数据库实验五

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实验任务

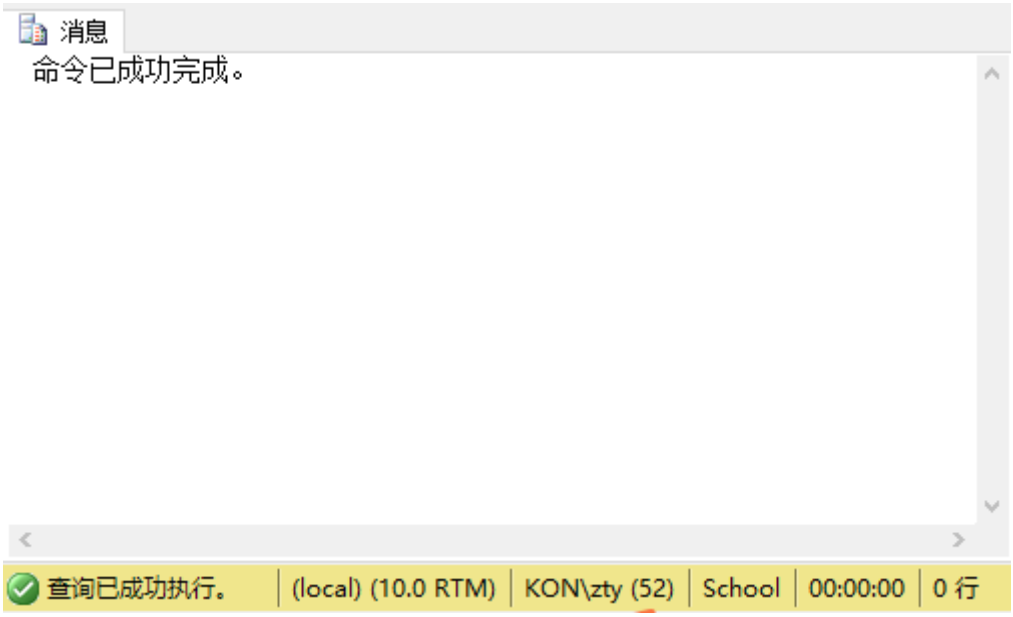
在school数据库中：
(1)定义选课信息和课程名称的视图 VIEWC;
(2)定义学生姓名与选课信息的视图 VIEWS;
(3)定义年级低于1998的学生的视图S1(SID, SNAME, GRADE);
(4)查询学生为“ uxjof”的学生的选课信息;
(5)查询选修课程“UML”的学生的编号和成绩;
(6)向视图S1插入记录(60000001,Lily,2001);
(7)定义包括更新和插入约束的视图S1,尝试向视图插入记录(60000001,Lily,1997),删除所有年级为1999的学生记录,讨论更新和插入约束带来的影响。
(8)在视图 VIEWS中将姓名为“ uxjof”的学生的选课成绩都加上5分。
(9)取消以上建立的所有视图。

解决方案

需要注意的是在前一次实验中的“(8)删除年级高于1998的学生信息”时，我在删除时使用了“alter table CHOICES drop constraint FK_CHOICES_STUDENTS”语句先删除了外键约束再删除了该信息，所以此实验不少结果有些奇怪（比如没有uxjof这个学生），和同学交流时发现上次该处并不需要一定删除成功，所以把原数据库还原重新做了一遍，现在的数据库中的外键约束是完整的，结果是比较合理的。

