(1) 检索"陈迪茂"老师所教授的课程号和课程名

```sql
select oc.class_id, c.class_name
from teacher
join open_class oc on teacher.teacher_id = oc.teacher_id
join class c on oc.class_id = c.class_id
where teacher.teacher_name = '陈迪茂';
```

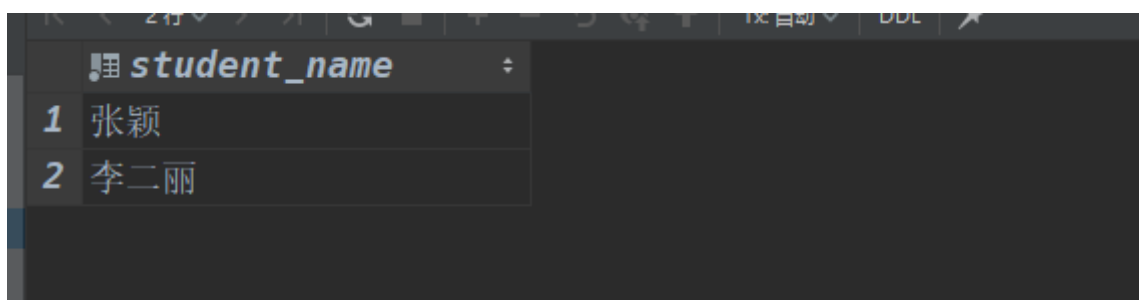| class_id	class_name
1 08305002	数据库原理
2 08305004	系统结构

(2) 检索"计算机软件"专业的全体女生的学号、姓名

```sql
select student_id, student_name
from student
join department d on student.yxh = d.yxh
where d.yxh='01' and student.gender='女';
```

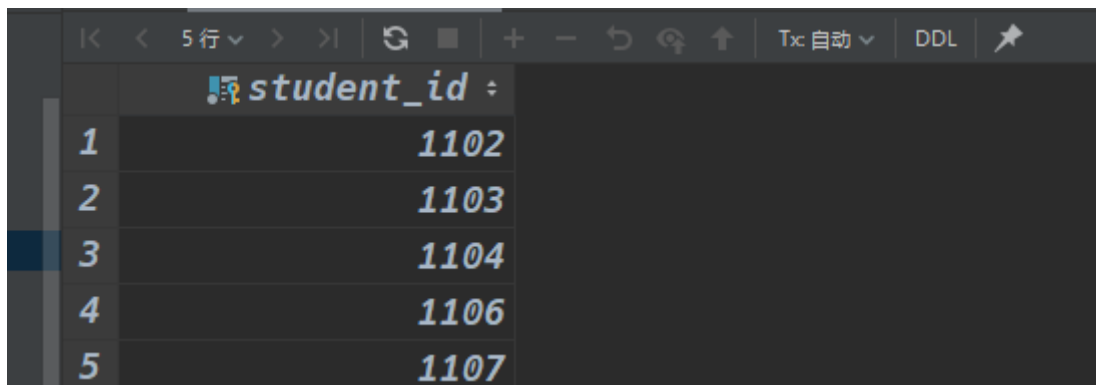| student_id	student_name
1	1103 张颖
2	1104 刘晶晶
3	1106 李二丽

(3) 检索至少选修"王晓明"老师所教授课程中一门课程在的女学生姓名

```sql
select distinct student_name from student
inner join select_class sc on student.student_id = sc.student_id
where gender = '女' and sc.class_id in (select class_id from open_class
inner join teacher t on open_class.teacher_id = t.teacher_id
where t.teacher_name= '陈迪茂');
```

student_name
1 张颖
2 李二丽

(4) 检索至少选修两门课程的学生学号

```
1  select student_id from select_class
2  group by student_id
3  having count(student_id) >= 2;
```
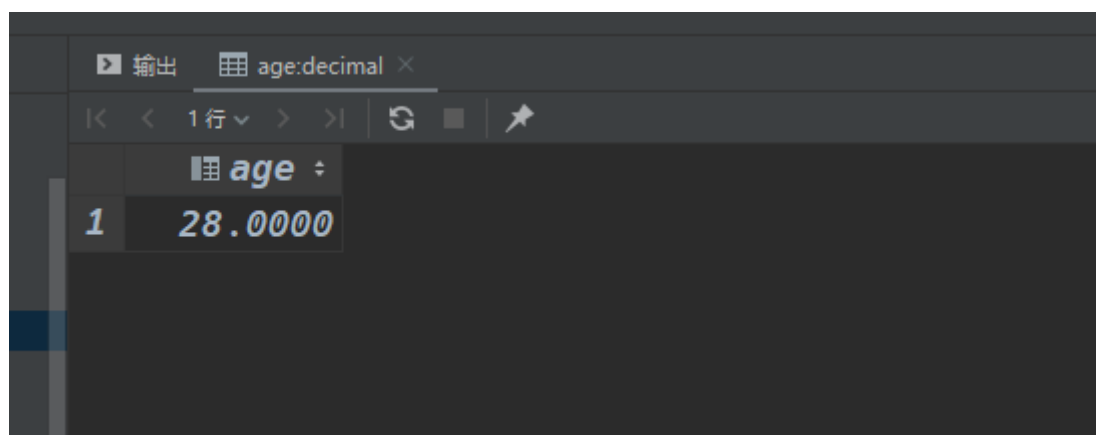

(5) 求选修通信课程的学生的平均年龄

```
1  select avg(TIMESTAMPDIFF(YEAR, birthday, CURDATE()))as age from select_class
   sc
2  left join student s on sc.student_id = s.student_id
3  left join class c on sc.class_id = c.class_id
4  where class_name = '通信学';
```


(6) 求"马小红"老师所教授课程的每门课程的平均成绩

```
1  select avg(score) from select_class
2  group by class_id
3  having class_id in (select distinct class_id from open_class
4  inner join teacher t on open_class.teacher_id = t.teacher_id
5  where teacher_name = '马小红');
```

`avg(score)`
75.8333
74.3333
81.5000

(7) 检索姓"刘"的所有的"计算机学院"的学生的姓名和年龄

```sql
select student_name , TIMESTAMPDIFF(YEAR, birthday, CURDATE()) as age from student
where left(student_name,1) = '刘' and yxh = (select yxh from department
where depart_name = '计算机学院');
```


student_name	age
刘晓明	30
刘晶晶	28
刘成刚	31

(8) 在SC表中检索成绩为空值的学生学号与课程号

```sql
select student_id, class_id from select_class
where select_class.score is null;
```


student_id	class_id
1102	08305004
1103	08305001
1103	08305004
1104	08302001
1107	08305004