Q4 .STUDENT AND MARKS

AIM:

Create a table **student** with following fields roll no int (primary key), Name char (20) not null (first letter as either B,S E,P), sex char (1) accept only m or f, dob date not null, course (values must be MCA, CSE ME), sem(values must be S3, S4), Date_of_Join.

```
SQL> create table student(rollno int primary key,name char(20) not null,sex char(1),dob_date date not null,course char(20), sem varchar(20), DATE_OF_JOIN date);

Table created.
```

```
SQL> insert into student values(1,'SUSAN','f','11/jul/2000','ME','S3','22/nov/2021');

1 row created.

SQL> insert into student values(2,'SKARIA','m','15/dec/1997','MCA','S4','12/oct/2020');

1 row created.

SQL> insert into student values(3,'BRITA','f','19/apr/2000','CSE','S3','22/feb/2020');

1 row created.

SQL> insert into student values(4,'STEFFY','f','20/oct/1990','MCA','S4','22/feb/2021');

1 row created.

SQL> insert into student values(5,'PARVATHY','f','10/dec/1999','ME','S3','22/feb/2021');

1 row created.

SQL> insert into student values(23,'SOURAV','m','10/dec/1999','ME','S3','22/oct/2020');

1 row created.

SQL> insert into student values(6,'EMILY','f','11/jan/1999','ME','S3','22/oct/2020');

1 row created.

SQL> insert into student values(7,'ELENA','f','11/jan/1999','CSE','S3','22/oct/2020');

1 row created.
```

```
SQL> select * from student ;

    ROLLNO NAME                 S DOB_DATE  COURSE              SEM                 DATE_OF_J
---------- -------------------- - --------- ------------------- ------------------- ---------
         1 SUSAN                f 11-JUL-00 ME                  S3                  22-NOV-21
         2 SKARIA               m 15-DEC-97 MCA                 S4                  12-OCT-20
         3 BRITA                f 19-APR-00 CSE                 S3                  22-FEB-20
         4 STEFFY               f 20-OCT-90 MCA                 S4                  22-FEB-21
         5 PARVATHY             f 10-DEC-99 ME                  S3                  22-FEB-21
        23 SOURAV               m 10-DEC-99 ME                  S3                  22-OCT-20
         6 EMILY                f 11-JAN-99 ME                  S3                  22-OCT-20
         7 ELENA                f 11-JAN-99 CSE                 S3                  22-OCT-20

8 rows selected.
```

Create second table **marks** with following data Mid in (primary key), roll no int (foreign key) referencing student tables). Sub_code char (5) not null and marks int not null (>=0 &<=100). Insert the data into these tables.

```
SQL> create table marks( Mid int primary key, rollno int references student , Sub_code char (5) not null ,marks int not null check(marks>=0 and marks<=100));

Table created.
```

```
SQL> select * from  marks;

       MID     ROLLNO SUB_C      MARKS
---------- ---------- ----- ----------
         1          1 cst           75
         2          2 cst           50
         3          3 cst           22
         4          4 cst           56
         5          5 cst           56
         6         23 cme           80
         7          6 cme           50
         8          7 cme           50

8 rows selected.
```

```
SQL> insert into marks values(1,1,'cst',75);

1 row created.

SQL> insert into marks values(2,2,'cst',50);

1 row created.
```

```
SQL> insert into marks values(3,3,'cst',22);

1 row created.

SQL> insert into marks values(4,4,'cst',56);

1 row created.

SQL> insert into marks values(5,5,'cst',56);

1 row created.

SQL> insert into marks values(6,23,'cme',80);

1 row created.

SQL> insert into marks values(7,6,'cme',50);

1 row created.

SQL> insert into marks values(8,7,'cme',50);

1 row created.
```

a. List the name of students joined in mca after 10-10-1990.

```
SQL> select NAME  from student  where course='MCA' and DATE_OF_JOIN > '10-oct-1990';

NAME
--------------------
SKARIA
STEFFY
```

b. List the name of students who are not in CS department.

```
SQL> select NAME  from student  where course != 'CSE';

NAME
--------------------
SUSAN
SKARIA
STEFFY
PARVATHY
SOURAV
EMILY
```

