
# SQL Insert,Update,and Delete

## CS/CE 355L/373L: Database Systems

### Lab 11

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# 1. Insert a new product with the following details

- Product Name: `'Coca Cola'`
- Category ID: `1`
- Unit Price: `90`

It will begin transaction, the set identity_insert would allow me to manually set up Product ID, I would be given the table from products, then the transaction would be rolled back. I won't always showcase "begin transaction" and selection to showcase the product and rollback, as it is very reduntant

```
begin transaction
SET IDENTITY_INSERT products ON
INSERT INTO Products (ProductID, ProductName, CategoryID, UnitPrice)
VALUES (77, 'Coca Cola', 1, 90)

select * from products
rollback
```

Results Messages

| | ProductID | ProductName | SupplierID | CategoryID | QuantityPerUnit | UnitPrice | UnitsInStock | UnitsOnOrder | ReorderLevel | Discontinued |
|---|---|---|---|---|---|---|---|---|---|---|
| 71 | 71 | Flotemysost | 15 | 4 | 10 - 500 g pkgs. | 21.50 | 26 | 0 | 0 | 0 |
| 72 | 72 | Mozzarella di Giovanni | 14 | 4 | 24 - 200 g pkgs. | 34.80 | 14 | 0 | 0 | 0 |
| 73 | 73 | Röd Kaviar | 17 | 8 | 24 - 150 g jars | 15.00 | 101 | 0 | 5 | 0 |
| 74 | 74 | Longlife Tofu | 4 | 7 | 5 kg pkg. | 10.00 | 4 | 20 | 5 | 0 |
| 75 | 75 | Rhönbräu Klosterbier | 12 | 1 | 24 - 0.5 l bottles | 7.75 | 125 | 0 | 25 | 0 |
| 76 | 76 | Lakkalikööri | 23 | 1 | 500 ml | 18.00 | 57 | 0 | 20 | 0 |
| 77 | 77 | Original Frankfurter grüne Soße | 12 | 2 | 12 boxes | 13.00 | 32 | 0 | 15 | 0 |
| 78 | 78 | Coca Cola | NULL | 1 | NULL | 190.00 | 0 | 0 | 0 | 0 |

Figure 1: Q1

# 2. Insert a new product with the following details

- Product ID: `79`
- Product Name: `'Fish'`
- Category ID: `8` (Category ID of seafood)
- Unit Price: `50`

```
insert into Products (ProductID, ProductName, CategoryID, UnitPrice)
values (79, 'Fish', 8, 50);
```

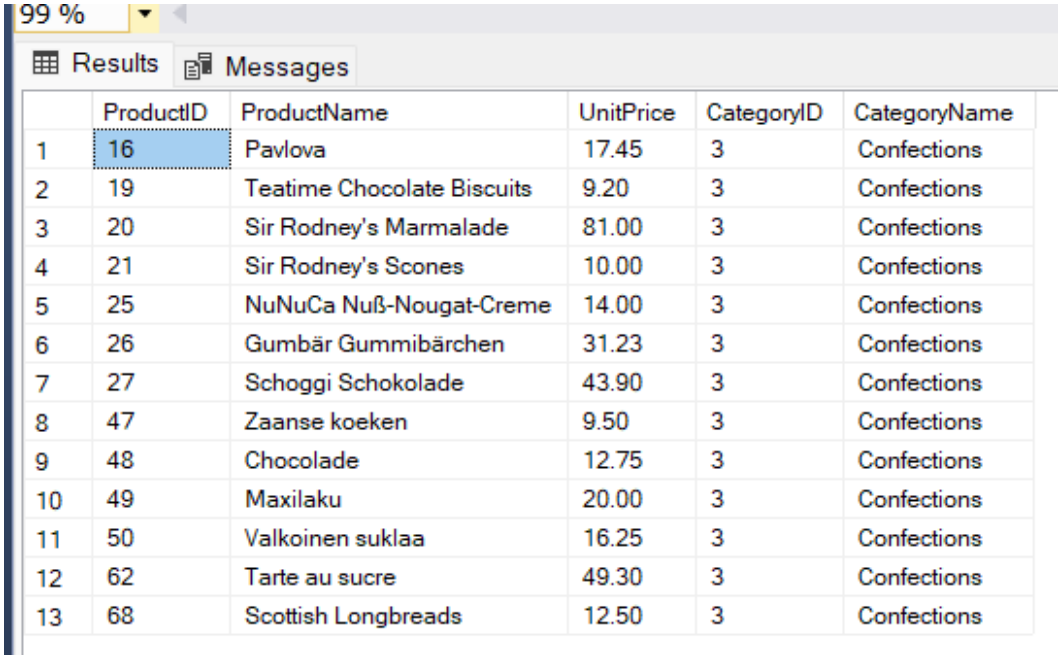
Results Messages

| | ProductID | ProductName | SupplierID | CategoryID | QuantityPerUnit | UnitPrice | UnitsInStock | UnitsOnOrder | ReorderLevel | Discontinued |
|---|---|---|---|---|---|---|---|---|---|---|
| 75 | 75 | Rhönbräu Klosterbier | 12 | 1 | 24 - 0.5 l bottles | 7.75 | 125 | 0 | 25 | 0 |
| 76 | 76 | Lakkalikööri | 23 | 1 | 500 ml | 18.00 | 57 | 0 | 20 | 0 |
| 77 | 77 | Original Frankfurter grüne Soße | 12 | 2 | 12 boxes | 13.00 | 32 | 0 | 15 | 0 |
| 78 | 79 | Fish | NULL | 8 | NULL | 50.00 | 0 | 0 | 0 | 0 |

