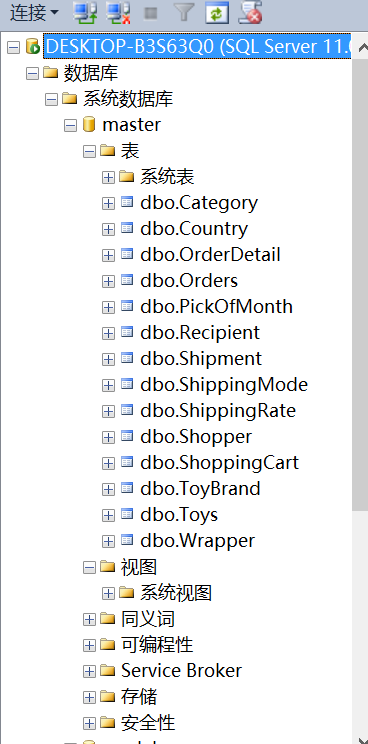
数据库原理实验报告

## 一：创建表和实施数据完整性

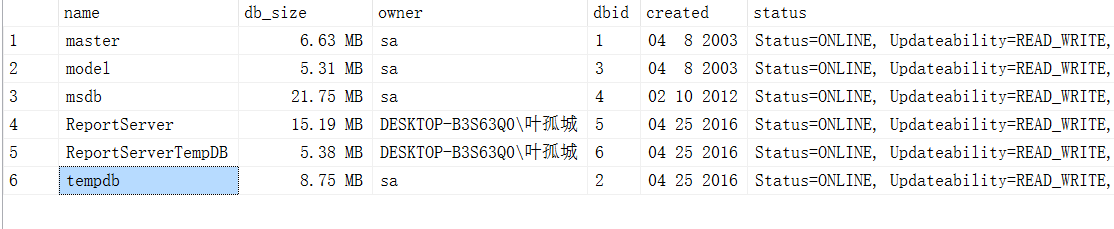
1. 运行给定的SQL Script，建立数据库GlobalToyz。
2. 了解表的结构。
3. 利用系统预定义的存储过程sp\_helpdb查看数据库的相关信息，例如所有者、大小、创建日期等。
4. 利用系统预定义的存储过程sp\_helpconstraint查看表中出现的约束（包括Primary key, Foreign key, check constraint, default, unique）
5. 对表Toys实施下面数据完整性规则：（1）玩具的现有数量应在0到300之间；（2）玩具适宜的最低年龄缺省为1。
6. 向表Orders中增加10条2016年1月的订单记录（注意Orders表与其它表的关联）。
7. 创建一张表Orders\_history，表的结构与Orders相同，将Orders表中2001年5月的订单记录复制到表Orders\_history中。

**答：**

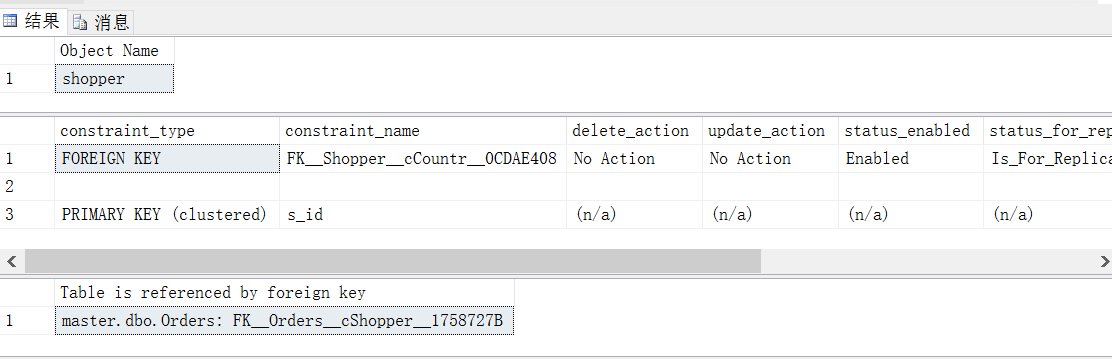
1. 建立数据库,数据库中表的结构如下：



1. 查看表中结构
2. sp\_helpdb;