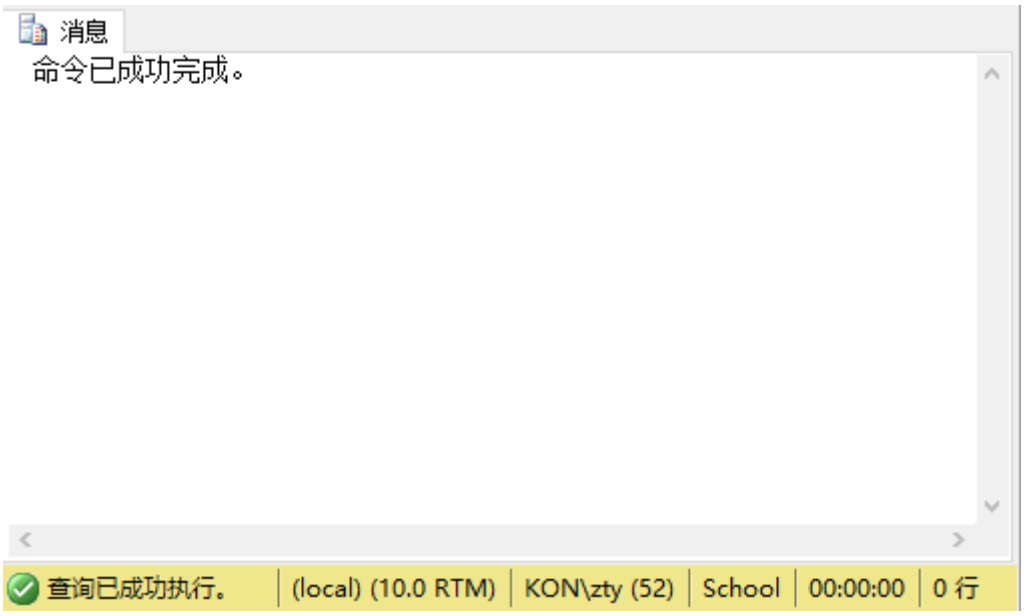
(1)

```
create view VIEWC
as select no,sid,tid,CHOICES.cid,score,cname
from CHOICES,COURSES
where CHOICES.cid=COURSES.cid
```



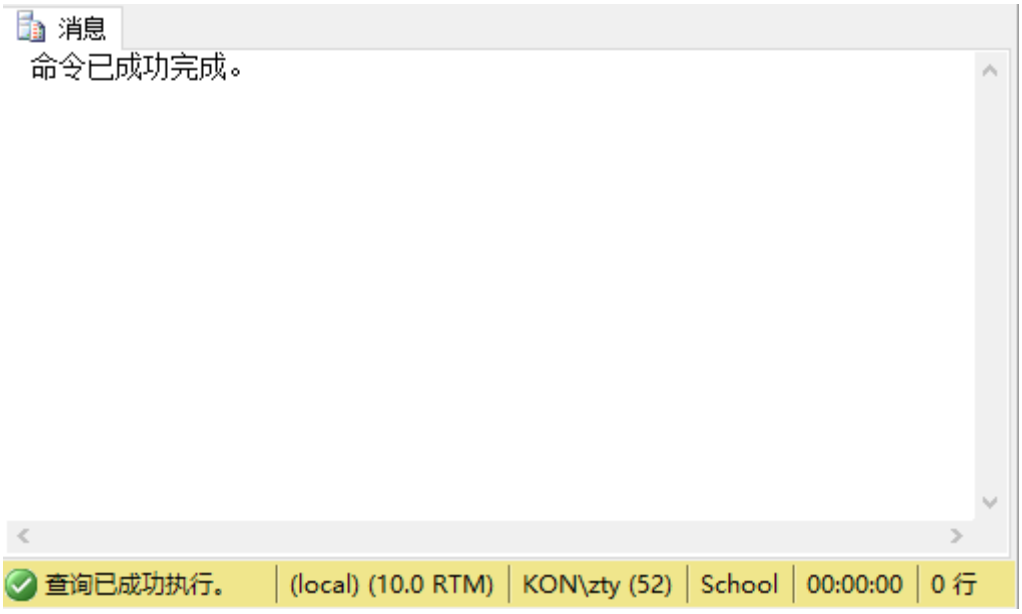
(2)

```
create view VIEWS
as select no,CHOICES.sid,tid,cid,score,sname
from CHOICES,STUDENTS
where CHOICES.sid=STUDENTS.sid
```



(3)

```
create view S1(SID, SNAME, GRADE)
as select SID,sname,grade
from STUDENTS
where grade>1998
```



