# sql练习题

一、已知有如下表，请用sql语句在mysql里建立相应的表

表1 学生表（student）

|  |  |  |  |
| --- | --- | --- | --- |
| 列名 | 意义 | 类型 | 约束 |
| sno | 学号 | varchar(3) | 主键 |
| sname | 姓名 | varchar(4) | 非空 |
| ssex | 性别 | varchar(2) |  |
| sbirthday | 生日 | datetime |  |
| class | 班级编号 | varchar(5) | 非空 |

表2 课程表（course）

|  |  |  |  |
| --- | --- | --- | --- |
| 列名 | 意义 | 类型 | 约束 |
| cno | 课程号 | varchar(5) | 主键 |
| cname | 课程名 | varchar(10) | 非空 |
| tno | 教师编号 | varchar(10) | 非空 |

(

表3 成绩表(grade)sname

|  |  |  |  |
| --- | --- | --- | --- |
| 列名 | 意义 | 类型 | 约束 |
| sno | 学号 | varchar(3) | 主键 |
| cno | 课程号 | varchar(5) | 主键 |
| degree | 分数 | numeric(3) | 非空 |

表4 教师表(teacher)

|  |  |  |  |
| --- | --- | --- | --- |
| 列名 | 意义 | 类型 | 约束 |
| tno | 教师编号 | varchar(3) | 主键 |
| tname | 教师姓名 | varchar(10) | 非空 |
| tsex | 性别 | varchar(2) |  |
| tbirthday | 生日 | datetime |  |
| prof | 职称 | varchar(6) | 非空 |
| depart | 系 | varchar(10) | 非空 |

表5 等级表(rank)

|  |  |  |  |
| --- | --- | --- | --- |
| 列名 | 意义 | 类型 | 约束 |
| down | 分数下届 | numeric(3) | 非空 |
| up | 分数上界 | numeric(3) | 非空 |
| rank | 级别 | varchar(1) | 主键 |

二、将如下数据插入到表里

INSERT INTO STUDENT (SNO,SNAME,SSEX,SBIRTHDAY,CLASS) VALUES (108 ,'曾华' ,'男' , '1977-09-01',95033);

INSERT INTO STUDENT (SNO,SNAME,SSEX,SBIRTHDAY,CLASS) VALUES (105 ,'匡明' ,'男' , '1975-10-02',95031);

INSERT INTO STUDENT (SNO,SNAME,SSEX,SBIRTHDAY,CLASS) VALUES (107 ,'王丽' ,'女' , '1976-01-23',95033);

INSERT INTO STUDENT (SNO,SNAME,SSEX,SBIRTHDAY,CLASS) VALUES (101 ,'李军' ,'男' , '1976-02-20',95033);

INSERT INTO STUDENT (SNO,SNAME,SSEX,SBIRTHDAY,CLASS) VALUES (109 ,'王芳' ,'女' , '1975-02-10',95031);

INSERT INTO STUDENT (SNO,SNAME,SSEX,SBIRTHDAY,CLASS) VALUES (103 ,'陆君' ,'男' , '1974-06-03',95031);

INSERT INTO COURSE(CNO,CNAME,TNO) VALUES ('3-105' ,'计算机导论', '825')

INSERT INTO COURSE(CNO,CNAME,TNO) VALUES ('3-245' ,'操作系统' , '804');

INSERT INTO COURSE(CNO,CNAME,TNO) VALUES ('6-166' ,'数据电路' , '856');

INSERT INTO COURSE(CNO,CNAME,TNO) VALUES ('9-888' ,'高等数学' , '100');

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES ('103','3-245',86);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (105,'3-245',75);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (109,'3-245',68);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (103,'3-105',92);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (105,'3-105',88);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (109,'3-105',76);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (101,'3-105',64);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (107,'3-105',91);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (108,'3-105',78);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (101,'6-166',85);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (107,'6-106',79);

INSERT INTO GRADE(SNO,CNO,DEGREE)VALUES (108,'6-166',81);