1. sp\_helpconstraint shopper;



1. add constraint Toys\_currentNumber check(siToyQoh between 0 and 300);

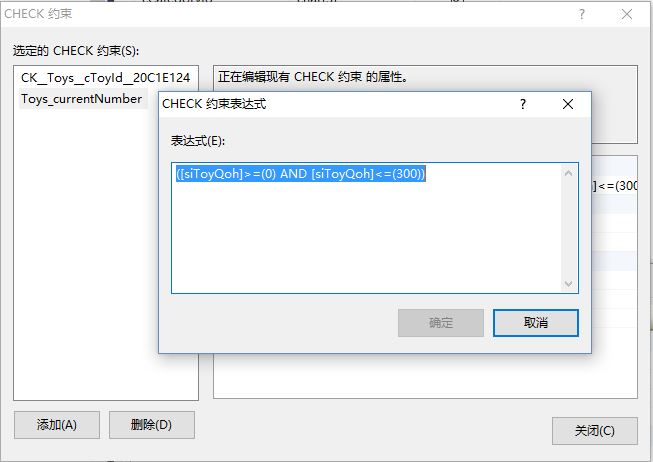
alter table Toys

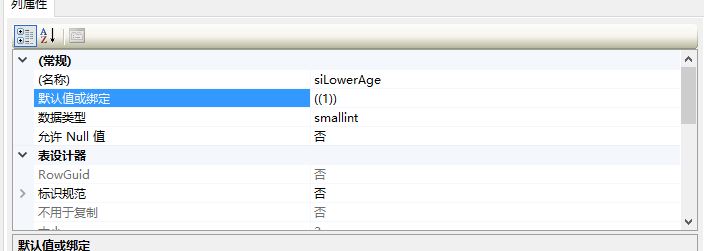
add constraint Toys\_lowerAge Default (1) for siLowerAge

--test测试用例

insert into Toys values('000033','Supermanhaha','','','100.00','','','400','','12','','')

insert into Toys values('000033','Supermanhaha','','001','100.00','001','','200','','12','','')







