

## Star Schema

This diagram represents a **Star Schema** design used in a Sales/Data Warehouse environment. The star schema is optimized for reporting and analytics, with a central **Fact table** connected to multiple **Dimension tables**.

Screenshot:

1)

The screenshot shows the SQL Server Management Studio (SSMS) interface. The Object Explorer on the left shows a connection to 'DESKTOP-1KSVG11 (SQL Server 16.0.1000.6 - DESKTOP-1KSVG11)'. The 'star\_schemas...' database is selected in the center pane. A script window titled 'star\_schemas...G1\123 (75)' displays the following T-SQL code:

```
1 CREATE DATABASE new
2 GO
3 USE new
4 GO
5 /*
6 =====
7 Dimension Tables
8 =====
9 */
10 /* DimCustomer */
11 CREATE TABLE DimCustomer (
12     CustomerID INT PRIMARY KEY,
13     CustomerName VARCHAR(100),
14     Email VARCHAR(100),
15     City VARCHAR(50),
16     Country VARCHAR(50)
17 );
18 /* DimProduct */
19 CREATE TABLE DimProduct (
20     ProductID INT PRIMARY KEY,
21     ProductName VARCHAR(100),
22     Category VARCHAR(50),
23     Price DECIMAL(10,2),
24     Brand VARCHAR(50)
25 );
26 /* DimDate */
27 CREATE TABLE DimDate (
28     DateID INT PRIMARY KEY,
29     Date DATE,
30     Year INT,
31     Quarter INT,
32     MonthName NVARCHAR(50),
33     Month INT,
34     DayName NVARCHAR(50),
35     Day INT
36 );
```

The status bar at the bottom indicates 'Connected (1/1)', 'DESKTOP-1KSVG11 (16.0 RTM) | DESKTOP-1KSVG11\123 (75) | new | 00:00:00 | 0 rows'.

2)

The screenshot shows the Object Explorer on the left with a connection to DESKTOP-1KSVG1 (SQL Server 16.0.1000.6 - DESKTOP-1KSVG1). The current database is star\_schemas..G1\123 (75). A query window titled 'SQLQuery1.sql...VG1\123 (60)\*' displays the following T-SQL code:

```
31  /* DimDate */
32  CREATE TABLE DimDate (
33      DateID INT PRIMARY KEY,
34      Date DATE,
35      Year INT,
36      Quarter INT,
37      Month INT,
38      Day INT
39  );
40
41  /* DimSegment */
42  CREATE TABLE DimSegment (
43      SegmentID INT PRIMARY KEY,
44      SegmentName VARCHAR(50),
45      Description VARCHAR(255),
46      Type VARCHAR(50)
47  );
48
49  /* =====
50  Fact Table
51  ===== */
52
53  CREATE TABLE FactTransaction (
54      TransactionID INT PRIMARY KEY,
55      CustomerID INT,
56      ProductID INT,
57      DateID INT,
58      SegmentID INT,
59      Amount DECIMAL(10, 2),
60      Quantity INT,
61      Revenue DECIMAL(10, 2),
62
63      CONSTRAINT FK_Fact_Customer FOREIGN KEY (CustomerID)
64          REFERENCES DimCustomer(CustomerID),
65
66      CONSTRAINT FK_Fact_Product FOREIGN KEY (ProductID)
67          REFERENCES DimProduct(ProductID),
68
69      CONSTRAINT FK_Fact_Date FOREIGN KEY (DateID)
70          REFERENCES DimDate(DateID),
71
72      CONSTRAINT FK_Fact_Segment FOREIGN KEY (SegmentID)
73          REFERENCES DimSegment(SegmentID)
74  );
75
76
77  select * from DimCustomer
78  select * from DimProduct
79  select * from DimDate
80  select * from DimSegment
81  select * from FactTransaction
```

The status bar at the bottom indicates 'Connected (1/1)'.

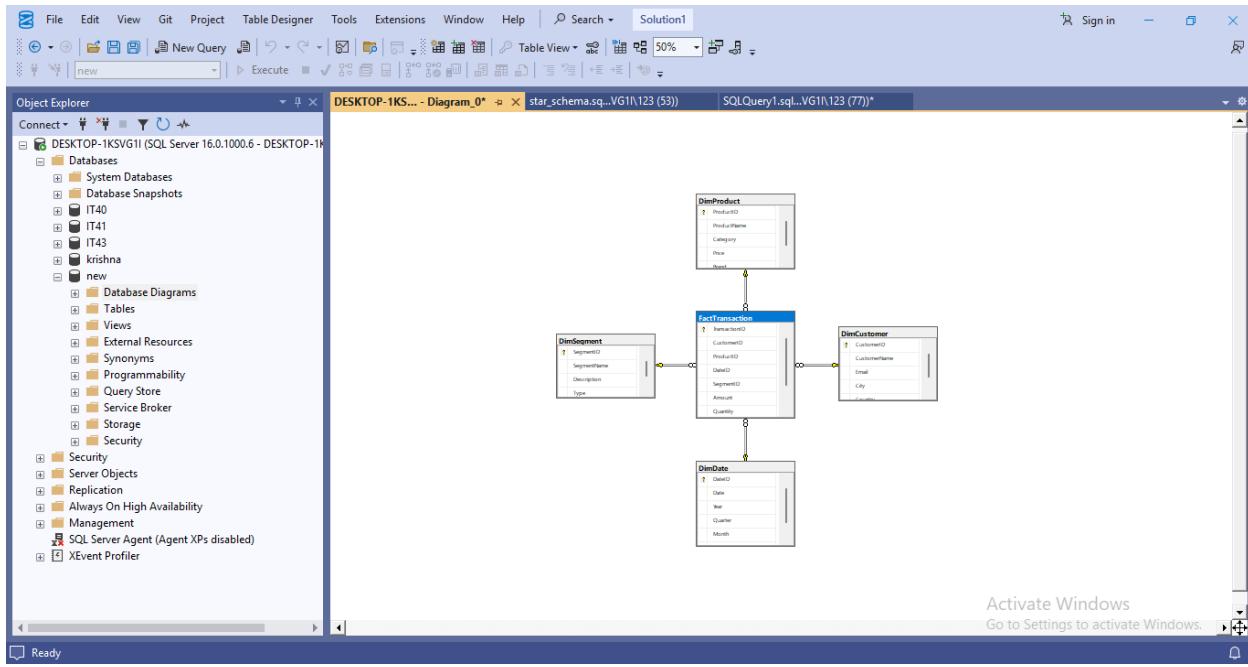
3)

The screenshot shows the same environment as the previous one. The current database is star\_schemas..G1\123 (75). The query window displays the continuation of the T-SQL code:

```
62
63      CONSTRAINT FK_Fact_Customer FOREIGN KEY (CustomerID)
64          REFERENCES DimCustomer(CustomerID),
65
66      CONSTRAINT FK_Fact_Product FOREIGN KEY (ProductID)
67          REFERENCES DimProduct(ProductID),
68
69      CONSTRAINT FK_Fact_Date FOREIGN KEY (DateID)
70          REFERENCES DimDate(DateID),
71
72      CONSTRAINT FK_Fact_Segment FOREIGN KEY (SegmentID)
73          REFERENCES DimSegment(SegmentID)
74  );
75
76
77  select * from DimCustomer
78  select * from DimProduct
79  select * from DimDate
80  select * from DimSegment
81  select * from FactTransaction
```

The status bar at the bottom indicates 'Connected (1/1)'.

4)



*Thank You*