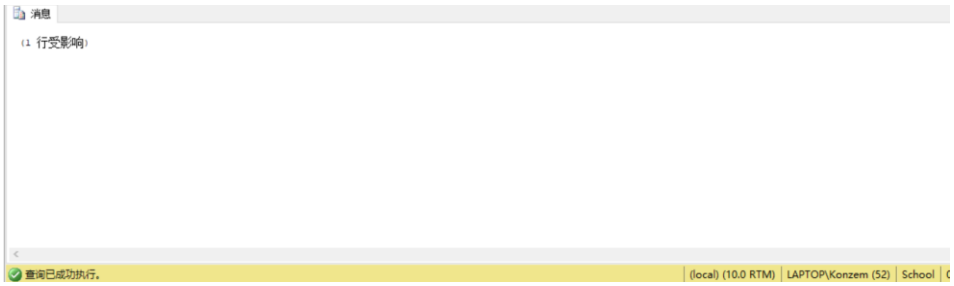
1. 事务一代码:

```
SET TRANSACTION ISOLATION LEVEL REPEATABLE READ
BEGIN TRAN
    UPDATE STUDENTS SET grade=1993 WHERE sid='800001216'
```

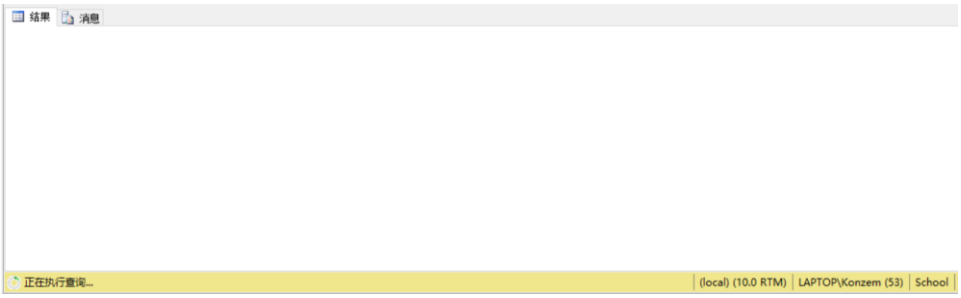
事务二代码:

```
SET TRANSACTION ISOLATION LEVEL REPEATABLE READ
BEGIN TRAN
    SELECT * FROM STUDENTS WHERE sid='800001216'
COMMIT TRAN
```

事务一结果:



事务二结果:



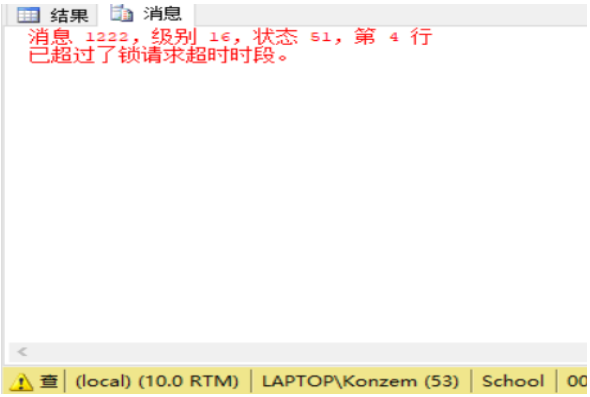
通过 exec sp_who 查看阻塞进程:

29	52	0	sleeping	LAPT...	LAPTOP	0	School	AWAITING COMMAND	0
30	53	0	suspended	LAPT...	LAPTOP	52	School	SELECT	0

设置 LOCK_TIMEOUT 后的事务二的代码:

```
SET TRANSACTION ISOLATION LEVEL REPEATABLE READ
SET LOCK_TIMEOUT 1000
BEGIN TRAN
    SELECT * FROM STUDENTS WHERE sid='800001216'
COMMIT TRAN
```

