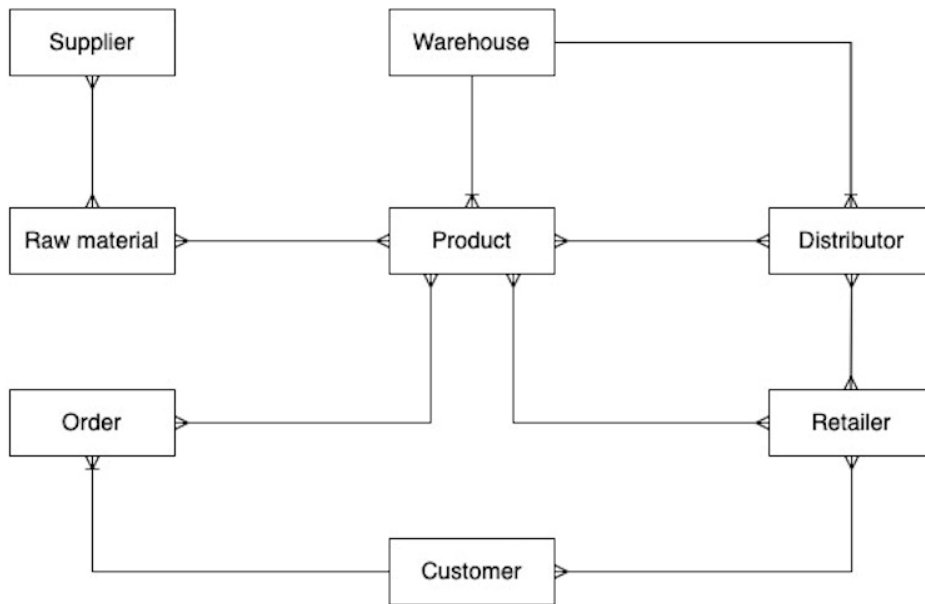


Supply Chain Management System

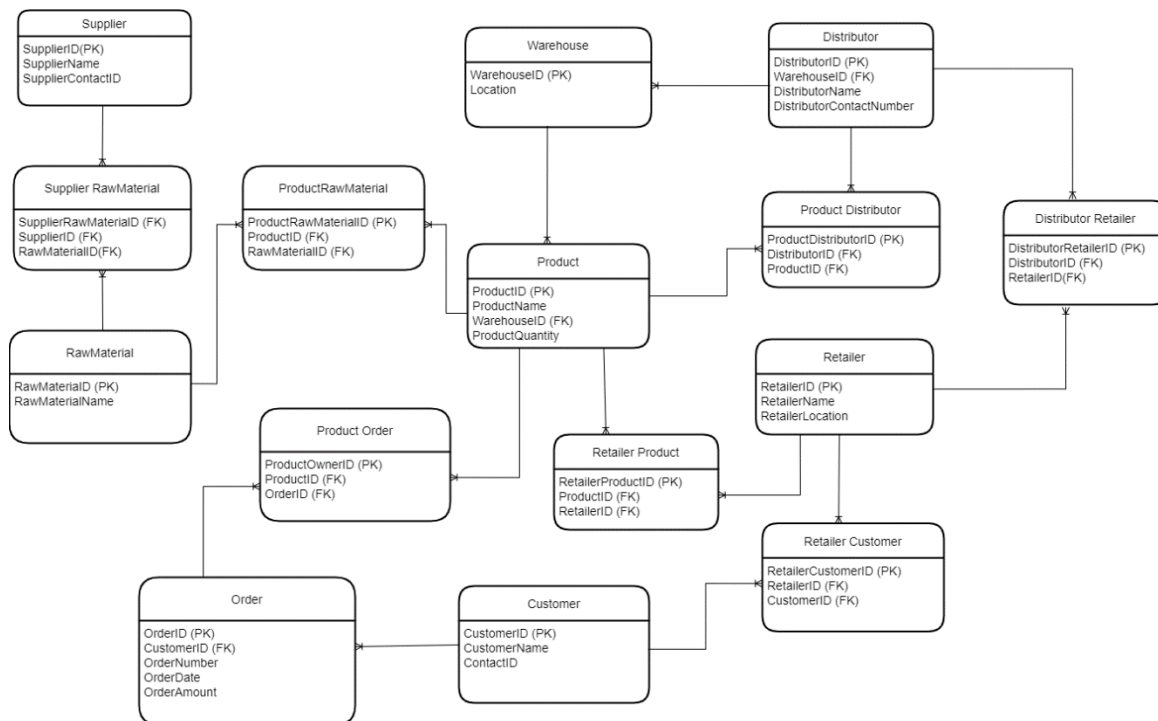
Business Rules:

1. A Supplier can supply many raw materials. A Raw material can be supplied by many suppliers
2. A product can be manufactured using multiple raw materials. A raw material can be used to manufacture multiple products
3. A product will be stored in a warehouse. But a warehouse may contain multiple products
4. A distributor can distribute multiple products. A product can be distributed by multiple distributors
5. A distributor can take products from one warehouse. But multiple distributors can take products from one warehouse.
6. A distributor can supply products to multiple retailers. But a retailer can get products from many distributors
7. A retailer can have multiple products. A product can have multiple retailers
8. A retailer can have multiple customers. A customer can have multiple retailers
9. A customer can have multiple orders. But order can be done by single customer
10. An Order may contain multiple products. A product can be in multiple orders.

Conceptual Entity Relationship Diagram:



Logical Entity Relationship Diagram:



Physical Entity Relationship Diagram:

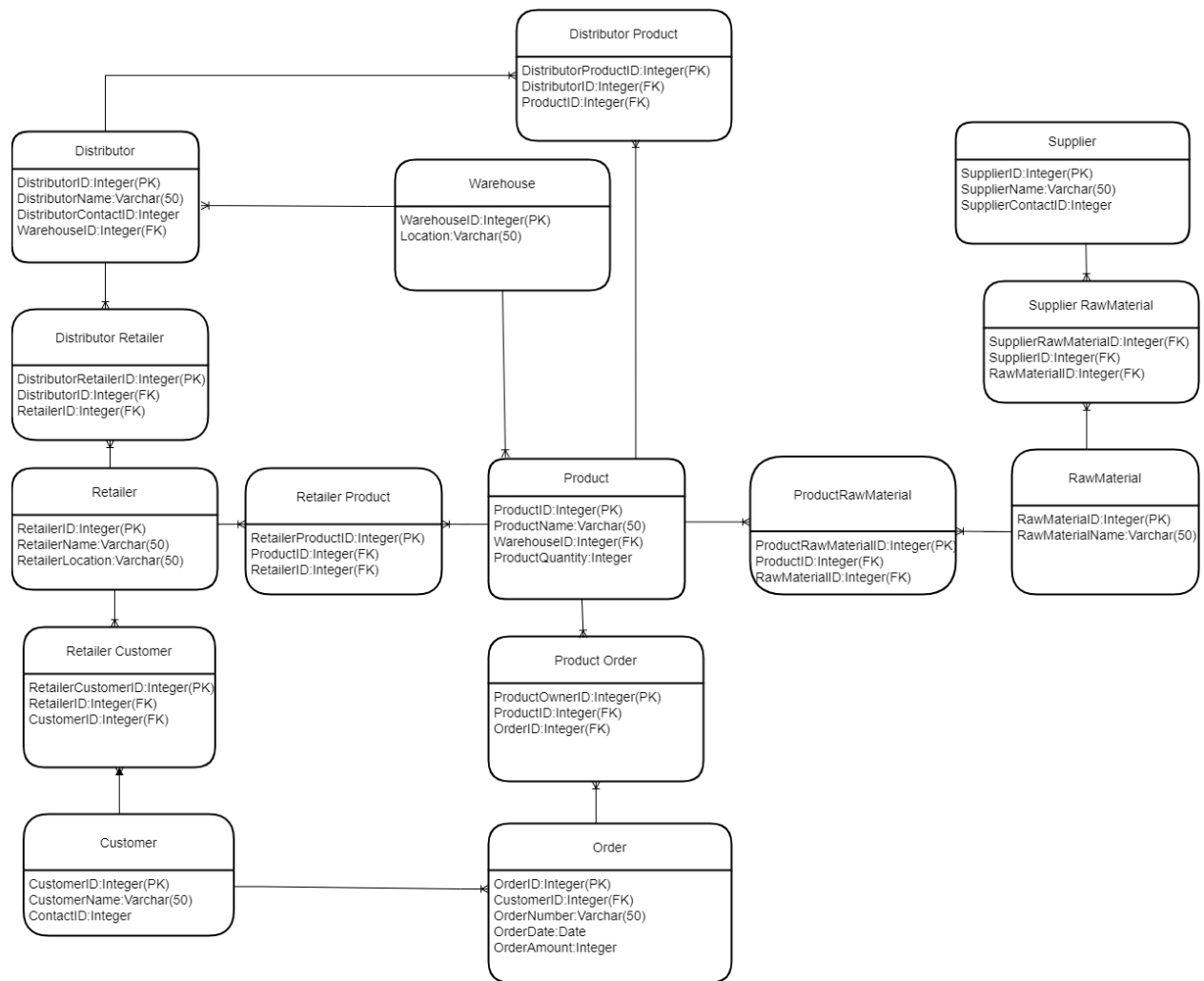
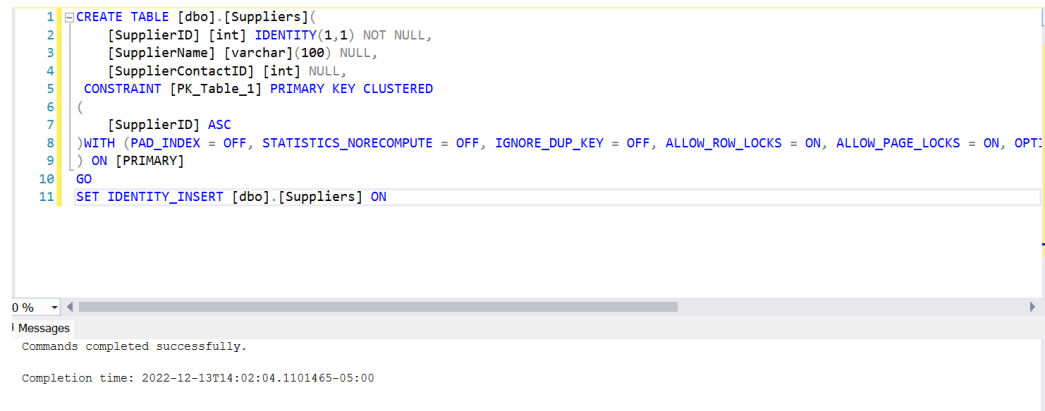