Figure 2: Q2

## 3. Increase the price of products in the 'Confections' category by 25%

```
-- seeing before transaction
select ProductID, ProductName, UnitPrice ,Categories.CategoryID, Categories.
   CategoryName
from products
join Categories on Categories.CategoryID = Products.CategoryID
where CategoryName = 'Confections'

begin transaction
UPDATE Products
SET UnitPrice = UnitPrice * 1.25
WHERE CategoryID = (
    SELECT CategoryID
    FROM Categories
    WHERE CategoryName = 'Confections'
);

-- seeing after transaction
select ProductID, ProductName, UnitPrice ,Categories.CategoryID, Categories.
   CategoryName
from products
join Categories on Categories.CategoryID = Products.CategoryID
where CategoryName = 'Confections'

rollback
```

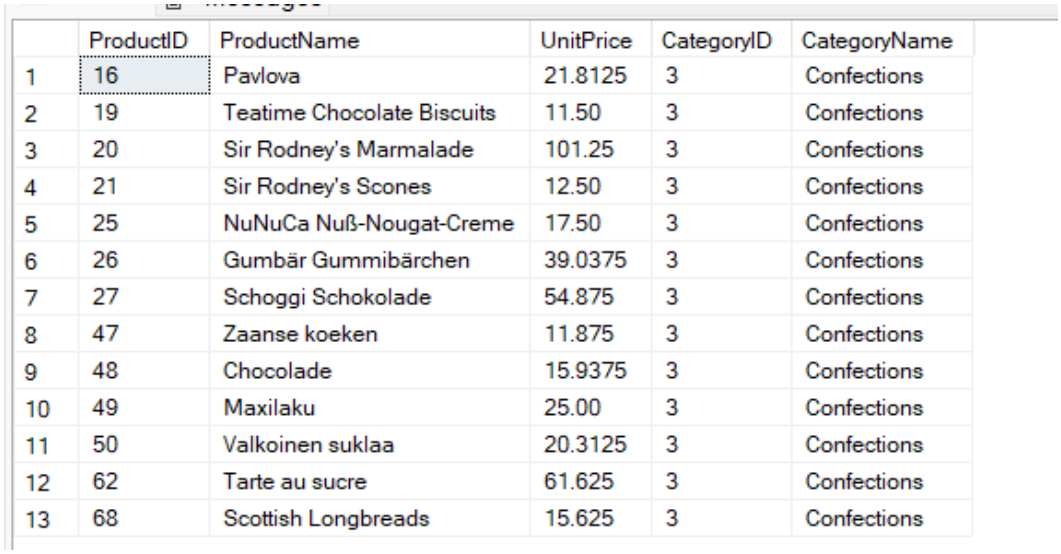


99 %

Results Messages

| | ProductID | ProductName | UnitPrice | CategoryID | CategoryName |
|---|---|---|---|---|---|
| 1 | 16 | Pavlova | 17.45 | 3 | Confections |
| 2 | 19 | Teatime Chocolate Biscuits | 9.20 | 3 | Confections |
| 3 | 20 | Sir Rodney's Marmalade | 81.00 | 3 | Confections |
| 4 | 21 | Sir Rodney's Scones | 10.00 | 3 | Confections |
| 5 | 25 | NuNuCa Nuß-Nougat-Creme | 14.00 | 3 | Confections |
| 6 | 26 | Gumbär Gummibärchen | 31.23 | 3 | Confections |
| 7 | 27 | Schoggi Schokolade | 43.90 | 3 | Confections |
| 8 | 47 | Zaanse koeken | 9.50 | 3 | Confections |
| 9 | 48 | Chocolade | 12.75 | 3 | Confections |
| 10 | 49 | Maxilaku | 20.00 | 3 | Confections |
| 11 | 50 | Valkoinen suklaa | 16.25 | 3 | Confections |
| 12 | 62 | Tarte au sucre | 49.30 | 3 | Confections |
| 13 | 68 | Scottish Longbreads | 12.50 | 3 | Confections |

Figure 3: Q3 - Before

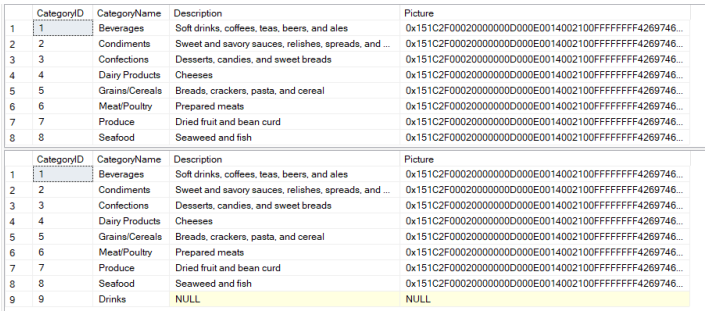


| | ProductID | ProductName | UnitPrice | CategoryID | CategoryName |
|---|---|---|---|---|---|
| 1 | 16 | Pavlova | 21.8125 | 3 | Confections |
| 2 | 19 | Teatime Chocolate Biscuits | 11.50 | 3 | Confections |
| 3 | 20 | Sir Rodney's Marmalade | 101.25 | 3 | Confections |
| 4 | 21 | Sir Rodney's Scones | 12.50 | 3 | Confections |
| 5 | 25 | NuNuCa Nuß-Nougat-Creme | 17.50 | 3 | Confections |
| 6 | 26 | Gumbär Gummibärchen | 39.0375 | 3 | Confections |
| 7 | 27 | Schoggi Schokolade | 54.875 | 3 | Confections |
| 8 | 47 | Zaanse koeken | 11.875 | 3 | Confections |
| 9 | 48 | Chocolade | 15.9375 | 3 | Confections |
| 10 | 49 | Maxilaku | 25.00 | 3 | Confections |
| 11 | 50 | Valkoinen suklaa | 20.3125 | 3 | Confections |
| 12 | 62 | Tarte au sucre | 61.625 | 3 | Confections |
| 13 | 68 | Scottish Longbreads | 15.625 | 3 | Confections |

