

# work2-sql

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## 1 查询所有同学的所有基本信息

182 ✓  
183

SELECT \* FROM Student;

Sno	Sname	Ssex	Sbirthday	Classno	Totalcredit	Createdby
1 22309010	李一在	男	2005-10-01	RJ2201	0	22301056
2 22309012	葛杨	男	2006-08-08	RJ2201	0	22301056
3 22309015	刘三晶	女	2005-05-22	RJ2201	0	22301056
4 22309020	杨四敏	女	2007-01-08	RJ2201	0	22301056
5 22309030	胡五斌	男	2006-10-08	RJ2201	0	22301056
6 22309048	赵陈鹏泽	男	2005-06-06	RJ2202	0	22301056
7 22309050	王威	男	2005-06-10	RJ2202	0	22301056
8 22309067	赵六玮	女	2005-08-21	RJ2203	0	22301056
9 22309075	王娜	女	2006-09-23	RJ2203	0	22301056
10 22309088	秦琪健	男	2005-03-01	RJ2203	0	22301056
11 22309100	田牧	女	2006-02-26	RJ2204	0	22301056
12 22309148	赵八颀	男	2005-04-25	RJ2205	0	22301056
13 22309150	杨青	女	2005-11-15	RJ2205	0	22301056
14 22309160	杨久玲	女	2005-12-12	RJ2206	0	22301056

## 2 查询所有女教师的所有信息

```
183 SELECT * FROM Student;
184 ✓ SELECT * FROM teacher WHERE Tsex = '女';
```

Output work.teacher x

	Tno	Tname	Tsex	Tbirthday	Ttitle	Createdby
1	000001	李英	女	1975-11-03	讲师	22301056
2	000006	许霞	女	1966-02-12	副教授	22301056
3	000008	李菁	女	1960-12-15	教授	22301056
4	000009	王凡	女	1974-12-08	讲师	22301056

31 ms  
131 ms

## 3 查询所有女同学的学号、姓名、出生日期、班级名称

```
184 SELECT * FROM Student;
185
186 SELECT * FROM teacher WHERE Tsex = '女';
187
188 ✓ SELECT Sno, Sname, Sbirthday, Classno FROM student WHERE Ssex = '女';
```

Output work.student x

	Sno	Sname	Sbirthday	Classno
1	22309015	刘三晶	2005-05-22	RJ2201
2	22309020	杨四敏	2007-01-08	RJ2201
3	22309067	赵六玮	2005-08-21	RJ2203
4	22309075	王娜	2006-09-23	RJ2203
5	22309100	田仪	2006-02-26	RJ2204
6	22309150	杨青	2005-11-15	RJ2205
7	22309160	杨久玲	2005-12-12	RJ2206

1 ms  
75 ms  
ms  
69 ms  
ms

#### 4 在基本表 Student 中增加 Age 列, 类型为 Int, 默认值为 18

```

189
190 ✓ alter table student add Age int default 18;
191 ✓ desc student;

```

Field	Type	Null	Key	Default	Extra
1 Sno	varchar(8)	NO	PRI	<null>	
2 Sname	varchar(8)	NO		<null>	
3 Ssex	char(1)	NO		<null>	
4 Sbirthday	date	YES		<null>	
5 Classno	varchar(6)	YES	MUL	<null>	
6 Totalcredit	smallint	YES		0	
7 Createdby	varchar(8)	YES		22301056	
8 Age	int	YES		18	

#### 5 在基本表 Student 中增加 Addr: Varchar(20) 列, 然后将其长度由 20 改为 25

```

93 ✓ alter table student add Addr VARCHAR(20);
94 ✓ alter table student modify Addr VARCHAR(25);
95 ✓ desc student;

```

Field	Type	Null	Key	Default	Extra
1 Sno	varchar(8)	NO	PRI	<null>	
2 Sname	varchar(8)	NO		<null>	
3 Ssex	char(1)	NO		<null>	
4 Sbirthday	date	YES		<null>	
5 Classno	varchar(6)	YES	MUL	<null>	
6 Totalcredit	smallint	YES		0	
7 Createdby	varchar(8)	YES		22301056	
8 Age	int	YES		18	
9 Addr	varchar(25)	YES		<null>	