Table Creation and Data Population:

1. Supplier Table:

```
CREATE TABLE [dbo].[Suppliers](
    [SupplierID] [int] IDENTITY(1,1) NOT NULL,
    [SupplierName] [varchar](100) NULL,
    [SupplierContactID] [int] NULL,
    CONSTRAINT [PK_Table_1] PRIMARY KEY CLUSTERED
(
    [SupplierID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
GO
SET IDENTITY_INSERT [dbo].[Suppliers] ON
```



```
1 CREATE TABLE [dbo].[Suppliers](
2     [SupplierID] [int] IDENTITY(1,1) NOT NULL,
3     [SupplierName] [varchar](100) NULL,
4     [SupplierContactID] [int] NULL,
5     CONSTRAINT [PK_Table_1] PRIMARY KEY CLUSTERED
6 (
7     [SupplierID] ASC
8 )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTI
9 ) ON [PRIMARY]
10 GO
11 SET IDENTITY_INSERT [dbo].[Suppliers] ON
```

0 %

Messages

Commands completed successfully.

Completion time: 2022-12-13T14:02:04.1101465-05:00

```
INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (1, N'Supplier 1', 2)
INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (2, N'Supplier 2', 3)
INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (3, N'Supplier 3', 1)
INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (4, N'Supplier 4', 7)
INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (5, N'Supplier 5', 9)
INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (6, N'Supplier 6', 4)
INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (7, N'Supplier 7', 10)
INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (8, N'Supplier 8', 8)
INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (9, N'Supplier 9', 5)
INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (10, N'Supplier 10', 6)
SET IDENTITY_INSERT [dbo].[Suppliers] OFF
GO
```

```

1 INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (1, N'Supplier 1', 2)
2 INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (2, N'Supplier 2', 3)
3 INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (3, N'Supplier 3', 1)
4 INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (4, N'Supplier 4', 7)
5 INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (5, N'Supplier 5', 9)
6 INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (6, N'Supplier 6', 4)
7 INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (7, N'Supplier 7', 10)
8 INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (8, N'Supplier 8', 8)
9 INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (9, N'Supplier 9', 5)
10 INSERT [dbo].[Suppliers] ([SupplierID], [SupplierName], [SupplierContactID]) VALUES (10, N'Supplier 10', 6)
11 SET IDENTITY_INSERT [dbo].[Suppliers] OFF
12 GO

```

0% Messages

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(1 row affected)

Completion time: 2022-12-13T14:04:43.8371690-05:00

```

SELECT TOP (1000) [SupplierID]
, [SupplierName]
, [SupplierContactID]
FROM [supplychain].[dbo].[Suppliers]

```

```

1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [SupplierID]
3 , [SupplierName]
4 , [SupplierContactID]
5 FROM [supplychain].[dbo].[Suppliers]

```

Results Messages

SupplierID	SupplierName	SupplierContactID
1	Supplier 1	2
2	Supplier 2	3
3	Supplier 3	1
4	Supplier 4	7
5	Supplier 5	9
6	Supplier 6	4
7	Supplier 7	10
8	Supplier 8	8
9	Supplier 9	5
10	Supplier 10	6

2. Warehouse Table:

```

CREATE TABLE [dbo].[Warehouse](
    [WarehouseId] [int] NOT NULL,
    [Location] [varchar](100) NOT NULL,

```

```
CONSTRAINT [PK_Warehouse] PRIMARY KEY CLUSTERED
(
    [WarehouseId] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
```

```
1 CREATE TABLE [dbo].[Warehouse](
2     [WarehouseId] [int] NOT NULL,
3     [Location] [varchar](100) NOT NULL,
4     CONSTRAINT [PK_Warehouse] PRIMARY KEY CLUSTERED
5     (
6         [WarehouseId] ASC
7     )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPT:
8     ) ON [PRIMARY]
```

0 %

Messages

Commands completed successfully.

Completion time: 2022-12-13T14:08:58.7531432-05:00

```
INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (1, N'Toronto')
INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (2, N'Hamilton')
INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (3, N'British Columbia')
INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (4, N'Ottawa')
INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (5, N'Portugal')
INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (6, N'Italy')
INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (7, N'Nova Scotia')
INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (8, N'scarborough')
INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (9, N'France')
INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (10, N'Toronto')
```

```
1 INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (1, N'Toronto')
2 INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (2, N'Hamilton')
3 INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (3, N'British Columbia')
4 INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (4, N'Ottawa')
5 INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (5, N'Portugal')
6 INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (6, N'Italy')
7 INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (7, N'Nova Scotia')
8 INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (8, N'scarborough')
9 INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (9, N'France')
10 INSERT [dbo].[Warehouse] ([WarehouseId], [Location]) VALUES (10, N'Toronto')
```

%

Messages

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Completion time: 2022-12-13T14:10:01.8333085-05:00

```

SELECT TOP (1000) [WarehouseId]
,[Location]
FROM [supplychain].[dbo].[Warehouse]

```

```

1  /***** Script for SelectTopNRows command from SSMS *****/
2  SELECT TOP (1000) [WarehouseId]
3      ,[Location]
4  FROM [supplychain].[dbo].[Warehouse]

```

%

WarehouseId	Location
1	Toronto
2	Hamilton
3	British Columbia
4	Ottawa
5	Portugal
6	Italy
7	Nova Scotia
8	scarborough
9	France
10	Toronto

3. RawMaterial Table:

```

CREATE TABLE [dbo].[Rawmaterials](
    [RawMaterialID] [int] IDENTITY(1,1) NOT NULL,
    [RawMaterialName] [varchar](100) NULL,
    CONSTRAINT [PK_Rawmaterials] PRIMARY KEY CLUSTERED
(
    [RawMaterialID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
GO
SET IDENTITY_INSERT [dbo].[Rawmaterials] ON

```

```
1 CREATE TABLE [dbo].[Rawmaterials](
2     [RawMaterialID] [int] IDENTITY(1,1) NOT NULL,
3     [RawMaterialName] [varchar](100) NULL,
4     CONSTRAINT [PK_Rawmaterials] PRIMARY KEY CLUSTERED
5     (
6         [RawMaterialID] ASC
7     )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
8 ) ON [PRIMARY]
9 GO
10 SET IDENTITY_INSERT [dbo].[Rawmaterials] ON
```

Messages

Commands completed successfully.