Figure 4: Q3 - After

## 4. Insert a new category titled 'Drinks'

```
SET IDENTITY_INSERT Products OFF;
set identity_insert Categories on
begin transaction
select * from Categories
INSERT INTO Categories (CategoryID, CategoryName)
VALUES (9 ,'Drinks');
```



| | CategoryID | CategoryName | Description | Picture |
|---|---|---|---|---|
| 1 | 1 | Beverages | Soft drinks, coffees, teas, beers, and ales | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 2 | 2 | Condiments | Sweet and savory sauces, relishes, spreads, and ... | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 3 | 3 | Confections | Desserts, candies, and sweet breads | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 4 | 4 | Dairy Products | Cheeses | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 5 | 5 | Grains/Cereals | Breads, crackers, pasta, and cereal | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 6 | 6 | Meat/Poultry | Prepared meats | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 7 | 7 | Produce | Dried fruit and bean curd | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 8 | 8 | Seafood | Seaweed and fish | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |

| | CategoryID | CategoryName | Description | Picture |
|---|---|---|---|---|
| 1 | 1 | Beverages | Soft drinks, coffees, teas, beers, and ales | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 2 | 2 | Condiments | Sweet and savory sauces, relishes, spreads, and ... | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 3 | 3 | Confections | Desserts, candies, and sweet breads | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 4 | 4 | Dairy Products | Cheeses | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 5 | 5 | Grains/Cereals | Breads, crackers, pasta, and cereal | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 6 | 6 | Meat/Poultry | Prepared meats | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 7 | 7 | Produce | Dried fruit and bean curd | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 8 | 8 | Seafood | Seaweed and fish | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 9 | 9 | Drinks | NULL | NULL |

Figure 5: Q4

```
select * from Categories
rollback
```

## 5. Insert products in the 'Beverages' category into the 'Drinks' category, allowing them to belong to both categories

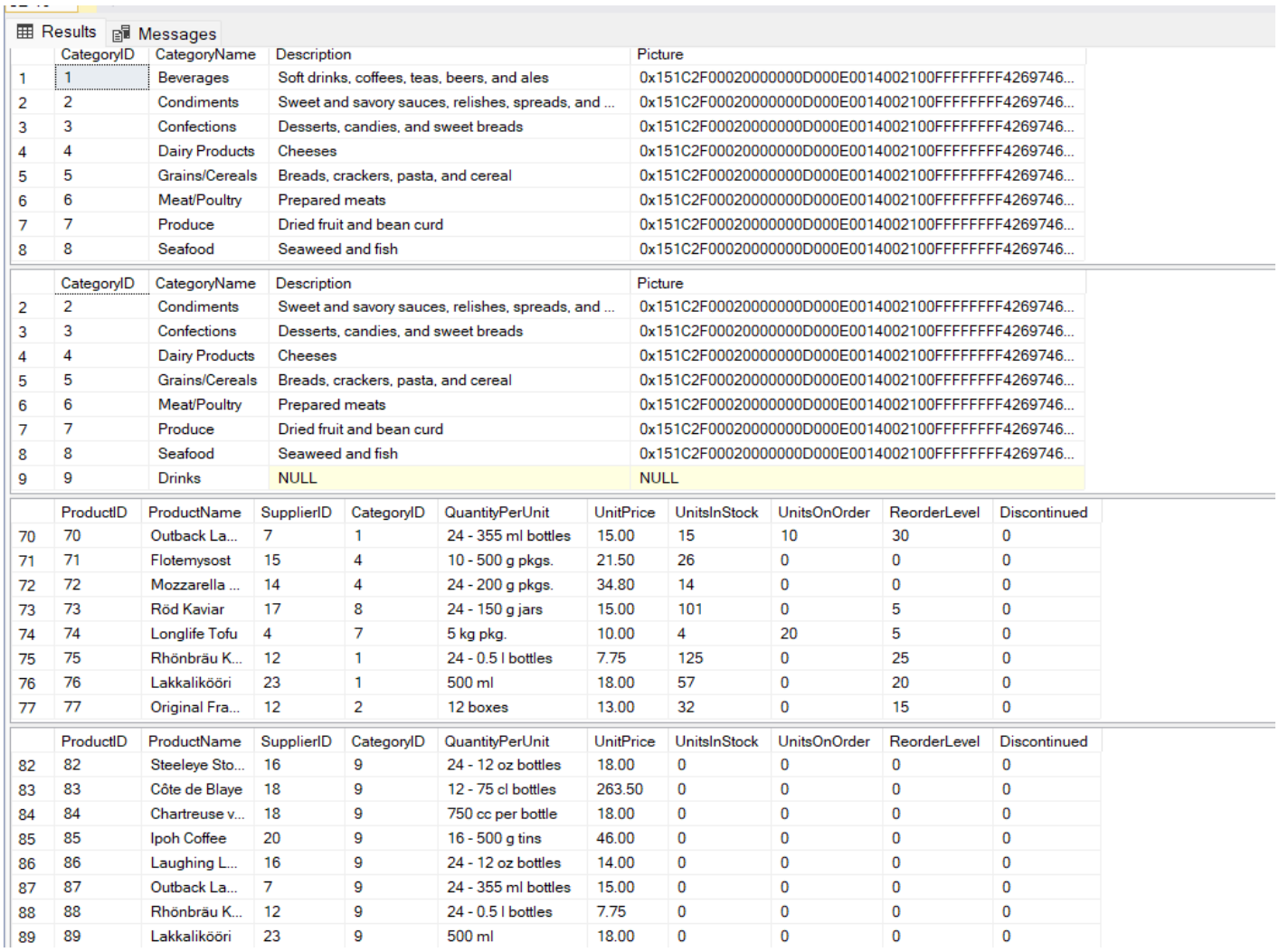
So there is alot to unpack here, basically, I begin my transaction (to make sure that I am able to roll back later), allow manual insertion of CategoryID, and make a query to find how my Category looked BEFORE the insertion. I then insert the new Category called Drink which have the CategoryID of 9, and then print the table to check it.

