Student(Sid,Sname,Sage,Ssex)学生表

Sid：学号

Sname：学生姓名

Sage：学生年龄

Ssex：学生性别

Course(Cid,Cname,T#)课程表

Cid：课程编号

Cname：课程名称

Tid：教师编号

SC(Sid,Cid,score)成绩表

Sid：学号

Cid：课程编号

score：成绩

Teacher(Tid,Tname)教师表

Tid：教师编号：

Tname：教师名字

1、查询“001”课程比“002”课程成绩高的所有学生的学号

select a.sid from

(select sid,score from sc where cid='001')a,

(select sid,score from sc where cid='002')b

where a.sid = b.sid and a.score>b.score;

2、查询平均成绩大于60分的同学的学号和平均成绩

select sid,avg(score) from sc group by sid having avg(score)>60;

3、查询所有同学的学号、姓名、选课数、总成绩

select s.sid,s.sname,count\_cid as 选课数,

sum\_score as 总成绩

from student s

left join

(select sid,count(cid) as count\_cid,sum(score) as sum\_score

from sc group by sid )sc

on s.sid = sc.sid;

4、查询姓‘李’的老师的个数：

select count(tname) from teacher where tname like '李%';

5、查询没有学过“叶平”老师可的同学的学号、姓名：

select s.sid,s.sname

from student as s

where s.sid not in (

select DISTINCT sid

from sc as sc

where sc.cid in (

select cid

from course as c

left join teacher as t on c.tid = t.tid

where t.tname = '叶平')

);

6、查询学过“叶平”老师所教的所有课的同学的学号、姓名：

select s.sid,s.sname

from student as s

where s.sid in (

select distinct sc.sid

from sc as sc

where sc.cid in (

select cid

from course as c

left join teacher as t on c.tid = t.tid

where t.tname = '叶平')

group by sc.sid

HAVING count(cid)=

(select count(cid)

from course as c left join teacher as t on c.tid = t.tid

where t.tname = '叶平')

);

7、查询学过“011”并且也学过编号“002”课程的同学的学号、姓名：

SELECT s.sid,s.sname

from student as s

left join sc as sc on s.sid = sc.sid

where sc.cid = '001'

and EXISTS(

select \* from sc as sc\_2

where sc.sid = sc\_2.sid

and sc\_2.cid='002');

select s.sid,s.sname

from student as s

left join sc as sc

on sc.sid = s.sid

where sc.cid = '001'

and s.sid in (

select sid from sc as sc\_2

where sc\_2.cid='002'

and sc\_2.sid = sc.sid);

8、查询课程编号“002”的成绩比课程编号“001”课程低的所有同学的学号、姓名：

select sid,sname

from (select student.sid,student.sname,score,

(select score from sc as sc\_2

where sc\_2.sid = student.sid

and sc\_2.cid = '002') as score2

from student,sc

where student.sid=sc.sid and cid = '001') s\_2

where score2<score;

9、查询所有课程成绩小于60的同学的学号、姓名：

select sid,sname

from student

where sid not in

(select s.sid

from student s,sc

where s.sid=sc.sid and score>60 );

select sid,sname

from student s

where not EXISTS (

select s.sid from sc

where sc.sid = s.sid and sc.score>60);

10、查询没有学全所有课的同学的学号、姓名：

select s.sid,s.sname

from student s ,sc sc

where s.sid = sc.sid

group by s.sid,s.sname

having count(sc.cid)<(

select count(cid)

from course);

select s.sid,s.sname

from student s

right join sc sc on s.sid = sc.sid

group by s.sid,s.sname

having count(sc.cid)<

(select count(cid) from course);

11、查询至少有一门课与学号为“1001”同学所学相同的同学的学号和姓名：

select student.sid,sname

from student,sc

where student.sid = sc.sid

and cid in

(select cid from sc where sid='1001');

select s.sid,s.sname

from sc sc left join student as s

on sc.sid = s.sid

where sc.cid in (select cid from sc where sid='1001');

select sc\_1.sid,s.sname

from sc sc\_1 left join student as s

on sc\_1.sid = s.sid

where

exists (select sc\_2.cid from sc as sc\_2

where sc\_1.cid = sc\_2.cid

and sc\_2.sid = '1001');

12、查询至少学过学号为“001”同学所有一门课的其他同学学号和姓名；

13、把“SC”表中“叶平”老师教的课的成绩都更改为此课程的平均成绩：

update sc set score =

(select avg(sc\_2.score) from sc sc\_2

where sc\_2.cid = sc.cid)

where cid in

(select c.cid from course c

left join teacher t on t.tid = c.tid

where t.tname = '叶平');