Completion time: 2022-12-13T14:14:10.8838300-05:00

```
INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (1, N'RawMaterial 1')
INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (2, N'RawMaterial 2')
INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (3, N'RawMaterial 3')
INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (4, N'RawMaterial 4')
INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (5, N'RawMaterial 5')
INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (6, N'RawMaterial 6')
INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (7, N'RawMaterial 7')
INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (8, N'RawMaterial 8')
INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (9, N'RawMaterial 9')
INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (10, N'RawMaterial 10')
SET IDENTITY_INSERT [dbo].[Rawmaterials] OFF
GO
```

```
1 INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (1, N'RawMaterial 1')
2 INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (2, N'RawMaterial 2')
3 INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (3, N'RawMaterial 3')
4 INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (4, N'RawMaterial 4')
5 INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (5, N'RawMaterial 5')
6 INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (6, N'RawMaterial 6')
7 INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (7, N'RawMaterial 7')
8 INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (8, N'RawMaterial 8')
9 INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (9, N'RawMaterial 9')
10 INSERT [dbo].[Rawmaterials] ([RawMaterialID], [RawMaterialName]) VALUES (10, N'RawMaterial 10')
11 SET IDENTITY_INSERT [dbo].[Rawmaterials] OFF
```

Messages

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Completion time: 2022-12-13T14:15:28.0224102-05:00


```

SELECT TOP (1000) [RawMaterialID]
,[RawMaterialName]
FROM [supplychain].[dbo].[Rawmaterials]

```

1 /***** Script for SelectTopNRows command from SSMS *****/

2 SELECT TOP (1000) [RawMaterialID]

3 , [RawMaterialName]

4 FROM [supplychain].[dbo].[Rawmaterials]

0 %

Results Messages

RawMaterialID	RawMaterialName
1	RawMaterial 1
2	RawMaterial 2
3	RawMaterial 3
4	RawMaterial 4
5	RawMaterial 5
6	RawMaterial 6
7	RawMaterial 7
8	RawMaterial 8
9	RawMaterial 9
10	RawMaterial 10

4. Product Table:

```

CREATE TABLE [dbo].[Products](
    [ProductID] [int] IDENTITY(1,1) NOT NULL,
    [ProductName] [varchar](100) NULL,
    [WarehouseID] [int] NULL,
    [ProductQuantity] [float] NULL,
    CONSTRAINT [PK_Products] PRIMARY KEY CLUSTERED
(
    [ProductID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
GO
SET IDENTITY_INSERT [dbo].[Products] ON

```

```
1 CREATE TABLE [dbo].[Products](
2     [ProductID] [int] IDENTITY(1,1) NOT NULL,
3     [ProductName] [varchar](100) NULL,
4     [WarehouseID] [int] NULL,
5     [ProductQuantity] [float] NULL,
6     CONSTRAINT [PK_Products] PRIMARY KEY CLUSTERED
7     (
8         [ProductID] ASC
9     ) WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTI
10    ) ON [PRIMARY]
11 GO
12 SET IDENTITY_INSERT [dbo].[Products] ON
```

Messages

Commands completed successfully.

Completion time: 2022-12-13T14:18:07.1783620-05:00

```
INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (1, N'Product1',
2, 256)
INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (2, N'Product3',
2, 300)
INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (3, N'Product 2',
1, 199)
INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (4, N'Product 4',
2, 600)
INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (5, N'Product5',
3, 500)
INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (6, N'Product 6',
3, 220)
INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (7, N'Product 7',
6, 459)
INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (8, N'Product 8',
4, 559)
INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (9, N'Product 9',
1, 187)
INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (10,
N'Product10', 5, 345)
SET IDENTITY_INSERT [dbo].[Products] OFF
GO
```

```

1 INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (1, N'Product1', 2, 256)
2 INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (2, N'Product3', 2, 300)
3 INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (3, N'Product 2', 1, 199)
4 INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (4, N'Product 4', 2, 600)
5 INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (5, N'Product5', 3, 500)
6 INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (6, N'Product 6', 3, 220)
7 INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (7, N'Product 7', 6, 459)
8 INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (8, N'Product 8', 4, 559)
9 INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (9, N'Product 9', 1, 187)
10 INSERT [dbo].[Products] ([ProductID], [ProductName], [WarehouseID], [ProductQuantity]) VALUES (10, N'Product10', 5, 345)
11 SET IDENTITY_INSERT [dbo].[Products] OFF
12 GO

```

%
 Messages
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 Completion time: 2022-12-13T14:19:02.8995544-05:00

```

SELECT TOP (1000) [ProductID]
, [ProductName]
, [WarehouseID]
, [ProductQuantity]
FROM [supplychain].[dbo].[Products]

```

```

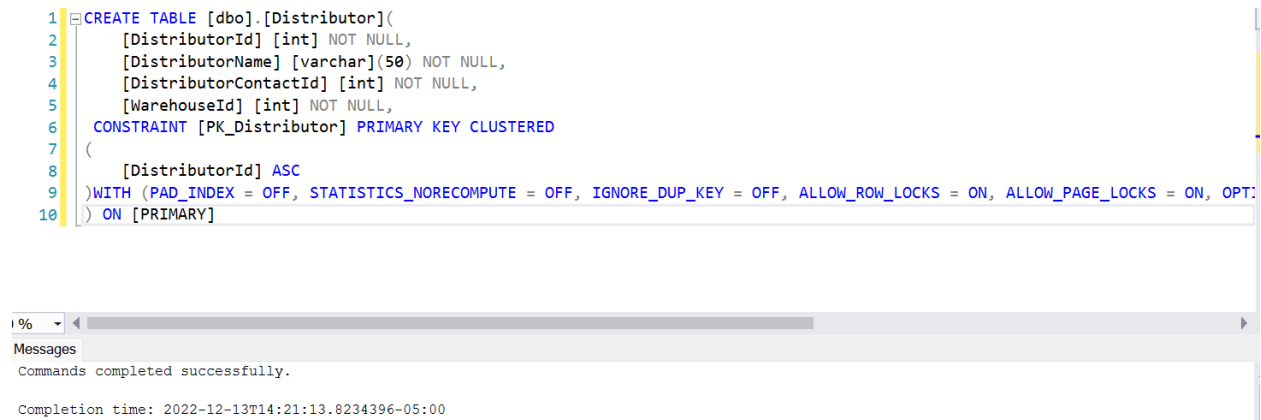
1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [ProductID]
3     , [ProductName]
4     , [WarehouseID]
5     , [ProductQuantity]
6 FROM [supplychain].[dbo].[Products]

```

ProductID	ProductName	WarehouseID	ProductQuantity
1	Product1	2	256
2	Product3	2	300
3	Product 2	1	199
4	Product 4	2	600
5	Product5	3	500
6	Product 6	3	220
7	Product 7	6	459
8	Product 8	4	559
9	Product 9	1	187
10	Product10	5	345

5. Distributor Table:

```
CREATE TABLE [dbo].[Distributor](
    [DistributorId] [int] NOT NULL,
    [DistributorName] [varchar](50) NOT NULL,
    [DistributorContactId] [int] NOT NULL,
    [WarehouseId] [int] NOT NULL,
    CONSTRAINT [PK_Distributor] PRIMARY KEY CLUSTERED
(
    [DistributorId] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
```



```
1 CREATE TABLE [dbo].[Distributor](
2     [DistributorId] [int] NOT NULL,
3     [DistributorName] [varchar](50) NOT NULL,
4     [DistributorContactId] [int] NOT NULL,
5     [WarehouseId] [int] NOT NULL,
6     CONSTRAINT [PK_Distributor] PRIMARY KEY CLUSTERED
7     (
8         [DistributorId] ASC
9     )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTI
10 ) ON [PRIMARY]
```

Messages

Commands completed successfully.

Completion time: 2022-12-13T14:21:13.8234396-05:00

```
INSERT [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (1,
N'Jhon', 5, 3)
INSERT [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (2,
N'Michael', 2, 1)
INSERT [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (3,
N'Jen', 2, 4)
INSERT [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (4,
N'Saam', 4, 6)
INSERT [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (5,
N'Galves', 7, 8)
INSERT [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (6,
N'Santos', 8, 9)
INSERT [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (7,
N'Joel', 6, 7)
INSERT [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (8,
N'Kevin', 1, 6)
INSERT [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (9,
N'Donald', 3, 6)
```

```
INSERT [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (10, N'David', 3, 5)
```

```

1  [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (1, N'Jhon', 5, 3)
2  [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (2, N'Michael', 2, 1)
3  [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (3, N'Jen', 2, 4)
4  [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (4, N'Saam', 4, 6)
5  [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (5, N'Galves', 7, 8)
6  [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (6, N'Santos', 8, 9)
7  [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (7, N'Joel', 6, 7)
8  [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (8, N'Kevin', 1, 6)
9  [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (9, N'Donald', 3, 6)
10 [dbo].[Distributor] ([DistributorId], [DistributorName], [DistributorContactId], [WarehouseId]) VALUES (10, N'David', 3, 5)

```

Messages

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Completion time: 2022-12-13T14:22:00.8148537-05:00

```

SELECT TOP (1000) [DistributorId]
, [DistributorName]
, [DistributorContactId]
, [WarehouseId]
FROM [supplychain].[dbo].[Distributor]