7、Create Table Orders\_history

(

cOrderNo char(6) constraint COH\_PK Primary key,

dOrderDate datetime not null,

cCartId char(6) not null,

cShopperId char(6) not null references Shopper(cShopperId),

cShippingModeId char(2) null references ShippingMode(cModeId),

mShippingCharges money null,

mGiftWrapCharges money null,

cOrderProcessed char null ,

mTotalCost money null,

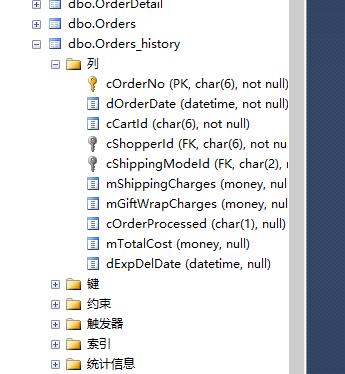
dExpDelDate DateTime null

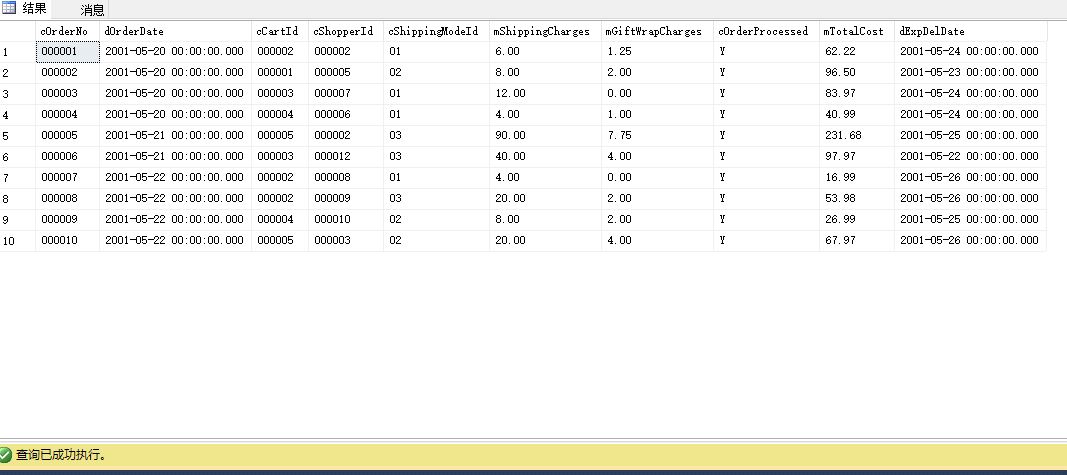
)

use GlobalToyz

go

insert into Orders\_history select \* from Orders where dOrderDate like “2001-05%”



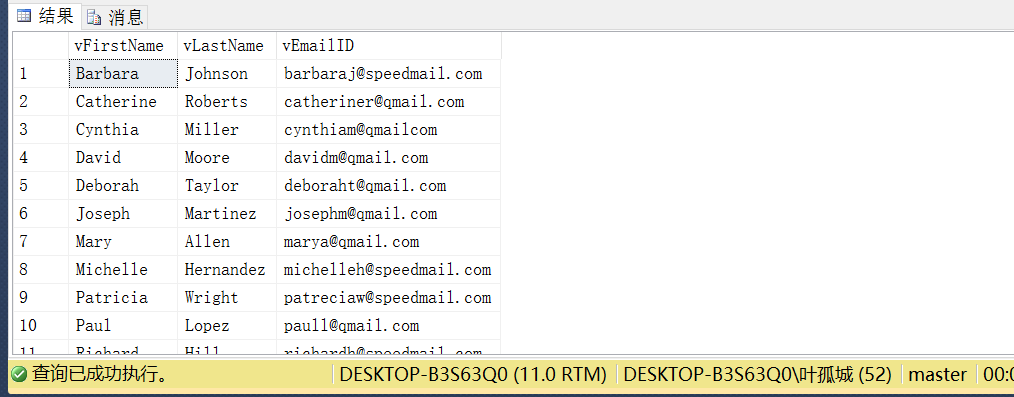


## 二：查询、更新数据库

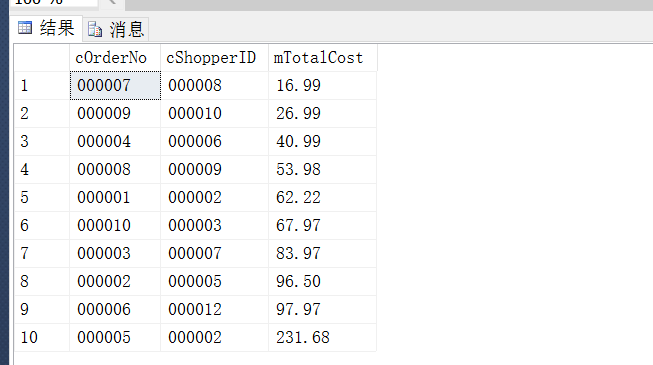
1. 显示属于California和Illinoi州的顾客的名、姓和emailID。
2. 显示定单号码、顾客ID，定单的总价值，并以定单的总价值的升序排列。
3. 显示在orderDetail表中vMessage为空值的行。
4. 显示玩具名字中有“Racer”字样的所有玩具的基本资料。
5. 列出表PickofMonth中的所有记录，并显示中文列标题。
6. 根据2000年的玩具销售总数，显示“Pick of the Month”玩具的前五名玩具的ID。
7. 根据OrderDetail表，显示玩具总价值大于￥50的定单的号码和玩具总价值。
8. 显示一份包含所有装运信息的报表，包括：Order Number, Shipment Date, Actual Delivery Date, Days in Transit. (提示：Days in Transit = Actual Delivery Date – Shipment Date)
9. 显示所有玩具的名称、商标和种类（Toy Name, Brand, Category）。
10. 以下列格式显示所有购物者的名字和他们的简称：（Initials, vFirstName, vLastName）,例如Angela Smith的Initials为A.S。
11. 显示所有玩具的平均价格，并舍入到整数。
12. 显示所有购买者和收货人的名、姓、地址和所在城市，要求显示结果中的重复记录。
13. 显示没有包装的所有玩具的名称。（要求用子查询实现）
14. 显示已收货定单的定单号码以及下定单的时间。（要求用子查询实现）
15. 显示一份基于Orderdetail的报表，包括cOrderNo,cToyId和mToyCost，记录以cOrderNo升序排列，并计算每一笔定单的玩具总价值。
16. 给id为‘000001’玩具的价格增加$1。
17. 删除“Largo”牌的所有玩具。

