

## 表结构预览

--学生表

Student(SId,Sname,Sage,Ssex)

--SId 学生编号,Sname 学生姓名,Sage 出生年月,Ssex 学生性别

--课程表

Course(CId,Cname,TId)

--CId 课程编号,Cname 课程名称,TId 教师编号

--教师表

Teacher(TId,Tname)

--TId 教师编号,Tname 教师姓名

--成绩表

SC(SId,CId,score)

--SId 学生编号,CId 课程编号,score 分数

## 题目

1、查询“01”课程比“02”课程成绩高的所有学生的学号；

```
1 select distinct t1.sid as sid
2 from
3     (select * from sc where cid='01')t1
4 left join
5     (select * from sc where cid='02')t2
6 on t1.sid=t2.sid
7 where t1.score>t2.score
```

2、查询平均成绩大于60分的同学的学号和平均成绩；

```
1 select
2     sid
3     ,avg(score)
4 from sc
5 group by sid
6 having avg(score)>60)
```

3、查询所有同学的学号、姓名、选课数、总成绩

```
1 select
```

```
2      student.sid as sid
3      ,sname
4      ,count(distinct cid) course_cnt
5      ,sum(score) as total_score
6  from student
7  left join sc
8  on student.sid=sc.sid
9  group by sid,sname
```

4、查询姓“李”的老师的个数；

```
1  select
2      count(distinct tid) as teacher_cnt
3  from teacher
4  where tname like '李%'
```

5、查询没学过“张三”老师课的同学的学号、姓名；

```
1  select
2      sid,sname
3  from student
4  where sid not in
5      (
6          select
7              sc.sid
8          from teacher
9          left join course
10             on teacher.tid=course.tid
11          left join sc
12             on course.cid=sc.cid
13          where teacher.tname='张三'
14      )
```

6、查询学过“01”并且也学过编号“02”课程的同学的学号、姓名；

```
1  select
2      t.sid as sid
3      ,sname
4  from
5      (
```

```

6      select
7          sid
8          ,count(if(cid='01',score,null)) as count1
9          ,count(if(cid='02',score,null)) as count2
10     from sc
11     group by sid
12     having count(if(cid='01',score,null))>0 and count(if(cid='02',score,n
13 )t
14 left join student
15     on t.sid=student.sid

```

7、查询学过“张三”老师所教的课的同学的学号、姓名；

```

1  select
2      student.sid
3      ,sname
4  from
5      (
6          select
7              distinct cid
8          from course
9          left join teacher
10             on course.tid=teacher.tid
11             where teacher.tname='张三'
12      )course
13 left join sc
14     on course.cid=sc.cid
15 left join student
16     on sc.sid=student.sid
17 group by student.sid,sname

```

8、查询课程编号“01”的成绩比课程编号“02”课程低的所有同学的学号、姓名；

```

1  select
2      t1.sid,sname
3  from
4      (
5          select distinct t1.sid as sid
6          from

```

```

7         (select * from sc where cid='01')t1
8     left join
9         (select * from sc where cid='02')t2
10    on t1.sid=t2.sid
11    where t1.score>t2.score
12 )t1
13 left join student
14    on t1.sid=student.sid

```

9、查询所有课程成绩小于60分的同学的学号、姓名；

```

1  select
2      t1.sid,sname
3  from
4      (
5          select
6              sid,max(score)
7          from sc
8          group by sid
9          having max(score)<60)
10 )t1
11 left join student
12    on t1.sid=student.sid

```

10、查询没有学全所有课的同学的学号、姓名；

```

1  select
2      t1.sid,sname
3  from
4      (
5          select
6              count(cid),sid
7          from sc
8          group by sid
9          having count(cid) < (select count(distinct cid) from course)
10 )t1
11 left join student
12    on t1.sid=student.sid

```

11、查询至少有一门课与学号为“01”的同学所学相同的同学的学号和姓名；

```

1  select
2      distinct sc.sid
3  from
4      (
5          select
6              cid
7          from sc
8          where sid='01'
9      )t1
10 left join sc
11     on t1.cid=sc.cid

