

--insert, update, delete
--INSERT VALUES, INSERT SELECT, INSERT EXEC, SELECT INTO

```
-- Insert Values
CREATE TABLE Sales.MyOrders
(
  orderid INT NOT NULL IDENTITY(1, 1)
  CONSTRAINT PK_MyOrders_orderid PRIMARY KEY,
  custid INT NOT NULL,
  empid INT NOT NULL,
  orderdate DATE NOT NULL
  CONSTRAINT DFT_MyOrders_orderdate DEFAULT (CAST(SYSDATETIME() AS DATE)),
  shipcountry NVARCHAR(15) NOT NULL,
  freight MONEY NOT NULL
);
```

```
INSERT INTO Sales.MyOrders(custid, empid, orderdate, shipcountry, freight)
VALUES(2, 19, '20120620', N'USA', 30.00);
```

```
select * from Sales.MyOrders
```

```
INSERT INTO Sales.MyOrders(custid, empid, shipcountry, freight)
VALUES(3, 20, N'BD', 40.00);
```

```
INSERT INTO Sales.MyOrders(custid, empid, orderdate, shipcountry, freight)
VALUES(9, 50, default, N'BD', 100.00);
```

```
INSERT INTO Sales.MyOrders(custid, empid, shipcountry, freight)
VALUES (4, 21, N'BD', 50.00),
       (5, 22, N'BD', 60.00),
       (6, 23, N'BD', 70.00);
```

```
---INSERT SELECT
set IDENTITY_INSERT Sales.MyOrders on
insert into Sales.MyOrders(orderid, custid, empid, orderdate, shipcountry, freight)
SELECT orderid, custid, empid, orderdate, shipcountry, freight
FROM Sales.Orders
WHERE shipcountry = N'Norway';
```

```
select * from Sales.MyOrders
```

```
set IDENTITY_INSERT Sales.MyOrders off
```

```
INSERT INTO Sales.MyOrders(custid, empid, orderdate, shipcountry, freight)
VALUES(800, 50, default, N'BD', 200.00);
```

```
insert into Sales.MyOrders
SELECT custid, empid, orderdate, shipcountry, freight
FROM Sales.Orders
WHERE shipcountry = N'Brazil';
```

```
--- insert exec
create proc testProc
as
SELECT custid, empid, orderdate, shipcountry, freight
FROM Sales.Orders
WHERE shipcountry = N'France';
```

```
--- procedure run
insert into Sales.MyOrders exec testProc
select * from Sales.MyOrders
```

```
create proc testProc2
as
SELECT orderid,custid, empid, orderdate, shipcountry, freight
FROM Sales.Orders
WHERE shipcountry = N'Germany';
```

```
alter proc testProc2
as
SELECT orderid,custid, empid, orderdate, shipcountry, freight
FROM Sales.Orders
WHERE shipcountry = N'Switzerland';
```

```
delete from Sales.MyOrders
set IDENTITY_INSERT Sales.MyOrders on
insert into Sales.MyOrders(orderid,custid, empid, orderdate, shipcountry, freight)
exec testProc2
set IDENTITY_INSERT Sales.MyOrders off
```

```
-- select into
SELECT orderid,custid, empid, orderdate, shipcountry, freight
into Sales.MyOrders2
FROM Sales.Orders
WHERE shipcountry = N'Belgium';
```

```
select * into Sales.MyOrders3 from Sales.MyOrders
```

```
--- update sample data
```

```
IF OBJECT_ID('Sales.MyOrderDetails', 'U') IS NOT NULL
```

```
DROP TABLE Sales.MyOrderDetails;
```

```
IF OBJECT_ID('Sales.MyOrders', 'U') IS NOT NULL
```

```
DROP TABLE Sales.MyOrders;
```

```
IF OBJECT_ID('Sales.MyCustomers', 'U') IS NOT NULL
```

```
DROP TABLE Sales.MyCustomers;
```

```
SELECT * INTO Sales.MyCustomers FROM Sales.Customers;
```

```
ALTER TABLE Sales.MyCustomers
```

```
ADD CONSTRAINT PK_MyCustomers PRIMARY KEY(custid);
```

```
SELECT * INTO Sales.MyOrders FROM Sales.Orders;
```

```
ALTER TABLE Sales.MyOrders
```

```
ADD CONSTRAINT PK_MyOrders PRIMARY KEY(orderid);
```

```
SELECT * INTO Sales.MyOrderDetails FROM Sales.OrderDetails;
```

```
ALTER TABLE Sales.MyOrderDetails
```

```
ADD CONSTRAINT PK_MyOrderDetails PRIMARY KEY(orderid, productid);
```

```
----- Update
```

```
SELECT *
```

```
FROM Sales.MyOrderDetails
```

```
WHERE orderid = 10251;
```

```
UPDATE Sales.MyOrderDetails
```

```
SET discount += 0.05
```

```
WHERE orderid = 10251;
```

```
UPDATE Sales.MyOrderDetails
```

```
SET discount = discount + 0.05
```

```
WHERE orderid = 10251;
```

```
UPDATE Sales.MyOrderDetails
```

```
SET discount -= 0.05 -- discount = discount - 0.05
```

```
WHERE orderid = 10251;
```

```
UPDATE Sales.MyOrderDetails
```

```
SET discount *= 0.05 -- discount = discount * 0.05
```

```
WHERE orderid = 10251;
```

```
UPDATE Sales.MyOrderDetails
```

```
SET discount /= 0.05 -- discount = discount / 0.05
```