**答：**

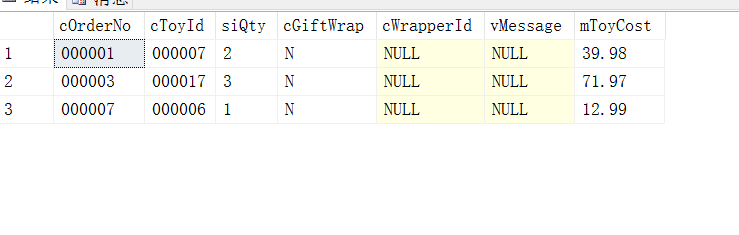
1. select vFirstName,vLastName,vEmailID from shopper where cState = 'California' or cState = 'Illinois';



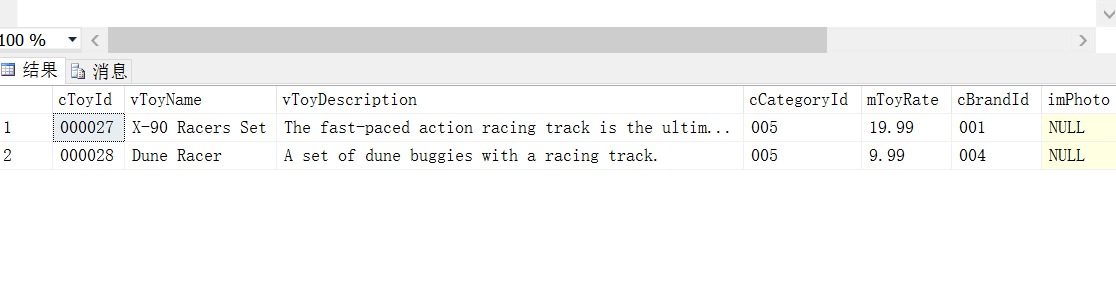
1. select cOrderNo,cShopperID,mTotalCost from orders order by mTotalCost ASC;



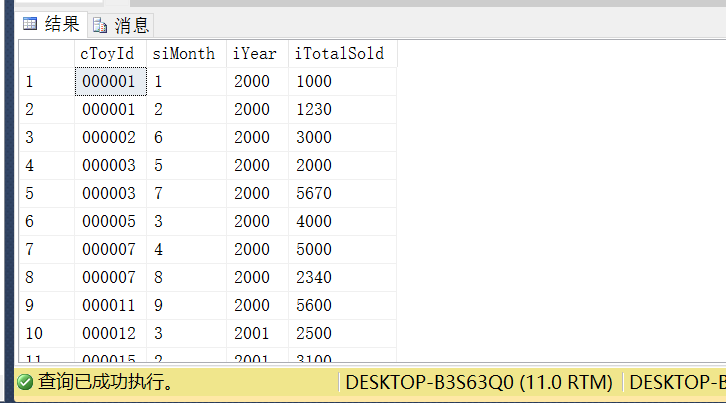
1. select \* from orderDetail where vMessage is null;