(4)

```
select *
from views
where sname='uxjof'
```

结果 消息

	no	sid	tid	cid	score	sname
1	506978093	800023963	220667042	10046	94	uxjof
2	541221076	800023963	238341990	10018	84	uxjof
3	567316431	800023963	258375444	10037	98	uxjof

查询已成... | (local) (10.0 RTM) | KON\zty (52) | School | 00:00:00 | 3 行

(5)

```
select sid,score
from viewc
where cname='UML'
```

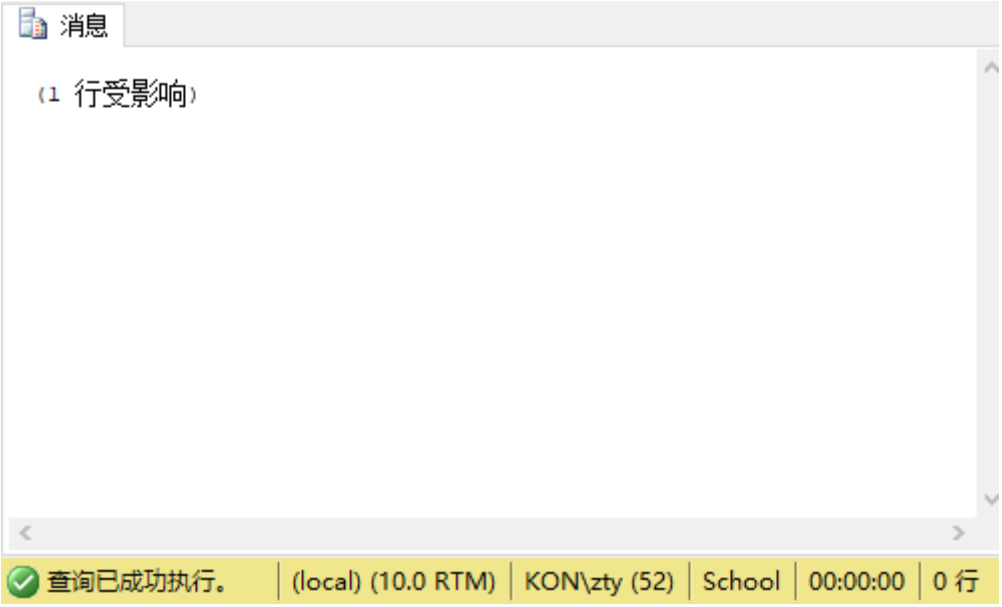
结果 消息

	sid	score
1	848035070	88
2	897664264	62
3	898453203	91
4	846108663	86
5	827984677	86
6	823352185	NULL
7	882778410	69
8	884993242	74
9	806427512	96
10	848803637	85
11	839666024	92
12	844745062	96

查询已成功执... | (local) (10.0 RTM) | KON\zty (52) | School | 00:00:00 | 5253 行

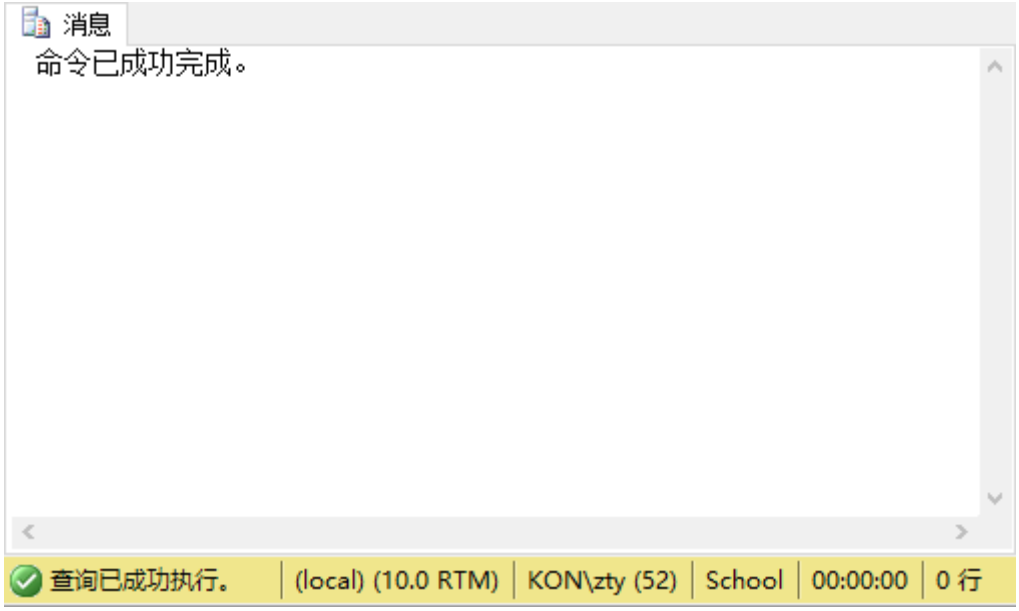
(6)