## 6 在基本表 Student 中增加 RegisterDate: Date 列，并为其设置默认值为当前系统时间，再删除该列

在设置为当前系统时间时，我发现我尝试很多办法都不行，于是我就用某一天来进行代替

```
196
197 ✓ select version();
198 ! alter table student add Register_Date DATE default current_date;
199 desc student;
200 alter table student drop column Register_Date;
201 desc student;
```

Register\_Date: @

[42000][1064] You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'current\_date' at line 1

```
✓ select version();
! alter table student add Register_Date DATE default curdate();
desc student;
alter table student drop column Register_Date;
desc student;
```

Register\_Date: @

[42000][1064] You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'curdate()' at line 1

Database Console

@localhost

```
> use demo
> use information_schem
> use mysql
> use performance_scher
> use sys
> use work
  tables
    class
    course
    sc
```

```
select version();
alter table student add Register_Date DATE default
desc student;
alter table student drop column Register_Date;
desc student;
```

Output Result 52-2

Field	Type	Null	Key	Default
Sno	varchar(8)	NO	PRI	<null>
Sname	varchar(8)	NO		<null>
Ssex	char(1)	NO		<null>
Sbirthday	date	YES		<null>
Classno	varchar(6)	YES	MUL	<null>
Totalcredit	smallint	YES		0
Createdby	varchar(8)	YES		22301056
Age	int	YES		18
Addr	varchar(25)	YES		<null>
Register_Date	date	YES		2024-03-23

Database Consoles > @localhost > console

199 desc student;

200 ✓ alter table student drop column Register\_Date;

201 ✓ desc student;

Services

Output Result 53-2

9 rows

	Field	Type	Null	Key	Default	Extra
1	Sno	varchar(8)	NO	PRI	<null>	
2	Sname	varchar(8)	NO		<null>	
3	Ssex	char(1)	NO		<null>	
4	Sbirthday	date	YES		<null>	
5	Classno	varchar(6)	YES	MUL	<null>	
6	Totalcredit	smallint	YES		0	
7	Createdby	varchar(8)	YES		22301056	
8	Age	int	YES		18	
9	Addr	varchar(25)	YES		<null>	

## 7 在基本表 Course 中将 Cname 设置为唯一值 (Unique)

205

206 alter table course add constraint unique\_cname unique (Cname);

207 ✓ desc course;

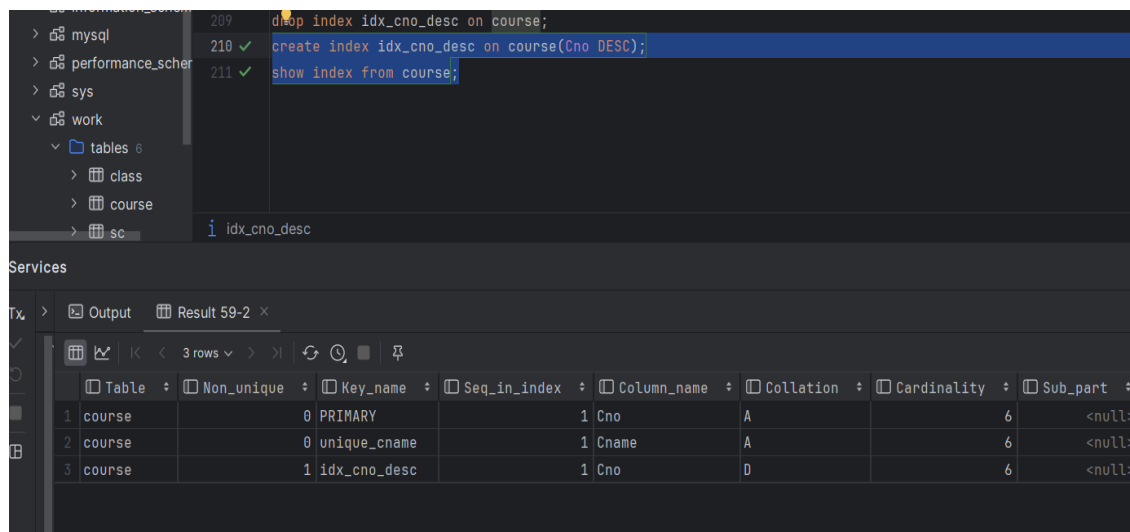
Services

Output Result 56

3 rows

	Field	Type	Null	Key	Default	Extra
1	Cno	varchar(6)	NO	PRI	<null>	
2	Cname	varchar(30)	NO	UNI	<null>	
3	Ccredit	smallint	NO		<null>	

