```sql
CREATE TRIGGER [dbo].[Trigger_OrderIdDelete]
ON [dbo].[Order]
FOR DELETE
AS

DECLARE @DeletedOrderID INT
SELECT @DeletedOrderID = Id FROM deleted

DELETE FROM [OrderItem] WHERE OrderId = @DeletedOrderID

PRINT 'Cac xoa cac item cua hoa don OrderId = ' + LTRIM(STR(@DeletedOrderID))
```

```sql
SELECT * FROM [OrderItem] WHERE OrderId = 1
```

100 %   ▾ ◂

▦ Results 🔲 Messages

	Id	OrderId	ProductId	UnitPrice	Quantity
1	1	1	11	14.00	12
2	2	1	42	9.80	10
3	3	1	72	34.80	5

```sql
ALTER TABLE [OrderItem] DROP CONSTRAINT FK_ORDERITE_REFERENCE_ORDER
DELETE FROM [Order] WHERE Id = 1
```

100 %   ▾ ◂

🔲 Messages

```
(3 row(s) affected)
Cac xoa cac item cua hoa don OrderId = 1

(1 row(s) affected)
```

```sql
SELECT * FROM [OrderItem] WHERE OrderId = 1
```

100 %   ▾ ◂

▦ Results 🔲 Messages

	Id	OrderId	ProductId	UnitPrice	Quantity

```sql
CREATE TRIGGER [dbo].[Trigger_CustomerIdDelete]
ON [dbo].[Order]
FOR DELETE
AS

    DECLARE @DeletedCustomerID INT
    SELECT @DeletedCustomerID = CustomerId FROM deleted

    IF (@DeletedCustomerID = 1)
    BEGIN
        RAISERROR ('CustomerID = 1 khong the xoa duoc', 16, 1)
        ROLLBACK TRANSACTION
    END

EXEC sp_settriggerorder @triggername = 'Trigger_CustomerIdDelete', @order = 'First', @stmttype = 'Delete'
DELETE FROM [Order] WHERE CustomerId = 1
```

Messages

Msg 50000, Level 16, State 1, Procedure Trigger_CustomerIdDelete, Line 45
CustomerID = 1 khong the xoa duoc
Msg 3609, Level 16, State 1, Line 36
The transaction ended in the trigger. The batch has been aborted.

```sql
CREATE TRIGGER [dbo].[Trigger_PhoneUpdate]
  ON [dbo].[Supplier]
  FOR UPDATE
  AS
  DECLARE @UpdatePhone NVARCHAR(30)
IF UPDATE(Phone)
BEGIN
    SELECT @UpdatePhone = Phone FROM inserted
    IF @UpdatePhone = NULL OR @UpdatePhone LIKE '%[A-Za-z]%'
    BEGIN
        RAISERROR ('Phone is NULL or contrains letters', 16, 1)
        ROLLBACK TRANSACTION
    END
END

UPDATE Supplier SET Phone = 'ALUHA 123' WHERE Id = 1
```

Messages

Msg 50000, Level 16, State 1, Procedure Trigger_PhoneUpdate, Line 64
Phone is NULL or contrains letters
Msg 3609, Level 16, State 1, Line 55
The transaction ended in the trigger. The batch has been aborted.

```sql
CREATE FUNCTION dbo.ufn_ListCompanyByCountry (@CountryDescription NVARCHAR(MAX))
RETURNS NVARCHAR(MAX)
AS
BEGIN
    DECLARE @CompanyList NVARCHAR(MAX) = 'Companies in ' + @CountryDescription + ' are: '
    DECLARE @Id INT
    DECLARE @CompanyName NVARCHAR(MAX)

    DECLARE CompanyCursor CURSOR READ_ONLY
    FOR
    SELECT Id, CompanyName
    FROM Supplier
    WHERE LOWER(Country) LIKE '%' + LTRIM(RTRIM(LOWER(@CountryDescription))) + '%'

    OPEN CompanyCursor

    FETCH NEXT FROM CompanyCursor INTO @Id, @CompanyName

    WHILE @@FETCH_STATUS = 0
    BEGIN
        SET @CompanyList = @CompanyList + @CompanyName + '(ID:' + LTRIM(STR(@Id)) + ') ; '
        FETCH NEXT FROM CompanyCursor INTO @Id, @CompanyName
    END

    CLOSE CompanyCursor
    DEALLOCATE CompanyCursor

    RETURN @CompanyList
END
SELECT dbo.ufn_ListCompanyByCountry('USA')
```

Results | Messages

(No column name)

