3.

FALSE: the trigger doesn't fire

A statement trigger fires one time for the whole DML statement and a row trigger fires once for each row affected by the DML statement

4.

0 times the before insert trigger

1 time the before update row trigger

0 times the after delete trigger

5.

```
CREATE OR REPLACE TRIGGER employee_trigg  
BEFORE UPDATE OF salary ON employees_dup  
BEGIN  
INSERT INTO audit_table(action, user_name, last_change_date)  
values('updating', user, SYSTIMESTAMP);  
END;  
  
update employees_dup  
set salary=50  
where employee_id=999;  
  
select * from audit_table
```

A.

```
CREATE OR REPLACE TRIGGER employees_dup_tr
BEFORE UPDATE OF salary ON employees_dup
BEGIN
    IF TO_CHAR(SYSDATE,'HH24:MI')<'08:00:00' AND
       TO_CHAR(SYSDATE,'HH24:MI')>'18:00:00' THEN

        RAISE_APPLICATION_ERROR(-20500,'You are not allowed to insert');

    END IF;
END;
```

B.

```
CREATE OR REPLACE TRIGGER employees_dup_tr
BEFORE UPDATE OF salary ON employees_dup
BEGIN
    IF TO_CHAR(SYSDATE,'HH24:MI')<'19:47:00' AND
       TO_CHAR(SYSDATE,'HH24:MI')>'18:47:00' THEN

        RAISE_APPLICATION_ERROR(-20500,'You are not allowed to insert');

    END IF;
END;
```

```
UPDATE employees_dup
SET salary = 25000 WHERE employee_id = 100
```