INSERT INTO TEACHER(TNO,TNAME,TSEX,TBIRTHDAY,PROF,DEPART)

VALUES (804,'李诚','男','1958-12-02','副教授','计算机系');

INSERT INTO TEACHER(TNO,TNAME,TSEX,TBIRTHDAY,PROF,DEPART)

VALUES (856,'张旭','男','1969-03-12','讲师','电子工程系');

INSERT INTO TEACHER(TNO,TNAME,TSEX,TBIRTHDAY,PROF,DEPART)

VALUES (825,'王萍','女','1972-05-05','助教','计算机系');

INSERT INTO TEACHER(TNO,TNAME,TSEX,TBIRTHDAY,PROF,DEPART)

VALUES (831,'刘冰','女','1977-08-14','助教','电子工程系');

insert into rank(down,up,rank) values(90,100,'A');

insert into rank(down,up,rank) values(80,89,'B');

insert into rank(down,up,rank) values(70,79,'C');

insert into rank(down,up,rank) values(60,69,'D');

insert into rank(down,up,rank) values(0,59,'E');

三、sql语句练习

1、 查询Student表中的所有记录的Sname、Ssex和Class列。

mysql> select sname,ssex,class from student;

+--------+------+-------+

| sname | ssex | class |

+--------+------+-------+

| 李军 | 男 | 95033 |

| 陆君 | 男 | 95031 |

| 匡明 | 男 | 95031 |

| 王丽 | 女 | 95033 |

| 曾华 | 男 | 95033 |

| 王芳 | 女 | 95031 |

+--------+------+-------+

6 rows in set (0.00 sec)

2、 查询教师所有的单位即不重复的Depart列。

mysql> select distinct depart from teacher;

+-----------------+

| depart |

+-----------------+

| 计算机系 |

| 电子工程系 |

+-----------------+

2 rows in set (0.01 sec)

3、 查询Student表的所有记录。

mysql> select \* from student;

+-----+--------+------+---------------------+-------+

| sno | sname | ssex | sbirthday | class |

+-----+--------+------+---------------------+-------+

| 101 | 李军 | 男 | 1976-02-20 00:00:00 | 95033 |

| 103 | 陆君 | 男 | 1974-06-03 00:00:00 | 95031 |

| 105 | 匡明 | 男 | 1975-10-02 00:00:00 | 95031 |

| 107 | 王丽 | 女 | 1976-01-23 00:00:00 | 95033 |

| 108 | 曾华 | 男 | 1977-09-01 00:00:00 | 95033 |

| 109 | 王芳 | 女 | 1975-02-10 00:00:00 | 95031 |

+-----+--------+------+---------------------+-------+

6 rows in set (0.00 sec)

4、 查询Grade表中成绩在60到80之间的所有记录。

mysql> select \* from grade where degree between 60 and 80;

+-----+-------+--------+

| sno | cno | degree |

+-----+-------+--------+

| 101 | 3-105 | 64 |

| 105 | 3-245 | 75 |

| 107 | 6-106 | 79 |

| 108 | 3-105 | 78 |

| 109 | 3-105 | 76 |

| 109 | 3-245 | 68 |

+-----+-------+--------+

6 rows in set (0.00 sec)

5、 查询Grade表中成绩为85，86或88的记录。

mysql> select \* from grade where degree in (85,86,88);

+-----+-------+--------+

| sno | cno | degree |

+-----+-------+--------+

| 101 | 6-166 | 85 |

| 103 | 3-245 | 86 |

| 105 | 3-105 | 88 |

+-----+-------+--------+

3 rows in set (0.00 sec)

6、 查询Student表中“95031”班或性别为“女”的同学记录。

mysql> select \* from student where class="95031" or ssex="女";

+-----+--------+------+---------------------+-------+

| sno | sname | ssex | sbirthday | class |

+-----+--------+------+---------------------+-------+

| 103 | 陆君 | 男 | 1974-06-03 00:00:00 | 95031 |

| 105 | 匡明 | 男 | 1975-10-02 00:00:00 | 95031 |

| 107 | 王丽 | 女 | 1976-01-23 00:00:00 | 95033 |

| 109 | 王芳 | 女 | 1975-02-10 00:00:00 | 95031 |

+-----+--------+------+---------------------+-------+

4 rows in set (0.00 sec)

