LAB 7

LAB EXERCISE

1).

```
DROP TABLE salary_raise;

CREATE TABLE salary_raise(
   Instructor_ID   NUMBER(5),
   Raise_Date      DATE,
   Raise_Amt       NUMERIC(8,2)
);

DECLARE
   CURSOR c_raise IS
      SELECT * FROM Instructor WHERE dept_name = 'Biology' FOR UPDATE;
   r_amt NUMERIC(8, 2);

BEGIN
   FOR i IN c_raise
   LOOP
                  r_amt := i.salary * 1.05;
                  UPDATE Instructor
      SET salary = salary * 1.05;
                  INSERT INTO salary_raise VALUES (i.ID, CURRENT_DATE, r_amt);
         END LOOP;
END;
/

SELECT * FROM salary_raise;
```

2).

```
DECLARE
        CURSOR c2 is select * from student order by tot_cred;
        sname student.name%type;
        sid student.id%type;
        sdept_name student.dept_name%type;
        scred student.tot_cred%type;
BEGIN
        OPEN c2;
        LOOP
        EXIT WHEN (c2%ROWCOUNT > 9) OR (c2%NOTFOUND);
        fetch c2 into sid, sname, sdept_name, scred;
        dbms_output.put_line(sid || ' ' || sname || ' ' || sdept_name
        || ' ' || scred);
        END LOOP;
        CLOSE c2;
END;
/
```

3).

```
declare
   cursor c1 is with stu as (select * from (student natural join takes natural join section)),ins
as (select * from (instructor natural join teaches natural join section))
            select
course_id,title,ins.dept_name,credits,ins.name,ins.building,ins.room_number,ins.time_slot_id
,count(*) as no_of_students from stu inner join  ins using(course_id,sec_id,semester,year)
natural join course
            group by
(course_id,title,ins.dept_name,credits,ins.name,ins.building,ins.room_number,ins.time_slot_i
d);
begin
```

```
    for info in c1
        loop
            dbms_output.put_line('Course ID : '|| info.course_id);
            dbms_output.put_line('Title : '|| info.title);
            dbms_output.put_line('Department : '|| info.dept_name);
            dbms_output.put_line('Credits : '|| info.credits);
            dbms_output.put_line('Instructor Name : '|| info.name);
            dbms_output.put_line('Building : '|| info.building);
            dbms_output.put_line('Room Number : '|| info.room_number);
            dbms_output.put_line('Time Slot ID : '|| info.time_slot_id);
            dbms_output.put_line('Total Students : '|| info.no_of_students);
            dbms_output.put_line('--------------------------------------------------------------------');
        end loop;
end;
/
```

4).

```
declare
cursor c is select * from Student natural join takes where course_id='CS-101' ;

begin
            for stud in c
    loop
    if stud.tot_cred < 30 then
    delete from takes where id=stud.id and course_id='CS-101';
    end if;
    end loop;
end;
/
```

5).

```
declare
cursor c is select * from student1 for update;
begin
   for stud in c
   loop
   if stud.gpa between 0 and 4 then
      update student1 set LetterGrade='F' where current of c;
   elsif stud.gpa between 4 and 5 then
      update student1 set LetterGrade='E' where current of c;
   elsif stud.gpa between 5 and 6 then
      update student1 set LetterGrade='D' where current of c;
   elsif stud.gpa between 6 and 7 then
      update student1 set LetterGrade='C' where current of c;
   elsif stud.gpa between 7 and 8 then
      update student1 set LetterGrade='B' where current of c;
   elsif stud.gpa between 8 and 9 then
      update student1 set LetterGrade='A' where current of c;
   else
      update student1 set LetterGrade='A+' where current of c;
   end if;
   end loop;
end;
/
```

6).

```
declare
cursor c(cid teaches.course_id%TYPE) is select * from instructor natural join teaches where
course_id=cid;

begin
```

```
for temp in c('CS-101')
loop
   dbms_output.put_line('Instructor ID:'||temp.id);
   dbms_output.put_line('Instructor Name:'||temp.name);
   dbms_output.put_line('---------------------------');
end loop;
end;
/
```

7).

```
declare
   cursor c1(a_id advisor.i_id%type,c_id takes.course_id%type) is select * from ((student s natural join takes t) inner join advisor a on (id=a.s_id)) where course_id = c_id and a_id=i_id;
   cursor c2 is select * from (instructor natural join teaches);
begin
   for ins_info in c2
      loop
         for info in c1(ins_info.id,ins_info.course_id)
            loop
               dbms_output.put_line(info.name);
            end loop;
      end loop;
end;
/
```

8).

```
DECLARE
Total_sal department.budget%TYPE;
Bio_budg department.budget%TYPE;
```

```
BEGIN
    Savepoint nochange;
    Update instructor set salary = salary*1.2 where dept_name='Biology';
    Select sum(salary) into Total_sal from instructor where dept_name='Biology';
    Select budget into Bio_budg from department where dept_name='Biology';
    If Total_sal > Bio_budg then
    Rollback to nochange;
    End If;
    Commit;
End;
/
```