```

```

1  /***** Script for SelectTopNRows command from SSMS *****/
2  SELECT TOP (1000) [DistributorId]
3      , [DistributorName]
4      , [DistributorContactId]
5      , [WarehouseId]
6  FROM [supplychain].[dbo].[Distributor]

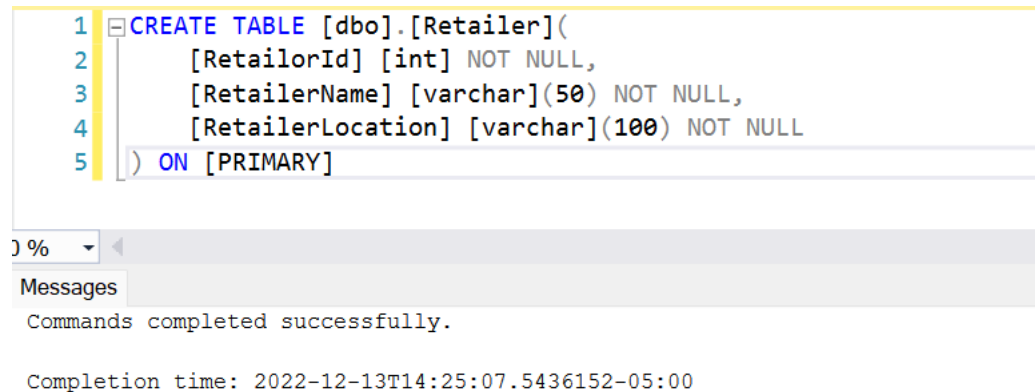
```

Results Messages

DistributorId	DistributorName	DistributorContactId	WarehouseId
1	Jhon	5	3
2	Michael	2	1
3	Jen	2	4
4	Saam	4	6
5	Galves	7	8
6	Santos	8	9
7	Joel	6	7
8	Kevin	1	6
9	Donald	3	6
10	David	3	5

6. Retailer Table:

```
CREATE TABLE [dbo].[Retailer](
    [RetailorId] [int] NOT NULL,
    [RetailerName] [varchar](50) NOT NULL,
    [RetailerLocation] [varchar](100) NOT NULL
) ON [PRIMARY]
```



The screenshot shows a SQL query window with the following code:

```
1 CREATE TABLE [dbo].[Retailer](
2     [RetailorId] [int] NOT NULL,
3     [RetailerName] [varchar](50) NOT NULL,
4     [RetailerLocation] [varchar](100) NOT NULL
5 ) ON [PRIMARY]
```

Below the query window, the Messages pane displays the following text:

Commands completed successfully.

Completion time: 2022-12-13T14:25:07.5436152-05:00

```
INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (1, N'Dominic', N'Toronto')
INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (2, N'Carine', N'Germany')
INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (3, N'Peter', N'Italy')
INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (4, N'Schmitt', N'Portugal')
INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (5, N'Lisboa', N'Nova Scotia')
INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (6, N'Torino', N'Ottawa')
INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (7, N'Franken', N'Scarborough')
INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (8, N'Lino', N'Toronto')
INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (9, N'Philip', N'Hamilton')
INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (10, N'Dewey', N'Italy')
```

```

1 INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (1, N'Dominic', N'Toronto')
2 INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (2, N'Carine', N'Germany')
3 INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (3, N'Peter', N'Italy')
4 INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (4, N'Schmitt', N'Portugal')
5 INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (5, N'Lisboa', N'Nova Scotia')
6 INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (6, N'Torino', N'Ottawa')
7 INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (7, N'Franken', N'Scarborough')
8 INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (8, N'Lino', N'Toronto')
9 INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (9, N'Philip', N'Hamilton')
10 INSERT [dbo].[Retailer] ([RetailorId], [RetailerName], [RetailerLocation]) VALUES (10, N'Dewey', N'Italy')

```

Messages

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

Completion time: 2022-12-13T14:25:57.4795709-05:00

```

SELECT TOP (1000) [RetailorId]
, [RetailerName]
, [RetailerLocation]
FROM [supplychain].[dbo].[Retailer]

```

```

1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [RetailorId]
3 , [RetailerName]
4 , [RetailerLocation]
5 FROM [supplychain].[dbo].[Retailer]

```

Results

RetailorId	RetailerName	RetailerLocation
1	Dominic	Toronto
2	Carine	Germany
3	Peter	Italy
4	Schmitt	Portugal
5	Lisboa	Nova Scotia
6	Torino	Ottawa
7	Franken	Scarborough
8	Lino	Toronto
9	Philip	Hamilton
10	Dewey	Italy

7. Customer Table:

```

CREATE TABLE [dbo].[Customers](
    [CustomerID] [int] IDENTITY(1,1) NOT NULL,
    [CustomerName] [varchar](100) NULL,
    [ContactID] [int] NOT NULL,

```

```
CONSTRAINT [PK_Customers] PRIMARY KEY CLUSTERED
(
    [CustomerID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
GO
SET IDENTITY_INSERT [dbo].[Customers] ON
```

```
1 CREATE TABLE [dbo].[Customers](
2     [CustomerID] [int] IDENTITY(1,1) NOT NULL,
3     [CustomerName] [varchar](100) NULL,
4     [ContactID] [int] NOT NULL,
5     CONSTRAINT [PK_Customers] PRIMARY KEY CLUSTERED
6     (
7         [CustomerID] ASC
8     )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPT:
9     ) ON [PRIMARY]
10 GO
11 SET IDENTITY_INSERT [dbo].[Customers] ON
```

Messages

Commands completed successfully.

Completion time: 2022-12-13T14:28:14.0122319-05:00

```
INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (1, N'Liam', 2)
INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (2, N'William Noah', 1)
INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (3, N'Olivia Jack', 3)
INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (4, N'Charlette Lucas', 8)
INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (5, N'Benjamin Lucas', 4)
INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (6, N'Amelia William', 9)
INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (7, N'Sophia Laurence', 10)
INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (8, N'Graham Jack', 6)
INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (9, N'Shelia Benjamin', 5)
INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (10, N'Beverley Mathews', 7)
SET IDENTITY_INSERT [dbo].[Customers] OFF
GO
```



```
2 INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (2, N'William Noah', 1)
3 INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (3, N'Olivia Jack', 3)
4 INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (4, N'Charlette Lucas', 8)
5 INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (5, N'Benjamin Lucas', 4)
6 INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (6, N'Amelia William', 9)
7 INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (7, N'Sophia Laurence', 10)
8 INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (8, N'Graham Jack', 6)
9 INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (9, N'Shelia Benjamin', 5)
10 INSERT [dbo].[Customers] ([CustomerID], [CustomerName], [ContactID]) VALUES (10, N'Beverley Mathews', 7)
11 SET IDENTITY_INSERT [dbo].[Customers] OFF
12 GO
```

%

Messages

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

Completion time: 2022-12-13T14:28:48.1051689-05:00

SELECT TOP (1000) [CustomerID]
,[CustomerName]
,[ContactID]
FROM [supplychain].[dbo].[Customers]

```
1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [CustomerID]
3     ,[CustomerName]
4     ,[ContactID]
5 FROM [supplychain].[dbo].[Customers]
```

%

Results Messages

CustomerID	CustomerName	ContactID
1	Liam	2
2	William Noah	1
3	Olivia Jack	3
4	Charlette Lucas	8
5	Benjamin Lucas	4
6	Amelia William	9
7	Sophia Laurence	10
8	Graham Jack	6
9	Shelia Benjamin	5
10	Beverley Mathews	7

8. Order Table:

```
CREATE TABLE [dbo].[Order](
    [OrderId] [int] NOT NULL,
    [CustomerId] [int] NOT NULL,
    [OrderNumber] [varchar](50) NOT NULL,
    [OrderAmount] [float] NULL,
    [OrderDate] [date] NULL,
    CONSTRAINT [PK_Order] PRIMARY KEY CLUSTERED
(
    [OrderId] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF,
ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON
[PRIMARY]
) ON [PRIMARY]
```

```
1 CREATE TABLE [dbo].[Order](
2     [OrderId] [int] NOT NULL,
3     [CustomerId] [int] NOT NULL,
4     [OrderNumber] [nvarchar](50) NOT NULL,
5     [OrderAmount] [float] NOT NULL,
6     CONSTRAINT [PK_Order] PRIMARY KEY CLUSTERED
7     (
8         [OrderId] ASC
9     )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OP
10 ) ON [PRIMARY]
```

Messages

Commands completed successfully.