WHERE orderid = 10251;

--UPDATE Based on Join

```
SELECT OD.*
FROM Sales.MyCustomers AS C
INNER JOIN Sales.MyOrders AS O
ON C.custid = O.custid
INNER JOIN Sales.MyOrderDetails AS OD
ON O.orderid = OD.orderid
WHERE C.country = N'Norway';
```

```
update od
set od.discount +=0.05,od.qty+=10
FROM Sales.MyCustomers AS C
INNER JOIN Sales.MyOrders AS O
ON C.custid = O.custid
INNER JOIN Sales.MyOrderDetails AS OD
ON O.orderid = OD.orderid
WHERE C.country = N'Norway';
```

```
update od
set od.discount -=0.05,od.qty-=10
FROM Sales.MyCustomers AS C
INNER JOIN Sales.MyOrders AS O
ON C.custid = O.custid
INNER JOIN Sales.MyOrderDetails AS OD
ON O.orderid = OD.orderid
WHERE C.country = N'Norway';
```

--UPDATE Based on a Variable

```
declare @value numeric(4,3)
```

```
update od
```

```
set @value=od.discount +=0.05 -- @value=od.discount=od.discount+0.05
```

```
FROM Sales.MyCustomers AS C
INNER JOIN Sales.MyOrders AS O
ON C.custid = O.custid
INNER JOIN Sales.MyOrderDetails AS OD
ON O.orderid = OD.orderid
WHERE C.country = N'Norway';
select @value
```

```
--UPDATE all-at-Once
CREATE TABLE dbo.T1
(
keycol INT NOT NULL
CONSTRAINT PK_T1 PRIMARY KEY,
col1 INT NOT NULL,
col2 INT NOT NULL
);
```

```
INSERT INTO dbo.T1(keycol, col1, col2) VALUES(1, 100, 0);
```

```
select * from dbo.T1
```

```
DECLARE @add AS INT = 10;
UPDATE dbo.T1
SET col1 += @add, col2 = col1
WHERE keycol = 1;
```

```
SELECT * FROM dbo.T1;
```

```
INSERT INTO dbo.T1(keycol, col1, col2) VALUES(4, 200, 0);
update dbo.t1 set col1=55,col2=77
update dbo.t1 set col1=66,col2=88 where col1=55
```

```
--- view update
select * from [dbo].[vwT1]
update dbo.[vwT1] set col1=777,col2=888 where testid='Test XYZ'
select * from [dbo].t1
update dbo.[vwT1] set col1=333,col2=666 where col2=8
```

```
--- view insert
CREATE TABLE Sales.MyOrdersTest
(
orderid INT NOT NULL IDENTITY(1, 1)
CONSTRAINT PK_MyOrdersTest_orderid PRIMARY KEY,
custid INT NOT NULL,
empid INT NOT NULL,
orderdate DATE NOT NULL
CONSTRAINT DFT_MyOrderstest_orderdate DEFAULT (CAST(SYSDATETIME() AS DATE)),
shipcountry NVARCHAR(15) NOT NULL,
freight MONEY NOT NULL
);
```

```
INSERT INTO [dbo].[vwMOT](custid, empid, orderdate, shipcountry, freight)
VALUES(2, 19, '20120620', N'USA', 30.00);
```

```
select * from [dbo].[vwMOT]
select * from Sales.MyOrdersTest
```

```
INSERT INTO [dbo].[vwMOT](custid, empid, orderdate, shipcountry, freight)
VALUES(2, 19, '20120620', N'USA', 30.00),(3, 19, default, N'BD', 40.00);
```

