数据库实验十三

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实验任务

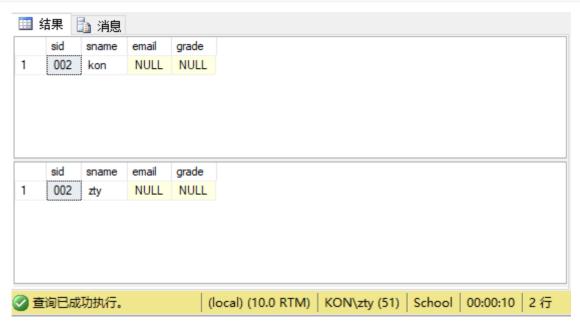
- 以下练习均在school数据库中students表上进行。
- (1)设置"未提交读"隔离级别(READ UNCOMMITTED),在students表上演示读"脏"数据。
- (2)设置"提交读"隔离级别(READ COMMITTED),在students表上演示避免读"脏"数据。
- (3)设置"可重复读"隔离级别(REPEATABLE READ),在students表上演示避免读"脏"数据、不可重复读,但不能避免幻象读。
- (4)设置 "可串行化"隔离级别(SERIALIZABLE),在students表上演示防止其他用户在事务提交之前更新数据。

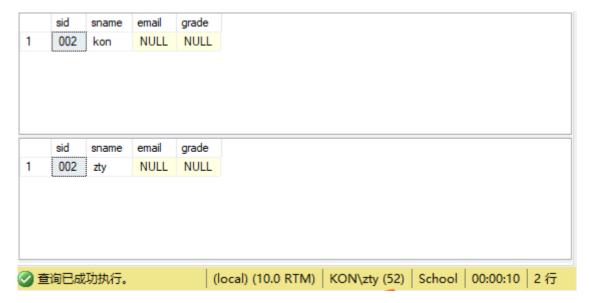
解决方案

(1)

```
-- 查询1
begin tran
    update STUDENTS set sname='kon' where sid='002'
    waitfor delay '00:00:10'
    select * from STUDENTS where sid='002'
rollback tran
    select * from STUDENTS where sid='002'

-- 查询2
set transaction isolation level read uncommitted
select * from STUDENTS where sid='002'
waitfor delay '00:00:10'
select *from STUDENTS where sid='002'
```



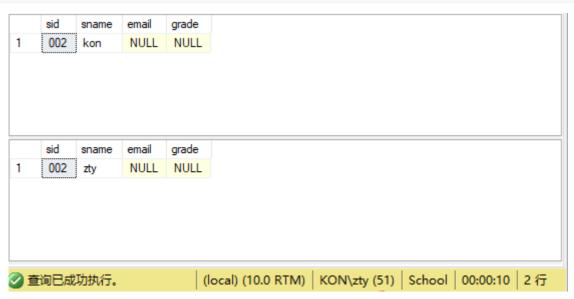


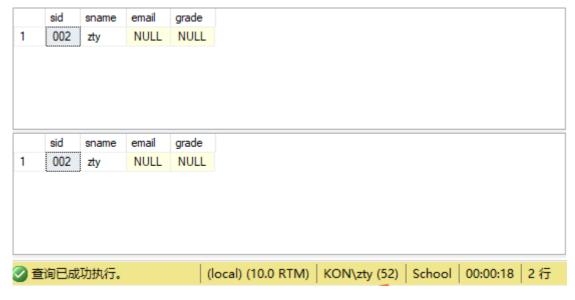
(2)

```
-- 查询1
set transaction isolation level read committed
begin tran
    update STUDENTS set sname='kon' where sid='002'
    waitfor delay '00:00:10'
    select * from STUDENTS where sid='002'

rollback tran
    select * from STUDENTS where sid='002'

-- 查询2
set transaction isolation level read committed
select * from STUDENTS where sid='002'
waitfor delay '00:00:10'
select *from STUDENTS where sid='002'
```

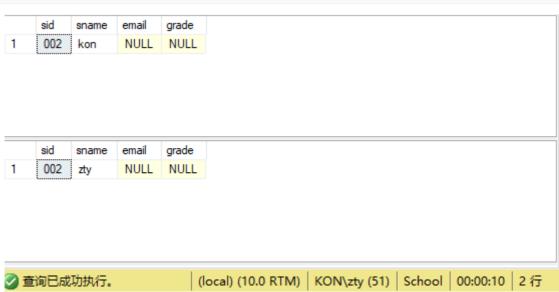


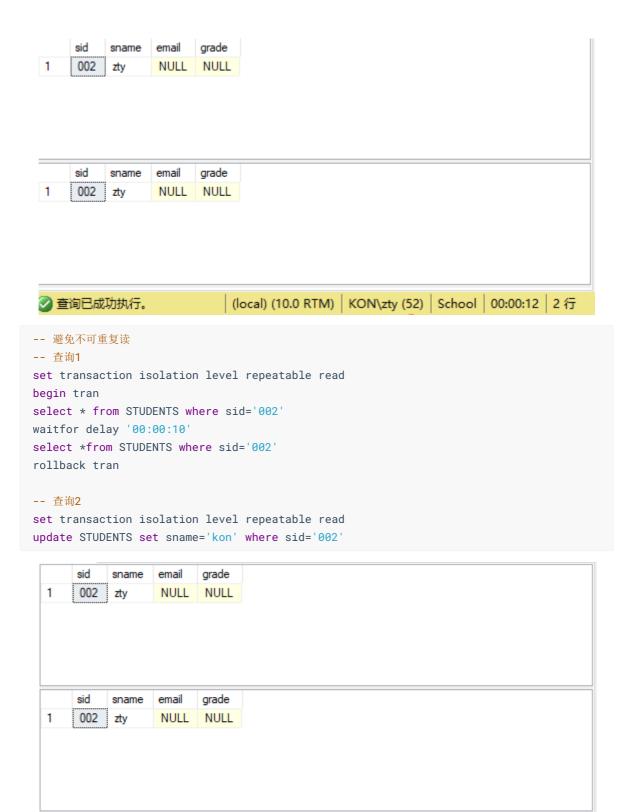


(3)

```
-- 避免脏读
-- 查询1
set transaction isolation level repeatable read
begin tran
    update STUDENTS set sname='kon' where sid='002'
    waitfor delay '00:00:10'
    select * from STUDENTS where sid='002'
rollback tran
    select * from STUDENTS where sid='002'

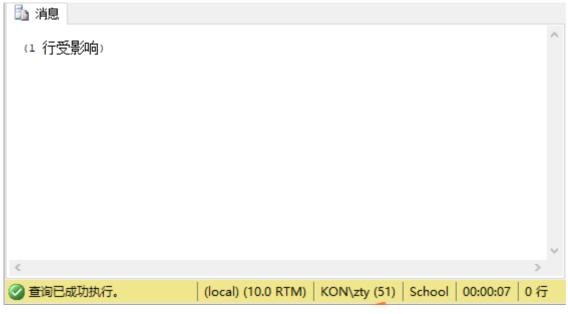
-- 查询2
set transaction isolation level repeatable read
select * from STUDENTS where sid='002'
waitfor delay '00:00:10'
select *from STUDENTS where sid='002'
```





(local) (10.0 RTM) | KON\zty (52) | School | 00:00:10 | 2 行

🧭 查询已成功执行。



```
-- 幻读
-- 查询1
set transaction isolation level repeatable read begin tran
select * from STUDENTS where sid='002'
waitfor delay '00:00:10'
select *from STUDENTS where sid='002'
rollback tran
-- 查询2
set transaction isolation level repeatable read delete STUDENTS where sid='002'
```



