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 batchid from batch_students group by batchid having
count(batchid)>2);
```

2. Display the student detail who have joined the same batch of the student 'saleel'.

```
select * from student s join batch_students bs where s.id=bs.studentid and batchid in  (select
cb.id  from student s join batch_students bs join course_batches cb where s.id=bs.studentid
and bs.batchid=cb.id and namefirst='saleel') ;
```

3. Display all courses where least number of students have taken the admission.

```
select * from(select c.name,count(c.id)r1 from course c join course_batches cb on
c.id=cb.courseid join batch_students bs on cb.id=bs.batchid join student s on bs.studentid=s.id
group by c.name)e order by r1 limit 2;
```

4. Display student details who have not taken the admission.

```
select * from student where id not in(select studentid from batch_students);
```

5. Get all courses where no modules are defined in course_modules table.

```
select * from course where id not in(select courseid from course_modules);
```

6. Display course_*batches* details where student has taken the admission.

```
select * from course_batches where id in(select studentid from batch_students);
```

7. 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 where
s.id=sq.studentid and marks>(select sq.marks from student s join student_qualifications sq
where s.id =sq.studentid and sq.name='be' and s.namefirst='ulka') and sq.name='be';


select * from (select s.namefirst,sq.marks r,sq.name from student s join student_qualifications
```

sq where s.id=sq.studentid and sq.name='be') e where r>67;

8. 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 where s.id=sq.studentid and marks>(select sq.marks from student s join student_qualifications sq where s.id=sq.studentid and sq.name=10 and s.namefirst='saleel')and sq.name='10';

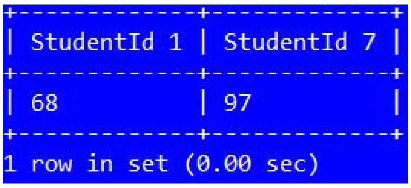
9. Display students whose DOB is as same as ‘kaushal’

select * from student where dob =(select dob from student where namefirst='kaushal');

10. Display all student details who have three or more phone numbers.

select * from student where id in (select studentid from student_phone group by studentid having count(number)>2);

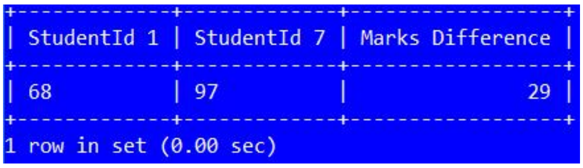
11. Display marks for the studentID 1 and 7 who have done ‘BE’. (Note: the marks must be displayed side by side).



```
+-------------+-------------+
| StudentId 1 | StudentId 7 |
+-------------+-------------+
| 68          | 97          |
+-------------+-------------+
1 row in set (0.00 sec)
```

select student1,student7 from (select marks as Student1 from student_qualifications sq where sq.studentid=1 and sq.name='BE')r1, (select marks as Student7 from student_qualifications sq where sq.studentid=7 and sq.name='BE')r2;

12. 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)



```
+-------------+-------------+------------------+
| StudentId 1 | StudentId 7 | Marks Difference |
+-------------+-------------+------------------+
| 68          | 97          |               29 |
+-------------+-------------+------------------+
1 row in set (0.00 sec)
```

select student1,student7,abs(student1-student7) as 'Marks Difference' from (select marks as Student1 from student_qualifications sq where sq.studentid=1 and sq.name='BE')r1, (select marks as Student7 from student_qualifications sq where sq.studentid=7 and sq.name='BE')r2;

13. Display all student who are not joined any of the batch.

select * from student where id not in(select studentid from batch_students);

14. Display all course_batches details who are starting on the same day as ‘Batch1’.

```sql
select * from course_batches where starton=(select starton from course_batches where name="batch1");
```

15. Display all students whose 10th marks is more than student ‘Neel’s 10th marks.

```sql
select s.*,sq.marks 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);
```

16. Get all student with their qualification details who have highest marks in ‘BE’.

```sql
select s.*,sq.marks from student s join student_qualifications sq on s.id=sq.studentid where sq.marks=(select max(marks) from student_qualifications sq where sq.name="BE");
```

17. Get all student with their qualification details who have second highest marks in ‘BE’.

```sql
select * from student,student_qualifications where student.id=student_qualifications.studentid and name = 'BE' and student.id in (select studentid from (select *,rank() over(order by marks desc) R1 from student_qualifications where name = 'BE' and marks < (select max(marks) from student_qualifications where name='BE' order by marks desc)) t where R1=1 );
```

18. Display the student and student_qualification details who have scored the maximum marks in ‘BE’

```sql
select s.*,sq.* from student s join student_qualifications sq on s.id=sq.studentid where sq.marks=(select max(marks) from student_qualifications sq where sq.name="BE");
```

19. Display the student details who have scored the maximum marks in ‘BE’

```sql
select s.* from student s join student_qualifications sq on s.id=sq.studentid where sq.marks=(select max(marks) from student_qualifications sq where sq.name="BE");
```

20. Display the student details who have scored the minimum marks in ‘10’ std.

```sql
select s.* from student s join student_qualifications sq on s.id=sq.studentid where sq.marks=(select min(marks) from student_qualifications sq where sq.name="10");
```

21. Display all student and student_qualification details of those students who have scored marks more than ‘RAJAN’ in ‘BE’.

```sql
select * from (select s.namefirst,sq.marks r,sq.name from student s join student_qualifications sq where s.id=sq.studentid and sq.name='be') e where r>68;
```

22. Display all student who have done ‘BE’ in the same year as of studentID 16.

```sql
select s.*,sq.year,sq.name from student s join student_qualifications sq where s.id=sq.studentid and sq.year=(select sq.year from student_qualifications sq  where sq.studentid=16 and name='be') and sq.name='be';
```

23. Display all odd records.

```sql
select * from(select * from student where id%2=1)e;
```

24. Calculate the sum of marks student wise of their qualifications (i.e. 10th, 12th and BE marks)

```sql
select * from (select s.*,sum(sq.marks) from student s join student_qualifications sq where
```

s.id=sq.studentid group by sq.studentid)k;
25. Display students’ details who are not having *'**Aadhaar**'* card.
select *,sa.name from student student_cards sa where id in (select studentid from student_cards where name="aadhaar");