第3次实验

一、上次实验问题

4. 请找出总分超过400分的学生;

```
USE SCHOOL
SELECT DISTINCT SNAME
FROM STUDENTS, CHOICES AS C1
WHERE STUDENTS.SID = C1.SID AND (SELECT SUM(SCORE)
                                 FROM CHOICES AS C2
                                 WHERE C1.SID = C2.SID) > 400
```

应该为

```
USE SCHOOL
SELECT SNAME
FROM STUDENTS
WHERE (SELECT SUM(SCORE)
       FROM CHOICES
       WHERE STUDENTS.SID = CHOICES.SID) > 400
```

一方面做了冗余的连接，另一方面 `SNAME` 可能重复，不能用 `DISTINCT` ，实验结果不变

	SNAME
1	sqeqpn
2	xjcuicla
3	uczklgzkd
4	pwrpft
5	zohbzqxk
6	gqwadq
7	yfhsteeu
8	yeowwsai
9	sguosu
10	zvnasm
11	jjnvnx

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二、本次实验练习

1. 查询选修C++课程的成绩比姓名为 ZNKOO的学生高的所有学生的编号和姓名;

```
USE SCHOOL
SELECT DISTINCT STUDENTS.SID, SNAME
FROM STUDENTS, CHOICES, COURSES
WHERE STUDENTS.SID = CHOICES.SID
AND CHOICES.CID = COURSES.CID
AND CNAME = 'C++'
AND SCORE > (SELECT SCORE
             FROM STUDENTS, CHOICES, COURSES
             WHERE STUDENTS.SID = CHOICES.SID
             AND CHOICES.CID = COURSES.CID
             AND CNAME = 'C++'
             AND SNAME = 'ZNKOO')
```

	SID	SNAME
1	802793962	rxfndxxcs
2	802924475	bffir
3	815916444	luoqneh
4	816004302	rknejgwo
5	816083740	cmhzfxp
6	816286205	ptvevdyf
7	816617832	ogkajvt
8	816833590	wqdyl
9	833023071	dksddz
10	833754181	shvzjql
11	833912927	fryzasicr

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2. 找出和学生883794999或学生850955252的年级一样的学生的姓名;

```
USE SCHOOL
SELECT SNAME
FROM STUDENTS
WHERE GRADE = SOME (SELECT GRADE
                    FROM STUDENTS
                    WHERE SID = 883794999 OR SID = 850955252)
```

	SNAME
1	uxqqbkjn
2	hvylafcj
3	vocojjnml
4	ztozk
5	efmgfprz
6	pgmrkdhh
7	ttyyb
8	mcefjr
9	rlmbgu
10	nkdnfq
11	qmxesrhv

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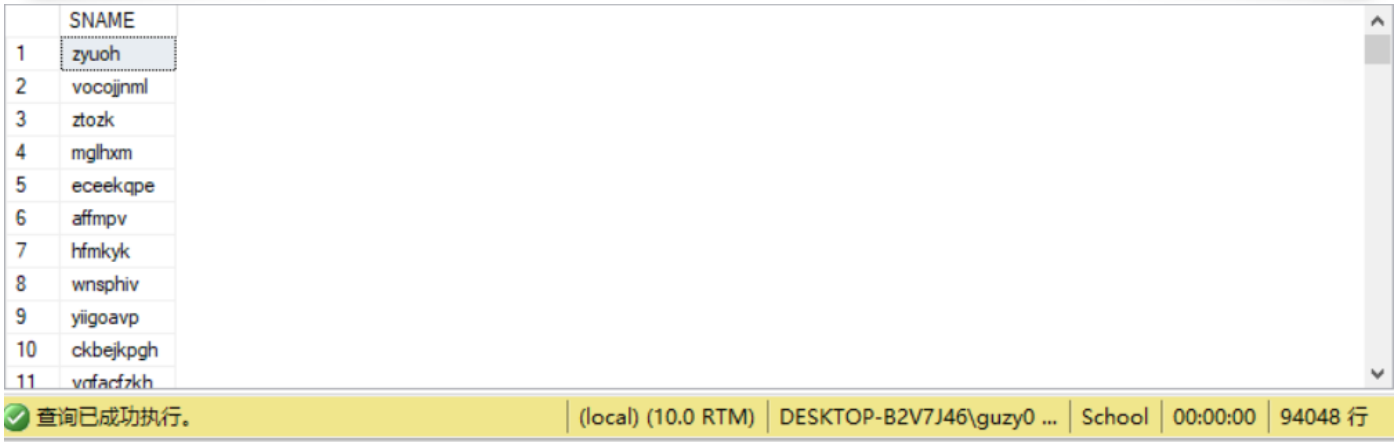
3. 查询没有选修Java的学生名称;

```
USE SCHOOL
SELECT SNAME
FROM STUDENTS
WHERE SID NOT IN (SELECT SID
                  FROM CHOICES, COURSES
                  WHERE CHOICES.CID = COURSES.CID
                  AND CNAME = 'Java')
```