## 8 基本表 Course 中创建索引: (Cno Desc)



The screenshot shows a MySQL IDE with a SQL editor and a results pane. The SQL editor contains the following commands:

```
209 drop index idx_cno_desc on course;
210 create index idx_cno_desc on course(Cno DESC);
211 show index from course;
```

The results pane shows the output of the 'show index from course;' command, displaying three rows of index information for the 'course' table:

Table	Non_unique	Key_name	Seq_in_index	Column_name	Collation	Cardinality	Sub_part
course	0	PRIMARY	1	Cno	A	6	<null>
course	0	unique_cname	1	Cname	A	6	<null>
course	1	idx_cno_desc	1	Cno	D	6	<null>

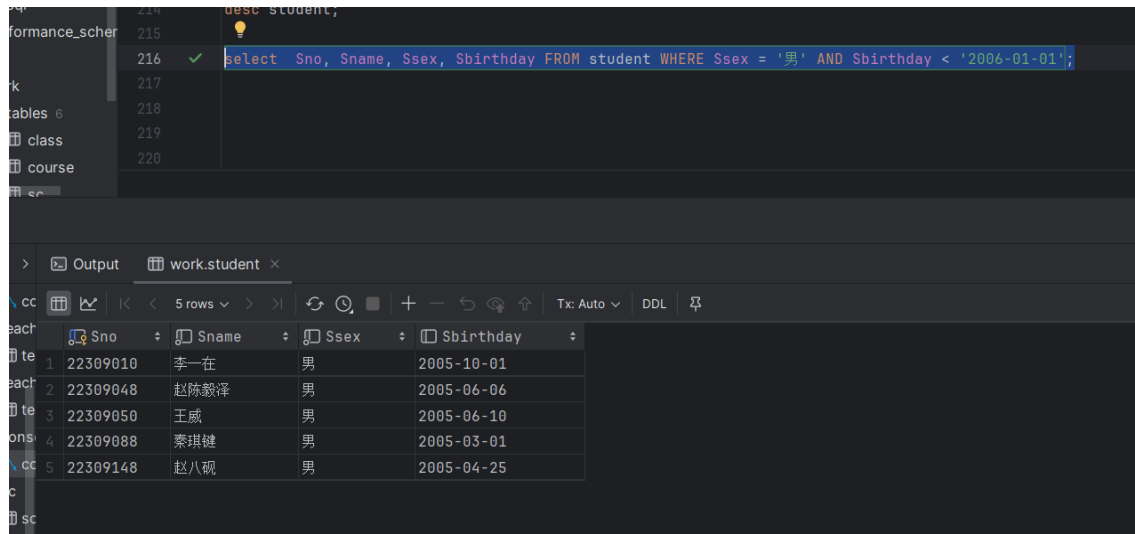
## 9 在基本表 Student 中增加约束条件: 男生年龄小于 24 岁, 女生年龄小于 22 岁。



The screenshot shows a MySQL IDE with a SQL editor. The SQL editor contains the following commands:

```
12
13 alter table student add CONSTRAINT age check ( (Ssex = '男' and Age < 24) or (Ssex = '女' and Age < 22));
14 desc student;
15
16
17
18
19
```

