**Example for Procedure**

create or replace procedure sal\_hike (eno in employee1.empcode%type, increase in employee1.salary%type) as sal employee1.salary%type;

new\_sal employee1.salary%type;

begin

select salary into sal from employee1 where empcode=eno;

new\_sal:=sal+increase;

update employee1 set salary=new\_sal where empcode=eno;

dbms\_output.put\_line('Table updated with new salary' ||new\_sal);

end;

/

**Example for Function**

create or replace function get\_major(rno in student1.regno%type)

return student1.major%type as smajor student1.major%type;

begin

select major into smajor from student1 where student1.regno=rno;

return(smajor);

end;

/

**Example for Table based records**

DECLARE

emp\_rec employee1%rowtype;

BEGIN

SELECT \* into emp\_rec FROM employee1 WHERE empcode = 111;

dbms\_output.put\_line('Employee - code ' || emp\_rec.empcode);

dbms\_output.put\_line('Employee - name ' || emp\_rec.empname);

dbms\_output.put\_line('Employee - DOB ' || emp\_rec.dob);

dbms\_output.put\_line('Employee - salary ' || emp\_rec.salary);

END;

/

**Example for User defined records**

DECLARE

type books is record (title varchar(50),author varchar(50),book\_id number);

book1 books;

book2 books;

BEGIN

book1.title := 'DBMS'; book1.author := 'ABCD’; book1.book\_id := 123;

book2.title := 'NoSQL'; book2.author := 'PAL'; book2.book\_id := 456;

--Print book 1 record

dbms\_output.put\_line('Book 1 title : '|| book1.title);

dbms\_output.put\_line('Book 1 author : '|| book1.author); dbms\_output.put\_line('Book book\_id : ' || book1.book\_id);

-- Print book 2record

dbms\_output.put\_line('Book 2 title : '|| book2.title);

dbms\_output.put\_line('Book 2 author : '|| book2.author);

dbms\_output.put\_line('Book 2 book\_id : '|| book2.book\_id);

END;

/

**Example: Implicit cursor (Update Command)**

Declare

total\_rows number(2);

Begin

update employee1 set salary=50000+5000 where empcode=111;

If sql%isopen then

dbms\_output.put\_line(‘cursor is open’);

else

dbms\_output.put\_line(‘cursor is not open’);

End if;

If sql%notfound then

dbms\_output.put\_line(‘No Employees selected’);

Elsif sql%found then

total\_rows:=sql%rowcount;

dbms\_output.put\_line(‘total\_rows || ‘Employees Selected’);

End if;

End;

/

**Example for Application error**

declare

s1 employee1.salary%type;

begin

select salary into s1 from employee1 where empname='sreenivas';

if sql%notfound then

raise\_application\_error(-20001, 'employee with name sreenivas is not there');

end if;

if(s1 > 10000) then

raise\_application\_error(-20002, 'earning better salary');

end if;

update emp set sal=sal+500 where ename='sreenivas';

end;

/

**Example for Exception**

DECLARE

empid employee1.empcode%type;

empname employee1.empname%type;

empdob employee1.dob%type;

empdept employee1.dept%type;

empsal employee1.salary%type;

BEGIN

SELECT \* into empid, empname, empdob, empdept, empsal FROM employee1 WHERE empcode = 55;

dbms\_output.put\_line('Employee - id ' || empid);

dbms\_output.put\_line('Employee - name ' || empname);

dbms\_output.put\_line('Employee - date of birth' ||empdob);

dbms\_output.put\_line('Employee-department' ||empdept);

dbms\_output.put\_line('Employee - salary ' || empsal);

EXCEPTION

WHEN no\_data\_found THEN

dbms\_output.put\_line('No such employee!');

END;

/

**Example for Explicit cursor**

declare

emp\_id employee1.empcode%type;

emp\_name employee1.empname%type;

emp\_dob employee1.dob%type;

emp\_dept employee1.dept%type;

emp\_salary employee1.salary%type;

cursor c\_emp is

select empcode,empname,dob,dept,salary from employee1;

begin

open c\_emp;

if c\_emp%isopen then

dbms\_output.put\_line('cursor is open');

end if;

loop

fetch c\_emp into emp\_id, emp\_name, emp\_dob, emp\_dept, emp\_salary;

exit when c\_emp%notfound;

dbms\_output.put\_line(c\_emp%rowcount|| '--' || emp\_id || ' ' || emp\_name

|| ' '|| emp\_dob || ' '|| emp\_dept || ' ' || emp\_salary);

end loop;

close c\_emp;

end;

/

**Example for cursor for**

declare

cursor c\_emp is

select empcode,empname,dob,dept,salary from employee1 order by empname;

begin

for emp\_rec in c\_emp

loop

dbms\_output.put\_line(c\_emp%rowcount|| '--' || emp\_rec.empcode || ' ' || emp\_rec.empname

|| ' '|| emp\_rec.dob || ' '|| emp\_rec.dept || ' ' || emp\_rec.salary);

end loop;

end;

/

**Example for exception**

DECLARE

empid employee1.empcode%type;

empname employee1.empname%type;

empsal employee1.salary%type;

BEGIN

SELECT \* into empid, empname, empsal FROM employee1 WHERE empcode = 55;

dbms\_output.put\_line('Employee - id ' || empid);

dbms\_output.put\_line('Employee - name ' || empname); dbms\_output.put\_line('Employee - salary ' || empsal);

EXCEPTION

WHEN no\_data\_found THEN

dbms\_output.put\_line('No such employee!');

END;

/

**Example for implicit cursor**

Declare

total\_rows number(2);

Begin

update employee1 set salary=50000+5000 where empcode=111;

If sql%isopen then

dbms\_output.put\_line('cursor is open');

else

dbms\_output.put\_line('cursor is not open');

End if;

If sql%notfound then

dbms\_output.put\_line('No Employees selected');

Elsif sql%found then

total\_rows:=sql%rowcount;

dbms\_output.put\_line(total\_rows || 'Employees Selected');

End if;

End;

/

**Example for user exception**

DECLARE

e\_rec employee1%ROWTYPE;

e1 EXCEPTION;

sal1 employee1.salary%TYPE;

BEGIN

SELECT salary INTO sal1 FROM employee1 WHERE empcode = 111 AND empname = 'rama';

IF sal1 < 50000 THEN

RAISE e1;

sal1 := 50000;

UPDATE employee1 SET salary = sal1 WHERE empcode = 111 AND empname = 'krishna';

END IF;

EXCEPTION

WHEN e1 THEN

RAISE\_APPLICATION\_ERROR (-20002, 'Less Salary.');

WHEN no\_data\_found THEN

--RAISE\_APPLICATION\_ERROR (-20001, 'krishna is not there.');

dbms\_output.put\_line('No such Employee');

END;

/