```

## 12、查询和"01"号的同学学习的课程完全相同的其他同学的学号和姓名

```

1  #注意是和'01'号同学课程完全相同但非学习课程数相同的,这里我用左连接解决这个问题
2  select
3      t1.sid,sname
4  from
5      (
6          select
7              sc.sid
8              ,count(distinct sc.cid)
9          from
10             (
11                 select
12                     cid
13                 from sc
14                 where sid='01'
15             )t1 #选出01的同学所学的课程
16         left join sc
17             on t1.cid=sc.cid
18         group by sc.sid
19         having count(distinct sc.cid)=
20             (select count(distinct cid) from sc where sid = '01')
21     )t1
22 left join student
23     on t1.sid=student.sid
24 where t1.sid!='01'

```

#### 14、查询没学过"张三"老师讲授的任一门课程的学生姓名

```
1  select
2      sname
3  from student
4  where sid not in
5      (
6          select
7              distinct sid
8          from sc
9          left join course
10             on sc.cid=course.cid
11          left join teacher
12             on course.tid=teacher.tid
13          where tname='张三'
14      )
```

#### 15、查询两门及其以上不及格课程的同学的学号，姓名及其平均成绩

```
1  select
2      t1.sid,sname,avg_score
3  from
4      (
5          select
6              sid,count(if(score<60,cid,null)),avg(score) as avg_score
7          from sc
8          group by sid
9          having count(if(score<60,cid,null)) >=2
10     )t1
11 left join student
12     on t1.sid=student.sid
```

#### 16、检索"01"课程分数小于60，按分数降序排列的学生信息

```
1  select
2      sid,if(cid='01',score,100)
3  from sc
4  where if(cid='01',score,100)<60
5  order by if(cid='01',score,100) desc
```

## 17、按平均成绩从高到低显示所有学生的平均成绩

```
1 select sid,avg(score)
2 from sc
3 group by sid
4 order by avg(score) desc
```

## 18、查询各科成绩最高分、最低分和平均分：以如下形式显示：课程ID，课程name，最高分，最低分，平均分，及格率

```
1 select
2     sc.cid
3     ,cname
4     ,max(score) as max_score
5     ,min(score) as min_score
6     ,avg(score) as avg_score
7     ,count(if(score>=60,sid,null))/count(sid) as pass_rate
8 from sc
9 left join course
10     on sc.cid=course.cid
11 group by sc.cid
```

## 19、按各科平均成绩从低到高和及格率的百分数从高到低顺序

```
1 #这里先按照平均成绩排序，再按照及格百分数排序，题目有点奇怪
2 select
3     cid
4     ,avg(score) as avg_score
5     ,count(if(score>=60,sid,null))/count(sid) as pass_rate
6 from sc
7 group by cid
8 order by avg_score,pass_rate desc
```

## 20、查询学生的总成绩并进行排名

```
1 select
2     sid
3     ,sum(score) as sum_score
4 from sc
```

```
5 group by sid
6 order by sum_score desc
```

## 21、查询不同老师所教不同课程平均分从高到低显示

```
1 select
2     tid
3     ,avg(score) as avg_score
4 from course
5 left join sc
6     on course.cid=sc.cid
7 group by tid
8 order by avg_score desc
```

## 22、查询所有课程的成绩第2名到第3名的学生信息及该课程成绩

```
1 select
2     sid,rank_num,score,cid
3 from
4     (
5         select
6             rank() over(partition by cid order by score desc) as rank_num
7             ,sid
8             ,score
9             ,cid
10        from sc
11    )t
12 where rank_num in (2,3)
```

## 23、统计各科成绩各分数段人数：课程编号,课程名称,[100-85],[85-70],[70-60],[0-60]及所占百分比

```
1 select
2     sc.cid
3     ,cname
4     ,count(if(score between 85 and 100,sid,null))/count(sid)
5     ,count(if(score between 70 and 85,sid,null))/count(sid)
6     ,count(if(score between 60 and 70,sid,null))/count(sid)
7     ,count(if(score between 0 and 60,sid,null))/count(sid)
```



```
8  from sc
9  left join course
10      on sc.cid=course.cid
11  group by sc.cid,cname
```

## 24、查询学生平均成绩及其名次

```
1  select
2      sid
3      ,avg_score
4      ,rank() over (order by avg_score desc)
5  from
6      (
7          select
8              sid
9              ,avg(score) as avg_score
10         from sc
11         group by sid
12     )t
```