Completion time: 2022-12-13T14:30:37.2697045-05:00

```
INSERT [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount],[OrderDate])
VALUES (1, 5, N'OD702', 1200, '2022-01-01')
INSERT [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount],[OrderDate])
VALUES (2, 7, N'OD703', 200, '2022-02-03')
INSERT [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount],[OrderDate])
VALUES (3, 9, N'OD704', 1000, '2022-03-05')
INSERT [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount],[OrderDate])
VALUES (4, 5, N'OD705', 1800, '2022-03-25')
INSERT [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount],[OrderDate])
VALUES (5, 3, N'OD706', 560, '2021-12-20')
INSERT [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount],[OrderDate])
VALUES (6, 1, N'OD707', 780, '2021-11-10')
INSERT [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount],[OrderDate])
VALUES (7, 8, N'OD708', 950, '2022-08-09')
INSERT [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount],[OrderDate])
VALUES (8, 6, N'OD709', 1500, '2022-10-30')
INSERT [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount],[OrderDate])
VALUES (9, 10, N'OD700', 850, '2021-12-30')
INSERT [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount],[OrderDate])
VALUES (10, 5, N'OD701', 390, '2022-12-12')
```

```
1 [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount], [OrderDate]) VALUES (1, 5, N'OD702', 1200, '2022-01-01')
2 [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount], [OrderDate]) VALUES (2, 7, N'OD703', 200, '2022-02-03')
3 [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount], [OrderDate]) VALUES (3, 9, N'OD704', 1000, '2022-03-05')
4 [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount], [OrderDate]) VALUES (4, 5, N'OD705', 1800, '2022-03-25')
5 [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount], [OrderDate]) VALUES (5, 3, N'OD706', 560, '2021-12-20')
6 [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount], [OrderDate]) VALUES (6, 1, N'OD707', 780, '2021-11-10')
7 [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount], [OrderDate]) VALUES (7, 8, N'OD708', 950, '2022-08-09')
8 [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount], [OrderDate]) VALUES (8, 6, N'OD709', 1500, '2022-10-30')
9 [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount], [OrderDate]) VALUES (9, 10, N'OD700', 850, '2021-12-30')
10 [dbo].[Order] ([OrderId], [CustomerId], [OrderNumber], [OrderAmount], [OrderDate]) VALUES (10, 5, N'OD701', 390, '2022-12-12')
11

0 %
Messages

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

Completion time: 2022-12-13T16:36:05.3330220-05:00
```

```
SELECT TOP (1000) [OrderId]
,[CustomerId]
,[OrderNumber]
,[OrderAmount]
,[OrderDate]
FROM [supplychain].[dbo].[Order]
```

```
1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [OrderId]
3     ,[CustomerId]
4     ,[OrderNumber]
5     ,[OrderAmount]
6     ,[OrderDate]
7 FROM [supplychain].[dbo].[Order]
```

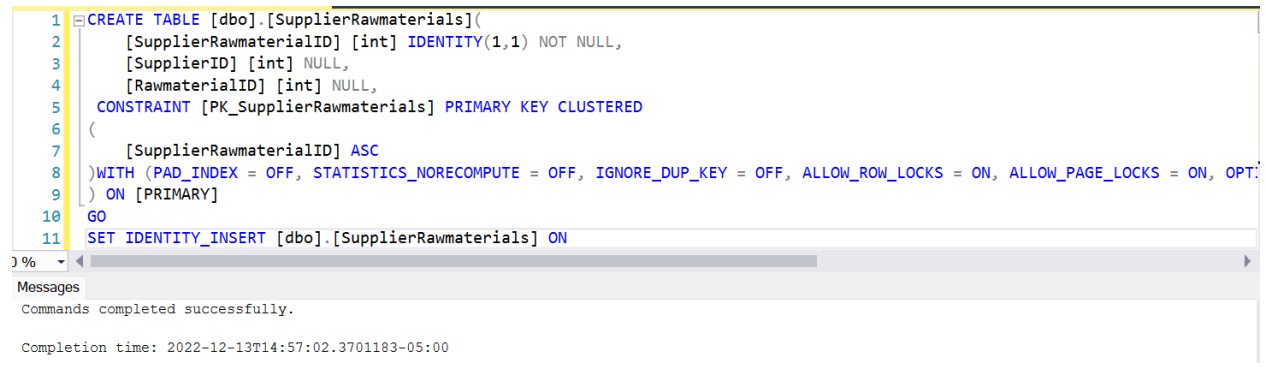
0 %

Results Messages

OrderId	CustomerId	OrderNumber	OrderAmount	OrderDate
1	5	OD702	1200	NULL
2	7	OD703	200	2022-02-03
3	9	OD704	1000	2022-03-05
4	5	OD705	1800	2022-03-25
5	3	OD706	560	2021-12-20
6	1	OD707	780	2021-11-10
7	8	OD708	950	2022-08-09
8	6	OD709	1500	2022-10-30
9	10	OD700	850	2021-12-30
10	5	OD701	390	2022-12-12

9. SupplierRawMaterial Table:

```
CREATE TABLE [dbo].[SupplierRawmaterials](
    [SupplierRawmaterialID] [int] IDENTITY(1,1) NOT NULL,
    [SupplierID] [int] NULL,
    [RawmaterialID] [int] NULL,
    CONSTRAINT [PK_SupplierRawmaterials] PRIMARY KEY CLUSTERED
(
    [SupplierRawmaterialID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
GO
SET IDENTITY_INSERT [dbo].[SupplierRawmaterials] ON
```



The screenshot displays a SQL Server Enterprise Manager interface. The top pane shows a script editor with the following T-SQL code:

```
1 CREATE TABLE [dbo].[SupplierRawmaterials](
2     [SupplierRawmaterialID] [int] IDENTITY(1,1) NOT NULL,
3     [SupplierID] [int] NULL,
4     [RawmaterialID] [int] NULL,
5     CONSTRAINT [PK_SupplierRawmaterials] PRIMARY KEY CLUSTERED
6 (
7     [SupplierRawmaterialID] ASC
8 )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTI
9 ) ON [PRIMARY]
10 GO
11 SET IDENTITY_INSERT [dbo].[SupplierRawmaterials] ON
```

The bottom pane shows the 'Messages' window with the following output:

```
Commands completed successfully.

Completion time: 2022-12-13T14:57:02.3701183-05:00
```

```
INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (1, 1, 5)
INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (2, 2, 3)
INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (3, 1, 2)
INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (4, 3, 2)
INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (5, 2, 5)
INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (6, 4, 6)
INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (7, 4, 2)
INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (8, 4, 3)
INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (9, 5, 1)
INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (10, 5, 4)
SET IDENTITY_INSERT [dbo].[SupplierRawmaterials] OFF
GO
```

```

2 INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (2, 2, 3)
3 INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (3, 1, 2)
4 INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (4, 3, 2)
5 INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (5, 2, 5)
6 INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (6, 4, 6)
7 INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (7, 4, 2)
8 INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (8, 4, 3)
9 INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (9, 5, 1)
10 INSERT [dbo].[SupplierRawmaterials] ([SupplierRawmaterialID], [SupplierID], [RawmaterialID]) VALUES (10, 5, 4)
11 SET IDENTITY_INSERT [dbo].[SupplierRawmaterials] OFF
12 GO

```

%

Messages

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

Completion time: 2022-12-13T14:58:03.4436800-05:00

```

SELECT TOP (1000) [SupplierRawmaterialID]
      , [SupplierID]
      , [RawmaterialID]
FROM [supplychain].[dbo].[SupplierRawmaterials]

```

```

1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [SupplierRawmaterialID]
3      , [SupplierID]
4      , [RawmaterialID]
5 FROM [supplychain].[dbo].[SupplierRawmaterials]

```

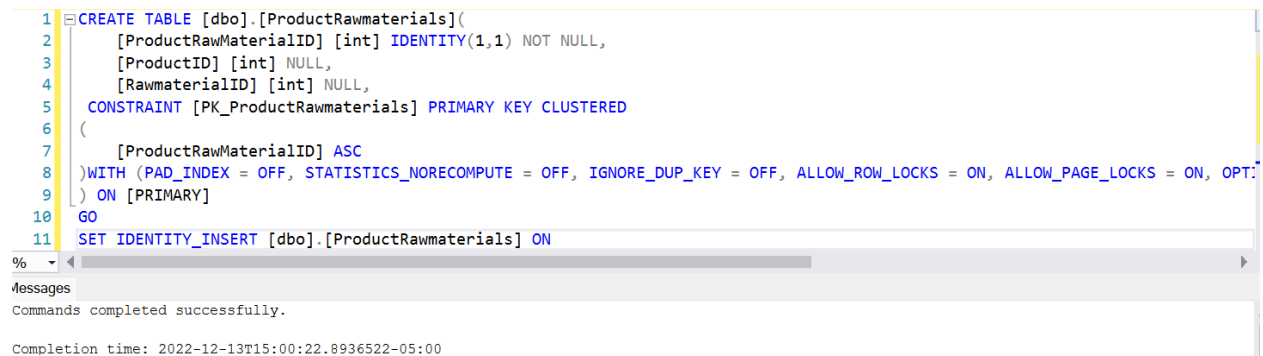
Results

Messages

SupplierRawmaterialID	SupplierID	RawmaterialID
1	1	5
2	2	3
3	1	2
4	3	2
5	2	5
6	4	6
7	4	2
8	4	3
9	5	1
10	5	4