After that, I turn off the manual insertion of CategoryID, and then turn on the manual insertion of ProductID cause I can't turn it on together simulatenously. I obviously check what my products table looked before the append which I am asked for. Then when I copy and append all the beverages, the way I find the ProductID is by using MaxProductID that allows me to find, as you guessed it, the MaxProductID which gets appended over with new insertion of a row. I then confirm whether I was able to append as intended and check the result.

I then rollback the results

```
-- Begin transaction
BEGIN TRANSACTION

-- Enable identity insert for Categories table
SET IDENTITY_INSERT Categories ON;

-- Select all from Categories table
SELECT * FROM Categories;

-- Insert new category 'Drinks'
INSERT INTO Categories (CategoryID, CategoryName)
VALUES (9, 'Drinks');

-- Select all from Categories table to verify insertion
SELECT * FROM Categories;

-- Disable identity insert for Categories table
```

```
SET IDENTITY_INSERT Categories OFF;

-- Enable identity insert for Products table
SET IDENTITY_INSERT Products ON;

-- Declare variable to hold maximum ProductID
DECLARE @MaxProductID INT;

-- Get the maximum ProductID from Products table
SELECT @MaxProductID = MAX(ProductID) FROM Products;

-- Select all from Products table
SELECT * FROM Products;

-- Insert new products into Products table with new ProductID and CategoryID 'Drinks'
INSERT INTO Products (ProductID, ProductName, SupplierID, CategoryID, QuantityPerUnit
    , UnitPrice)
SELECT @MaxProductID + ROW_NUMBER() OVER (ORDER BY ProductID), ProductName,
   SupplierID, 9, QuantityPerUnit, UnitPrice
FROM Products
WHERE CategoryID = (
    SELECT CategoryID
    FROM Categories
    WHERE CategoryName = 'Beverages'
);

-- Select all from Products table to verify insertion
SELECT * FROM Products;

-- Rollback transaction
ROLLBACK;
```



Results Messages

| | CategoryID | CategoryName | Description | Picture |
|---|---|---|---|---|
| 1 | 1 | Beverages | Soft drinks, coffees, teas, beers, and ales | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 2 | 2 | Condiments | Sweet and savory sauces, relishes, spreads, and ... | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 3 | 3 | Confections | Desserts, candies, and sweet breads | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 4 | 4 | Dairy Products | Cheeses | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 5 | 5 | Grains/Cereals | Breads, crackers, pasta, and cereal | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 6 | 6 | Meat/Poultry | Prepared meats | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 7 | 7 | Produce | Dried fruit and bean curd | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 8 | 8 | Seafood | Seaweed and fish | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |

| | CategoryID | CategoryName | Description | Picture |
|---|---|---|---|---|
| 2 | 2 | Condiments | Sweet and savory sauces, relishes, spreads, and ... | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 3 | 3 | Confections | Desserts, candies, and sweet breads | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 4 | 4 | Dairy Products | Cheeses | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 5 | 5 | Grains/Cereals | Breads, crackers, pasta, and cereal | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 6 | 6 | Meat/Poultry | Prepared meats | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 7 | 7 | Produce | Dried fruit and bean curd | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 8 | 8 | Seafood | Seaweed and fish | 0x151C2F00020000000D000E0014002100FFFFFFFF4269746... |
| 9 | 9 | Drinks | NULL | NULL |

| | ProductID | ProductName | SupplierID | CategoryID | QuantityPerUnit | UnitPrice | UnitsInStock | UnitsOnOrder | ReorderLevel | Discontinued |
|---|---|---|---|---|---|---|---|---|---|---|
| 70 | 70 | Outback La... | 7 | 1 | 24 - 355 ml bottles | 15.00 | 15 | 10 | 30 | 0 |
| 71 | 71 | Flotemysost | 15 | 4 | 10 - 500 g pkgs. | 21.50 | 26 | 0 | 0 | 0 |
| 72 | 72 | Mozzarella ... | 14 | 4 | 24 - 200 g pkgs. | 34.80 | 14 | 0 | 0 | 0 |
| 73 | 73 | Röd Kaviar | 17 | 8 | 24 - 150 g jars | 15.00 | 101 | 0 | 5 | 0 |
| 74 | 74 | Longlife Tofu | 4 | 7 | 5 kg pkg. | 10.00 | 4 | 20 | 5 | 0 |
| 75 | 75 | Rhönbräu K... | 12 | 1 | 24 - 0.5 l bottles | 7.75 | 125 | 0 | 25 | 0 |
| 76 | 76 | Lakkalikööri | 23 | 1 | 500 ml | 18.00 | 57 | 0 | 20 | 0 |
| 77 | 77 | Original Fra... | 12 | 2 | 12 boxes | 13.00 | 32 | 0 | 15 | 0 |

| | ProductID | ProductName | SupplierID | CategoryID | QuantityPerUnit | UnitPrice | UnitsInStock | UnitsOnOrder | ReorderLevel | Discontinued |
|---|---|---|---|---|---|---|---|---|---|---|
| 82 | 82 | Steeleye Sto... | 16 | 9 | 24 - 12 oz bottles | 18.00 | 0 | 0 | 0 | 0 |
| 83 | 83 | Côte de Blaye | 18 | 9 | 12 - 75 cl bottles | 263.50 | 0 | 0 | 0 | 0 |
| 84 | 84 | Chartreuse v... | 18 | 9 | 750 cc per bottle | 18.00 | 0 | 0 | 0 | 0 |
| 85 | 85 | Ipoh Coffee | 20 | 9 | 16 - 500 g tins | 46.00 | 0 | 0 | 0 | 0 |
| 86 | 86 | Laughing L... | 16 | 9 | 24 - 12 oz bottles | 14.00 | 0 | 0 | 0 | 0 |
| 87 | 87 | Outback La... | 7 | 9 | 24 - 355 ml bottles | 15.00 | 0 | 0 | 0 | 0 |
| 88 | 88 | Rhönbräu K... | 12 | 9 | 24 - 0.5 l bottles | 7.75 | 0 | 0 | 0 | 0 |
| 89 | 89 | Lakkalikööri | 23 | 9 | 500 ml | 18.00 | 0 | 0 | 0 | 0 |