## 25、查询各科成绩前三名的记录

```
1  select
2      sid,cid,rank1
3  from
4      (
5          select
6              cid
7              ,sid
8              ,rank() over(partition by cid order by score desc) as rank1
9          from sc
10     )t
11  where rank1<=3
```

## 26、查询每门课程被选修的学生数

```
1  select
2      count(sid)
3      ,cid
4  from sc
```

```
5 group by cid
```

## 27、查询出只选修了一门课程的全部学生的学号和姓名

```
1 #只查出来sid即可，后面懒得交student表
2 select
3     sid
4 from sc
5 group by sid
6 having count(cid) =1
```

## 28、查询男生、女生人数

```
1 select
2     ssex
3     ,count(distinct sid)
4 from student
5 group by ssex
```

## 29、查询名字中含有"风"字的学生信息

```
1 select
2     sid,sname
3 from student
4 where sname like '%风%'
```

## 30、查询同名同性学生名单，并统计同名人数

```
1 #题目有歧义，这套题的质量感觉有点差
2 select
3     ssex
4     ,sname
5     ,count(sid)
6 from student
7 group by ssex,sname
8 having count(sid)>=2
```

## 31、查询1990年出生的学生名单(注：Student表中Sage列的类型是datetime)

```
1 select
2     sid,sname,sage
3 from student
4 where year(sage)=1990
```

32、查询每门课程的平均成绩，结果按平均成绩升序排列，平均成绩相同时，按课程号降序排列

```
1 select
2     cid,avg(score) as avg_score
3 from sc
4 group by cid
5 order by avg_score,cid desc
```

37、查询不及格的课程，并按课程号从大到小排列

```
1 #有问题的题目
2 select
3     cid,sid,score
4 from sc
5 where score<60
6 order by cid desc,sid
```

38、查询课程编号为"01"且课程成绩在60分以上的学生的学号和姓名；

```
1 select
2     sid,cid,score
3 from sc
4 where cid='01' and score>60
```

40、查询选修“张三”老师所授课程的学生中，成绩最高的学生姓名及其成绩

```
1 select
2     sc.sid,sname,cname,score
3 from sc
```

```
4 left join course
5     on sc.cid=course.cid
6 left join teacher
7     on course.tid=teacher.tid
8 left join student
9     on sc.sid=student.sid
10 where tname='张三'
11 order by score desc
12 limit 1;
```

#### 42、查询每门功课成绩最好的前两名

```
1  ##感觉题目重复了
2  select
3      cid,sid,rank1
4  from
5      (
6          select
7              cid
8              ,sid
9              ,rank() over(partition by cid order by score desc) as rank1
10         from sc
11     )t
12  where rank1 <=2
```

#### 43、统计每门课程的学生选修人数（超过5人的课程才统计）。要求输出课程号和选修人数，查询结果按人数降序排列，若人数相同，按课程号升序排列

```
1  select
2      cid
3      ,count(sid) as cnt
4  from sc
5  group by cid
6  having cnt>=5
7  order by count(sid) desc,cid
```

#### 44、检索至少选修两门课程的学生学号

```
1 select
2     sid
3     ,count(cid)
4 from sc
5 group by sid
6 having count(cid)>=2
```

#### 45、查询选修了全部课程的学生信息

```
1 #不太严谨，但实务中应该没问题，如需严谨见12题思路
2 select
3     sid
4     ,count(cid)
5 from sc
6 group by sid
7 having count(cid)=(select count(distinct cid) from sc)
```

#### 46、查询各学生的年龄

```
1 select
2     sid,sname,year(curdate())-year(sage) as sage
3 from student
```

#### 47、查询本周过生日的学生

```
1 select
2     sid,sname,sage
3 from student
4 where weekofyear(sage)=weekofyear(curdate())
```

#### 48、查询下周过生日的学生

```
1 select
2     sid,sname,sage
3 from student
4 where weekofyear(sage) = weekofyear(date add(curdate(),interval 1 week))
```

#### 49、查询本月过生日的学生

```
1 select
2     sid,sname,sage
3 from student
4 where month(sage) = month(curdate())
```

#### 50、查询下月过生日的学生

```
1 select
2     sid,sname,sage
3 from student
4 where month(date_sub(sage,interval 1 month)) = month(curdate())
```