7、 以Class降序查询Student表的所有记录。

mysql> select \* from student order by class desc;

+-----+--------+------+---------------------+-------+

| sno | sname | ssex | sbirthday | class |

+-----+--------+------+---------------------+-------+

| 101 | 李军 | 男 | 1976-02-20 00:00:00 | 95033 |

| 107 | 王丽 | 女 | 1976-01-23 00:00:00 | 95033 |

| 108 | 曾华 | 男 | 1977-09-01 00:00:00 | 95033 |

| 103 | 陆君 | 男 | 1974-06-03 00:00:00 | 95031 |

| 105 | 匡明 | 男 | 1975-10-02 00:00:00 | 95031 |

| 109 | 王芳 | 女 | 1975-02-10 00:00:00 | 95031 |

+-----+--------+------+---------------------+-------+

6 rows in set (0.00 sec)

8、 以Cno升序、Degree降序查询Grade表的所有记录。

mysql> select \* from grade order by cno,degree desc;

+-----+-------+--------+

| sno | cno | degree |

+-----+-------+--------+

| 103 | 3-105 | 92 |

| 107 | 3-105 | 91 |

| 105 | 3-105 | 88 |

| 108 | 3-105 | 78 |

| 109 | 3-105 | 76 |

| 101 | 3-105 | 64 |

| 103 | 3-245 | 86 |

| 105 | 3-245 | 75 |

| 109 | 3-245 | 68 |

| 107 | 6-106 | 79 |

| 101 | 6-166 | 85 |

| 108 | 6-166 | 81 |

+-----+-------+--------+

12 rows in set (0.01 sec)

9、 查询“95031”班的学生人数。

mysql> select count(sno) from student where class='95031';

+------------+

| count(sno) |

+------------+

| 3 |

+------------+

1 row in set (0.00 sec)

10、查询Grade表中的最高分的学生学号和课程号。

mysql> select sno,cno from grade where degree=(select max(degree) from grade);

+-----+-------+

| sno | cno |

+-----+-------+

| 103 | 3-105 |

+-----+-------+

1 row in set (0.00 sec)

11、查询‘3-105’号课程的平均分。

mysql> select avg(degree) from grade where cno="3-105";

+-------------+

| avg(degree) |

+-------------+

| 81.5000 |

+-------------+

1 row in set (0.00 sec)

12、查询Grade表中至少有5名学生选修的并以3开头的课程的平均分数。

select cno,count(\*),avg(degree) from grade where cno like '3%' group by cno having count(\*) >= 5;

+-------------+

| avg(degree) |

+-------------+

| 81.5000 |

+-------------+

1 row in set (0.01 sec)

13、查询最低分大于70，最高分小于90的Sno列。

select sno, max(degree),min(degree) from grade group by sno having max(degree) <= 90 and min(degree) >=70;

+-----+-------------+-------------+

| sno | max(degree) | min(degree) |

+-----+-------------+-------------+

| 105 | 88 | 75 |

| 108 | 81 | 78 |

+-----+-------------+-------------+

2 rows in set (0.00 sec)

mysql> select sno from grade group by sno having max(degree)<=90 and min(degree)>=70;

+-----+

| sno |

+-----+

| 105 |

| 108 |

+-----+

14、查询所有学生的Sname、Cno和Degree列。

select sname,cno,degree from grade sc join student s on sc.sno = s.sno;

mysql> select sname,cno,degree from student s,grade g where s.sno=g.sno;

