A Course on PL/SQL

LECTURE PL/SQL-5

CONTENTS:
- **DATABASE TRIGGERS**
- **TYPES**

RAHUL A PATIL
DEPARTMENT OF COMPUTER ENGINEERING
PIMPRI CHINCHWAD COLLEGE OF ENGINEERING, PUNE.

Session Outcomes

At the end of this session, you will be able to:

- Understand the concept of Database Trigger and its types.
- Write & use Database Trigger for given requirements

Database Triggers

- Database Objects
- Trigger consist of
  - A named database event
  - PL/SQL block that will execute when the event occurs
- Implicitly executed
- Not called by user
- Database Triggers V/s Procedures

  - Triggers do not accept parameters procedures can

  - Triggers executed implicitly by oracle engine

  - To execute procedure, it has to be explicitly called

Database Triggers- Parts

- A triggering Event or statement

  - INSERT/UPDATE/ DELETE

- A triggering restriction

- A trigger action

CREATE OR REPLACE TRIGGER <TriggerName>
    {BEFORE, AFTER}
    {DELETE, INSERT, UPDATE [OF COLUMN,.....]}
ON <TABLE NAME>
    [FOR EACH ROW]
DECLARE

BEGIN

EXCEPTION

END;

Row- After Trigger- Example

```
Create or replace trigger t2 after update or delete on stud11
        for each row
Declare
        op varchar(10);
Begin
        if updating then
        op:='update';
        end if;
        if deleting then
        op:='Delete';
        end if;
        insert into audi values(:old.roll,op);
End;
```

Types of Triggers

- Row Triggers

- Statement Trigger

- After Trigger

- Before Trigger

```
Create or replace trigger t2 after update on stud11
Declare
        op varchar(10);
Begin
        if updating then
        op:='update';
        end if;
        insert into audi values('',op);
End;
```

Row- Before Trigger- Example

Create or replace trigger t4 before insert or update on stud11
        for each row
Begin
        if :new.roll>100 then
        raise_application_error(-20003,'roll no should not be
        greater thant 100');
        end if;
End;

Trigger on selected column- Example

Create or replace trigger t2 after update of roll or delete on stud11
       for each row
Declare
       op varchar(10);
Begin
       if updating then
       op:='update';
       end if;
       if deleting then
       op:='Delete';
       end if;
       insert into audi values(:old.roll,op);
End;

Thank You

RAHUL A PATIL
DEPARTMENT OF COMPUTER ENGINEERING
PIMPRI CHINCHWAD COLLEGE OF ENGINEERING, PUNE.

RAHULPATILPINK@GMAIL.COM