**Ex. No. : 5**

**SELECT with various clause – BETWEEN, IN, Aggregate function**

**Questions:**

**QUESTIONS:**

**IN & BETWEEN**

1. List the type of the courses “DBMS” and “ds”

mysql> select coursedesc,coursetype from course where coursedesc in('dbms','ds');

+------------+------------+

| coursedesc | coursetype |

+------------+------------+

| dbms | c |

| ds | c |

+------------+------------+

2 rows in set (0.04 sec)

1. The instructor wants to know the CourseNos whose scores are in the range 50

to 80

mysql> select courseno from student where score between 50 and 80;

+----------+

| courseno |

+----------+

| c2 |

| c2 |

+----------+

2 rows in set (0.00 sec)

**AGGREGATE**

1.Find the average mark of “C2”.

mysql> select courseno,avg(score) from student where courseno='c2' group by courseno;

+----------+------------+

| courseno | avg(score) |

+----------+------------+

| c2 | 72.0000 |

+----------+------------+

1 row in set (0.00 sec)

2.List the maximum, minimum mark for “C1”

mysql> select courseno,min(score),max(score) from student group by courseno;

+----------+------------+------------+

| courseno | min(score) | max(score) |

+----------+------------+------------+

| c1 | 45 | 95 |

| c2 | 65 | 79 |

+----------+------------+------------+

2 rows in set (0.00 sec)

3.List the no of faculties in each department

mysql> select deptno,count(\*) from faculty group by deptno;

+--------+----------+

| deptno | count(\*) |

+--------+----------+

| d1 | 2 |

| d2 | 2 |

+--------+----------+

2 rows in set (0.00 sec)

4.List the name of the courses and average mark of each courses.

mysql> select courseno,avg(score) from student group by courseno;

+----------+------------+

| courseno | avg(score) |

+----------+------------+

| c1 | 69.0000 |

| c2 | 72.0000 |

+----------+------------+

2 rows in set (0.00 sec)

5.Calculate the sum of all the scores.

mysql> select sum(score) from student;

+------------+

| sum(score) |

+------------+

| 351 |

+------------+

1 row in set (0.00 sec)

6.How many students are registered for each course

mysql> select courseno,count(\*) from student group by courseno;

+----------+----------+

| courseno | count(\*) |

+----------+----------+

| c1 | 3 |

| c2 | 2 |

+----------+----------+

2 rows in set (0.00 sec)

7.Display the sum of salaries in each department.

mysql> select deptno,sum(salary) from faculty group by deptno;

+--------+-------------+

| deptno | sum(salary) |

+--------+-------------+

| d1 | 12987 |

| d2 | 146578 |

+--------+-------------+

2 rows in set (0.00 sec)

**Ex.No : 6**

**SELECT with various clause – GROUP BY, HAVING, ORDER BY**

**Questions:**

**Questions**:

**GROUP BY - HAVING**

1. Display the courseno and the number of students registered in each course if no of students registered is >1.

mysql> select courseno,count(\*) from student group by courseno having count(\*)>1;

+----------+----------+

| courseno | count(\*) |

+----------+----------+

| c1 | 3 |

| c2 | 2 |

+----------+----------+

2 rows in set (0.00 sec)

1. Display the facno whose department is getting average salary greater than 25000

mysql> select facno from faculty group by deptno having avg(salary)>25000;

+-------+

| facno |

+-------+

| f2 |

+-------+

1 row in set (0.00 sec)

**ORDER BY**

1. Retrieve Name, Gender, MobileNo of all the students in ascending order of RegNo.

mysql> select name,gender,mobileno from student order by regno;

+---------+--------+------------+

| name | gender | mobileno |

+---------+--------+------------+

| magesh | m | 1234567891 |

| reshma | m | 1231231231 |

| nisha | f | 1131231231 |

| sathish | f | 1423123423 |

| gans | m | 1233456644 |

+---------+--------+------------+

5 rows in set (0.00 sec)

1. List the faculty members in the order of older faculty first.

mysql> select facno from faculty order by dob desc;

+-------+

| facno |

+-------+

| f1 |

| f4 |

| f3 |

| f2 |

+-------+

4 rows in set (0.00 sec)

**Ex.No : 7**

**SubQuery& Correlated Query**

**QUESTIONS:**

**Sub-Query and Correlated Sub-Query:**

1. Which of the student’s score is greater than the average score?

mysql> select \* from student where score>(select avg(score) from student);

+-------+---------+--------+------------+------------+---------+----------+-------+

| regno | name | gender | dob | mobileno | city | courseno | score |

+-------+---------+--------+------------+------------+---------+----------+-------+

| 123 | magesh | m | 2022-09-08 | 1234567891 | chennai | c1 | 95 |

| 191 | sathish | f | 2002-02-22 | 1423123423 | salem | c2 | 79 |

+-------+---------+--------+------------+------------+---------+----------+-------+

2 rows in set (0.00 sec)

1. Display the course description of the course which are having more than 2 students
2. Which faculty has joined recently
3. List the course and score of assessments that have the value more than the average score each Course

2 rows in set (0.08 sec)

mysql> select coursedesc from course where courseno in(select courseno from student group by courseno having count(\*)>2);

+------------+

| coursedesc |

+------------+

dbms |

+------------+

1 row in set (0.00 sec)

mysql> select facno from faculty where doj=(select max(doj) from faculty);