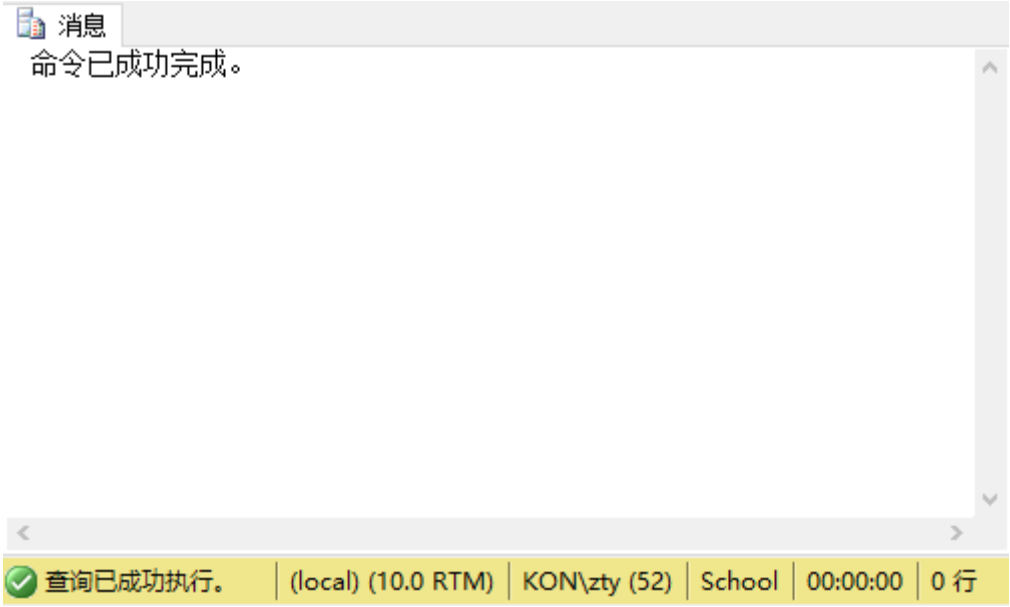
```
insert into S1
values('60000001','Lily',2001)
```