Figure 6: Q5

## 6. Change the category of all products labeled as `'Beverages'` to `'Drinks'`

I begin a database transaction to ensure data integrity and consistency. First, I enable `IDENTITY_INSERT` on the `Categories` table to manually insert a new category with `CategoryID` 9, named `'Drinks'`. After inserting the new category, I disable `IDENTITY_INSERT`. Next, I update the `Products` table to change the category of all products labeled as `'Beverages'` to the new `'Drinks'` category by modifying their `CategoryID` to 9. I then run a selection query to retrieve and verify all products with `CategoryID` 9. Finally, I roll back the transaction to revert the database to its previous state, ensuring no permanent changes are made

```
begin transaction

set identity_insert Categories on
INSERT INTO Categories (CategoryID, CategoryName)
VALUES (9 ,'Drinks');
```

```
set identity_insert Categories off

-- Update Products to change 'Beverages' to 'Drinks'
UPDATE Products
SET CategoryID = (
    SELECT CategoryID
    FROM Categories
    WHERE CategoryName = 'Drinks'
)
WHERE CategoryID = (
    SELECT CategoryID
    FROM Categories
    WHERE CategoryName = 'Beverages'
);

-- You can do Select * from products as well
Select * from Products where CategoryID = '9'

rollback
```

Results Messages

| | ProductID | ProductName | SupplierID | CategoryID | QuantityPerUnit | UnitPrice | UnitsInStock | UnitsOnOrder | ReorderLevel | Discontinued |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | Chai | 1 | 9 | 10 boxes x 20 bags | 18.00 | 39 | 0 | 10 | 0 |
| 2 | 2 | Chang | 1 | 9 | 24 - 12 oz bottles | 19.00 | 17 | 40 | 25 | 0 |
| 3 | 24 | Guaraná Fantástica | 10 | 9 | 12 - 355 ml cans | 4.50 | 20 | 0 | 0 | 1 |
| 4 | 34 | Sasquatch Ale | 16 | 9 | 24 - 12 oz bottles | 14.00 | 111 | 0 | 15 | 0 |
| 5 | 35 | Steeleye Stout | 16 | 9 | 24 - 12 oz bottles | 18.00 | 20 | 0 | 15 | 0 |
| 6 | 38 | Côte de Blaye | 18 | 9 | 12 - 75 cl bottles | 263.50 | 17 | 0 | 15 | 0 |
| 7 | 39 | Chartreuse verte | 18 | 9 | 750 cc per bottle | 18.00 | 69 | 0 | 5 | 0 |
| 8 | 43 | Ipoh Coffee | 20 | 9 | 16 - 500 g tins | 46.00 | 17 | 10 | 25 | 0 |
| 9 | 67 | Laughing Lumberjack Lager | 16 | 9 | 24 - 12 oz bottles | 14.00 | 52 | 0 | 10 | 0 |
| 10 | 70 | Outback Lager | 7 | 9 | 24 - 355 ml bottles | 15.00 | 15 | 10 | 30 | 0 |
| 11 | 75 | Rhönbräu Klosterbier | 12 | 9 | 24 - 0.5 l bottles | 7.75 | 125 | 0 | 25 | 0 |
| 12 | 76 | Lakkalikööri | 23 | 9 | 500 ml | 18.00 | 57 | 0 | 20 | 0 |

Figure 7: Q6

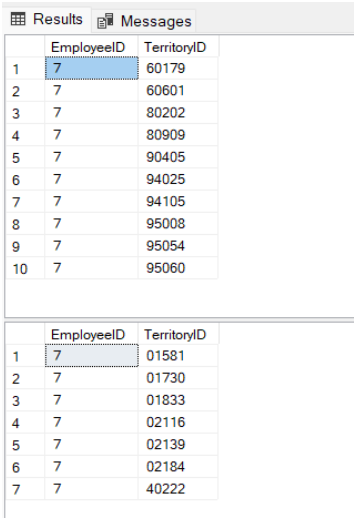
# 7. Update records so that the employee 'Robert King' is assigned the same territories as 'Andrew Fuller'

## (a) Delete existing territory assignments of 'Robert King' (b) Insert new assignments

The transaction begins to ensure data integrity. In part (a), the first SQL statement selects all territory assignments for the employee 'Robert King'. Next, the code deletes all current territory assignments for 'Robert King' by matching his EmployeeID. In part (b), the code inserts new territory assignments for 'Robert King'. It first finds the EmployeeID of 'Robert King', then selects the TerritoryIDs from the territories assigned to 'Andrew Fuller'. Finally, it inserts these territory assignments into 'EmployeeTer-

ritories' for 'Robert King'. After updating, it selects and displays the updated territory assignments for 'Robert King'. The transaction ends with a rollback to revert the database to its previous state, ensuring no permanent changes are made.

```
begin transaction
-- a)

--Finding all the Employee territories of Robert King
SELECT * FROM EmployeeTerritories
where EmployeeID = (
                select EmployeeID
                from Employees
                where FirstName = 'Robert' AND LastName = 'King'
                )

delete from EmployeeTerritories
where EmployeeID = (
    select EmployeeID
    from Employees
    where FirstName = 'Robert' AND LastName = 'King'
)

--b)
insert into EmployeeTerritories (EmployeeID, TerritoryID)
--first finding the employeeID of Robert King, and
select(
                select EmployeeID
                from Employees
                where FirstName = 'Robert' AND LastName = 'King') as EmployeeID,
    TerritoryID
from EmployeeTerritories
where EmployeeID = (
    select EmployeeID
    from Employees
    where FirstName = 'Andrew' AND LastName = 'Fuller'
)

--Finding all the Employee territories of Robert King AFTER THE UPDATE
SELECT * FROM EmployeeTerritories
where EmployeeID = (
                select EmployeeID
                from Employees
                where FirstName = 'Robert' AND LastName = 'King'
                )


rollback
```