14、查询和“1002”号的同学学习的课程完全相同的其他同学学号和姓名：

select sc\_1.sid from (select cid from sc where sid='1002')a

left join sc sc\_1 on a.cid = sc\_1.cid

where sc\_1.sid<>'1002'

group by sc\_1.sid

having count(sc\_1.cid) =

(select count(cid) from sc where sid='1002');

select a.sid,s.sname from

(select sid,GROUP\_CONCAT(cid order by cid separator ',') as cid\_str

from sc where sid='1002')b,

(select sid,GROUP\_CONCAT(cid order by cid separator ',') as cid\_str

from sc group by sid)a

left join student s

on a.sid = s.sid

where a.cid\_str = b.cid\_str and a.sid<>'1002';

15、删除学习“叶平”老师课的SC表记录：

delete from sc WHERE

cid in (

select c.cid from course c

LEFT JOIN teacher t on c.tid=t.tid

where t.tname = '叶平');

16、向SC表中插入一些记录，这些记录要求符合以下条件：没有上过编号“003”课程的同学学号、002号课的平均成绩：

insert into sc select sid,'002',

(select avg(score) from sc where cid='0022')

from student

where sid not in (select sid from sc where cid='002');

17、按平均成绩从高到低显示所有学生的“数据库”、“企业管理”、“英语”三门的课程成绩，按如下形式显示：学生ID，数据库，企业管理，英语，有效课程数，有效平均分：

select sid as 学生id,

(SELECT score from sc

where sc.sid = t.sid and cid='004') as 数据库,

(select score from sc

where sc.sid = t.sid and cid='001') as 企业管理,

(select score from sc

where sc.sid = t.sid and cid='015') as 英语,

count(cid) as 有效课程数, avg(t.score) as 平均成绩

from sc as t

group by sid

order by avg(t.score);

18、查询各科成绩最高和最低的分：以如下的形式显示：课程ID，最高分，最低分

select l.cid as 课程id,l.score as 最高分,

r.score as 最低分

from sc l,sc r

where l.cid = r.cid

and l.score =

(select max(t.score) from sc t

where l.cid = t.cid group by t.cid)

and r.score = (select min(t.score) from sc t

where r.cid = t.cid group by t.cid)

order by l.cid;

select cid as 课程id,max(score) as 最高分,

min(score) as 最低分

from sc

group by 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：

SELECT t.cid as 课程号,

c.cname as 课程名,

COALESCE(avg(score),0) as 平均成绩,

100\*sum(case

when COALESCE(score,0)>=60

then 1 else 0 END)/count(\*) as 及格百分数

from sc t

left join course c

on t.cid = c.cid

group by t.cid

order by 100\*sum(case

when COALESCE(score,0)>=60

then 1 else 0 END)/count(\*);

20、查询如下课程平均成绩和及格率的百分数(用”1行”显示): 企业管理（001），马克思（002），OO&UML （003），数据库（004）：

21、查询不同老师所教不同课程平均分从高到低显示：

select t.tid as 教师id, t.tname as 教师姓名, sc.cid as 课程id,

avg(score) as 平均成绩from sc as sc

left join course c on sc.cid = c.cid

left join teacher t on c.tid = t.tid

group by sc.cid

order by avg(sc.score) desc;

22、查询如下课程成绩第3名到第6名的学生成绩单：企业管理(001)，马克思(002)，UML(003)，数据库(004)：

23、统计下列各科成绩，各分数段人数：课程ID，课程名称，[100-85],[85-70],[70-60],[ 小于60] ：

select sc.cid as 课程id,cname as 课程名称,

sum(case when score between 85 and 100 then 1 else 0 end) as '[100-85]',

sum(case when score between 70 and 85 then 1 else 0 end) as '[85-70]',

sum(case when score between 60 and 70 then 1 else 0 end) as '[70-60]',

sum(case when score<60 then 1 else 0 end) as '[60-0]'

from sc as sc

left join course as c

on sc.cid = c.cid

group by sc.cid;

24、查询学生平均成绩及其名次：

select 1+(select count(distinct 平均成绩)

from (select sid,avg(score) as 平均成绩

from sc group by sid)t1

where 平均成绩>t2.平均成绩) as 名次,

sid as 学生学号,平均成绩

from (select sid,avg(score) 平均成绩 from sc group by sid) as t2

order by 平均成绩 desc;