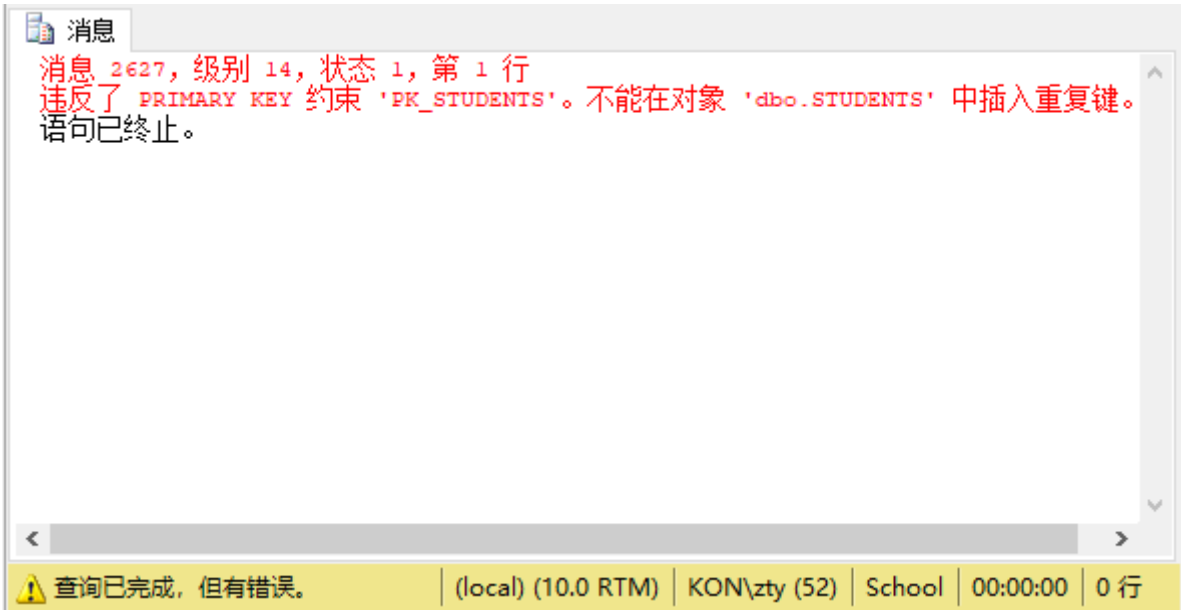


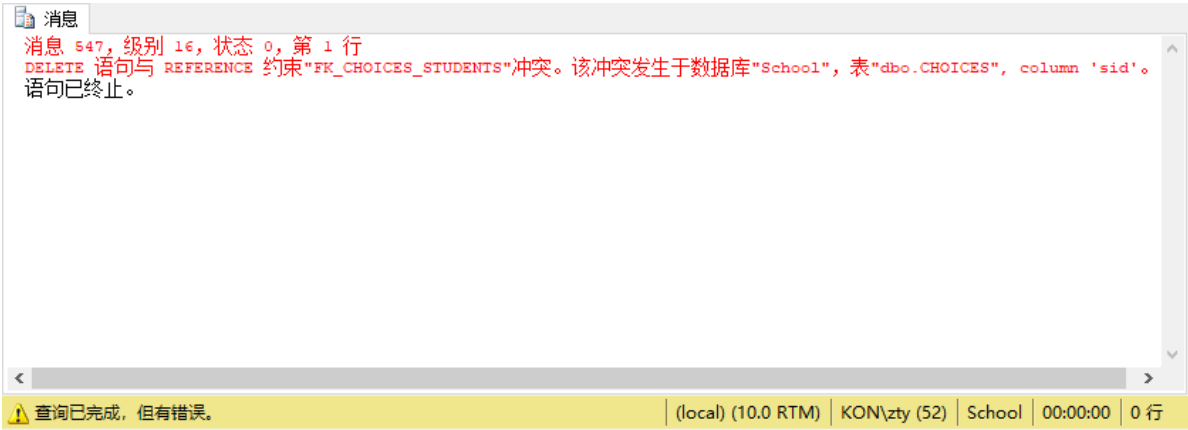
(7)

```
--- 分四步做
--- 0
drop view S1
--- 1
create view S1(SID,SNAME,GRADE)
as SELECT SID,SNAME,GRADE
from STUDENTS
where grade>1998
with check option
--- 2
insert into S1
values('60000001','Lily',2001)
--- 3
delete from S1
where grade=1999
```