+--------+-------+--------+

| sname | cno | degree |

+--------+-------+--------+

| 李军 | 3-105 | 64 |

| 李军 | 6-166 | 85 |

| 陆君 | 3-105 | 92 |

| 陆君 | 3-245 | 86 |

| 匡明 | 3-105 | 88 |

| 匡明 | 3-245 | 75 |

| 王丽 | 3-105 | 91 |

| 王丽 | 6-106 | 79 |

| 曾华 | 3-105 | 78 |

| 曾华 | 6-166 | 81 |

| 王芳 | 3-105 | 76 |

| 王芳 | 3-245 | 68 |

+--------+-------+--------+

12 rows in set (0.00 sec)

15、查询所有学生的Sno、Cname和Degree列。

select sno,cname,degree from grade g ,course c where c.cno = g.cno;

mysql> select sno,cname,degree from grade g join course c on g.cno=c.cno;

+-----+-----------------+--------+

| sno | cname | degree |

+-----+-----------------+--------+

| 101 | 计算机导论 | 64 |

| 101 | 数据电路 | 85 |

| 103 | 计算机导论 | 92 |

| 103 | 操作系统 | 86 |

| 105 | 计算机导论 | 88 |

| 105 | 操作系统 | 75 |

| 107 | 计算机导论 | 91 |

| 108 | 计算机导论 | 78 |

| 108 | 数据电路 | 81 |

| 109 | 计算机导论 | 76 |

| 109 | 操作系统 | 68 |

+-----+-----------------+--------+

11 rows in set (0.00 sec)

16、查询所有学生的Sname、Cname和Degree列。

select sname,cname,degree from student s join grade g on s.sno = g.sno join course c on g.cno = c.cno;

mysql> select sname,cname,degree from student s,grade g,course c where s.sno=g.sno and g.cno=c.cno;

+--------+-----------------+--------+

| sname | cname | degree |

+--------+-----------------+--------+

| 李军 | 计算机导论 | 64 |

| 李军 | 数据电路 | 85 |

| 陆君 | 计算机导论 | 92 |

| 陆君 | 操作系统 | 86 |

| 匡明 | 计算机导论 | 88 |

| 匡明 | 操作系统 | 75 |

| 王丽 | 计算机导论 | 91 |

| 曾华 | 计算机导论 | 78 |

| 曾华 | 数据电路 | 81 |

| 王芳 | 计算机导论 | 76 |

| 王芳 | 操作系统 | 68 |

+--------+-----------------+--------+

11 rows in set (0.00 sec)

17、查询“95033”班**所选课程**的平均分。

select cno, avg(degree) from student s join grade g on s.sno = g.sno where class='95033' group by cno;

mysql> select cno,avg(degree) from student s,grade g where s.sno=g.sno and class='95033' group by cno;

+-------+-------------+

| cno | avg(degree) |

+-------+-------------+

| 3-105 | 77.6667 |

| 6-106 | 79.0000 |

| 6-166 | 83.0000 |

+-------+-------------+

3 rows in set (0.00 sec)

---以下题目均需提供两种sql语句

18、查询选修课成绩为A等的学生信息

select s.\* from student s,grade g where s.sno = g.sno group by sno having max(degree)>=(select down from rank where rank='A');

mysql> select s.\* from student s join grade g on s.sno=g.sno group by sno having max(degree)>=(select down from rank where rank='A');

+-----+--------+------+---------------------+-------+

| sno | sname | ssex | sbirthday | class |

+-----+--------+------+---------------------+-------+

| 103 | 陆君 | 男 | 1974-06-03 00:00:00 | 95031 |

| 107 | 王丽 | 女 | 1976-01-23 00:00:00 | 95033 |

+-----+--------+------+---------------------+-------+

2 rows in set (0.00 sec)

select \* from student where sno in (select sno from grade group by sno having max(degree)>=(select down from rank where rank='A'));

+-----+--------+------+---------------------+-------+

| sno | sname | ssex | sbirthday | class |

+-----+--------+------+---------------------+-------+

| 101 | 李军 | 男 | 1976-02-20 00:00:00 | 95033 |

| 103 | 陆君 | 男 | 1974-06-03 00:00:00 | 95031 |

| 107 | 王丽 | 女 | 1976-01-23 00:00:00 | 95033 |

+-----+--------+------+---------------------+-------+

3 rows in set (0.00 sec)

mysql> select \* from student s join grade g on g.sno=s.sno join rank r on r.rank='A'where degree>down;