10.ProductRawMaterial Table:

```
CREATE TABLE [dbo].[ProductRawmaterials](
    [ProductRawMaterialID] [int] IDENTITY(1,1) NOT NULL,
    [ProductID] [int] NULL,
    [RawmaterialID] [int] NULL,
    CONSTRAINT [PK_ProductRawmaterials] PRIMARY KEY CLUSTERED
(
    [ProductRawMaterialID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
GO
SET IDENTITY_INSERT [dbo].[ProductRawmaterials] ON
```



The screenshot displays a SQL Server query window with the following commands executed:

```
1 CREATE TABLE [dbo].[ProductRawmaterials](
2     [ProductRawMaterialID] [int] IDENTITY(1,1) NOT NULL,
3     [ProductID] [int] NULL,
4     [RawmaterialID] [int] NULL,
5     CONSTRAINT [PK_ProductRawmaterials] PRIMARY KEY CLUSTERED
6 (
7     [ProductRawMaterialID] ASC
8 )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
9 ) ON [PRIMARY]
10 GO
11 SET IDENTITY_INSERT [dbo].[ProductRawmaterials] ON
```

The Messages pane at the bottom indicates: "Commands completed successfully." and "Completion time: 2022-12-13T15:00:22.8936522-05:00".

```
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (1, 1, 2)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (2, 2, 2)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (3, 2, 3)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (4, 1, 3)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (5, 4, 5)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (6, 4, 3)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (7, 5, 6)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (8, 6, 4)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (9, 7, 5)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (10, 7, 4)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (11, 7, 1)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (12, 8, 7)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (13, 8, 9)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (14, 9, 1)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (15, 9, 3)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (16, 9, 6)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (17, 10, 8)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (18, 10, 9)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (19, 10, 10)
INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (20, 10, 5)
```

```
SET IDENTITY_INSERT [dbo].[ProductRawmaterials] OFF
GO
```

```
12 INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (12, 8, 7)
13 INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (13, 8, 9)
14 INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (14, 9, 1)
15 INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (15, 9, 3)
16 INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (16, 9, 6)
17 INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (17, 10, 8)
18 INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (18, 10, 9)
19 INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (19, 10, 10)
20 INSERT [dbo].[ProductRawmaterials] ([ProductRawMaterialID], [ProductID], [RawmaterialID]) VALUES (20, 10, 5)
21 SET IDENTITY_INSERT [dbo].[ProductRawmaterials] OFF
22 GO
```

%
lessages

(1 row affected)

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(1 row affected)

Completion time: 2022-12-13T15:01:01.8918537-05:00

```
SELECT TOP (1000) [ProductRawMaterialID]
, [ProductID]
, [RawmaterialID]
FROM [supplychain].[dbo].[ProductRawmaterials]
```

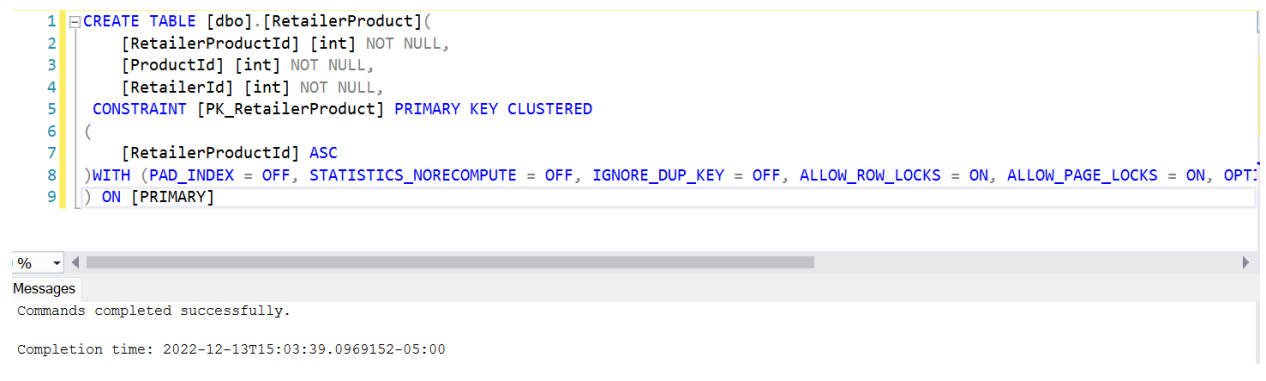
```
1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [ProductRawMaterialID]
3 , [ProductID]
4 , [RawmaterialID]
5 FROM [supplychain].[dbo].[ProductRawmaterials]
```

%
Results Messages

ProductRawMaterialID	ProductID	RawmaterialID
1	1	2
2	2	2
3	2	3
4	1	3
5	4	5
6	4	3
7	5	6
8	6	4
9	7	5
10	7	4
11	7	1
12	8	7
13	8	9
14	9	1
15	9	3
16	9	6
17	10	8
18	10	9
19	10	10
20	10	5

11. RetailerProduct Table:

```
CREATE TABLE [dbo].[RetailerProduct](
    [RetailerProductId] [int] NOT NULL,
    [ProductId] [int] NOT NULL,
    [RetailerId] [int] NOT NULL,
    CONSTRAINT [PK_RetailerProduct] PRIMARY KEY CLUSTERED
(
    [RetailerProductId] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
```



The screenshot displays the SQL Server Enterprise Manager interface. The top pane shows the execution of a SQL script with line numbers 1 through 9. The script is the same CREATE TABLE statement shown above. The bottom pane, titled 'Messages', shows the message 'Commands completed successfully.' and the completion time '2022-12-13T15:03:39.0969152-05:00'.

```
1 CREATE TABLE [dbo].[RetailerProduct](
2     [RetailerProductId] [int] NOT NULL,
3     [ProductId] [int] NOT NULL,
4     [RetailerId] [int] NOT NULL,
5     CONSTRAINT [PK_RetailerProduct] PRIMARY KEY CLUSTERED
6 (
7     [RetailerProductId] ASC
8 )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
9 ) ON [PRIMARY]
```

Messages

Commands completed successfully.

Completion time: 2022-12-13T15:03:39.0969152-05:00

```
INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (1, 5, 8)
INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (2, 4, 6)
INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (3, 7, 4)
INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (4, 8, 5)
INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (5, 6, 2)
INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (6, 2, 10)
INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (7, 10, 1)
INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (8, 1, 3)
INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (9, 3, 9)
INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (10, 9, 8)
```



```

1 INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (1, 5, 8)
2 INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (2, 4, 6)
3 INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (3, 7, 4)
4 INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (4, 8, 5)
5 INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (5, 6, 2)
6 INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (6, 2, 10)
7 INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (7, 10, 1)
8 INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (8, 1, 3)
9 INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (9, 3, 9)
10 INSERT [dbo].[RetailerProduct] ([RetailerProductId], [ProductId], [RetailerId]) VALUES (10, 9, 8)

```

%

Messages

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

Completion time: 2022-12-13T15:04:16.7911045-05:00

```

SELECT TOP (1000) [RetailerProductId]
      , [ProductId]
      , [RetailerId]
FROM [supplychain].[dbo].[RetailerProduct]

```

```

1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [RetailerProductId]
3      , [ProductId]
4      , [RetailerId]
5 FROM [supplychain].[dbo].[RetailerProduct]

```

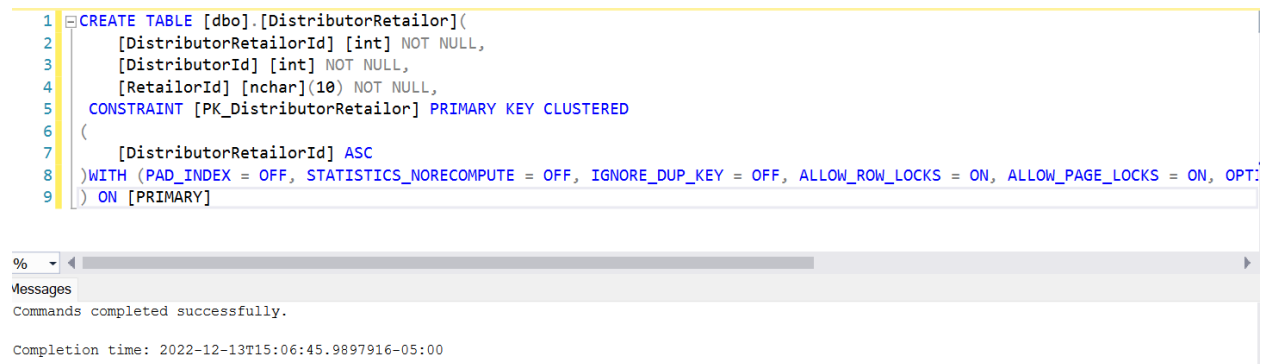
6

Results Messages

RetailerProductId	ProductId	RetailerId
1	5	8
2	4	6
3	7	4
4	8	5
5	6	2
6	2	10
7	10	1
8	1	3
9	3	9
10	9	8