---delete sample data

```
IF OBJECT_ID('Sales.MyOrderDetails', 'U') IS NOT NULL
DROP TABLE Sales.MyOrderDetails;
IF OBJECT_ID('Sales.MyOrders', 'U') IS NOT NULL
DROP TABLE Sales.MyOrders;
IF OBJECT_ID('Sales.MyCustomers', 'U') IS NOT NULL
DROP TABLE Sales.MyCustomers;
SELECT * INTO Sales.MyCustomers FROM Sales.Customers;
ALTER TABLE Sales.MyCustomers
ADD CONSTRAINT PK_MyCustomers PRIMARY KEY(custid);
SELECT * INTO Sales.MyOrders FROM Sales.Orders;
ALTER TABLE Sales.MyOrders
ADD CONSTRAINT PK_MyOrders PRIMARY KEY(orderid);
SELECT * INTO Sales.MyOrderDetails FROM Sales.OrderDetails;
ALTER TABLE Sales.MyOrderDetails
ADD CONSTRAINT PK_MyOrderDetails PRIMARY KEY(orderid, productid);
```

--- delete

```
DELETE FROM Sales.MyOrderDetails
WHERE productid = 11;
select * from Sales.MyOrderDetails where productid = 13;
DELETE FROM Sales.MyOrderDetails
WHERE productid = 12;
```

--- large data delete

```
WHILE 1 = 1
BEGIN
    DELETE TOP (1000) FROM Sales.MyOrderDetails
    WHERE productid = 13;
    IF @@rowcount < 1000 BREAK;
END
select * FROM Sales.MyOrderDetails
```

```
delete from sales.MyOrderDetails
```

```
-- TRUNCATE
TRUNCATE TABLE Sales.MyOrderDetails
```

```
select * from sales.MyOrderDetails
```

```
--- DELETE Based on a Join
DELETE FROM O
FROM Sales.MyOrders AS O
INNER JOIN Sales.MyCustomers AS C
ON O.custid = C.custid
WHERE C.country = N'USA';
```

```
select *
FROM Sales.MyOrders AS O
INNER JOIN Sales.MyCustomers AS C
ON O.custid = C.custid
WHERE C.country = N'USA';
```

```
-- delete from subquery
DELETE FROM Sales.MyOrders
WHERE EXISTS
(SELECT *
FROM Sales.MyCustomers
WHERE MyCustomers.custid = MyOrders.custid
AND MyCustomers.country = N'USA');
```

```
select * FROM Sales.MyOrders
WHERE EXISTS
(SELECT *
FROM Sales.MyCustomers
WHERE MyCustomers.custid = MyOrders.custid
AND MyCustomers.country = N'USA');
```

```
select * FROM [Sales].[MyOrderDetails]
where [orderid] in (select [orderid] from [Sales].[MyOrders] where [shipcountry]='France')
```

```
delete FROM [Sales].[MyOrderDetails]
where [orderid] in
(
    select [orderid] from [Sales].[MyOrders]
    where [shipcountry]='France'
)
```