**复杂SQL(答案)**

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| **笔记本:** | 数据库系统助教 | | |
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SQL例题:
查询课程名称为「数学」，且分数低于 60 的学生姓名和分数:
select student.sname, sc.score from student, sc, course
where student.sid = sc.sid
and course.cid = sc.cid
and course.cname = "数学"
and sc.score < 60;

查询本月份过生日的同学名单:
select *
from student
where extract(month from Student.Sage)=extract(month from now());

查询下个月过生日的学生名单:
select *
from student
where extract(month from student.Sage)=extract(month from (now()::timestamp+'1 month'));

查询有数学成绩的学生信息:
select * from student
where exists (select sc.sid from sc,course where student.sid = sc.sid  and sc.cid =  course.cid and course.cname='数
学');

成绩不重复，查询选修「张三」老师所授课程的学生中，成绩最高的学生信息及其成绩:
select student.*, sc.score, sc.cid from student, teacher, course,sc
where teacher.tid = course.tid
and sc.sid = student.sid
and sc.cid = course.cid
and teacher.tname = '张三'
order by score desc
limit 1;

查询没有学全部课程（语数外）的学生的信息:
select * from student
where student.sid not in (
select sc.sid from sc
group by sc.sid
having count(sc.cid)= (select count(cid) from course));

统计各科成绩各分数段人数: 课程名称，课程编号，[100-85]，[85-70]，[70-60]，[60-0] 及所占百分
select course.cname, r.*
from course ,(
select sc.cid as id,
sum(case when sc.score<=100 and sc.score>85 then 1 else 0 end) as "[100-85]",
sum(case when sc.score<=85 and sc.score>70 then 1 else 0 end) as "[85-70]",
sum(case when sc.score<=70 and sc.score>60 then 1 else 0 end) as "[70-60]",
sum(case when sc.score<=60 and sc.score>0 then 1 else 0 end) as "[60-0]"
from sc left join course
on sc.cid = course.cid
group by sc.cid) r
where course.cid = r.id;

查询平均成绩大于等于 80(且单科大于70) 的同学的学生编号和学生姓名和平均成绩
select student.SId,sname,ss from student,(
select SId, AVG(score) as ss from sc
GROUP BY SId
HAVING AVG(score)> 80 and min(score)>70)r
where student.sid = r.sid;

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
select student.sname, r.*
from student, (
select sid as id,avg(score)
from sc
where sc.score < 60
group by sc.sid
having count(1)>1) r
where r.id = student.sid;

查询每门课程的平均成绩，结果按平均成绩降序排列，平均成绩相同时，按课程编号升序排列:
select sc.cid, course.cname, AVG(SC.SCORE) as average
from sc, course
where sc.cid = course.cid
group by sc.cid
order by average desc,cid asc;

查询有一门成绩大于90(且没有挂科: >= 60) 的同学的学生编号和学生姓名和平均成绩
select distinct student.sname from
student, sc, (select sc.sid as id
from sc
group by sc.sid
having avg(sc.score)>=60) r1
where student.sid = r1.id and r1.id in (select distinct sc.sid from sc where score >=90);


查询各科成绩前三名的记录:
select * from sc
where (
select count(*) from sc as a
where sc.cid = a.cid and sc.score<a.score)< 3
order by cid asc, sc.score desc;