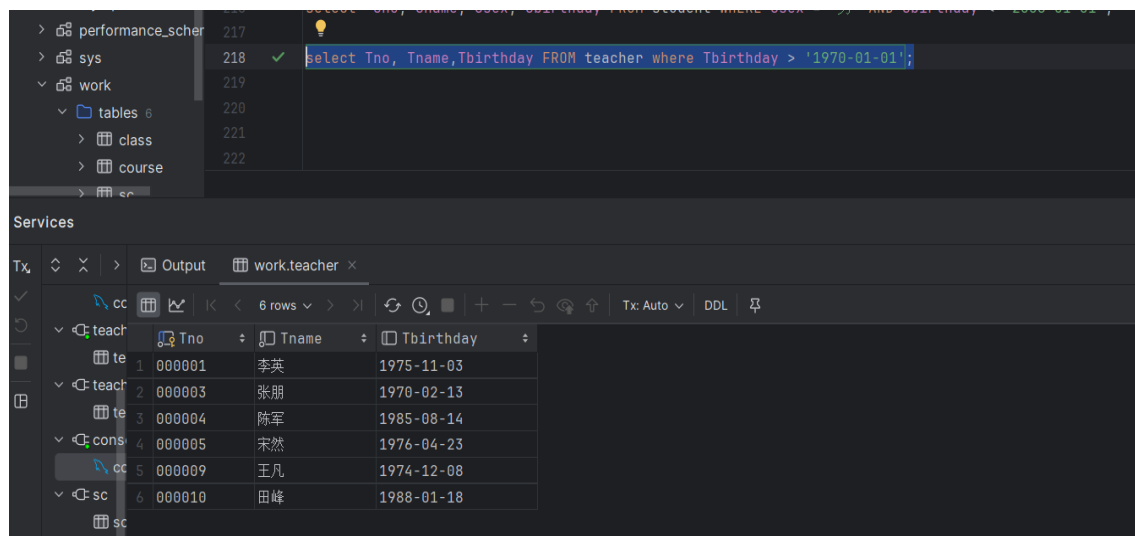
## 10 查询所有在“2006-01-01”之前出生的男同学的学号、姓名、性别、出生日期



The screenshot shows a database IDE with a SQL query editor at the top and an output window at the bottom. The query is: `select Sno, Sname, Ssex, Sbirthday FROM student WHERE Ssex = '男' AND Sbirthday < '2006-01-01';`. The output window displays 5 rows of data from the 'student' table.

Sno	Sname	Ssex	Sbirthday
22309010	李一在	男	2005-10-01
22309048	赵陈毅泽	男	2005-06-06
22309050	王威	男	2005-06-10
22309088	秦琪健	男	2005-03-01
22309148	赵八视	男	2005-04-25

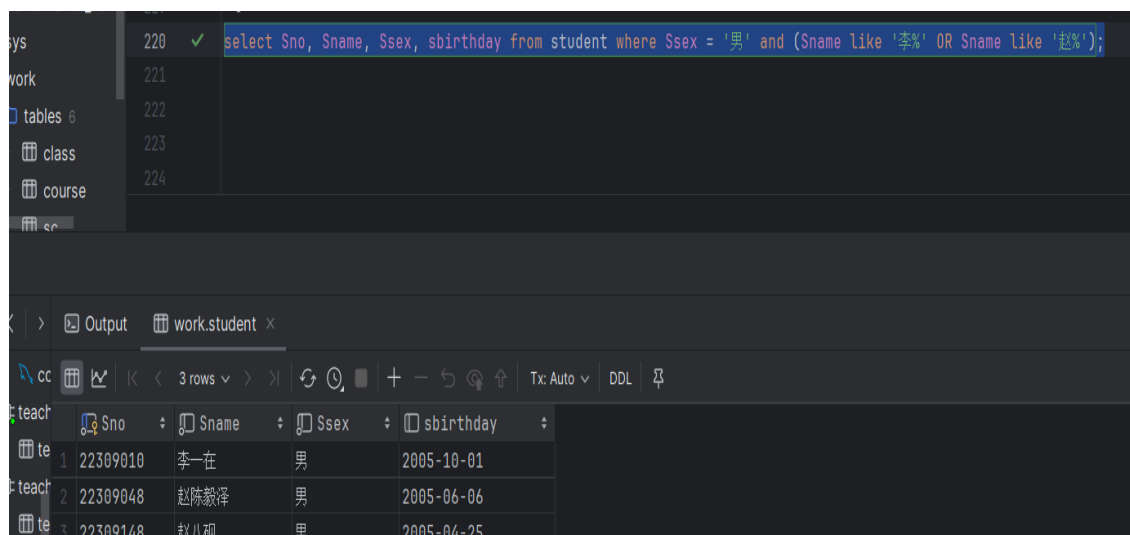
## 11 查询在 1970 年 1 月 1 日之后出生的教师的教师号、姓名、出生日期



The screenshot shows a database IDE with a SQL query editor at the top and a services window at the bottom. The query is: `select Tno, Tname, Tbirthday FROM teacher where Tbirthday > '1970-01-01';`. The services window displays 6 rows of data from the 'teacher' table.