c. List the names of students whose names start with ‘E’ and ‘P as 3rd character

```
6 rows selected.

SQL> select NAME from student where name like 'E_P%';

no rows selected
```

d. List all marks of the student Sourav from MCA.

```
SQL> select marks from marks join student on student.rollno = marks.rollno where NAME = 'SOURAV';

    MARKS
---------
       80
```

e. List all roll no from two table (avoid duplicate roll no).

```
SQL> select rollno from marks union select rollno from student ;

    ROLLNO
----------
         1
         2
         3
         4
         5
         6
         7
        23

8 rows selected.
```

f. List all roll no which is common in both tables.

```
SQL> select rollno from marks intersect select rollno from student ;

    ROLLNO
----------
         1
         2
         3
         4
         5
         6
         7
        23

8 rows selected.
```

g. List name from student table and all marks from marks of roll no 23 in student table.

```
SQL> select name ,marks from marks join student on marks.rollno=student.rollno where student.rollno=23;

NAME                   MARKS
-------------------- ----------
SOURAV                     80
```

h. List the roll no and total marks of each roll no from mark table.

```
SQL> select  rollno ,SUM(marks) from marks  GROUP BY rollno;

    ROLLNO SUM(MARKS)
---------- ----------
         1         75
         6         50
         2         50
         4         56
         5         56
        23         80
         3         22
         7         50

8 rows selected.
```

i. Display name and roll no of students, where marks are entered in marks table.

```
SQL> select distinct(student.name),student.rollno from marks join student on       marks.rollno=student.rollno;

NAME                    ROLLNO
-------------------- ----------
SKARIA                       2
STEFFY                       4
PARVATHY                     5
SUSAN                        1
ELENA                        7
SOURAV                      23
EMILY                        6
BRITA                        3

8 rows selected.
```

j. Display the name, roll no, sex, dob, sub_code and mark of highest subject mark.

```
SQL> select student.name,student.rollno,student.sex,student.dob_date,marks.sub_code,marks.marks from student join marks on student.rollno=marks.rollno where (marks.mark
s,marks.sub_code) in (select max(marks),sub_code from marks group by sub_code);

NAME                 ROLLNO S DOB_DATE  SUB_C      MARKS
-------------------- ---------- - -------- ----- ----------
SUSAN                         1 f 11-JUL-00 cst          75
SOURAV                       23 m 10-DEC-99 cme          80
```

k. List the student name and Date of Join in format dd/mm/yy

```
SQL>  select name ,DATE_OF_JOIN from student;

NAME                 DATE_OF_J
-------------------- ---------
SUSAN                22-NOV-21
SKARIA               12-OCT-20
BRITA                22-FEB-20
STEFFY               22-FEB-21
PARVATHY             22-FEB-21
SOURAV               22-OCT-20
EMILY                22-OCT-20
ELENA                22-OCT-20

8 rows selected.
```

l. List all students joined during the year 1998

```
SQL>  select * from student where DATE_OF_JOIN like '%-%-98';

no rows selected
```

m. List the minimum mark of various students in various department having minimum mark greater than 60.

```
SQL>  select min(marks) from marks where marks>60 group by rollno;

MIN(MARKS)
----------
        75
        80
```

n. List all the students in the college other than CS Department

```
SQL> select * from student where course not in 'CSE';

    ROLLNO NAME                 S DOB_DATE  COURSE              SEM                 DATE_OF_J
---------- -------------------- - --------- ------------------- ------------------- ---------
         1 SUSAN                f 11-JUL-00 ME                  S3                  22-NOV-21
         2 SKARIA               m 15-DEC-97 MCA                 S4                  12-OCT-20
         4 STEFFY               f 20-OCT-90 MCA                 S4                  22-FEB-21
         5 PARVATHY             f 10-DEC-99 ME                  S3                  22-FEB-21
        23 SOURAV               m 10-DEC-99 ME                  S3                  22-OCT-20
         6 EMILY                f 11-JAN-99 ME                  S3                  22-OCT-20

6 rows selected.
```

o. Count the number of students in each department whose mark in greater than 60

```
SQL>   select student.course , count(student.rollno) from student join marks on marks.rollno= student.rollno where marks.marks>60 group by student.course ;

COURSE              COUNT(STUDENT.ROLLNO)
------------------- ---------------------
ME                                    2
```