Companies in USA are: New Orleans Cajun Delights(ID:2) ; Grandma Kelly's Homestead(ID:3) ; Bigfoot Breweries(ID:16) ; New En...

```sql
BEGIN TRY
    BEGIN TRANSACTION UpdateQuantityTrans

        SET NOCOUNT ON

        DECLARE @NumOfUpdatedRecords INT = 0
        DECLARE @DFactor INT
        SET @DFactor = 1

        UPDATE OrderItem SET Quantity = Quantity / @DFactor
        FROM OrderItem I JOIN [Order] O ON I.OrderId = O.Id JOIN Customer C ON O.CustomerId = C.Id
        WHERE C.Country LIKE '%USA%'

        SET @NumOfUpdatedRecords = @@ROWCOUNT
        PRINT 'Cap nhat thanh cong ' + LTRIM(STR(@NumOfUpdatedRecords)) + ' dong trong bang OrderItem'

    COMMIT TRANSACTION UpdateQuantityTrans
END TRY
BEGIN CATCH
    ROLLBACK TRAN UpdateQuantityTrans
    PRINT 'Cap nhat that bai. Chi tiet:'
    PRINT ERROR_MESSAGE()
END CATCH
```

%   ◂ ◂ | ‖ |

Messages

Cap nhat thanh cong 352 dong trong bang OrderItem

```sql
BEGIN TRY
    BEGIN TRANSACTION UpdateQuantityTrans

        SET NOCOUNT ON

        DECLARE @NumOfUpdatedRecords INT = 0
        DECLARE @DFactor INT
        SET @DFactor = 0

        UPDATE OrderItem SET Quantity = Quantity / @DFactor
        FROM OrderItem I JOIN [Order] O ON I.OrderId = O.Id JOIN Customer C ON O.CustomerId = C.Id
        WHERE C.Country LIKE '%USA%'

        SET @NumOfUpdatedRecords = @@ROWCOUNT
        PRINT 'Cap nhat thanh cong ' + LTRIM(STR(@NumOfUpdatedRecords)) + ' dong trong bang OrderItem'

    COMMIT TRANSACTION UpdateQuantityTrans
END TRY
BEGIN CATCH
    ROLLBACK TRAN UpdateQuantityTrans
    PRINT 'Cap nhat that bai. Chi tiet:'
    PRINT ERROR_MESSAGE()
END CATCH
```

%   ◂ ◂ | ‖ |

Messages

Cap nhat that bai. Chi tiet:
Divide by zero error encountered.

```sql
BEGIN TRY
 BEGIN TRANSACTION CompareTwoCountriesTrans

     SET NOCOUNT ON
     DECLARE @Country1 NVARCHAR(MAX)
     DECLARE @Country2 NVARCHAR(MAX)

     SET @Country1 = 'USA'
     SET @Country2 = 'UK'

     CREATE TABLE #ProductInfo1
     (
         Country NVARCHAR(30),
         SupplierId INT,
         Product NVARCHAR(MAX)
     )
     DECLARE @ProductInfo2 TABLE
     (
         Country NVARCHAR(30),
         SupplierId INT,
         Product NVARCHAR(MAX)
     )

     INSERT INTO #ProductInfo1
     SELECT S.Country, S.Id, P.ProductName
     FROM Supplier S JOIN Product P ON S.Id = P.SupplierId
     WHERE LTRIM(RTRIM(LOWER(Country))) LIKE '%' + LTRIM(RTRIM(LOWER(@Country1))) + '%'
     INSERT INTO @ProductInfo2
     SELECT S.Country, S.Id, P.ProductName
     FROM Supplier S JOIN Product P ON S.Id = P.SupplierId
     WHERE LTRIM(RTRIM(LOWER(Country))) LIKE '%' + LTRIM(RTRIM(LOWER(@Country2))) + '%'

     DECLARE @NumProduct1 INT
     SET @NumProduct1 = (SELECT COUNT(DISTINCT Product) FROM #ProductInfo1)
     DECLARE @NumProduct2 INT
     SET @NumProduct2 = (SELECT COUNT(DISTINCT Product) FROM @ProductInfo2)

     PRINT @Country1 + ' cung cap ' + LTRIM(STR(@NumProduct1)) + ' san pham'
     PRINT @Country2 + ' cung cap ' + LTRIM(STR(@NumProduct2)) + ' san pham'


     PRINT
     CASE
         WHEN @NumProduct1 > @NumProduct2
             THEN @Country1 + ' cung cap nhieu san pham hon ' + @Country2
         WHEN @NumProduct1 < @NumProduct2
             THEN @Country2 + ' cung cap nhieu san pham hon ' + @Country1
         ELSE @Country1 + ' cung cap so san pham bang ' + @Country2
     END

     DROP TABLE #ProductInfo1

 COMMIT TRANSACTION CompareTwoCountriesTrans
 END TRY
```

```
BEGIN CATCH
    ROLLBACK TRAN CompareTwoCountriesTrans
    PRINT 'Co loi xay ra. Chi tiet:'
    PRINT ERROR_MESSAGE()
END CATCH
```

Messages

USA cung cap 12 san pham
UK cung cap 7 san pham
USA cung cap nhieu san pham hon UK