1. **Trigger**

Triggers are the procedures that are stored in the database and are implicitly executed when the contents of a table are changed. They can not be called by the user explicitlty.

**Types of triggers**

Row triggers

Statement Trigger

Before trigger

After Trigger

Syntax

CREATE OR REPLACE TRIGGER [schema.]triggername

{BEFORE, AFTER}

{DELETE, INSERT, UPDATE [ OF column,…]}

ON [schema.]tablename

[REFERENCING {OLD AS old, NEW AS new}]

[FOR EACH ROW [WHEN condition]]

DECLARE

Variable declarations;

Constant declaration

BEGIN

PL/SQL body

EXCEPTION

Exception PL/SQL block

END;

**Example 1 (based on university database)**

/\* To create a trigger to store the average salary in inst\_avg table, after each update on the instructor relation \*/

SQL> create table inst\_avg(avg\_sal numeric(12,2));

create or replace trigger sal\_avg after update on instructor

declare

s number(5);

begin

select avg(salary) into s from instructor;

insert into inst\_avg values(s);

end;

**Example 2 (based on university database)**

*create or replace trigger sal\_update before insert on employee*

*declare*

*s number(5);*

*begin*

*select avg(salary) into s from employee;*

*insert into t values(s);*

*end;*