25、查询各科成绩前三名的记录（不考虑成绩并列情况）：

select sid,cid,score from sc sc\_1

where (

select count(3) from sc sc\_2

where sc\_1.cid = sc\_2.cid

and sc\_2.score>=sc\_1.score)<=2

order by sc\_1.cid

);

26、查询每门课程被选修的学生数：

select cid, count(sid) from sc group by cid;

27、查询出只选修一门课程的全部学生的学号和姓名：

select sc.sid,s.sname, count(sc.cid) as 课程数

from sc as sc

left join student as s

on sc.sid = s.sid

group by sc.sid

having count(sc.cid)=1;

28、查询男生、女生人数：

select count(ssex) as 男生人数from student

group by ssex

having ssex = '男';

select count(2) from student

where ssex = '女';

29、查询姓“张”的学生名单：

select sid, sname from student where sname like '张%';

30、查询同名同姓的学生名单，并统计同名人数：

select sname,count(8) from student group by sname having count(8)>1;

31、1981年出生的学生名单（注：student表中sage列的类型是datetime）:

32、查询平均成绩大于85的所有学生的学号、姓名和平均成绩：

select s.sname,sc.sid,avg(sc.score) as 平均成绩from sc as sc

left join student as s

on sc.sid = s.sid

group by sc.sid

having avg(sc.score)>85;

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

select cid,avg(score) from sc group by cid order by avg(score),cid desc;

34、查询课程名称为“数据库”，且分数低于60的学生名字和分数：

select c.cname,s.sid,s.sname,sc.score from course c

left join sc on sc.cid = c.cid

left join student s on s.sid = sc.sid

where c.cname = '数据库' and sc.score<60;

35、查询所有学生的选课情况：

select sc.sid,sc.cid,s.sname,c.cname from sc

left join course c on sc.cid = c.cid

left join student s on sc.sid = s.sid;

36、查询任何一门课程成绩在70分以上的姓名、课程名称和分数：

select distinct s.sid,s.sname,sc.cid,sc.score from sc

left join student s on sc.sid = s.sid

left join course c on sc.cid = c.cid

where sc.score>70;

37、查询不及格的课程，并按课程号从大到小的排列：

select cid from sc where score<60 order by cid;

38、查询课程编号为“003”且课程成绩在80分以上的学生的学号和姓名：

select sc.sid, s.sname from sc left join student s on sc.sid = s.sid

where sc.cid = '003' and sc.score>80;

39、求选了课程的学生人数：

select count(2) from (select distinct sid from sc)a;

40、查询选修“叶平”老师所授课程的学生中，成绩最高的学生姓名及其成绩：

select s.sname,sc.score

from sc sc

left join student s on sc.sid = s.sid

left join course c on sc.cid = c.cid

left join teacher t on c.tid = t.tid

where t.tname = '叶平'

and sc.score = (

select max(score)

from sc sc\_1

where sc.cid = sc\_1.cid);

41、查询各个课程及相应的选修人数：

select cid,count(\*) from sc group by cid;

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42、查询不同课程成绩相同的学生和学号、课程号、学生成绩：

select DISTINCT a.sid,a.cid,a.score

from sc as a ,sc as b

where a.score = b.score

and a.cid <> b.cid;

43、查询每门课程成绩最好的前两名：

44、统计每门课程的学生选修人数(超过10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序，若人数相同，按课程号升序排序：

select cid as 课程号,count(8) as 选修人数

from sc

group by cid

HAVING count(sid)>10

order by count(8) desc,cid;

45、检索至少选修两门课程的学生学号：

select sid from sc group by sid having count(8)>=2;

46、查询全部学生选修的课程和课程号和课程名：

select cid,cname

from course

where cid in (select cid from sc group by cid);

47、查询没学过”叶平”老师讲授的任一门课程的学生姓名：

select sname

from student

where sid not in (

select sid

from sc,course,teacher

where course.tid = teacher.tid and sc.cid = course.cid

and teacher.tname='叶平'

);

48、查询两门以上不及格课程的同学的学号以及其平均成绩：

select sid,avg(COALESCE(score,0))

from sc

where sid in (

select sid

from sc

where score<60

group by sid

having count(8)>2

)

group by sid;

49、检索“004”课程分数小于60，按分数降序排列的同学学号：

select sid,score from sc where cid='004' and score<60 order by score desc;

50、删除“002”同学的“001”课程的成绩：

delete from sc where sid = '002' and cid = '001';