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.

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| 1. Display all student who have taken admission in more than 2 batches. |
| select \* from (select s.namefirst,count( cb.name) from student s inner join batch\_students bs on s.id=bs.studentid inner join course\_batches cb on bs.id=cb.courseid group by s.namefirst having count(cb.name)>2)e; |
|  |
| 1. Display the student detail who have joined the same batch of the student ‘saleel’. |
| select \* from (select s. \* from student s inner join batch\_students bs on s.id=bs.studentid inner join course\_batches cb on bs.batchid=cb.id where batchid=1) e;  /////////////////////////////  select \* from student s inner join batch\_students bs on s.id=bs.studentid inner join course\_batches cb on bs.batchid=cb.id where cb.id in (select s2.id from student s2 inner join batch\_students bs2 on s2.id = bs2.studentid inner join course\_batches cb2 on bs2.batchid=cb2.id where s2.namefirst='saleel'); |
|  |
| 1. Display all courses where least number of students have taken the admission. |
| select distinct course.name from course join(select \* from course\_batches join (Select batchid from (Select batchid,count(\*) count from batch\_students group by batchid) a join (select min(b.count) ct from (Select batchid,count(\*) count from batch\_students group by batchid) b) c where a.count=c.ct) t1 where course\_batches.id=t1.batchid) t2 where course.id=t2.courseid; |
|  |
| 1. Display student details who have not taken the admission. |
| select s.id,s.namefirst from student s where s.id not in (select s.id from course cs join course\_batches cb join batch\_students bs join student s where cs.id=cb.courseid and cb.id=bs.batchid and bs.studentid=s.id); |
|  |
| 1. Get all courses where no modules are defined in course\_modules table. |
| select c.name from course c where c.name not in(select c.name from course c inner join course\_modules cm on c.id=cm.courseid inner join modules m on m.id=cm.moduleid); |
|  |
| 1. Display course*\_batches* details where student has taken the admission. |
| select \* from course\_batches where id in (select batchid from batch\_students); |
|  |
| 1. Display all students whose marks of ‘BE’ is more than ‘ULKA’ marks in ‘BE’. |
| select s. \*, sq.name, sq.marks from student s inner join student\_qualifications sq where s.id=sq.studentid and sq.name='BE' and sq.marks > (select sq.marks from student s inner join student\_qualifications sq on s.id = sq.studentid where s.namefirst='ulka' and sq.name='BE'); |
|  |
| 1. Display all students whose marks are more than ‘saleel’ marks in 10th std. |
| select s. \*, sq.name, sq.marks from student s inner join student\_qualifications sq where s.id=sq.studentid and sq.name=10 and sq.marks > (select sq.marks from student s inner join student\_qualifications sq on s.id = sq.studentid where s.namefirst='saleel' and sq.name=10); |
|  |
| 1. Display students whose DOB is as same as ‘kaushal’ |
| select namefirst,dob 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 \* from (select s.namefirst from student s inner join student\_phone sp where s.id=sp.studentid group by s.id having count(sp.number)>3)e; |
|  |
| 1. Display marks for the studentID 1 and 7 who have done ‘BE’. (Note: the marks must be displayed side by side). |
| select (select sq.marks from student s join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and s.id=1)studentid1, (select marks from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and s.id=7)studentid2; |
|  |
| 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 sq.marks from student s join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and s.id=1)studentid1, (select marks from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and s.id=7)studentid2, (select studentid2 - studentid1)diff; |
|  |
| 1. Display all student who are not joined any of the batch. |
| select \* from student where id not in(select s.id from student s inner join batch\_students bs on s.id = bs.studentid inner join course\_batches cb on bs.batchid=cb.id); |
|  |
| 1. Display all course\_batches details who are starting on the same day as ‘Batch1’. |
| select name,starton 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.namefirst, s.namelast, sq.marks from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='10' and sq.marks> (select sq.marks from student s inner join student\_qualifications sq on s.id=sq.studentid where s.namefirst='NEEL' and sq.name='10'); |
|  |
| 1. Get all student with their qualification details who have highest marks in ‘BE’. |
| select sq.studentid,s.namefirst,s.namelast,sq.marks,sq.name from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and sq.marks=(select max(marks) from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE'); |
|  |
| 1. Get all student with their qualification details who have second highest marks in ‘BE’. |
| select sq.studentid,s.namefirst,s.namelast,sq.marks,sq.name from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and sq.marks < (select max(marks) from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE')order by sq.marks desc limit 2; |
|  |
| 1. Display the student and student\_qualification details who have scored the maximum marks in ‘BE’ |
| select sq.studentid,s.namefirst,s.namelast,sq.marks,sq.name from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and sq.marks=(select max(marks) from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE'); |
|  |
| 1. Display the student details who have scored the maximum marks in ‘BE’ |
| select sq.studentid,s.namefirst,s.namelast,sq.marks,sq.name from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and sq.marks=(select max(marks) from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE'); |
|  |
| 1. Display the student details who have scored the minimum marks in ‘10’ std. |
| select sq.studentid, s.namefirst, s.namelast,sq.marks from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='10' and sq.marks=(select min(marks) from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.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 sq.name='BE' and sq.marks > (select sq.marks from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and s.namefirst='RAJAN'); |
|  |
| 1. Display all student who have done ‘BE’ in the same year as of studentID 16. |
| select s. \*, sq.studentid,sq.year,sq.name from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and sq.year=(select sq.year from student s inner join student\_qualifications sq on s.id=sq.studentid where sq.name='BE' and sq.studentid=16); |
|  |
| 1. Display all odd records. |
| select \* from (select \* from student where id%2=1) e; |
|  |
| 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 \* from student where id in (select studentid from student\_cards where name="aadhaar"); |
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