

SQL FAMILIARIZATION 4

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 check(name like 'B%' OR name like 'S%' OR name like 'E%' OR name like 'P%'), sex char(1) check(sex in ('M','F')), dob varchar(10) not null, course varchar(3) check (course in('MCA','CSE','ME')), sem varchar(3) check (sem in('S3','S4')),doj varchar(10));  
Table created.
```

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, subcode char(5) not null, marks int not null check (marks>=0 AND marks<=100));  
Table created.
```

ANSWERS:

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

Ans:

```
SQL> select name from student where course='MCA' and doj >'10-OCT-1990';  
  
NAME  
-----  
Prinu Nair  
Espillon Roy  
Sourav Shah
```

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

Ans:

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

NAME
-----
Prinu Nair
Espillon Roy
Sourav Shah
```

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

Ans:

```
SQL> select name from student where name like 'E_p%';

NAME
-----
Espillon Roy
```

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

Ans:

```
SQL> select marks from marks join student on student.rollno = marks.rollno where name='Sourav Shah';

      MARKS
-----
        79
```

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

Ans;

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

      ROLLNO
-----
        15
        23
        33
        40
        45
        53
        61
        71

8 rows selected.
```

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

Ans:

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

ROLLNO
23
45
53
61
71

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

Ans:

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

NAME	MARKS
Essaiah Paul	89

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

Ans:

```
SQL> select rollno, sum(marks) from marks group by(rollno);
```

ROLLNO	SUM(MARKS)
53	209
23	89
61	92
45	75
71	135

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

Ans:

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

NAME	ROLLNO
Essaiah Paul	23
Sumayya Maheen	61
Shah Neel	71
Sourav Shah	53
Prinu Nair	45

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

Ans;

```
SQL> select student.name, student.rollno, student.sex, student.dob, marks.subcode, marks.marks from student join marks on student.rollno = marks.rollno where (marks.marks, marks.subcode) in (select max(marks), subcode from marks group by subcode);
```

NAME	ROLLNO	S	DOB	SUBCO	MARKS
Sourav Shah	53	M	31-JAN-01	MCN30	79
Essaiah Paul	23	F	30-DEC-03	CST20	89
Sumayya Maheen	61	F	16-JUL-02	CST40	92
Prinu Nair	45	M	23-APR-01	MCT10	75
Sourav Shah	53	M	31-JAN-01	MCN10	45
Sourav Shah	53	M	31-JAN-01	MCN80	85

6 rows selected.

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

Ans;

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

NAME	DOJ
Sumayya Maheen	10-NOV-20
Basil Thampi	20-NOV-20
Pranav Nair	04-AUG-18
Prinu Nair	20-DEC-10
Espillon Roy	25-JUN-15
Essaiah Paul	10-NOV-20
Sourav Shah	10-NOV-19
Shah Neel	10-NOV-95

8 rows selected.

- l. List all students joined during the year 1998

Ans:

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

ROLLNO	NAME	S	DOB	COU	SEM	DOJ
71	Shah Neel	M	13-APR-90	CSE	S4	10-NOV-98

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

Ans;

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

MIN(MARKS)
79
89
92
75
80

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

Ans:

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

ROLLNO	NAME	S	DOB	COU	SEM	DOJ
45	Prinu Nair	M	23-APR-01	MCA	S3	20-DEC-10
33	Espillon Roy	M	29-OCT-01	MCA	S4	25-JUN-15
53	Sourav Shah	M	31-JAN-01	MCA	S3	10-NOV-19

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

Ans;

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

COUNT(STUDENT.ROLLNO)
3
3