

第三次实验

(1)查询全部课程的详细记录;

```
select *  
from courses
```

```
select *  
from courses
```

	cid	cname	hour
1	10001	database	96
2	10002	operating system	88
3	10003	computer graphics	48
4	10004	java	48
5	10005	c++	60
6	10006	design pattern	48
7	10007	uml	30
8	10008	data structure	60
9	10009	cryptology	36
10	10010	software engineering	50
11	10011	distributed computing	36
12	10012	erp	40
13	10013	artificial intelligence	46
14	10014	computer network	60
15	10015	tcp/ip protocol	68
16	10016	data mining	40

(2)查询所有有选修课的学生的编号;

```
select sid  
from choices
```

```
select sid
from choices
```

(3)查询课时<88(小时)的课程的编号;

```
select cid
from courses
where hour < 88
```

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

```
select cid  
from courses  
where hour < 88
```

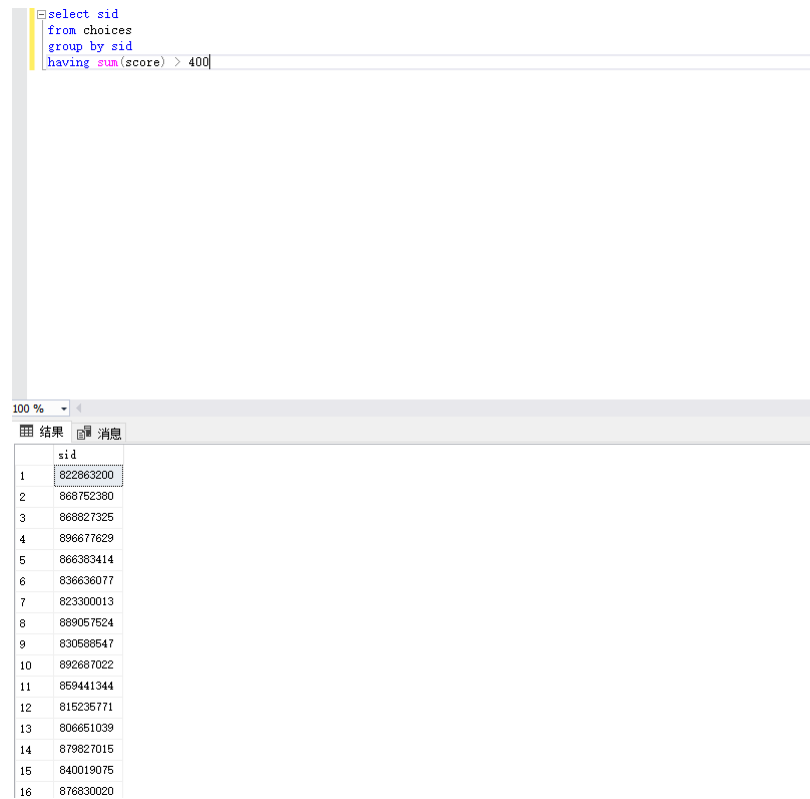
Below the editor, there is a toolbar with a dropdown menu set to "100 %". To the right of the toolbar are two icons: a table icon and a message icon, with the text "结果" (Results) and "消息" (Message) respectively.

The results pane displays a table with two columns: "cid" and "hour". The table contains 16 rows of data, with the "cid" column highlighted in blue. The "hour" column is not visible in the screenshot.

	cid
1	10003
2	10004
3	10005
4	10006
5	10007
6	10008
7	10009
8	10010
9	10011
10	10012
11	10013
12	10014
13	10015
14	10016
15	10017
16	10018

(4)请找出总分超过400分的学生;

```
select sid
from choices
group by sid
having sum(score) > 400
```



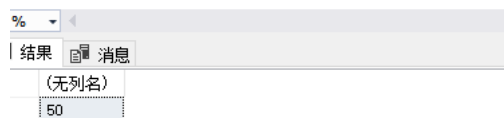
```
select sid
from choices
group by sid
having sum(score) > 400
```

	sid
1	822863200
2	868752380
3	868827325
4	896677629
5	866383414
6	836636077
7	823300013
8	889057524
9	830588547
10	892687022
11	859441344
12	815235771
13	806651039
14	879827015
15	840019075
16	876830020

(5)查询课程的总数;

```
select count(cid)
from courses
```

```
select count(cid)
from courses
```

