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 namefirst, count(name) from (select s.namefirst , cb.name from student s join batch\_students bs join course\_batches cb where s.id=bs.studentid and bs.batchid=cb.id) e group by namefirst having count(name)>2; |
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| 1. Display the student detail who have joined the same batch of the student ‘saleel’. |
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| 1. Display all courses where least number of students have taken the admission. |
| select \* from ( select cs.name,count(cs.id) r1 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 group by cs.name) e order by r1 limit 2; |
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| 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); |
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| 1. Get all courses where no modules are defined in course\_modules table. |
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| 1. Display course*\_batches* details where student has taken the admission. |
| select \* from course\_batches where id in (select distinct batchid from batch\_students) ; |
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| 1. Display all students whose marks of ‘BE’ is more than ‘ULKA’ marks in ‘BE’. |
| select s.namefirst,sq.marks,sq.name 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 join student\_qualifications sq on s.id=sq.studentid where s.namefirst='ulka' and sq.name='be'); |
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| 1. Display all students whose marks are more than ‘saleel’ marks in 10th std. |
| select s.namefirst,sq.marks,sq.name from student s join student\_qualifications sq on s.id=sq.studentid where s.namefirst not in (select namefirst from student where namefirst="saleel") and sq.marks > (select sq.marks from student s join student\_qualifications sq on s.id=sq.studentid where s.namefirst='saleel' and sq.name='10'); |
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| 1. Display students whose DOB is as same as ‘kaushal’ |
| select \* from student where dob=(select dob from student where namefirst='kaushal'); |
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| 1. Display all student details who have three or more phone numbers. |
| select s.\* , r1 as totalno from student s join (select studentid,count(\*) R1 from student\_phone group by studentid having R1>2) s1 on s.id = s1.studentid; |
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| 1. Display marks for the studentID 1 and 7 who have done ‘BE’. (Note: the marks must be displayed side by side). |
| select studentid1 ,studentid7 from (select marks as studentid1 from student\_qualifications sq where sq.studentid=1 and sq.name="be") r1 , (select marks as studentid7 from student\_qualifications sq where sq.studentid=7 and sq.name="be") r2 ; |
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| 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 studentid1 ,studentid7, studentid1 - studentid7 as " Marks Difference" from (select marks as studentid1 from student\_qualifications sq where sq.studentid=1 and sq.name="be") r1 , (select marks as studentid7 from student\_qualifications sq where sq.studentid=7 and sq.name="be") r2 ; |
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| 1. Display all student who are not joined any of the batch. |
| select \* from student where id not in (select studentid from batch\_students); |
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| 1. Display all course\_batches details who are starting on the same day as ‘Batch1’. |
| select name , starton from course\_batches where starton = (select starton from course\_batches where name = "batch1"); |
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| 1. Display all students whose 10th marks is more than student ‘Neel’s 10th marks. |
| select s.namefirst,sq.marks,sq.name from student s join student\_qualifications sq on s.id=sq.studentid where sq.name='10'and sq.marks > (select sq.marks from student s join student\_qualifications sq on s.id=sq.studentid where s.namefirst='neel' and sq.name='10'); |
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| 1. Get all student with their qualification details who have highest marks in ‘BE’. |
| select s.id,s.namefirst,s.namelast,sq.marks,sq.name from student s join student\_qualifications sq on s.id=sq.studentid where sq.marks>all(select sq.marks from student\_qualifications sq where sq.name in (10,12) and s.id=sq.studentid) and sq.name='be'; |
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| 1. Get all student with their qualification details who have second highest marks in ‘BE’. |
| select \* from (select dense\_rank() over(order by marks desc ) as r1 , s.id as r2,s.namefirst as r3,s.namelast as r4,sq.marks as r5,sq.name as r6 from student s join student\_qualifications sq on s.id=sq.studentid where sq.marks>all(select sq.marks from student\_qualifications sq where sq.name in (10,12) and s.id=sq.studentid) and sq.name='be' order by marks desc) as t1 where r1 = 2; |
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| 1. Display the student and student\_qualification details who have scored the maximum marks in ‘BE’ |
| select \* from student s inner join (select \* from student\_qualifications where marks = (SELECT max(marks) from student\_qualifications sq where sq.name = "be") and name="be") t1 on t1.studentid = s.id ; |
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| 1. Display the student details who have scored the maximum marks in ‘BE’ |
| select \* from student s inner join student\_qualifications sq on s.id = sq.studentid where marks = (select max(marks) from student\_qualifications sq where sq.name = "BE"); |
|  |
| 1. Display the student details who have scored the minimum marks in ‘10’ std. |
| select \* from student s inner join student\_qualifications sq on s.id = sq.studentid where marks = (select min(marks) from student\_qualifications sq 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 \* from student s inner join student\_qualifications sq on s.id = sq.studentid where marks > (select marks from student s inner join student\_qualifications sq on s.id = sq.studentid where namefirst="RAJAN" AND name="BE") and name="BE"; |
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| 1. Display all student who have done ‘BE’ in the same year as of studentID 16. |
| select s.namefirst,s.namelast,sq.name,sq.college , sq.year from student s join student\_qualifications sq on s.id=sq.studentid where sq.name='be' and sq.year=(select sq.year from student s join student\_qualifications sq on s.id=sq.studentid where s.id=16 and sq.name='be'); |
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| 1. Display all odd records. |
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| 1. Calculate the sum of marks student wise of their qualifications (i.e. 10th, 12th and BE marks) |
| select s.namefirst , s.namelast , s.DOB , t1.total\_marks from student s inner join (select sum(marks)as total\_marks , studentid from student\_qualifications group by studentid) t1 on s.id =t1.studentid; |
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| 1. Display students’ details who are not having ***'Aadhaar'*** card. |
| select \* from student where id not in (select studentid from student\_cards where name = "Aadhaar"); |
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