+-------+

| facno |

+-------+

| f1 |

+-------+

1 row in set (0.00 sec)

mysql> select courseno from student where score>(select avg(score) from student);

+----------+

| courseno |

+----------+

| c1 |

| c2 |

+----------+

**Ex.No : 8**

**Joins – EquiJoin, InnerJoin, OuterJoin**

**QUESTIONS**:

1. List the departments where the faculty members are working.

mysql> select facno,deptname from faculty,department where faculty.deptno=department.deptno;

+-------+----------+

| facno | deptname |

+-------+----------+

| f1 | cse |

| f3 | cse |

| f2 | ece |

| f4 | ece |

+-------+----------+

4 rows in set (0.00 sec)

2. Find the courses and student details of all the courses even though no students assigned for that course.

mysql> select \* from course left join student on course.courseno=student.courseno;

+----------+---------------+------------+-------+--------+-------+-------+---------+--------+------------+------------+-----------+----------+-------+

| courseno | coursedesc | coursetype | semno | hallno | facno | regno | name | gender | dob | mobileno | city | courseno | score |

+----------+---------------+------------+-------+--------+-------+-------+---------+--------+------------+------------+-----------+----------+-------+

| c1 | dbms | c | 2 | 3 | f1 | 123 | magesh | m | 2022-09-08 | 1234567891 | chennai | c1 | 95 |

| c1 | dbms | c | 2 | 3 | f1 | 124 | reshma | m | 2004-09-08 | 1231231231 | bangalore | c1 | 45 |

| c1 | dbms | c | 2 | 3 | f1 | 200 | gans | m | 1997-08-09 | 1233456644 | chennai | c1 | 67 |

| c2 | ds | c | 1 | 4 | f2 | 125 | nisha | f | 2008-09-18 | 1131231231 | hyderabad | c2 | 65 |

| c2 | ds | c | 1 | 4 | f2 | 191 | sathish | f | 2002-02-22 | 1423123423 | salem | c2 | 79 |

| c3 | networks | c | 3 | 5 | f3 | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

| c4 | r programming | c | 1 | NULL | f2 | NULL | NULL | NULL | NULL | NULL | NULL | NULL | NULL |

+----------+---------------+------------+-------+--------+-------+-------+---------+--------+------------+------------+-----------+----------+-------+

**Ex.No : 9**

**VIEW, INDEX, SEQUENCE**

**Question:**

1.Create a view with name ‘std\_view’ using STUDENT table which holds the value of register number, name and DOB of student.

mysql> create view std\_view as select regno,name,dob from student;

Query OK, 0 rows affected (0.07 sec)

mysql> select \* from std\_view;

+-------+---------+------------+

| regno | name | dob |

+-------+---------+------------+

| 123 | magesh | 2022-09-08 |

| 124 | reshma | 2004-09-08 |

| 125 | nisha | 2008-09-18 |

| 191 | sathish | 2002-02-22 |

| 200 | gans | 1997-08-09 |

+-------+---------+------------+

5 rows in set (0.08 sec)

1,create an index on courseno of student and analyze the performance

mysql> create index ind1 on student(courseno);

Query OK, 0 rows affected (0.15 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> select \* from student where courseno='c1';

+-------+--------+--------+------------+------------+-----------+----------+-------+

| regno | name | gender | dob | mobileno | city | courseno | score |

+-------+--------+--------+------------+------------+-----------+----------+-------+

| 123 | magesh | m | 2022-09-08 | 1234567891 | chennai | c1 | 95 |

| 124 | reshma | m | 2004-09-08 | 1231231231 | bangalore | c1 | 45 |

| 200 | gans | m | 1997-08-09 | 1233456644 | chennai | c1 | 67 |

+-------+--------+--------+------------+------------+-----------+----------+-------+

3 rows in set (0.00 sec)

mysql> EXPLAIN select \* from student where courseno='c1';

+----+-------------+---------+------+---------------+------+---------+------+------+-------------+

| id | select\_type | table | type | possible\_keys | key | key\_len | ref | rows | Extra |

+----+-------------+---------+------+---------------+------+---------+------+------+-------------+

| 1 | SIMPLE | student | ALL | ind1 | NULL | NULL | NULL | 5 | Using where |

+----+-------------+---------+------+---------------+------+---------+------+------+-------------+

1 row in set (0.04 sec)

3.Create a example sequence

mysql> create table empl(eno integer(3) auto\_increment primary key, ename varchar(20));

Query OK, 0 rows affected (0.10 sec)

mysql> insert into empl(ename) values('kiruthik');

Query OK, 1 row affected (0.01 sec)

mysql> insert into empl(ename) values('shwethaa');

Query OK, 1 row affected (0.05 sec)

mysql> insert into empl(ename) values('balaji');

Query OK, 1 row affected (0.03 sec)

mysql> select \* from empl;

+-----+----------+

| eno | ename |

+-----+----------+

| 1 | kiruthik |

| 2 | shwethaa |

| 3 | balaji |

+-----+----------+

3 rows in set (0.00 sec)

**Ex.No : 10**

**Simple programming exercise using(REPEAT, WHILE )**

**Questions:**

Write a function to build a string repeatedly until the value of the variable becomes s greater than 5. Then, we display the final string using a SELECT statement.

Write a function that uses REPEAT statement which would repeat the loopuntil income is greater than or equal to 4000, at which point the REPEAT loop would beterminated