

These notes should be used as a supplement to the lecture slides on Triggers.

CLASSES

Department	Course	Current_Students
CSIT	BIT	180
CSIT	BCS	50
Maths	BSc	40
Physics	BSc	0

```
CREATE OR REPLACE TRIGGER delete_classes  
BEFORE DELETE ON classes
```

```
FOR EACH ROW
```

```
BEGIN
```

```
INSERT INTO TEMP_TABLE (del_dept, del_course)  
VALUES (:old.department, :old.course);
```

```
END delete_classes;
```

```
/
```

```
DELETE FROM classes
```

```
WHERE department = 'CSIT';
```

TEMP_TABLE

del_dept	del_course
CSIT	BIT
CSIT	BCS

Rooms

Building	Room	Number_Seats
BG	BG-114	35
BG	BG-115	40
PS1	PS1-101	20
PS1	PS1-102	25

Room_Summary

Building	Total_Seats
BG	75
PS1	45

Before trigger is implemented:

```
DELETE FROM ROOM_SUMMARY  
WHERE BUILDING = 'PS1';  
SELECT * FROM ROOM_SUMMARY;
```

After trigger is implemented:

```
DELETE FROM ROOM_SUMMARY  
WHERE BUILDING = 'PS1';  
SELECT * FROM ROOM_SUMMARY;
```

Classes

Department	Course	Enrolment
CS	BCS	50
CS	BIT	150
Maths	B.Maths	40
Physics	B.Physics	20

Temp_Table

Num_Col	Char_Col

UPDATE Classes

SET Department = 'CSIT'

WHERE Department = 'CS';

Temp_Table

Num_Col	Char_Col
1	Before Statement Trigger
2	Before Row Trigger
3	After Row Trigger
4	Before Row Trigger
5	After Row Trigger
6	After Statement Trigger

Students

<u>ID</u>	Name	Course

CREATE SEQUENCE student_sequence

START WITH 1000

INCREMENT BY 100;

Before trigger is implemented:

**INSERT INTO STUDENTS (Name, Course)
VALUES('Mary Clarke', 'BCS');**

After trigger is implemented:

**INSERT INTO STUDENTS (Name, Course)
VALUES('Mary Clarke', 'BCS');**

Students

ID	Name	Course
1000	Mary Clarke	BCS

EMP

EmpNo	Sal	DeptNo
E1	200	D1
E2	100	D1
E3	500	D2

DEPT

DeptNo	Total_Sal
D1	300
D2	500

What happened with DEPT when you do these operations?

DELETE FROM EMP

WHERE EmpNo = 'E1';

INSERT INTO EMP

VALUES ('E4', 100, 'D2');

UPDATE EMP

SET Sal = 700

WHERE EmpNo = 'E3';

UPDATE EMP

SET DeptNo = 'D2'

WHERE DeptNo = 'E1';

Things to identify in a trigger:

- Which table linked to the trigger;
- What operations fire the trigger;
- When the trigger is fired;
- How many times the trigger is fired;
- What operations/tasks performed by the trigger.