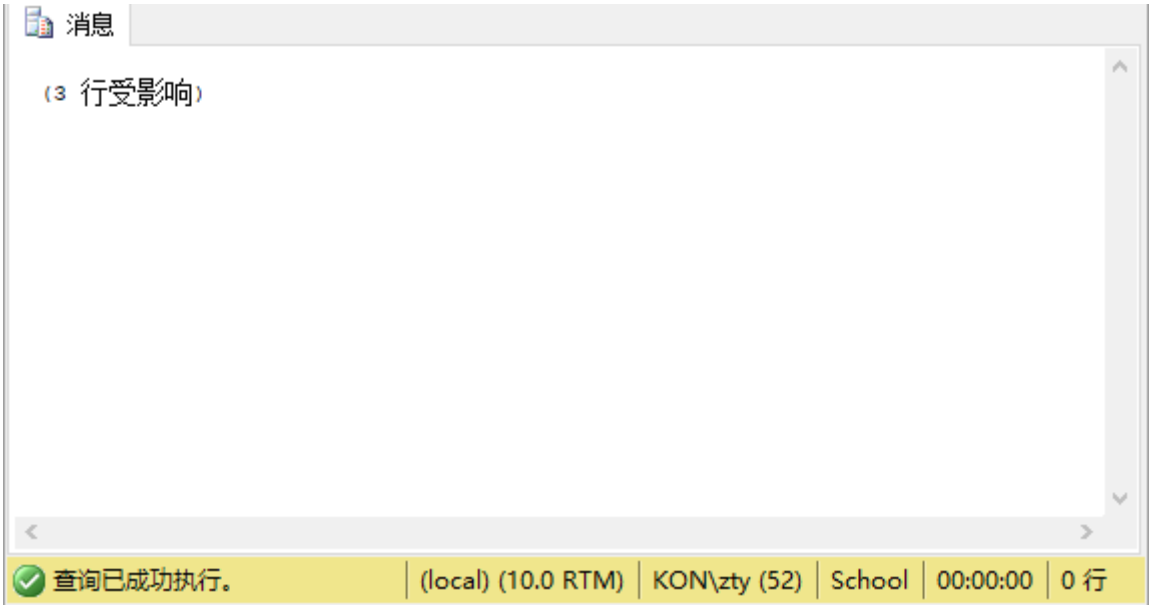


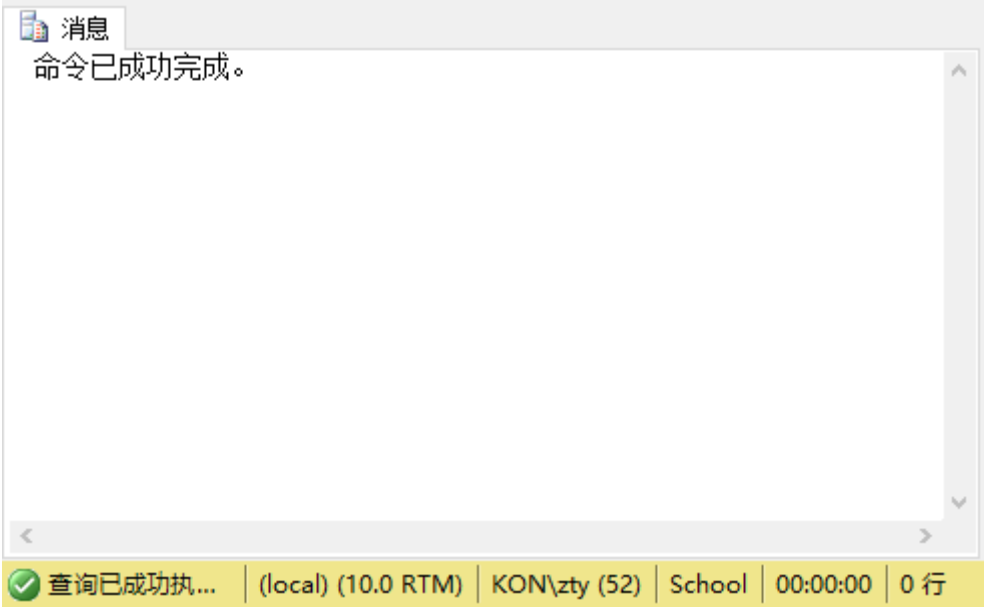


”with check option“决定插入和更新是否需要检查约束grade>1998，插入时不满足约束插入失败。虽然”with check option“不影响删除操作，但删除违反了外键约束，所以也失败了。

(8)

```
update views
set score=score+5
where sname='uxjof'
```



(9)

```
drop view S1
drop view viewc
drop view views
```