Tno	Tname	Tbirthday
000001	李英	1975-11-03
000003	张朋	1970-02-13
000004	陈军	1985-08-14
000005	宋然	1976-04-23
000009	王凡	1974-12-08
000010	田峰	1988-01-18

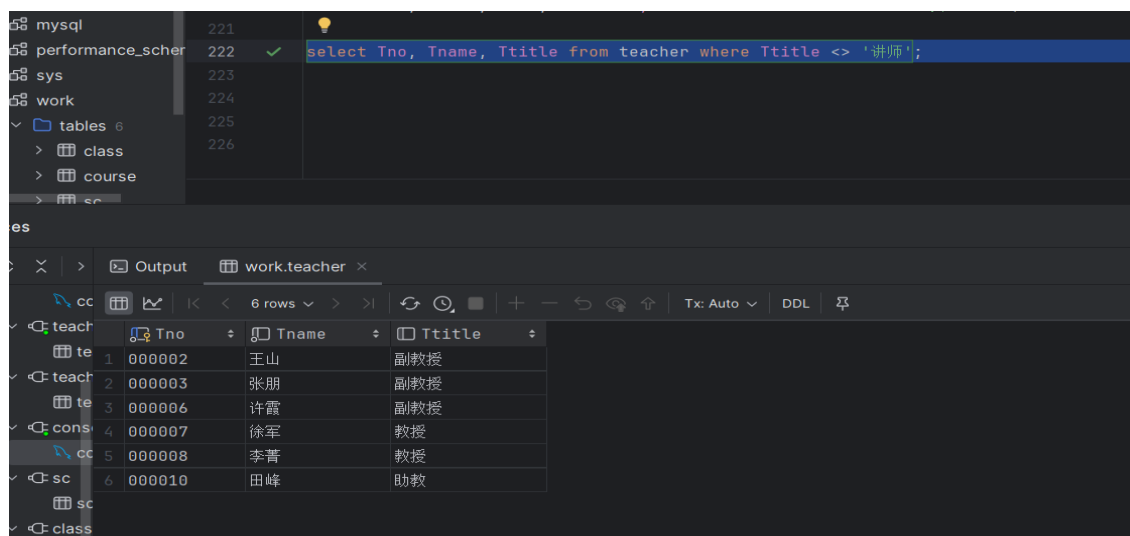
## 12 查询所有姓“李”和姓“赵”的男同学的学号、姓名、性别、出生日期



The screenshot shows a MySQL IDE interface. The SQL editor contains the query: `select Sno, Sname, Ssex, sbirthday from student where Ssex = '男' and (Sname like '李%' OR Sname like '赵%');`. The output window displays the results of this query, showing three rows of data from the 'student' table.

	Sno	Sname	Ssex	sbirthday
1	22309010	李一在	男	2005-10-01
2	22309048	赵陈毅泽	男	2005-06-06
3	22309148	赵八视	男	2005-04-25