| | EmployeeID | TerritoryID |
|---|---|---|
| 1 | 7 | 60179 |
| 2 | 7 | 60601 |
| 3 | 7 | 80202 |
| 4 | 7 | 80909 |
| 5 | 7 | 90405 |
| 6 | 7 | 94025 |
| 7 | 7 | 94105 |
| 8 | 7 | 95008 |
| 9 | 7 | 95054 |
| 10 | 7 | 95060 |

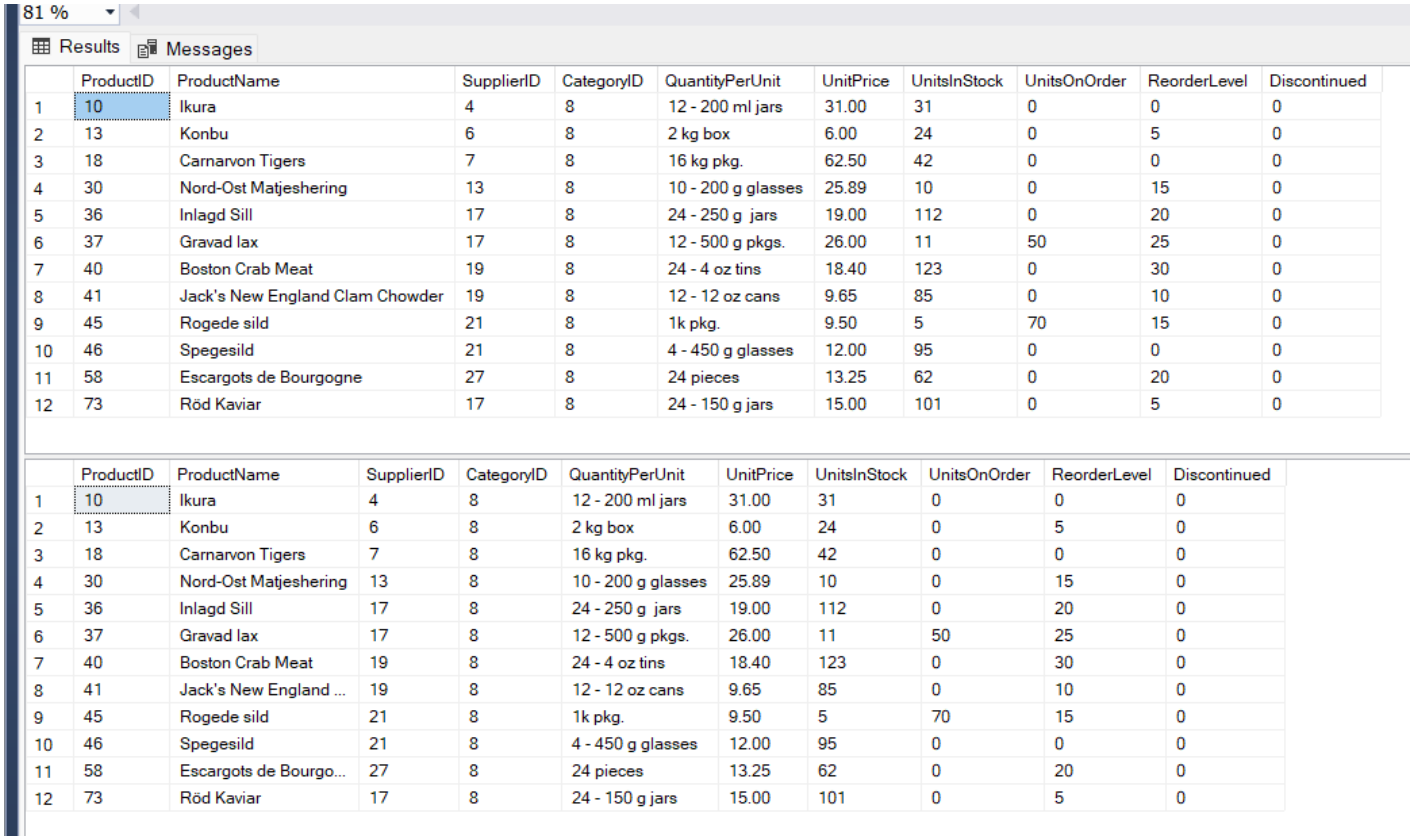
| | EmployeeID | TerritoryID |
|---|---|---|
| 1 | 7 | 01581 |
| 2 | 7 | 01730 |
| 3 | 7 | 01833 |
| 4 | 7 | 02116 |
| 5 | 7 | 02139 |
| 6 | 7 | 02184 |
| 7 | 7 | 40222 |

Figure 8: Q7

## 8. Delete products in the 'Seafood' category with an amount less than 5 in Products

```
begin transaction


-- Before the Update
select * from Products  where CategoryID = (
        select CategoryID
    from Categories
    where CategoryName = 'Seafood'
)

-- Doing the deletion
delete from Products
where CategoryID = (
    select CategoryID
    from Categories
    where CategoryName = 'Seafood'
) and UnitsInStock < 5;

-- After the Update
select * from Products  where CategoryID = (
        select CategoryID
    from Categories
    where CategoryName = 'Seafood'
)
```

```
rollback
```