1. select \* from toys where vToyname like '%Racer%';

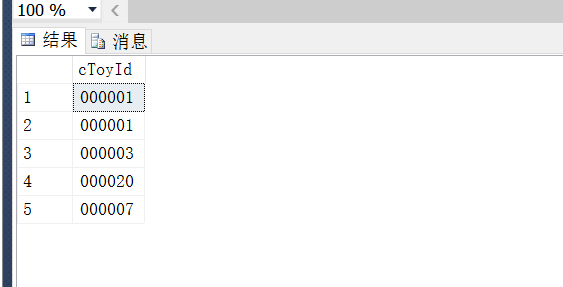


1. select \* from PickofMonth;

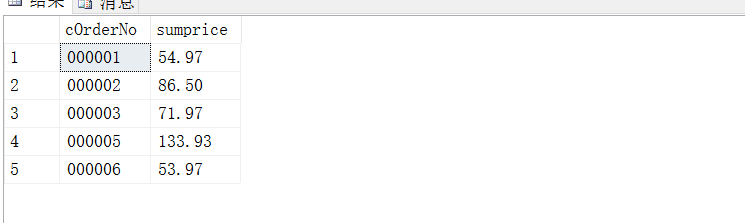


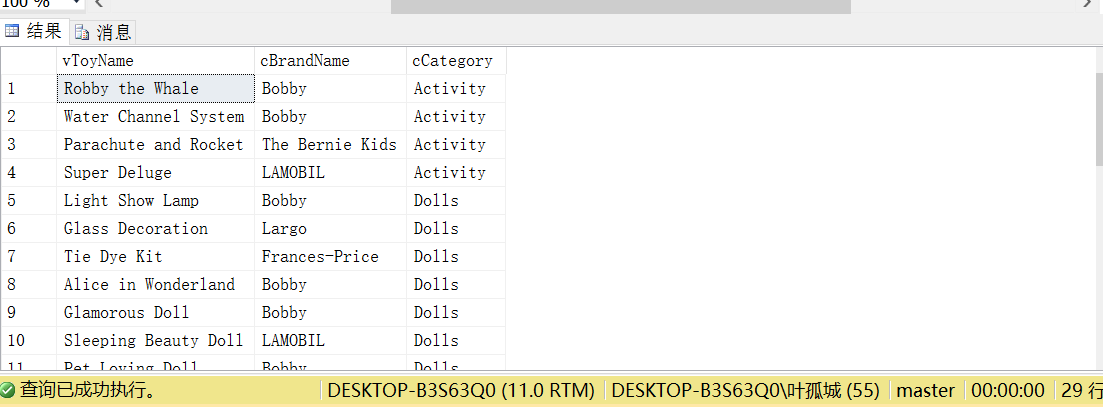
1. select top 5 cToyId from PickofMonth where iYear = '2000' order by iTotalSold ASC;

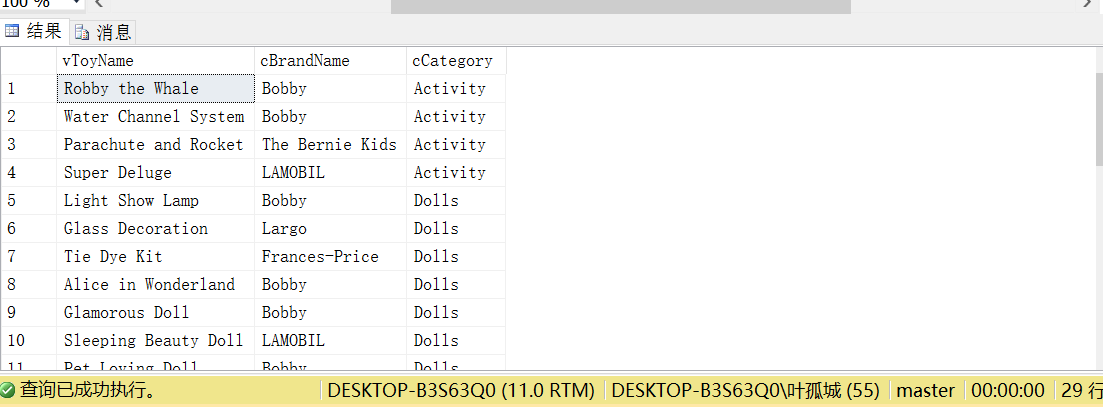
-----attention: limit in mysql do NOT supported my sql server!