19、查询选修“3-105”课程的成绩高于“109”号同学成绩的所有同学的记录。

mysql> select \* from grade where cno='3-105' and degree>(select max(degree) from grade where sno='109' and cno='3-105');

+-----+-------+--------+

| sno | cno | degree |

+-----+-------+--------+

| 103 | 3-105 | 92 |

| 105 | 3-105 | 88 |

| 107 | 3-105 | 91 |

| 108 | 3-105 | 78 |

+-----+-------+--------+

4 rows in set (0.01 sec)

select a.\* from (select \* from grade where cno='3-105') a,(select \* from grade where cno='3-'3-105' and sno='109') b where a.degree > b.degree;

+-----+-------+--------+

| sno | cno | degree |

+-----+-------+--------+

| 103 | 3-105 | 92 |

| 105 | 3-105 | 88 |

| 107 | 3-105 | 91 |

| 108 | 3-105 | 78 |

+-----+-------+--------+

4 rows in set (0.00 sec)

20、查询grade中选学一门以上课程的同学中分数为非最高分成绩的记录。

select \* from grade where sno in (select sno from grade group by sno having count(\*) > 1)

and degree not in(select max(degree) from grade group by cno);

+-----+-------+--------+

| sno | cno | degree |

+-----+-------+--------+

| 101 | 3-105 | 64 |

| 101 | 6-166 | 85 |

| 103 | 6-200 | 83 |

| 105 | 3-105 | 88 |

| 105 | 3-245 | 75 |

| 107 | 3-105 | 91 |

| 108 | 3-105 | 78 |

| 108 | 6-166 | 81 |

| 109 | 3-105 | 76 |

| 109 | 3-245 | 68 |

+-----+-------+--------+

10 rows in set (0.00 sec)

1. 查询成绩高于学号为“109”、课程号为“3-105”的成绩的所有记录。
2. 查询和学号为108的同学同年出生的所有学生的Sno、Sname和Sbirthday列。

mysql> select sno,sname,sbirthday from student where year(sbirthday)=(select year(sbirthday) from student where sno='107')and sno!='107';

+-----+--------+---------------------+

| sno | sname | sbirthday |

+-----+--------+---------------------+

| 101 | 李军 | 1976-02-20 00:00:00 |

+-----+--------+---------------------+

1 row in set (0.00 sec)

1. 查询“张旭“教师任课的学生成绩。

mysql> select \* from grade where cno in (select cno from course c,teacher t where t.tno=c.tno and tname='张旭');

+-----+-------+--------+

| sno | cno | degree |

+-----+-------+--------+

| 101 | 6-166 | 85 |

| 108 | 6-166 | 81 |

+-----+-------+--------+

2 rows in set (0.01 sec)

1. 查询选修某课程的同学人数多于5人的教师姓名。

mysql> select tname from teacher where tno in (select tno from course c,grade g where c.cno=g.cno group by tno having count(\*)>5);

+--------+

| tname |

+--------+

| 王萍 |

+--------+

1 row in set (0.01 sec)

1. 查询95033班和95031班全体学生的记录。

mysql> select \* from student where class in ('95033','95031');

+-----+--------+------+---------------------+-------+

| sno | sname | ssex | sbirthday | class |

+-----+--------+------+---------------------+-------+

| 101 | 李军 | 男 | 1976-02-20 00:00:00 | 95033 |

| 103 | 陆君 | 男 | 1974-06-03 00:00:00 | 95031 |

| 105 | 匡明 | 男 | 1975-10-02 00:00:00 | 95031 |

| 107 | 王丽 | 女 | 1976-01-23 00:00:00 | 95033 |

| 108 | 曾华 | 男 | 1977-09-01 00:00:00 | 95033 |

| 109 | 王芳 | 女 | 1975-02-10 00:00:00 | 95031 |

+-----+--------+------+---------------------+-------+

6 rows in set (0.00 sec)