81 %

Results Messages

| | ProductID | ProductName | SupplierID | CategoryID | QuantityPerUnit | UnitPrice | UnitsInStock | UnitsOnOrder | ReorderLevel | Discontinued |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | Ikura | 4 | 8 | 12 - 200 ml jars | 31.00 | 31 | 0 | 0 | 0 |
| 2 | 13 | Konbu | 6 | 8 | 2 kg box | 6.00 | 24 | 0 | 5 | 0 |
| 3 | 18 | Carnarvon Tigers | 7 | 8 | 16 kg pkg. | 62.50 | 42 | 0 | 0 | 0 |
| 4 | 30 | Nord-Ost Matjeshering | 13 | 8 | 10 - 200 g glasses | 25.89 | 10 | 0 | 15 | 0 |
| 5 | 36 | Inlagd Sill | 17 | 8 | 24 - 250 g jars | 19.00 | 112 | 0 | 20 | 0 |
| 6 | 37 | Gravad lax | 17 | 8 | 12 - 500 g pkgs. | 26.00 | 11 | 50 | 25 | 0 |
| 7 | 40 | Boston Crab Meat | 19 | 8 | 24 - 4 oz tins | 18.40 | 123 | 0 | 30 | 0 |
| 8 | 41 | Jack's New England Clam Chowder | 19 | 8 | 12 - 12 oz cans | 9.65 | 85 | 0 | 10 | 0 |
| 9 | 45 | Rogede sild | 21 | 8 | 1k pkg. | 9.50 | 5 | 70 | 15 | 0 |
| 10 | 46 | Spegesild | 21 | 8 | 4 - 450 g glasses | 12.00 | 95 | 0 | 0 | 0 |
| 11 | 58 | Escargots de Bourgogne | 27 | 8 | 24 pieces | 13.25 | 62 | 0 | 20 | 0 |
| 12 | 73 | Röd Kaviar | 17 | 8 | 24 - 150 g jars | 15.00 | 101 | 0 | 5 | 0 |

| | ProductID | ProductName | SupplierID | CategoryID | QuantityPerUnit | UnitPrice | UnitsInStock | UnitsOnOrder | ReorderLevel | Discontinued |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10 | Ikura | 4 | 8 | 12 - 200 ml jars | 31.00 | 31 | 0 | 0 | 0 |
| 2 | 13 | Konbu | 6 | 8 | 2 kg box | 6.00 | 24 | 0 | 5 | 0 |
| 3 | 18 | Carnarvon Tigers | 7 | 8 | 16 kg pkg. | 62.50 | 42 | 0 | 0 | 0 |
| 4 | 30 | Nord-Ost Matjeshering | 13 | 8 | 10 - 200 g glasses | 25.89 | 10 | 0 | 15 | 0 |
| 5 | 36 | Inlagd Sill | 17 | 8 | 24 - 250 g jars | 19.00 | 112 | 0 | 20 | 0 |
| 6 | 37 | Gravad lax | 17 | 8 | 12 - 500 g pkgs. | 26.00 | 11 | 50 | 25 | 0 |
| 7 | 40 | Boston Crab Meat | 19 | 8 | 24 - 4 oz tins | 18.40 | 123 | 0 | 30 | 0 |
| 8 | 41 | Jack's New England ... | 19 | 8 | 12 - 12 oz cans | 9.65 | 85 | 0 | 10 | 0 |
| 9 | 45 | Rogede sild | 21 | 8 | 1k pkg. | 9.50 | 5 | 70 | 15 | 0 |
| 10 | 46 | Spegesild | 21 | 8 | 4 - 450 g glasses | 12.00 | 95 | 0 | 0 | 0 |
| 11 | 58 | Escargots de Bourgo... | 27 | 8 | 24 pieces | 13.25 | 62 | 0 | 20 | 0 |
| 12 | 73 | Röd Kaviar | 17 | 8 | 24 - 150 g jars | 15.00 | 101 | 0 | 5 | 0 |

Figure 9: Q8

As the question wanted me to delete any products "in seafood category" that was less than 5, and considering that there is no item in "unitsinstock" belonged to "seafood" category which is less than 5, it makes sense that the table would remain unchanged.

## 9. Delete all orders of `CustomerID 'CHOPS'`

```
begin transaction
-- checking before
SELECT OrderID FROM Orders WHERE CustomerID = 'CHOPS'

DELETE FROM [Order Details]
WHERE OrderID IN (SELECT OrderID FROM Orders WHERE CustomerID = 'CHOPS')

-- Step 2: Delete orders in Orders table
DELETE FROM Orders
WHERE CustomerID = 'CHOPS'

--checking after deletion
SELECT OrderID FROM Orders WHERE CustomerID = 'CHOPS'
```

```
rollback
```