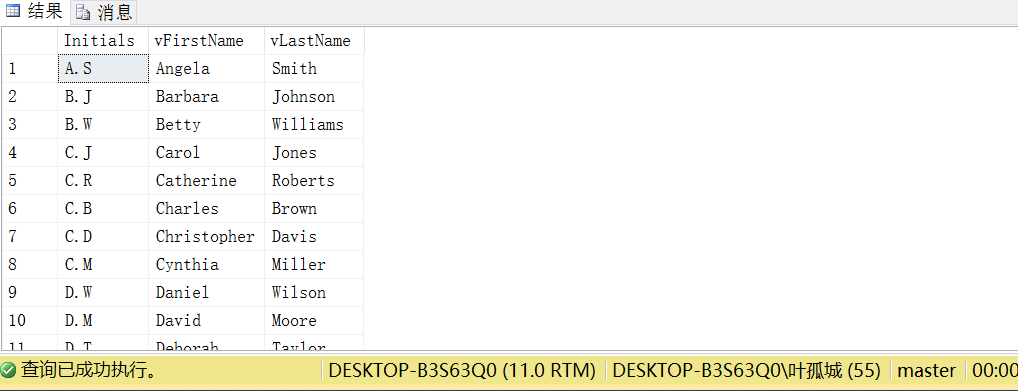
1. select distinct cOrderNo, sum(mToyCost)as sumprice from OrderDetail group by cOrderNo having sum(mToyCost)>50;



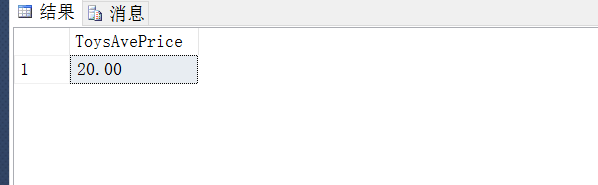
1. select cOrderNo as 'Order Number',dShipmentDate as 'Shipment Date',dActualDeliveryDate as 'Actual Delivery Date',dActualDeliveryDate-dShipmentDate as 'Days in Transit' from Shipment; 
2. select t.vToyName,b.cBrandName,c.cCategory from Toys t join ToyBrand b on t .cBrandId=b.cBrandId join Category c on t.cCategoryId=c.cCategoryId



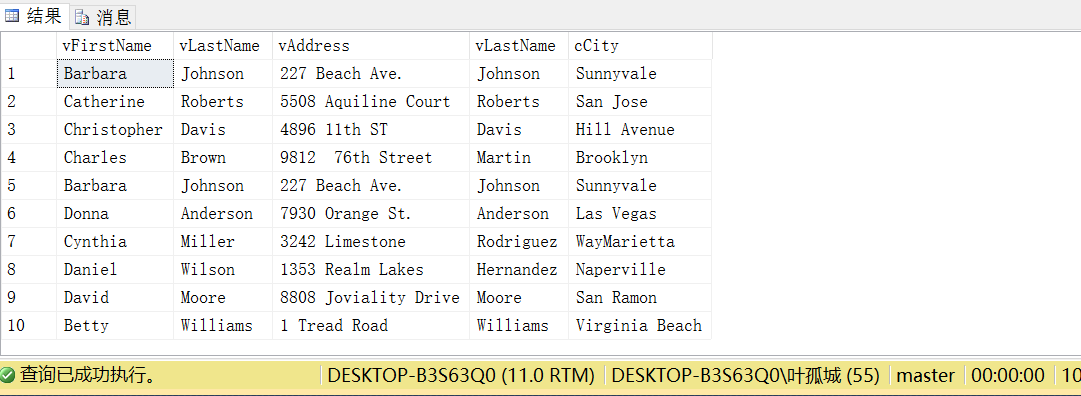
1. select left((select vFirstName from Shopper s2 where s1.vFirstName=s2.vFirstName and s1.vLastName=s2.vLastName ),1)+'.'+left((select vLastName from Shopper s2 where s1.vLastName=s2.vLastName and s1.vFirstName=s2.vFirstName),1) as Initials,s1.vFirstName,s1.vLastName from Shopper s1