1. 查询存在有85分以上成绩的课程Cno.

mysql> select distinct cno from grade where degree >85;

+-------+

| cno |

+-------+

| 3-105 |

| 3-245 |

+-------+

2 rows in set (0.00 sec)

1. 查询出“计算机系“教师所教课程的成绩表。

mysql> select \* from grade where cno in (select cno from course c,teacher t where c.tno=t.tno and depart='计算机系');

+-----+-------+--------+

| sno | cno | degree |

+-----+-------+--------+

| 101 | 3-105 | 64 |

| 103 | 3-105 | 92 |

| 103 | 3-245 | 86 |

| 105 | 3-105 | 88 |

| 105 | 3-245 | 75 |

| 107 | 3-105 | 91 |

| 108 | 3-105 | 78 |

| 109 | 3-105 | 76 |

| 109 | 3-245 | 68 |

+-----+-------+--------+

9 rows in set (0.00 sec)

1. 查询“计算机系”与“电子工程系“不同职称的教师的Tname和Prof。
2. 查询选修编号为“3-105“课程且成绩至少高于选修编号为“3-245”的同学的Cno、Sno和Degree,并按Degree从高到低次序排序。

mysql> select \* from grade where cno='3-105' and degree>(select max(degree) from grade where cno='3-245') order by degree desc;

+-----+-------+--------+

| sno | cno | degree |

+-----+-------+--------+

| 103 | 3-105 | 92 |

| 107 | 3-105 | 91 |

| 105 | 3-105 | 88 |

+-----+-------+--------+

3 rows in set (0.00 sec)

1. 查询选修编号为“3-105”且成绩高于选修编号为“3-245”课程的同学的Cno、Sno和Degree.
2. 查询所有教师和同学的name、sex和birthday.

mysql> select sname name,ssex sex,sbirthday birthday from student union select tname,tsex,tbirthday from teacher;

+--------+------+---------------------+

| name | sex | birthday |

+--------+------+---------------------+

| 李军 | 男 | 1976-02-20 00:00:00 |

| 陆君 | 男 | 1974-06-03 00:00:00 |

| 匡明 | 男 | 1975-10-02 00:00:00 |

| 王丽 | 女 | 1976-01-23 00:00:00 |

| 曾华 | 男 | 1977-09-01 00:00:00 |

| 王芳 | 女 | 1975-02-10 00:00:00 |

| 李诚 | 男 | 1958-12-02 00:00:00 |

| 王萍 | 女 | 1972-05-05 00:00:00 |

| 刘冰 | 女 | 1977-08-14 00:00:00 |

| 张旭 | 男 | 1969-03-12 00:00:00 |

+--------+------+---------------------+

10 rows in set (0.00 sec)

1. 查询所有“女”教师和“女”同学的name、sex和birthday.

mysql> select sname name,ssex sex,sbirthday birthday from student where ssex='女' union select tname,tsex,tbirthday from teacher where tsex='女';

+--------+------+---------------------+

| name | sex | birthday |

+--------+------+---------------------+

| 王丽 | 女 | 1976-01-23 00:00:00 |

| 王芳 | 女 | 1975-02-10 00:00:00 |

| 王萍 | 女 | 1972-05-05 00:00:00 |

| 刘冰 | 女 | 1977-08-14 00:00:00 |

+--------+------+---------------------+

4 rows in set (0.01 sec)

33、查询成绩比该课程平均成绩低的同学的成绩表。

mysql> select \* from grade a join (select cno,avg(degree) num from grade group by cno) b on a.cno=b.cno where degree<num;

+-----+-------+--------+-------+---------+

| sno | cno | degree | cno | num |

+-----+-------+--------+-------+---------+

| 101 | 3-105 | 64 | 3-105 | 81.5000 |

| 105 | 3-245 | 75 | 3-245 | 76.3333 |

| 108 | 3-105 | 78 | 3-105 | 81.5000 |

| 108 | 6-166 | 81 | 6-166 | 83.0000 |

| 109 | 3-105 | 76 | 3-105 | 81.5000 |

| 109 | 3-245 | 68 | 3-245 | 76.3333 |

+-----+-------+--------+-------+---------+

6 rows in set (0.00 sec)