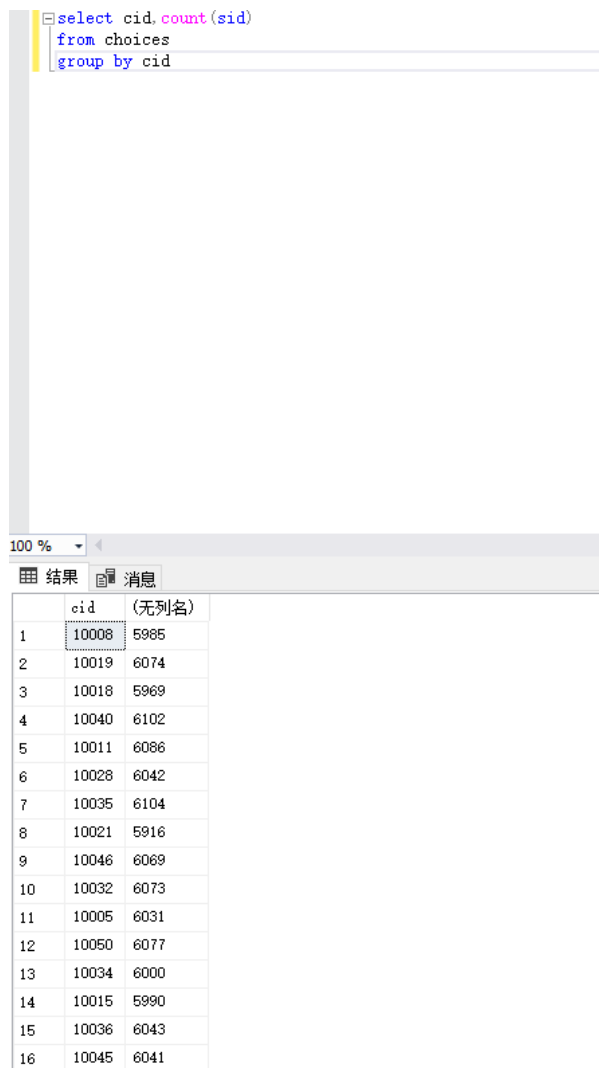


```
select count(cid)
from courses
```

(无列名)
50

(6)查询所有课程和选修该课程的学生总数;

```
select cid,count(sid)
from choices
group by cid
```



The screenshot shows a SQL query execution interface. At the top, the query is entered in a text box: `select cid,count(sid) from choices group by cid`. Below the text box, there is a tab labeled "结果" (Results) and a tab labeled "消息" (Messages). The "结果" tab is active, displaying a table with the following data:

	cid	(无列名)
1	10008	5985
2	10019	6074
3	10018	5969
4	10040	6102
5	10011	6086
6	10028	6042
7	10035	6104
8	10021	5916
9	10046	6069
10	10032	6073
11	10005	6031
12	10050	6077
13	10034	6000
14	10015	5990
15	10036	6043
16	10045	6041

(7)查询选修成绩超过60的课程超过两门的学生编号;

```
select sid
from choices
where score>60
group by sid
having count(cid)>2
```

```

select sid
from choices
where score>60
group by sid
having count(cid)>2

```

100 %

	结果	消息
	sid	
1	881360462	
2	822863200	
3	878053860	
4	888277410	
5	891044332	
6	862458436	
7	868752380	
8	815830773	
9	825769835	
10	848438237	
11	868827325	
12	884755248	
13	813094719	
14	807070488	
15	854160639	
16	801694037	

(8)统计各个学生的选修课程数目和平均成绩:

```

select sid,count(cid),avg(score)
from choices
group by sid

```

```

select sid, count(cid), avg(score)
from choices
group by sid

```

100 %

结果 消息

	sid	(无列名)	(无列名)
1	881360462	5	74
2	822863200	5	82
3	826765496	1	99
4	878053860	4	64
5	890054584	3	77
6	888277410	5	73
7	835593153	3	90
8	865375956	2	73
9	821819409	1	98
10	891044332	3	93
11	862458436	5	83
12	839006320	3	67
13	868752380	5	80
14	880524593	2	84
15	848032458	2	99
16	851274287	4	87

(9)查询选修Java的所有学生的编号及姓名;

```

select students.sid, sname
from students, courses, choices
where cname='JAVA' and students.sid=choices.sid and
courses.cid=choices.cid

```

```

select students.sid,sname
from students,courses,choices
where cname='JAVA' and students.sid=choices.sid and courses.cid=choices.cid

```

100 %

结果 消息

	sid	sname
1	800001216	gfxrgs
2	800013889	nahhluoe
3	800017669	lkclbq
4	800017669	lkclbq
5	800022243	ssst
6	800040140	kqvynoc
7	800041941	rndbdy
8	800056217	esvns
9	800064807	jukhld
10	800084502	hwshb
11	800116045	tdtdbn
12	800126924	minujyxfb
13	800161341	pgheo
14	800169640	gtixlgfox
15	800196293	vioojua
16	800234387	aqjhmqh

(10)查询姓名为ssst的学生所选的课程的编号和成绩;

```

select cid,score
from students,choices
where sname='ssst' and students.sid=choices.sid

```

```

select cid,score
from students,choices
where sname='ssst' and students.sid=choices.sid

```

100 %

结果 消息

	cid	score
1	10004	76
2	10037	84
3	10037	54
4	10030	53
5	10019	79

(11)查询其他课时比课程C++多的课程的名称;

```

select y.cname
from courses as x,courses as y
where x.cname='C++' and x.hour < y.hour

```

```

select y.cname
from courses as x,courses as y
where x.cname='C++' and x.hour < y.hour

```

100 %

结果 消息

	cname
1	database
2	operating system
3	top/ip protocol
4	algorithm
5	compiling principle