

## CS3402 Practice 5:

Given 4 tables shown below.

**Student**

s_id	s_name	s_birth	s_sex
01	ZHAO Lei	2000-01-01	Male
02	QIAN Dian	2000-12-21	Female
03	SUN Feng	2000-05-20	Male
04	LI Yun	2000-08-06	Male
05	ZHOU Mei	2001-12-01	Female
06	WU Lan	2002-03-01	Female
07	ZHENG Zhu	NULL	Female
08	WANG Jv	2001-01-20	Female
09	QIAN Dian	2001-7-15	Female

**Course**

c_id	c_name	t_id
01	Chinese	02
02	Math	01
03	English	03

**Teacher**

t_id	t_name
01	ZHANG San
02	LI Si
03	WANG Wu

**Sc**

s_id	c_id	s_Sc
01	01	80
01	02	90
01	03	99
02	01	70
02	02	60
02	03	80
03	01	80
03	02	80
03	03	90
04	01	50
04	02	30

04	03	20
05	01	76
05	02	87
06	01	31
06	03	34
07	02	89
07	03	98

1. Query male student's name.

**Answer:**

```
SELECT
    s_name
FROM
    Student
WHERE
    s_sex = 'Male';
```

2. Query the name and score of each course that 'ZHAO Lei' took.

**Answer:**

```
SELECT
    c_name, s_Sc
FROM
    Sc,
    Student,
    Course
WHERE
    Student.s_name = 'ZHAO Lei'
    AND Sc.s_id = Student.s_id
    AND Course.c_id = Sc.c_id;
```

3. Query name of students with higher grades in the '02' course than in the '03' course.

**Answer:**

```
SELECT
    s_name
FROM
    Student a,
    Sc b,
    Sc c
WHERE
    a.s_id = b.s_id
    AND a.s_id = c.s_id
    AND b.c_id = '02'
    AND c.c_id = '03'
    AND b.s_Sc > c.s_Sc;
```

4. Query the information of students whose birth date is NULL.

**Answer:**

```
SELECT
    *
FROM
    Student
WHERE
    Student.s_birth IS NULL;
```

5. Query the id of teachers surnamed 'LI'.

**Answer:**

```
SELECT
    t_id
FROM
    Teacher
WHERE
    t_name LIKE 'LI %';
```

6. Query information of students who born after '2001-01-01'.

**Answer:**

```
SELECT
    *
FROM
    Student
WHERE
    s_birth > Date('2001-01-01');
```

7. Retrieve name and '01' course score of students whose score of '01' course is less than 60, sorted in descending order of the score.

**Answer:**

```
SELECT
    a.s_name,
    b.s_Sc
FROM
    Student a,
    Sc b
WHERE
    a.s_id = b.s_id
    AND b.c_id = '01'
    AND b.s_Sc < 60
ORDER BY
    b.s_Sc DESC;
```

8. Retrieve information about students who have studied '01' course and '02' course, sorted in ascending order of the sum score of two courses.

**Answer:**

```
SELECT
    a.*,
    b.s_Sc + c.s_Sc
FROM
    Student a,
```

```

        Sc b,
        Sc c
WHERE
    a.s_id = b.s_id
    AND a.s_id = c.s_id
    AND b.c_id = '01'
    AND c.c_id = '02'
ORDER BY
    b.s_Sc + c.s_Sc ASC;

```

9. Retrieve the distinct names of students.

**Answer:**

```

SELECT
    DISTINCT s_name
FROM
    Student;

```

10. Query id of the courses that 'ZHENG Zhu' and 'SUN Feng' both took.

**Answer:**

```

SELECT
    c_id
FROM
    Sc,
    Student
WHERE
    Student.s_name = 'ZHENG Zhu'
    AND Sc.s_id = Student.s_id
INTERSECT
SELECT
    c_id
FROM
    Sc,
    Student
WHERE
    Student.s_name = 'SUN Feng'
    AND Sc.s_id = Student.s_id;

```