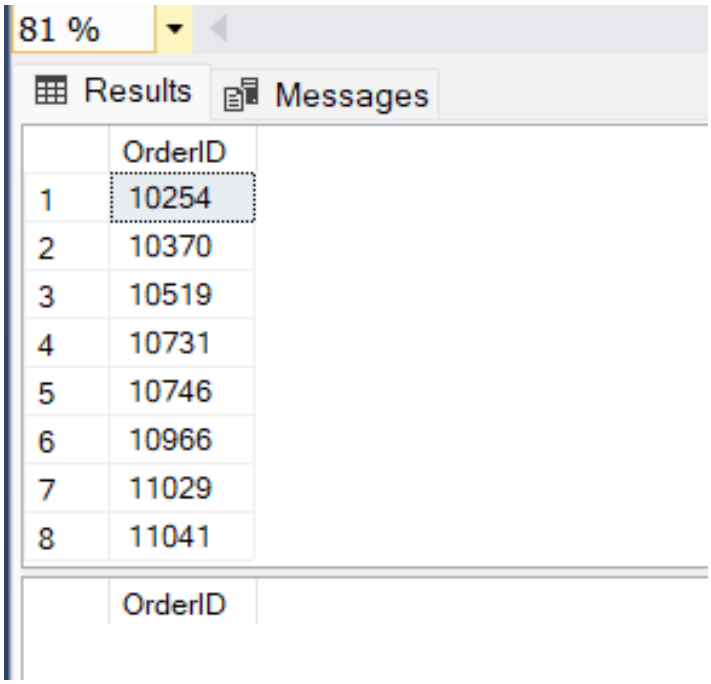
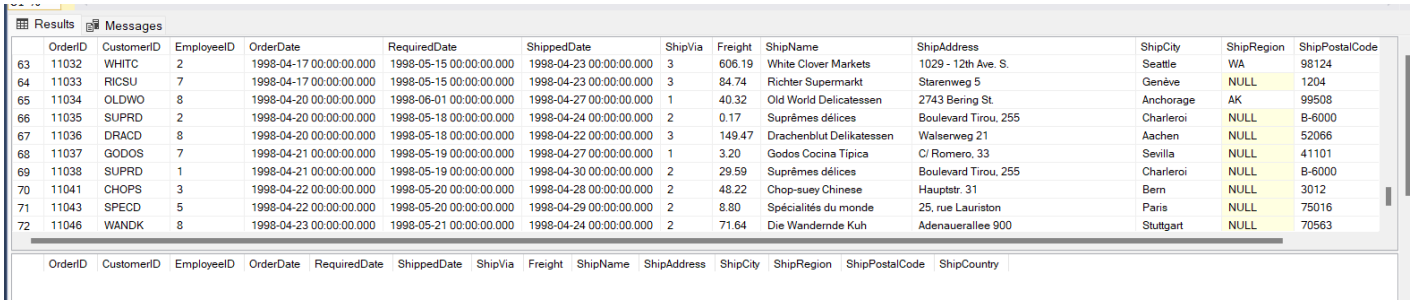



Figure 10: Q9

## 10. Delete all orders that have been shipped in April 1998

```
begin transaction

--before
select * from orders where ShippedDate BETWEEN '1998-04-01' AND '1998-04-30';

DELETE FROM [Order Details]
WHERE OrderID IN (
    SELECT OrderID
    FROM Orders
    WHERE ShippedDate BETWEEN '1998-04-01' AND '1998-04-30'
);

-- Step 2: Delete from Orders
DELETE FROM Orders
WHERE ShippedDate BETWEEN '1998-04-01' AND '1998-04-30';

-- after
select * from orders where ShippedDate BETWEEN '1998-04-01' AND '1998-04-30';

rollback
```



Results Messages

| | OrderID | CustomerID | EmployeeID | OrderDate | RequiredDate | ShippedDate | ShipVia | Freight | ShipName | ShipAddress | ShipCity | ShipRegion | ShipPostalCode |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 63 | 11032 | WHITC | 2 | 1998-04-17 00:00:00.000 | 1998-05-15 00:00:00.000 | 1998-04-23 00:00:00.000 | 3 | 606.19 | White Clover Markets | 1029 - 12th Ave. S. | Seattle | WA | 98124 |
| 64 | 11033 | RICSU | 7 | 1998-04-17 00:00:00.000 | 1998-05-15 00:00:00.000 | 1998-04-23 00:00:00.000 | 3 | 84.74 | Richter Supermarkt | Starenweg 5 | Genève | NULL | 1204 |
| 65 | 11034 | OLDWO | 8 | 1998-04-20 00:00:00.000 | 1998-06-01 00:00:00.000 | 1998-04-27 00:00:00.000 | 1 | 40.32 | Old World Delicatessen | 2743 Bering St. | Anchorage | AK | 99508 |
| 66 | 11035 | SUPRD | 2 | 1998-04-20 00:00:00.000 | 1998-05-18 00:00:00.000 | 1998-04-24 00:00:00.000 | 2 | 0.17 | Suprêmes délices | Boulevard Tirou, 255 | Charleroi | NULL | B-6000 |
| 67 | 11036 | DRACD | 8 | 1998-04-20 00:00:00.000 | 1998-05-18 00:00:00.000 | 1998-04-22 00:00:00.000 | 3 | 149.47 | Drachenblut Delikatessen | Walserweg 21 | Aachen | NULL | 52066 |
| 68 | 11037 | GODOS | 7 | 1998-04-21 00:00:00.000 | 1998-05-19 00:00:00.000 | 1998-04-27 00:00:00.000 | 1 | 3.20 | Godos Cocina Típica | C/ Romero, 33 | Sevilla | NULL | 41101 |
| 69 | 11038 | SUPRD | 1 | 1998-04-21 00:00:00.000 | 1998-05-19 00:00:00.000 | 1998-04-30 00:00:00.000 | 2 | 29.59 | Suprêmes délices | Boulevard Tirou, 255 | Charleroi | NULL | B-6000 |
| 70 | 11041 | CHOPS | 3 | 1998-04-22 00:00:00.000 | 1998-05-20 00:00:00.000 | 1998-04-28 00:00:00.000 | 2 | 48.22 | Chop-suey Chinese | Hauptstr. 31 | Bern | NULL | 3012 |
| 71 | 11043 | SPECD | 5 | 1998-04-22 00:00:00.000 | 1998-05-20 00:00:00.000 | 1998-04-29 00:00:00.000 | 2 | 8.80 | Spécialités du monde | 25, rue Lauriston | Paris | NULL | 75016 |
| 72 | 11046 | WANDK | 8 | 1998-04-23 00:00:00.000 | 1998-05-21 00:00:00.000 | 1998-04-24 00:00:00.000 | 2 | 71.64 | Die Wandernde Kuh | Adenauerallee 900 | Stuttgart | NULL | 70563 |

| OrderID | CustomerID | EmployeeID | OrderDate | RequiredDate | ShippedDate | ShipVia | Freight | ShipName | ShipAddress | ShipCity | ShipRegion | ShipPostalCode | ShipCountry |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

Figure 11: Q10