## 13 查询所有职称不是“讲师”的教师的教师号、姓名、职称

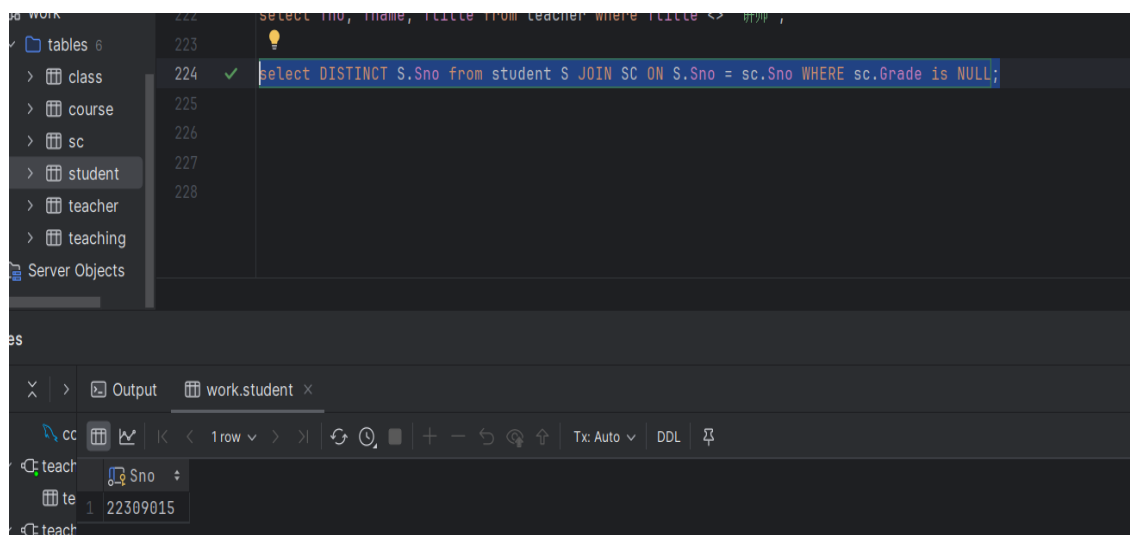


The screenshot shows a MySQL IDE interface. The SQL editor contains the query: `select Tno, Tname, Ttitle from teacher where Ttitle <> '讲师';`. The output window displays the results of this query, showing six rows of data from the 'teacher' table.

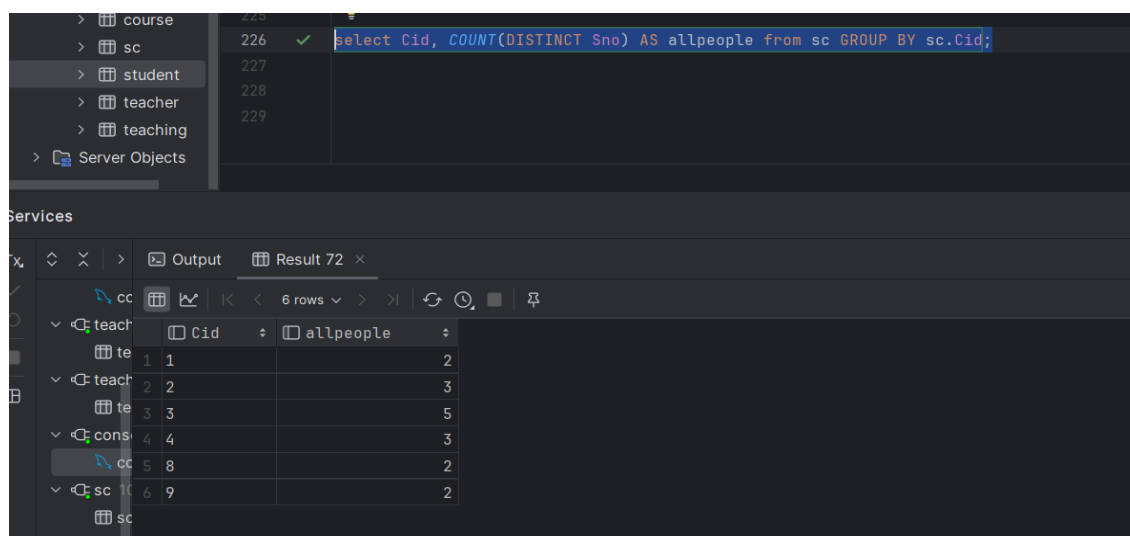
	Tno	Tname	Ttitle
1	000002	王山	副教授
2	000003	张朋	副教授
3	000006	许霞	副教授
4	000007	徐军	教授
5	000008	李菁	教授
6	000010	田峰	助教



## 14 查询虽然选修了课程，但未参加考试的所有同学的学号



## 15 查询各个课程号的选课人数（包含该课程的所有课堂）



## 16 查询所有用英文授课（Language 字段值为“英文”）教师的教师号、姓名及其英语授课的门数

```
select t.Tno, t.Tname, COUNT(t1.Cno) as English_Courses FROM teacher t JOIN teaching t1 on t.Tno = t1.Tno
WHERE t1.Language = '英文' GROUP BY t.Tno, t.Tname;
```

