Assignment

Sept23/ DBT/ 011

Database Technologies

Diploma in Advance Computing

September 2023

**Sub-queries with joins.**

USE ***student\_phone, student\_address, faculty\_phone, faculty\_address, batch\_students, course\_batches, student\_qualifications, faculty\_qualifications, course\_modules, modules, faculty, student, course, student\_cards, and student\_order*** relation to solve the following queries.

|  |
| --- |
| 1. Display all student who have taken admission in more than 2 batches. |
| select \* from student where id in (select studentid from batch\_students bs group by studentid having count(studentid)>2); |
|  |
| 1. Display the student detail who have joined the same batch of the student ‘saleel’. |
| select \* from student where id in (select studentid from batch\_students where batchid in(select batchid from batch\_students where studentid in(select id from student where namefirst='saleel'))); |
|  |
| 1. Display all courses where least number of students have taken the admission. |
| select id,name from course where id in(select courseid from (select \*, dense\_rank() over(order by r1) r2 from (select courseid,count(bs.studentid) r1 from course\_batches cb inner join batch\_students bs on cb.id=bs.batchid group by courseid)tb1)tb2 where r2 = 1); |
|  |
| 1. Display student details who have not taken the admission. |
| select \* from student where id in(select s.id from student s left join batch\_students bs on s.id=bs.studentid where bs.studentid is null group by bs.studentid,s.id) ; |
|  |
| 1. Get all courses where no modules are defined in course\_modules table. |
| select \* from course where id not in (select courseid from course\_modules cm join course c group by courseid); |
|  |
| 1. Display course*\_batches* details where student has taken the admission. |
| select \* from course\_batches where id in (select batchid from batch\_students bs join course\_batches cb on cb.id=bs.batchid group by batchid); |
|  |
| 1. Display all students whose marks of ‘BE’ is more than ‘ULKA’ marks in ‘BE’. |
| select s.\* from student s join student\_qualifications sq on s.id=sq.studentid where name='be'and studentid in(select studentid from student\_qualifications where name='be' and marks> (select sq.marks from student s join student\_qualifications sq on s.id=sq.studentid where namefirst='ulka'and name='be')); |
|  |
| 1. Display all students whose marks are more than ‘saleel’ marks in 10th std. |
| select s.\* from student s join student\_qualifications sq on s.id=sq.studentid where name='10' and marks >(select marks from student\_qualifications where name='10' and studentid in(select id from student where namefirst ='saleel')); |
|  |
| 1. Display students whose DOB is as same as ‘kaushal’ |
| select \*from student where dob in(select dob from student where namefirst='kaushal'); |
|  |
| 1. Display all student details who have three or more phone numbers. |
| select distinct s.\* from student s join student\_qualifications sq on s.id=sq.studentid where studentid in(select studentid from student\_phone group by studentid having count(number)>=3); |
|  |
| 1. Display marks for the studentID 1 and 7 who have done ‘BE’. (Note: the marks must be displayed side by side). |
| select (select marks from student\_qualifications where studentid=1 and name='be')as studentid\_1, (select marks from student\_qualifications where studentid=7 and name='be')as studentid\_7; |
|  |
| 1. Display marks for the studentID 1 and 7 who have done ‘BE’ also fine out the difference of marks between them.   (Note: the marks and difference between the marks must be displayed side by side) |
| select (select marks from student\_qualifications where studentid=1 and name='be')as 'studentid 1', (select marks from student\_qualifications where studentid=7 and name='be')as 'studentid 7',abs((select marks from student\_qualifications where studentid=1 and name='be')-(select marks from student\_qualifications where studentid=7 and name='be')) as 'marks difference'; |
|  |
| 1. Display all student who are not joined any of the batch. |
| select s.\* from student s where id not in(select studentid from student s join batch\_students bs on s.id=bs.studentid group by studentid); |
|  |
| 1. Display all course\_batches details who are starting on the same day as ‘Batch1’. |
| select \* from course\_batches where starton in(select starton from course\_batches where name='batch1'); |
|  |
| 1. Display all students whose 10th marks is more than student ‘Neel’s 10th marks. |
| select s.\* from student s join student\_qualifications sq on s.id=sq.studentid where name='10' and marks >(select marks from student\_qualifications where name='10' and studentid in(select id from student where namefirst ='neel')); |
|  |
| 1. Get all student with their qualification details who have highest marks in ‘BE’. |
| select s.\*,sq.\* from student s inner join student\_qualifications sq on s.id=sq.studentid where name=’be’ and sq.marks in(select max(marks) from student\_qualifications where name="BE"); |
|  |
| 1. Get all student with their qualification details who have second highest marks in ‘BE’. |
| select s.\*,sq.\*from student s join student\_qualifications sq on s.id=sq.studentid where name='be' and marks in(select distinct marks from (select marks, dense\_rank() over(order by marks desc)r1 from student\_qualifications where name="BE")r2 where r1=2); |
|  |
| 1. Display the student and student\_qualification details who have scored the maximum marks in ‘BE’ |
| select s.\*,sq.\* from student s inner join student\_qualifications sq on s.id=sq.studentid where name=’be’ and sq.marks in(select max(marks) from student\_qualifications where name="BE"); |
|  |
| 1. Display the student details who have scored the maximum marks in ‘BE’ |
| select s.\* from student s join student\_qualifications sq on s.id=sq.studentid where name='be' and marks in(select distinct marks from (select marks, dense\_rank() over(order by marks desc)r1 from student\_qualifications where name="BE")r2 where r1=2); |
|  |
| 1. Display the student details who have scored the minimum marks in ‘10’ std. |
| select s.\*,name,marks from student s join student\_qualifications sq on s.id=sq.studentid where name='10'and marks in (select min(marks) from student\_qualifications where name='10'); |
|  |
| 1. Display all student and student\_qualification details of those students who have scored marks more than ‘RAJAN’ in ‘BE’. |
| select s.\*,sq.\* from student s join student\_qualifications sq on s.id=sq.studentid where name='BE' and marks >(select marks from student\_qualifications where name='BE' and studentid in(select id from student where namefirst ='RAJAN')); |
|  |
| 1. Display all student who have done ‘BE’ in the same year as of studentID 16. |
| select s.\*,year,name from student s join student\_qualifications sq on s.id=sq.studentid where name='be' and year in(select year from student\_qualifications where studentid=16 and name='BE'); |
|  |
| 1. Display all odd records. |
| select \* from student where id%2=1; |
|  |
| 1. Calculate the sum of marks student wise of their qualifications (i.e. 10th, 12th and BE marks) |
| select studentid, sum(marks) as 'Sum of Marks' from student\_qualifications group by studentid ; |
|  |
| 1. Display students’ details who are not having ***'Aadhaar'*** card. |
| select distinct s.\* from student s join student\_cards sc on s.id=sc.studentid where s.id not in (select studentid from student\_cards where name='Aadhaar'); |
|  |