EX: 3 QUERIES, SUB QUERIES, AGGREGATE FUNCTIONS

TABLE CREATION:

Parent Table:

Create table student(Rollno varchar2(8) primary key, Sname varchar2(20), dept varchar2(10), dob date, Phoneno number(10));

Child Table:

Create table marksheet(Rno varchar2(8) references student(Rollno),M1 number(3),

M2 number(3),M3 number(5), M5 number(3), Total number(3), Average number(8,2),

Result char(5));

NOTE: Insert minimum TEN records to the both the tables Student and marksheet(Don’t Enter values for total, average & result in marksheet table)

CALCULATION OF TOTAL, AVERAGE, RESULT

Update marksheet set total=M1+M2+M3+M4+M5;

Update marksheet set Average= (total/5);

Update marksheet set Result='PASS' where M1>=40 and M2>=40 and M3>=40 and M4>=40 and M5>=40;

Update marksheet set Result='FAIL' where M1<40 or M2<40 or M3<40 or M4<40 or M5<40;

QUERIES:

Select all the records of maksheet table:

Select \* from marksheet;

Select the list of passed students:

Select \* from marksheet where Result='PASS';

List the students whose result is pass and average in descending:

Select \* from marksheet where Result='PASS' order by average desc;

Select Rollno, name, dept and result of passed students using joins:

Select a.Rollno, a.sname,a.Dept, b.Result from student a,marksheet b where b.Result='PASS' and a.rollno=b.Rno

Select Rollno, Dept of failed students whose department is BCA using Joins:

Select a.Rollno, a.Dept, b.Result from student a,marksheet b where b.Result='FAIL' and a.Dept='BCA' and a.Rollno=b.Rno

SUBQURIES:

List the students who belong to BSC(CS) Department

Select \* from marksheet where Rno in(select rollno from student where dept='BSC(CS)')

List the rollno,name and phoneno of failed students:

Select rollno, sname,phoneno from student where rollno in(select Rno from marksheet where result='FAIL')

List the students who scored above 75%

selectRno,sname,dept,marksheet.average from student,marksheet where rollno in(select Rno from marksheet where average>75) and student.rollno=marksheet.Rno

AGGREGATE FUNCTIONS:

Various aggregate functions are:

COUNT

MAX

MIN

SUM

AVG

STDDEV and

VARIANCE

(A) COUNT Function

Find the total number of records in student table

Select Count (\*) from student

Find the total number of departments in student table and display the list

a) Select Count (Distinct (dept)) from student

b) Select distinct (dept) from student

(B) MAX, MIN Functions

Find the student who scores the highest total & minimum mark in subject m3.

Select Max (total) from marksheet

Select Min(m3) from marksheet

(C) SUM Function

Find the sum of the total column

Select sum(total) from marksheet

(D) STDDEV Function

Select STDDEV(Average) from marksheet

(E) VARIANCE Function

Select VARIANCE(Average) from marksheet

AGGREGATE FUNCTIONS WITH “GROUP BY” AND “HAVING” CLAUSE:

select dept, count(\*) from student group by dept

select max(a.Average), b.dept from marksheet a, student b where a.rno=b.rollno group by b.dept having max(average)>75