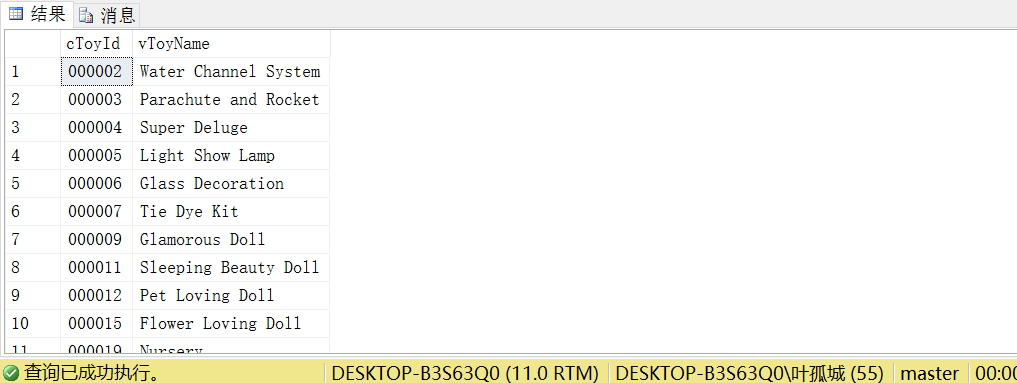
1. select round(avg(mToyRate),0) as ToysAvePrice from Toys



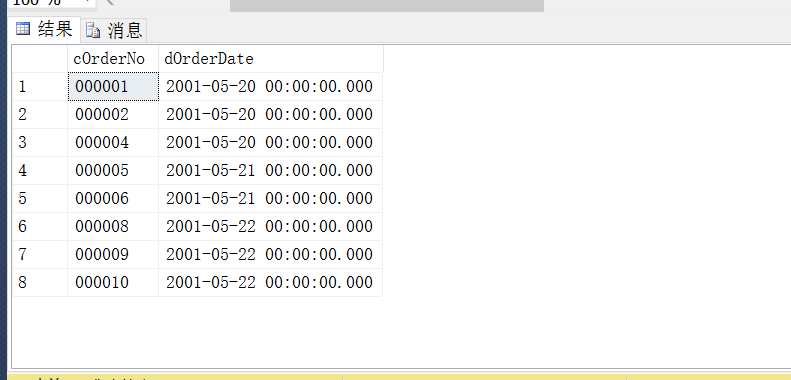
1. select s.vFirstName,s.vLastName,r.vAddress,r.vLastName,r.cCity from Orders o join Shopper s on o.cShopperId=s.cShopperId join Recipient r on o.cOrderNo=r.cOrderNo



1. select cToyId,vToyName from Toys where cToyId not in(select cToyId from OrderDetail o join Wrapper w on o.cWrapperId=w.cWrapperId)



1. select cOrderNo,dOrderDate from Orders where cOrderNo in (select cOrderNo from Shipment where cDeliveryStatus='d')



1. select o1.cOrderNo,o1.cToyid,o1.mToyCost,o2.sumprice from(select cOrderNo,cToyId,mToyCost from OrderDetail ) o1 join (select cOrderNo,sum(mToyCost) as sumprice from OrderDetail group by cOrderNo) o2 on o1.cOrderNo=o2.cOrderNo