1. 查询所有任课教师的Tname和Depart.

mysql> select tname,depart from teacher t,course c where t.tno=c.tno;

+--------+-----------------+

| tname | depart |

+--------+-----------------+

| 李诚 | 计算机系 |

| 王萍 | 计算机系 |

| 张旭 | 电子工程系 |

+--------+-----------------+

3 rows in set (0.03 sec)

35 查询所有未讲课的教师的Tname和Depart.

mysql> select tname,depart from teacher t left join course c on t.tno=c.tno where c.tno is null;

+--------+-----------------+

| tname | depart |

+--------+-----------------+

| 刘冰 | 电子工程系 |

+--------+-----------------+

1 row in set (0.00 sec)

1. 查询至少有2名男生的班号。

mysql> select class, ssex,count(ssex) from student group by ssex,class having count(ssex)>=2 and ssex='男';

+-------+------+-------------+

| class | ssex | count(ssex) |

+-------+------+-------------+

| 95031 | 男 | 2 |

| 95033 | 男 | 2 |

+-------+------+-------------+

2 rows in set (0.00 sec)

1. 查询Student表中不姓“王”的同学记录。

mysql> select \* from student where sname not like '李%';

+-----+--------+------+---------------------+-------+

| sno | sname | ssex | sbirthday | class |

+-----+--------+------+---------------------+-------+

| 103 | 陆君 | 男 | 1974-06-03 00:00:00 | 95031 |

| 105 | li | 男 | 1975-10-02 00:00:00 | 95031 |

| 107 | 王丽 | 女 | 1976-01-23 00:00:00 | 95033 |

| 108 | 曾华 | 男 | 1977-09-01 00:00:00 | 95033 |

| 109 | 王芳 | 女 | 1975-02-10 00:00:00 | 95031 |

| 123 | li | NULL | NULL | 12345 |

+-----+--------+------+---------------------+-------+

6 rows in set (0.00 sec)

1. 查询Student表中每个学生的姓名和年龄。

mysql> select sname,year(curdate())-year(sbirthday) age from student;

+--------+------+

| sname | age |

+--------+------+

| 李军 | 43 |

| 陆君 | 45 |

| li | 44 |

| 王丽 | 43 |

| 曾华 | 42 |

| 王芳 | 44 |

| li | NULL |

+--------+------+

7 rows in set (0.01 sec)

1. 查询Student表中最大和最小的Sbirthday日期值。

mysql> select sname,sbirthday from student where sbirthday=(select max(sbirthday) from student) union select sname,sbirthday from student where sbirthday=(select min(sbirthday) from student);

+--------+---------------------+

| sname | sbirthday |

+--------+---------------------+

| 曾华 | 1977-09-01 00:00:00 |

| 陆君 | 1974-06-03 00:00:00 |

+--------+---------------------+

2 rows in set (0.00 sec)

1. 以班号和年龄从大到小的顺序查询Student表中的全部记录。

mysql> select \* from student order by class desc,sbirthday;

+-----+--------+------+---------------------+-------+

| sno | sname | ssex | sbirthday | class |

+-----+--------+------+---------------------+-------+

| 107 | 王丽 | 女 | 1976-01-23 00:00:00 | 95033 |

| 101 | 李军 | 男 | 1976-02-20 00:00:00 | 95033 |

| 108 | 曾华 | 男 | 1977-09-01 00:00:00 | 95033 |

| 103 | 陆君 | 男 | 1974-06-03 00:00:00 | 95031 |

| 109 | 王芳 | 女 | 1975-02-10 00:00:00 | 95031 |

| 105 | li | 男 | 1975-10-02 00:00:00 | 95031 |

| 123 | li | NULL | NULL | 12345 |

+-----+--------+------+---------------------+-------+

7 rows in set (0.00 sec)