	SNAME
1	zyuoh
2	vocojjnml
3	ztozk
4	mglhxm
5	eceekqpe
6	affmpv
7	hfmkyk
8	wnsphiv
9	yiigoavp
10	ckbejkpgh
11	yqfacfzkh

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4. 找出课时最少的课程的详细信息;

```
USE SCHOOL
SELECT *
FROM COURSES
WHERE HOUR = (SELECT MIN(HOUR)
              FROM COURSES)
```

	cid	cname	hour
1	10024	use case	18
2	10034	windows	18

查询已成功执行。 | (local) (10.0 RTM) | DESKTOP-B2V7J46\guzy0 ... | School | 00:00:00 | 2 行

5. 查询工资最高的教师的编号和开设的课程号;

```
USE SCHOOL
SELECT TEACHERS.TID, CID
FROM TEACHERS, CHOICES
WHERE TEACHERS.TID = CHOICES.TID AND SALARY = (SELECT MAX(SALARY)
                                               FROM TEACHERS)
```

	TID	CID
1	204711560	10032
2	204711560	10017
3	277877392	10041
4	204711560	10001
5	204711560	10026
6	287866460	10005
7	277877392	10047
8	214445507	10022
9	287866460	10012
10	214445507	10003
11	287866460	10048

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6. 找出选修课程ERP成绩最高的学生编号;

```
USE SCHOOL
SELECT CHOICES.SID
FROM CHOICES, COURSES
WHERE CHOICES.CID = COURSES.CID
AND CNAME = 'ERP'
AND SCORE = (SELECT MAX(SCORE)
             FROM CHOICES, COURSES
             WHERE CHOICES.CID = COURSES.CID
             AND CNAME = 'ERP')
```

	SID
1	831163985
2	862976650
3	840891316
4	844440501
5	883884237
6	862654622
7	839342232
8	865296034
9	843643589
10	827092658
11	866949513

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7. 查询没有学生选修的课程名称;

```
USE SCHOOL
SELECT CNAME
FROM CHOICES RIGHT JOIN COURSES
ON CHOICES.CID = COURSES.CID
WHERE SID IS NULL
```

CNAME

查询已成功执行。 | (local) (10.0 RTM) | DESKTOP-B2V7J46\guzy0 ... | School | 00:00:00 | 0 行

8. 查询讲授课程UML的教师所讲授的所有课程名称;

```
USE SCHOOL
SELECT DISTINCT CNAME
FROM CHOICES, COURSES
WHERE CHOICES.CID = COURSES.CID
AND CHOICES.TID IN (SELECT TID
                    FROM CHOICES, COURSES
                    WHERE CHOICES.CID = COURSES.CID AND COURSES.CNAME = 'UML')
```

	CNAME
1	algorithm
2	architectonics
3	artifical intelligence
4	asp
5	basic
6	c
7	c#
8	c++
9	c++/stl programming
10	cobol
11	compiling principle

查询已成功执行。 | (local) (10.0 RTM) | DESKTOP-B2V7J46\guzy0 ... | School | 00:00:00 | 50 行

9. 使用集合交运算，查询既选修了database又选修了UML课程的学生编号;

```
USE SCHOOL
SELECT SID
FROM CHOICES, COURSES
WHERE CHOICES.CID = COURSES.CID AND CNAME = 'database'
INTERSECT
SELECT SID
FROM CHOICES, COURSES
WHERE CHOICES.CID = COURSES.CID AND CNAME = 'UML'
```

	SID
1	801619231
2	806238872
3	820098772
4	821126308
5	824825346
6	828934699
7	830644918
8	834921972
9	836670359
10	838450830
11	838803879

查询已成功执行。 | (local) (10.0 RTM) | DESKTOP-B2V7J46\guzy0 ... | School | 00:00:00 | 303 行

10. 使用集合减运算，查询选修了database却没有选修UML课程的学生编号;

```
USE SCHOOL
SELECT SID
FROM CHOICES, COURSES
WHERE CHOICES.CID = COURSES.CID AND CNAME = 'database'
EXCEPT
SELECT SID
FROM CHOICES, COURSES
WHERE CHOICES.CID = COURSES.CID AND CNAME = 'UML'
```

	SID
1	800276260
2	800307150
3	800506045
4	800550744
5	800578280
6	800585883
7	800714571
8	800739413
9	801106750
10	801253720
11	801847773

查询已成功执行。 | (local) (10.0 RTM) | DESKTOP-B2V7J46\guzy0 ... | School | 00:00:00 | 5454 行