12.DistributorRetailer Table:

```
CREATE TABLE [dbo].[DistributorRetailor](
    [DistributorRetailorId] [int] NOT NULL,
    [DistributorId] [int] NOT NULL,
    [RetailorId] [nchar](10) NOT NULL,
    CONSTRAINT [PK_DistributorRetailor] PRIMARY KEY CLUSTERED
(
    [DistributorRetailorId] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
```



The screenshot displays the SQL Server Enterprise Manager interface. The top pane shows the execution of a SQL script. The script creates a table named [DistributorRetailor] with three columns: [DistributorRetailorId] (int, NOT NULL), [DistributorId] (int, NOT NULL), and [RetailorId] (nchar(10), NOT NULL). A primary key constraint [PK_DistributorRetailor] is defined on [DistributorRetailorId]. The table is created on the [PRIMARY] filegroup with various options. The bottom pane shows the message "Commands completed successfully." and the completion time: 2022-12-13T15:06:45.9897916-05:00.

```
1 CREATE TABLE [dbo].[DistributorRetailor](
2     [DistributorRetailorId] [int] NOT NULL,
3     [DistributorId] [int] NOT NULL,
4     [RetailorId] [nchar](10) NOT NULL,
5     CONSTRAINT [PK_DistributorRetailor] PRIMARY KEY CLUSTERED
6 (
7     [DistributorRetailorId] ASC
8 )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
9 ) ON [PRIMARY]
```

Messages
Commands completed successfully.

Completion time: 2022-12-13T15:06:45.9897916-05:00

```
INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (1, 5, N'3    ')
INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (2, 3, N'7    ')
INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (3, 7, N'6    ')
INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (4, 4, N'1    ')
INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (5, 8, N'2    ')
INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (6, 10, N'8    ')
INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (7, 1, N'3    ')
INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (8, 3, N'5    ')
INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (9, 6, N'4    ')
INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (10, 9, N'9    ')
```

```
1 INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (1, 5, N'3')
2 INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (2, 3, N'7')
3 INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (3, 7, N'6')
4 INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (4, 4, N'1')
5 INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (5, 8, N'2')
6 INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (6, 10, N'8')
7 INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (7, 1, N'3')
8 INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (8, 3, N'5')
9 INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (9, 6, N'4')
10 INSERT [dbo].[DistributorRetailor] ([DistributorRetailorId], [DistributorId], [RetailorId]) VALUES (10, 9, N'9')
```

1 %

Messages

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

Completion time: 2022-12-13T15:07:27.5097613-05:00

```
SELECT TOP (1000) [DistributorRetailorId]
, [DistributorId]
, [RetailorId]
FROM [supplychain].[dbo].[DistributorRetailor]
```

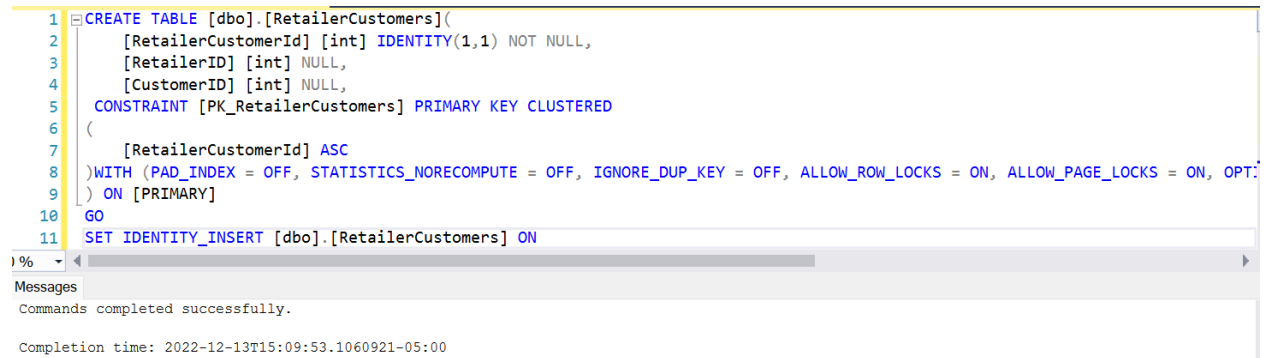
```
1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [DistributorRetailorId]
3 , [DistributorId]
4 , [RetailorId]
5 FROM [supplychain].[dbo].[DistributorRetailor]
```

1 %

Results			Messages
DistributorRetailorId	DistributorId	RetailorId	
1	5	3	
2	3	7	
3	7	6	
4	4	1	
5	8	2	
6	10	8	
7	1	3	
8	3	5	
9	6	4	
10	9	9	

13.RetailerCustomer Table:

```
CREATE TABLE [dbo].[RetailerCustomers](
    [RetailerCustomerId] [int] IDENTITY(1,1) NOT NULL,
    [RetailerID] [int] NULL,
    [CustomerID] [int] NULL,
    CONSTRAINT [PK_RetailerCustomers] PRIMARY KEY CLUSTERED
(
    [RetailerCustomerId] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
GO
SET IDENTITY_INSERT [dbo].[RetailerCustomers] ON
```



```
1 CREATE TABLE [dbo].[RetailerCustomers](
2     [RetailerCustomerId] [int] IDENTITY(1,1) NOT NULL,
3     [RetailerID] [int] NULL,
4     [CustomerID] [int] NULL,
5     CONSTRAINT [PK_RetailerCustomers] PRIMARY KEY CLUSTERED
6     (
7         [RetailerCustomerId] ASC
8     )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
9 ) ON [PRIMARY]
10 GO
11 SET IDENTITY_INSERT [dbo].[RetailerCustomers] ON
```

Messages

Commands completed successfully.

Completion time: 2022-12-13T15:09:53.1060921-05:00

```
INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (1, 5, 8)
INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (2, 4, 6)
INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (3, 7, 4)
INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (4, 8, 5)
INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (5, 6, 2)
INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (6, 2, 10)
INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (7, 10, 1)
INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (8, 1, 3)
INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (9, 3, 9)
INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (10, 9, 8)
SET IDENTITY_INSERT [dbo].[RetailerCustomers] OFF
GO
```

```

2 INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (2, 4, 6)
3 INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (3, 7, 4)
4 INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (4, 8, 5)
5 INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (5, 6, 2)
6 INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (6, 2, 10)
7 INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (7, 10, 1)
8 INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (8, 1, 3)
9 INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (9, 3, 9)
10 INSERT [dbo].[RetailerCustomers] ([RetailerCustomerId], [RetailerID], [CustomerID]) VALUES (10, 9, 8)
11 SET IDENTITY_INSERT [dbo].[RetailerCustomers] OFF
12 GO

```

%

Messages

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

Completion time: 2022-12-13T15:10:34.2718923-05:00

```

SELECT TOP (1000) [RetailerCustomerId]
      , [RetailerID]
      , [CustomerID]
FROM [supplychain].[dbo].[RetailerCustomers]

```

```

1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [RetailerCustomerId]
3      , [RetailerID]
4      , [CustomerID]
5 FROM [supplychain].[dbo].[RetailerCustomers]

```

%

results Messages

RetailerCustomerId	RetailerID	CustomerID
1	5	8
2	4	6
3	7	4
4	8	5
5	6	2
6	2	10
7	10	1
8	1	3
9	3	9
10	9	8

14.ProductOrder Table:

```
CREATE TABLE [dbo].[ProductOrder](
    [ProductOrderId] [int] NOT NULL,
    [ProductId] [int] NOT NULL,
    [OrderId] [int] NOT NULL,
    CONSTRAINT [PK_ProductOrder] PRIMARY KEY CLUSTERED
(
    [ProductOrderId] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS =
ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON [PRIMARY]
) ON [PRIMARY]
```

```
1 CREATE TABLE [dbo].[ProductOrder](
2     [ProductOrderId] [int] NOT NULL,
3     [ProductId] [int] NOT NULL,
4     [OrderId] [int] NOT NULL,
5     CONSTRAINT [PK_ProductOrder] PRIMARY KEY CLUSTERED
6     (
7         [ProductOrderId] ASC
8     )WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPT:
9     ) ON [PRIMARY]
```

% 

Messages

Commands completed successfully.