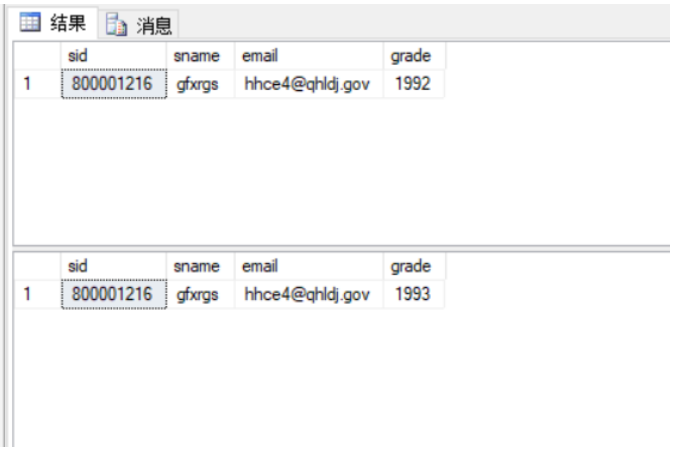
结果:



2. 事务一、二代码:

```
SET TRANSACTION ISOLATION LEVEL REPEATABLE READ
BEGIN TRAN
    SELECT * FROM STUDENTS WHERE sid='800001216'
    WAITFOR DELAY '00:00:05'
    UPDATE STUDENTS SET grade=1993 WHERE sid='800001216'
COMMIT TRAN
    SELECT * FROM STUDENTS WHERE sid='800001216'
```

事务一的结果:



结果 消息

	sid	sname	email	grade
1	800001216	gfxrgs	hhce4@qhldj.gov	1992

	sid	sname	email	grade
1	800001216	gfxrgs	hhce4@qhldj.gov	1993

事务二的结果:

结果 消息

(1 行受影响)
消息 1205, 级别 13, 状态 51, 第 5 行
事务(进程 ID 53)与另一个进程被死锁在 锁 资源上，并且已被选作死锁牺牲品。请重新运行该事务。

3. 避免死锁的方法:
通过对加锁请求进行排序或要求同时获得所有的锁来保证不会发生循环等待;
使用抢占与事务回滚;
使用锁超时机制;

处理死锁的方法:
回滚某些处于死锁的事务，等待一段时间再进行这些事务;

4. 创建用户“王二”:

```
EXEC sp_addlogin '王二', '123456', 'School', 'English'
GO
USE School
GO
EXEC sp_grantdbaccess '王二'
```

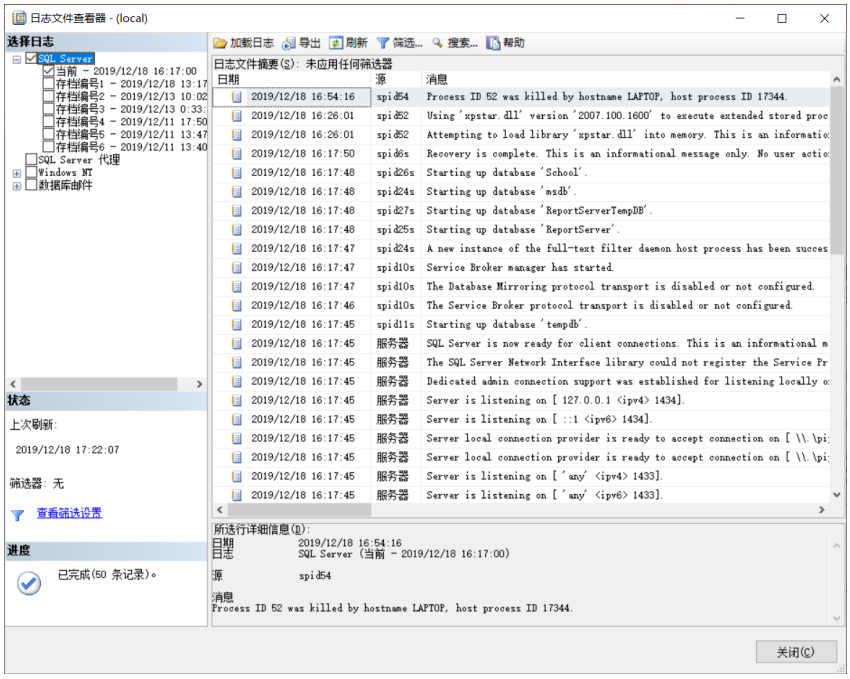
创建视图:

```
GO
CREATE VIEW Grade2000 AS
SELECT * FROM STUDENTS WHERE grade=2000
```

5. 授权代码:

```
GO
GRANT SELECT ON Grade2000 TO 王二
```

6. 授权代码:

```
GO
GRANT UPDATE ON dbo.[Grade2000]([sname]) TO 王二
```

7. 错误日志: