# 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(10) | 非空 |
| ssex | 性别 | varchar(3) |  |
| 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(10) | 主键 |
| cname | 课程名 | varchar(30) | 非空 |
| tno | 教师编号 | varchar(10) | 非空 |

表3 成绩表(grade)

|  |  |  |  |
| --- | --- | --- | --- |
| 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 | tinyint | 非空 |

表4 教师表(teacher)

|  |  |  |  |
| --- | --- | --- | --- |
| 列名 | 意义 | 类型 | 约束 |
| tno | 教师编号 | varchar(5) | 主键 |
| tname | 教师姓名 | varchar(20) | 非空 |
| tsex | 性别 | varchar(2) |  |
| tbirthday | 生日 | datetime |  |
| prof | 职称 | varchar(20) | 非空 |
| depart | 系 | varchar(30) | 非空 |

表5 等级表(rank)

|  |  |  |  |
| --- | --- | --- | --- |
| 列名 | 意义 | 类型 | 约束 |
| down | 分数下届 | tinyint | 非空 |
| up | 分数上界 | tinyint | 非空 |
| rk | 级别 | varchar(2) | 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 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。

2、 查询教师所有的单位即不重复的Depart列。

3、 查询Student表的所有记录。

4、 查询Grade表中成绩在60到80之间的所有记录。

5、 查询Grade表中成绩为85，86或88的记录。

6、 查询Student表中“95031”班或性别为“女”的同学记录。

7、 以Class降序查询Student表的所有记录。

8、 以Cno升序、Degree降序查询Grade表的所有记录。

9、 查询“95031”班的学生人数。

10、查询Grade表中的最高分的学生学号和课程号。

11、查询‘3-105’号课程的平均分。

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。

13、查询最低分大于70，最高分小于90的Sno列。

14、查询所有学生的Sname、Cno和Degree列。

15、查询所有学生的Sno、Cname和Degree列。

16、查询所有学生的Sname、Cname和Degree列。

17、查询“95033”班所选课程的平均分。

1. 查询选修课成绩为A等的学生信息
2. 在grade表中查询选修“3-105”课程的成绩高于选修“3-105”并且学号为“109”的所有同学的记录。
3. 查询grade中小于最高分成绩并且选学一门以上课程的同学的sno。

21、查询成绩高于学号为“109”、课程号为“3-105”的成绩的所有记录。

22、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。

23、查询“张旭“教师任课的学生成绩。

24、查询选修某课程的同学人数多于5人的教师姓名。

25、查询95033班和95031班全体学生的记录。

26、查询存在有85分以上成绩的课程Cno.

1. 查询出“计算机系“教师所教课程的成绩表。
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”的同学最低分的Cno、Sno和Degree,并按Degree从高到低次序排序。

29、查询同时选修编号为“3-105”和‘3-245’且‘3-105’成绩高于选修编号为“3-245”成绩的同学的Cno、Sno和Degree.

30、查询所有教师和同学的name、sex和birthday.

31、查询所有“女”教师和“女”同学的name、sex和birthday.

1,select sname,ssex,class from student;

2,select depart,count(\*)as d from teacher group by depart;

3,select \* from student;

4,select \* from grade where 60<degree<80;

5,select \* from grade where degree=85 or degree=86 or degree=88;

6,select \* from student where class=95031 or ssex=’女’;

1. select \* from student order by class desc;

8, select \* from grade order by cno asc;

select \* from grade order by degree desc;

1. select class,count(\*) as c from student group by class having class=95031;
2. Select \* from grade order by degree desc limit 1;
3. Select avg(degree) from grade where cno=’3-105’;

12,

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

14,select student.sname as name,grade.cno as cno,grade.degree as degree as degree from student,grade where student.sno=grade.sno;

15,select grade.sno as sno,grade.degree as degree as degree,course.cname as cname from grade ,course where course.cno=grade.cno;

16,select student.sname as name,course.cname as cname,grade.degree as degree from student,course,grade where student.sno=grade.sno and grade.cno=course.cno;

或

SELECT student.`sname`, course.`cname`, grade.`degree` FROM student JOIN grade ON student.`sno`=grade.`sno` JOIN course ON grade.`cno`=course.`cno`;

1. select cno,avg(degree) from grade where sno in (select sno from student where class=95033) group by cno;
2. Select \* from student where sno in(select sno from grade where degree >=(select down from rank where rk=”A”));

23,mysql> select g.degree from grade as g join course as c on g.cno=c.cno join teacher as t on c.tno=t.tno where t.tname='张旭';

24,mysql> select tname from teacher where tno in(select tno from course where cno in(select cno from grade group by cno having count(cno)>5));

25,select \* from student where class in (‘95033’,’95031’);

26，select distinct cno from grade where degree>85;

27，select degree from grade where cno in (select cno form course where tno in (select tno from teacher where depart=”计算机系”))；

28,mysql> select \* from grade where cno='3-105' and degree>(select min(degree) from

grade where cno='3-245') order by degree desc;

29,mysql> select \* from grade as g1 join grade as g2 on g1.sno=g2.sno where g1.cno=

'3-105'and g2.cno='3-245' and g1.degree>g2.degree;

30,mysql> select sname,ssex,sbirthday from student union select tname,tsex,tbirthday from teacher;

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