

数据库实验二

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实验任务

在school数据库中：

- (1)查询全部课程的详细记录
- (2)查询所有有选修课的学生的编号
- (3)查询课时<88(小时)的课程的编号
- (4)请找出总分超过400分的学生
- (5)查询课程的总数
- (6)查询所有课程和选修该课程的学生总数
- (7)查询选修成绩超过60的课程超过两门的学生编号
- (8)统计各个学生的选修课程数目和平均成绩
- (9)查询选修java的所有学生的编号及姓名
- (10)查询姓名为ssht的学生所选的课程的编号和成绩
- (11)查询其他课时比课程C++多的课程的名称

解决方案

(1)

```
use School
select *
from COURSES
```

结果		消息	
	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

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(2)

```

use School
select distinct STUDENTS.sid
from CHOICES,STUDENTS
where CHOICES.sid=STUDENTS.sid

```

	sid
1	875058993
2	825441836
3	802563629
4	830171441
5	816522768
6	820928013
7	851274287
8	868752380
9	867124477
10	872331801
11	805270936
12	826772208

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(3)

```

use School
select cid
from COURSES
where COURSES.hour<88

```

	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

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(4)

```

use School
select sid,sname
from STUDENTS
where STUDENTS.grade>400

```

结果		消息
	sid	sname
1	800001216	gfxrgs
2	800002933	vnbnqzsvv
3	800005753	waqcj
4	800006682	fiiluommh
5	800006941	ogvmu
6	800007595	uxqqbkjn
7	800008565	ehlycg
8	800009026	rcxaihj
9	800009099	zapyv
10	800009249	zyuoh
11	800010666	uwphrw
12	800013889	nahhluoe

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(5)

```
use School
select COUNT(distinct cid)
from COURSES
```

结果		消息
	(无列名)	
1	50	

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(6)

```
use School
select cid,COUNT(distinct STUDENTS.sid)
from CHOICES,STUDENTS
where CHOICES.sid=STUDENTS.sid
group by CHOICES.cid
```

结果			消息
	cid	(无列名)	
1	10001	5757	
2	10002	5853	
3	10003	5811	
4	10004	5952	
5	10005	5876	
6	10006	5913	
7	10007	5825	
8	10008	5825	
9	10009	5807	
10	10010	5881	
11	10011	5937	
12	10012	5669	

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(7)

```

use School
select STUDENTS.sid
from CHOICES,STUDENTS
where CHOICES.sid=STUDENTS.sid and grade>60
group by STUDENTS.sid
having COUNT(*)>2

```

结果			消息
	sid		
1	835593153		
2	826307377		
3	862458436		
4	816052242		
5	864460136		
6	887378604		
7	867004082		
8	835399987		
9	854160639		
10	865564545		
11	894923042		
12	831998172		

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(8)

```

use School
select STUDENTS.sid ,COUNT(cid) as course_cnt,AVG(score) as avg_score
from CHOICES,STUDENTS
where CHOICES.sid=STUDENTS.sid
group by STUDENTS.sid

```

	sid	course_cnt	avg_score
1	875058993	3	78
2	872331801	4	87
3	820928013	4	74
4	802563629	2	66
5	830171441	2	80
6	868752380	5	80
7	867124477	2	92
8	816522768	3	74
9	851274287	4	87
10	825441836	4	73
11	820970361	3	66
12	805270936	1	NULL

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(9)

```
use School
select STUDENTS.sid,sname
from CHOICES,STUDENTS,COURSES
where cname='Java' and CHOICES.sid = STUDENTS.sid and COURSES.cid = CHOICES.cid
```

	sid	sname
1	807316755	dvdnlvrnx
2	807335473	ysmndlygl
3	807349443	hcmqyer
4	807461130	yiflvz
5	807461225	merjuf
6	807662908	qxfqolwld
7	807786999	szpymq
8	808089273	xapzofwyr
9	808135161	zpuula
10	808167636	rldodoy
11	808182089	ncsqcpmcs
12	808441580	hhjdxxzgx

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(10)

```
use School
select CHOICES.cid,CHOICES.score
from CHOICES,STUDENTS
where STUDENTS.sname='sssh' and CHOICES.sid = STUDENTS.sid
```

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

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(11)

```

use School
select COURSES.cname
from COURSES
where COURSES.hour>(select COURSES.hour from COURSES where COURSES.cname='c++')
  
```

结果		消息
	cname	
1	database	
2	operating system	
3	tcp/ip protocol	
4	algorithm	
5	compiling principle	

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