create table student(

rollno number(5) primary key,

name varchar(20),

mrks1 number(5),

mrks2 number(5),

mrks3 number(5),

percentage number(5));

insert into student(rollno,name,mrks1,mrks2,mrks3) values(1,'ASHISH',99,98,97);

insert into student(rollno,name,mrks1,mrks2,mrks3) values(2,'RAHUL',81,82,83);

insert into student(rollno,name,mrks1,mrks2,mrks3) values(3,'ROHIT',79,80,81);

insert into student(rollno,name,mrks1,mrks2,mrks3) values(4,'JAY',65,76,78);

insert into student(rollno,name,mrks1,mrks2,mrks3) values(5,'KEVAL',85,81,94);

insert into student(rollno,name,mrks1,mrks2,mrks3) values(6,'MEHUL',60,50,40);

insert into student(rollno,name,mrks1,mrks2,mrks3) values(7,'KARTIK',45,55,65);

declare

cursor c1 is select \* from student;

per student.percentage%type;

cursor c2 is

select rollno,name,mrks1 from student

where mrks1=(select max(mrks1) from student);

cursor c3 is

select rollno,name,mrks2 from student

where mrks2=(select max(mrks2) from student);

cursor c4 is

select rollno,name,mrks3 from student

where mrks3=(select max(mrks3) from student);

begin

for r1 in c1

loop

per:=100\*(r1.mrks1+r1.mrks2+r1.mrks3)/300;

update student set percentage=per

where rollno=r1.rollno;

end loop;

dbms\_output.put\_line('Highest marks in subject:-1');

for r in c2

loop

dbms\_output.put\_line('Roll no:- '||r.rollno||' '||' Marks:- '||r.mrks1);

end loop;

dbms\_output.put\_line('Highest marks in subject:-2');

for r in c3

loop

dbms\_output.put\_line('Roll no:- '||r.rollno||' '||' Marks:- '||r.mrks2);

end loop;

dbms\_output.put\_line('Highest marks in subject:-3');

for r in c4

loop

dbms\_output.put\_line('Roll no:- '||r.rollno||' '||' Marks:- '||r.mrks3);

end loop;

end;

/

select \* from student;

create table candidate(

cid number(5) primary key,

cname varchar(20),

caddress varchar(20),

cbirth\_dt date);

create table test(

tid number(5) primary key,

tname varchar2(20),

tot\_mrks number(6),

pass\_mks number(6));

create table test\_centre(

tcid number(5) primary key,

location varchar2(20),

mgr varchar(20),

capacity number(6));

create table test\_taken(

cid number(5) references candidate(cid),

tid number(5) references test(tid),

tcid number(5) references test\_centre(tcid),

test\_dt date,

score number(6),

constraint pk\_test\_taken primary key(cid,tid,tcid));

insert into candidate values(1,'ASHISH','MUMBAI',to\_date('12-4-2002','dd-mm-yyyy'));

insert into candidate values(2,'MAYUR','SURAT',to\_date('10-4-1999','dd-mm-yyyy'));

insert into candidate values(3,'VIJAY','VADODARA',to\_date('20-5-2005','dd-mm-yyyy'));

insert into candidate values(4,'PRAKASH','RAJKOT',to\_date('23-5-2007','dd-mm-yyyy'));

insert into candidate values(5,'MEHUL','MEHSANA',to\_date('22-3-2002','dd-mm-yyyy'));

insert into test values(1,'SCIENCE',100,40);

insert into test values(2,'ENGLISH',100,50);

insert into test values(3,'SANSKRIT',100,60);

insert into test values(4,'MATHS',100,70);

insert into test values(5,'HINDI',100,80);

insert into test\_centre values(1,'AHMDABAD',100,50);

insert into test\_centre values(2,'MUMBAI',100,40);

insert into test\_centre values(3,'PORBANDAR',100,60);

insert into test\_centre values(4,'SURAT',100,50);

insert into test\_taken values(1,1,1,to\_date('11-4-2022','dd-mm-yyyy'),80);