1. 查询“男”教师及其所上的课程。

mysql> select \* from teacher t ,course c where t.tno=c.tno and tsex='男';

+-----+--------+------+---------------------+-----------+-----------------+-------+--------------+-----+

| tno | tname | tsex | tbirthday | prof | depart | cno | cname | tno |

+-----+--------+------+---------------------+-----------+-----------------+-------+--------------+-----+

| 804 | 李诚 | 男 | 1958-12-02 00:00:00 | 副教授 | 计算机系 | 3-245 | 操作系统 | 804 |

| 856 | 张旭 | 男 | 1969-03-12 00:00:00 | 讲师 | 电子工程系 | 6-166 | 数据电路 | 856 |

+-----+--------+------+---------------------+-----------+-----------------+-------+--------------+-----+

2 rows in set (0.01 sec)

1. 查询最高分同学的Sno、Cno和Degree列。

mysql> select \* from grade where degree=(select max(degree) from grade);

+-----+-------+--------+

| sno | cno | degree |

+-----+-------+--------+

| 103 | 3-105 | 92 |

+-----+-------+--------+

1 row in set (0.00 sec)

mysql> select \* from grade g join (select cno,max(degree) max from grade group by cno) b on g.cno=b.cno where degree=max;

+-----+-------+--------+-------+------+

| sno | cno | degree | cno | max |

+-----+-------+--------+-------+------+

| 101 | 6-166 | 85 | 6-166 | 85 |

| 103 | 3-105 | 92 | 3-105 | 92 |

| 103 | 3-245 | 86 | 3-245 | 86 |

| 107 | 6-106 | 79 | 6-106 | 79 |

+-----+-------+--------+-------+------+

4 rows in set (0.00 sec)

1. 查询和“李军”同性别的所有同学的Sname.

mysql> select sname from student where ssex=(select ssex from student where sname='李军') and sname !='李军';

+--------+

| sname |

+--------+

| 陆君 |

| li |

| 曾华 |

+--------+

3 rows in set (0.00 sec)

1. 查询和“李军”同性别并同班的同学Sname.

mysql> select sname from student where ssex=(select ssex from student where sname='李军') and sname !='李军'and class=(select class from student where sname='李军');

+--------+

| sname |

+--------+

| 曾华 |

+--------+

1 row in set (0.00 sec)

1. 查询所有选修“计算机导论”课程的“男”同学的成绩表

mysql> select s.sno,sname,degree from student s,course c,grade g where s.sno=g.sno and c.cno=g.cno and s.ssex='男'and c.cname='计算机导论';

+-----+--------+--------+

| sno | sname | degree |

+-----+--------+--------+

| 101 | 李军 | 64 |

| 103 | 陆君 | 92 |

| 105 | li | 88 |

| 108 | 曾华 | 78 |

+-----+--------+--------+

4 rows in set (0.00 sec)

1. 查询计算机系教师所教课程成绩为B等的课程信息

mysql> select c. \* from course c,grade g,teacher t where c.cno=g.cno and c.tno=t.tno and depart ='计算机系'and degree>(select down from rank where rank='B') and degree<(select up from rank where rank='B');

+-------+-----------------+-----+

| cno | cname | tno |

+-------+-----------------+-----+

| 3-245 | 操作系统 | 804 |

| 3-105 | 计算机导论 | 825 |

+-------+-----------------+-----+

2 rows in set (0.00 sec)

1. 查询成绩在C等以上的学生的所在班级

mysql> select sname,cno,class from student s ,grade g where s.sno=g.sno and degree > (select up from rank where rank='C');

+--------+-------+-------+

| sname | cno | class |

+--------+-------+-------+

| 李军 | 6-166 | 95033 |

| 陆君 | 3-105 | 95031 |

| 陆君 | 3-245 | 95031 |

| li | 3-105 | 95031 |

| 王丽 | 3-105 | 95033 |

| 曾华 | 6-166 | 95033 |

+--------+-------+-------+

6 rows in set (0.00 sec)

48、查询班里B等以上学生人数最多的班级信息