Output Result 73

	Tno	Tname	English_Courses
1	000001	李英	1
2	000004	陈军	1
3	000007	徐军	2

## 17 查询讲授超过 1 门课程的教师号、姓名，并按姓名降序排列（允许 Unicode 编码不是拼音顺序）

```
select t.Tno, t.Tname from teacher t
join teaching t1 on t.Tno = t1.Tno GROUP BY t.Tno, t.Tname
HAVING COUNT(*) > 1 ORDER BY t.Tname DESC;
```

Output work.teacher

	Tno	Tname
1	000002	王山
2	000007	徐军

## 18 查询 810011 课程选修成绩的平均分数、最低分数和最高分数

The screenshot shows a SQL query in a text editor and its result in a database client. The query is:

```
select AVG(Grade) AS Avg_Grade, MIN(Grade) AS Min_Grade, MAX(Grade) AS Max_Grade
FROM sc where sc.Cid IN (select Cid from teaching where Cno = '810011');
```

The result is displayed in a table with the following data:

	Avg_Grade	Min_Grade	Max_Grade
1	74.6000	58	89

## 19 查询所有考试记录中及格的同学的学号和成绩，并按成绩降序排列

需要说明，由于在上次作业中添加了一部分个人的数据，所以同样会在此次排序的作业中显现出来

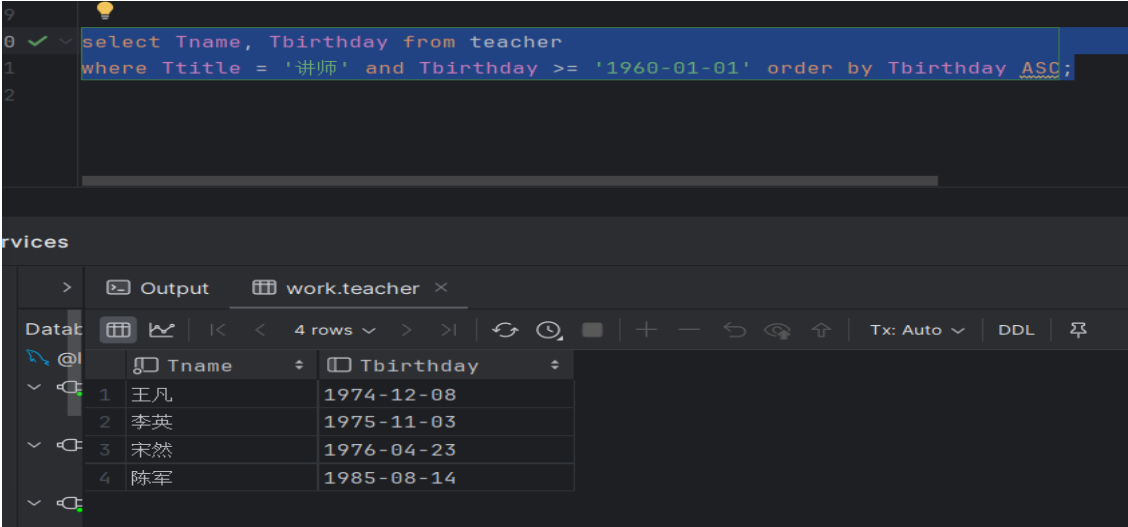
The screenshot shows a SQL query in a text editor and its result in a database client. The query is:

```
select Sno, Grade from sc where Grade >= 60 order by Grade DESC;
```

The result is displayed in a table with the following data:

	Sno	Grade
1	22309048	97
2	22309020	95
3	22309020	95
4	22309075	91
5	22309150	89
6	22309012	88
7	22309020	88
8	22309100	82
9	22301056	80
10	22301056	80
11	22301056	80
12	22309015	79
13	22309030	78
14	22309030	78
15	22309160	71
16	22309010	69
17	22309100	67

20 查询 1960 年以后出生的，职称为讲师的教师的姓名、出生日期，并按出生日期升序排列。



The screenshot shows a SQL query editor with the following query:

```
select Tname, Tbirthday from teacher
where Ttitle = '讲师' and Tbirthday >= '1960-01-01' order by Tbirthday ASC;
```

Below the query editor, the results are displayed in a table with 4 rows. The table has two columns: Tname and Tbirthday.

	Tname	Tbirthday
1	王凡	1974-12-08
2	李英	1975-11-03
3	宋然	1976-04-23
4	陈军	1985-08-14