insert into test\_taken values(1,2,1,to\_date('6-4-2022','dd-mm-yyyy'),85);

insert into test\_taken values(1,3,1,to\_date('7-4-2022','dd-mm-yyyy'),95);

insert into test\_taken values(2,1,2,to\_date('1-5-2022','dd-mm-yyyy'),60);

insert into test\_taken values(2,2,2,to\_date('2-6-2022','dd-mm-yyyy'),70);

insert into test\_taken values(2,3,2,to\_date('3-7-2022','dd-mm-yyyy'),80);

insert into test\_taken values(3,1,1,to\_date('1-8-2022','dd-mm-yyyy'),70);

insert into test\_taken values(3,2,1,to\_date('2-9-2022','dd-mm-yyyy'),75);

insert into test\_taken values(3,3,1,to\_date('3-10-2022','dd-mm-yyyy'),65);

insert into test\_taken values(4,1,1,to\_date('1-1-2022','dd-mm-yyyy'),82);

insert into test\_taken values(4,2,1,to\_date('2-5-2022','dd-mm-yyyy'),72);

insert into test\_taken values(4,3,1,to\_date('3-7-2022','dd-mm-yyyy'),92);

insert into test\_taken values(5,1,3,to\_date('1-2-2022','dd-mm-yyyy'),56);

insert into test\_taken values(5,2,3,to\_date('2-2-2022','dd-mm-yyyy'),66);

insert into test\_taken values(5,3,3,to\_date('3-2-2022','dd-mm-yyyy'),76);

declare

cursor c1(t test\_taken.tid%type) is

select \* from test\_taken

where tid=t and score>

(select avg(score) from test\_taken where tid=t);

cursor c2(tc test\_taken.tcid%type) is

select test\_dt from

(select test\_dt,count(\*) c

from test\_taken

where tcid=tc

group by test\_dt

order by test\_dt)

where c=(select capacity

from test\_centre

where tcid=tc);

r1 test\_taken%rowtype;

r2 test\_taken.test\_dt%type;

tid test\_taken.tid%type;

tcid test\_taken.tcid%type;

begin

tid:=1;

tcid:=1;

dbms\_output.put\_line('Candidate scored more than average in given test');

open c1(tid);

loop

fetch c1 into r1;

exit when c1%notfound;

dbms\_output.put\_line('CANDIDATE='||r1.cid);

dbms\_output.put\_line('TEST='||r1.tid);

dbms\_output.put\_line('TESTCENTER='||r1.tcid);

dbms\_output.put\_line('TESTDATE='||r1.test\_dt);

dbms\_output.put\_line('SCORE='||r1.score);

dbms\_output.put\_line('\_\_\_');

end loop;

close c1;

dbms\_output.put\_line('TEST CENTER IS FULL:');

for r2 in c2(tcid)

loop

dbms\_output.put\_line(r2.test\_dt);

end loop;

end;

/

declare

cursor c1(id test\_taken.cid%type) is

select \* from test\_taken

where cid=id;

cid test\_taken.cid%type;

sub test.tname%type;

highest test\_taken.score%type;

begin

cid:=1;

dbms\_output.put\_line('Candidate apperared in following tests:-');

for r1 in c1(cid)

loop

select tname into sub

from test

where tid=r1.tid;

select max(score) into highest

from test\_taken

where tid=r1.tid;

dbms\_output.put\_line('TEST ID:- '||r1.tid);

dbms\_output.put\_line('SCORE:- '||r1.score);

dbms\_output.put\_line('TEST NAME:- '||sub);

dbms\_output.put\_line('HIGHEST:- '||highest);

dbms\_output.put\_line('--');

end loop;

end;

/

select \*

from test t inner join test\_taken tt

on t.tid=tt.tid

where tt.cid=1;

select

t.tid,t.tname,t.tot\_mrks,t.pass\_mks,

tt.cid,tt.test\_dt,tt.score,

(select max(score)

from test\_taken

where tid=t.tid

group by tid) as highest

from test t inner join test\_taken tt

on t.tid=tt.tid

where tt.cid=1;