Completion time: 2022-12-13T15:12:25.7290321-05:00

```
INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (1, 7, 5)
INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (2, 5, 4)
INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (3, 9, 8)
INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (4, 8, 7)
INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (5, 3, 9)
INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (6, 2, 6)
INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (7, 10, 1)
INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (8, 4, 3)
INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (9, 6, 2)
INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (10, 2, 10)
```

```

1 INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (1, 7, 5)
2 INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (2, 5, 4)
3 INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (3, 9, 8)
4 INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (4, 8, 7)
5 INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (5, 3, 9)
6 INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (6, 2, 6)
7 INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (7, 10, 1)
8 INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (8, 4, 3)
9 INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (9, 6, 2)
10 INSERT [dbo].[ProductOrder] ([ProductOrderId], [ProductId], [OrderId]) VALUES (10, 2, 10)

```

%

Messages

(1 row affected)

(1 row affected)

(1 row affected)

(1 row affected)

Completion time: 2022-12-13T15:13:08.3191204-05:00

```

SELECT TOP (1000) [ProductOrderId]
, [ProductId]
, [OrderId]
FROM [supplychain].[dbo].[ProductOrder]

```

```

1 /***** Script for SelectTopNRows command from SSMS *****/
2 SELECT TOP (1000) [ProductOrderId]
3 , [ProductId]
4 , [OrderId]
5 FROM [supplychain].[dbo].[ProductOrder]

```

%

Results Messages

ProductOrderId	ProductId	OrderId
1	7	5
2	5	4
3	9	8
4	8	7
5	3	9
6	2	6
7	10	1
8	4	3
9	6	2
10	2	10

15.DistributorProduct Table:

```
CREATE TABLE [dbo].[DistributorProduct](
    [DistributorProductID] [int] NOT NULL,
    [DistributorID] [int] NULL,
    [ProductID] [int] NULL,
    CONSTRAINT [PK_DistributorProduct] PRIMARY KEY CLUSTERED
(
    [DistributorProductID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF,
ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON
[PRIMARY]
) ON [PRIMARY]
```

```
1  /***** Script for SelectTopNRows command from SSMS *****/
2  SELECT TOP (1000) [DistributorProductID]
3      ,[DistributorID]
4      ,[ProductID]
5  FROM [supplychain].[dbo].[DistributorProduct]
```

%			
Results Messages			
DistributorProductID	DistributorID	ProductID	
1	3	8	
2	2	3	
3	1	5	
4	5	8	
5	5	9	
6	7	6	
7	10	1	
8	7	1	
9	9	2	
10	3	8	

Analytical Queries:

```
select
wh.WarehouseLocation, pr.ProductID,pr.UnitPrice,ord.OrderAmount,ord.OrderDate
from Products pr
join ProductOrder pro on pr.ProductID=pro.ProductId
join Orders ord on pro.OrderId=ord.OrderId
join Warehouse wh on wh.WarehouseId=pr.WarehouseID
where ord.OrderDate between '2020-01-01' and '2022-12-01'
and ord.OrderAmount>500
order by ord.OrderAmount desc
```

	WarehouseLocation	ProductID	UnitPrice	OrderAmount	OrderDate
1	British Columbia	5	35	1800	2022-03-25
2	Toronto	9	50	1500	2022-10-30
3	Hamilton	4	20	1000	2022-03-05
4	Ottawa	8	40	950	2022-08-09
5	Toronto	3	100	850	2021-12-30
6	Hamilton	2	50	780	2021-11-10
7	Italy	7	80	560	2021-12-20

The above query retrieves the warehouse location, product name, order date and order amount of orders placed between 2020-01-01 and 2022-12-01 and the order amount is greater than \$500.

The data is retrieved from 3 different tables which are joined using an innerjoin on the productid and warehouseID.

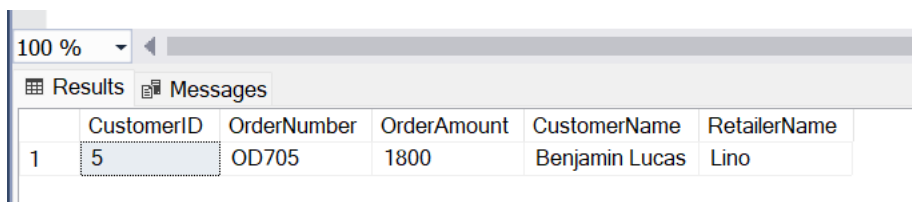
The result is order in descending order of the order amount.

```
select
wh.WarehouseLocation, pr.UnitPrice, ds.DistributorName
from Products pr
join DistributorProduct dsp on pr.ProductID=dsp.ProductId
join Distributor ds on ds.DistributorId=dsp.DistributorID
join Warehouse wh on wh.WarehouseId=pr.WarehouseID
where pr.UnitPrice < (select avg(UnitPrice) from Products)
```

	WarehouseLocation	UnitPrice	DistributorName
1	Ottawa	40	Jen
2	British Columbia	35	Jhon
3	Ottawa	40	Galves
4	Hamilton	10	David
5	Hamilton	10	Joel
6	Ottawa	40	Jen

The above query retrieves Warehouse Location, Unit Price of Product and Distributor Name of Products whose unit price is less than the average of all the product unit price.

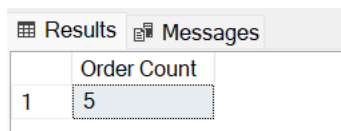
```
select cus.CustomerID,ord.OrderNumber,ord.OrderAmount,cus.CustomerName,Ret.RetailerName
from
  Orders ord join Customers cus on ord.CustomerId=cus.CustomerID
  join RetailerCustomers retcus on cus.CustomerID=retcus.CustomerID
  join Retailer Ret on retcus.RetailerID=Ret.RetailerId where OrderAmount=(select
max(OrderAmount) from orders)
  order by cus.CustomerID asc
```



	CustomerID	OrderNumber	OrderAmount	CustomerName	RetailerName
1	5	OD705	1800	Benjamin Lucas	Lino

The above query retrieves CustomerID, Order Number, Order Amount, Customer Name and Retailer Name of Order with the maximum Order Amount.

```
SELECT COUNT(*) [Order Count]
FROM orders
WHERE OrderAmount > (SELECT AVG(OrderAmount) FROM orders)
```



	Order Count
1	5

The above query is used to count the number of records in the orders table where the OrderAmount is greater than the average OrderAmount for all records in the table. The COUNT function is used to count the number of records that match the specified condition, and the AVG function is used to calculate the average OrderAmount.

```

select top 5
    pr.ProductName,pr.UnitPrice,pr.ProductQuantity,rm.RawmaterialName
from Products pr
join ProductRawmaterials prm on prm.ProductID=pr.ProductID
join Rawmaterials rm on rm.RawMaterialID=prm.RawmaterialID
order by pr.UnitPrice desc

```

	ProductName	UnitPrice	ProductQuantity	RawmaterialName
1	Product 2	100	199	RawMaterial 8
2	Product 7	80	459	RawMaterial 5
3	Product 7	80	459	RawMaterial 4
4	Product 7	80	459	RawMaterial 1
5	Product 6	55	220	RawMaterial 4

The above query retrieves data from multiple tables. It uses the JOIN keyword to combine records from the Products and Rawmaterials tables based on matching values in the ProductID and RawmaterialID columns, respectively. The SELECT statement specifies the columns that should be included in the final results, which are the product name, unit price, product quantity, and raw material name. The TOP 5 clause limits the number of records returned to the top five highest UnitPrice values, and the ORDER BY clause sorts the results in descending order by the UnitPrice column.

```

select de.DistributorID,de.DistributorName,pr.ProductName,sum(pr.UnitPrice) as [Total Price]
from Distributor de
join DistributorProduct dep on dep.DistributorID=de.DistributorId
join Products pr on pr.ProductID=dep.ProductID
group by de.DistributorID,de.DistributorName,pr.ProductName
having sum(pr.UnitPrice)>50

```

	DistributorID	DistributorName	ProductName	Total Price
1	2	Michael	Product 2	100
2	7	Joel	Product 6	55
3	3	Jen	Product 8	80

The above query retrieves the DistributorID, DistributorName, ProductName, and total price of products from the following tables: Distributor, DistributorProduct, and Products.

The query uses a combination of the JOIN, GROUP BY, and HAVING clauses to first join the three tables on the DistributorID, ProductID, and ProductName columns, respectively. It then groups the resulting data by DistributorID, DistributorName, and ProductName, and uses the HAVING clause to only return rows where the total price of products (calculated using the SUM() function) is greater than 50.
