

Module 1: Introduction to Databases

Demonstration: Exploring a Relational Database

Objectives

In this demonstration, you will see:

- How to create a database diagram.
- How to use a database diagram to view tables, primary key constraints, and foreign key constraints.

Preparation

Start the 10985C-MIA-DC and 10985C-MIA-SQL virtual machines, and then log on to 10985C-MIA-SQL as **ADVENTUREWORKS\Student** with the password **Pa\$\$w0rd**.

Demonstration Steps

1. In the **D:\Demofiles\Mod01** folder, right-click **Setup.cmd**, and then click **Run as administrator**.
2. In the **User Account Control** dialog box, click **Yes**, and wait for setup to complete.
3. Open **Microsoft SQL Server Management Studio**, and then connect to the **MIA-SQL** instance of the database engine by using Windows Authentication.
4. In **Object Explorer**, expand **Databases**, expand **AdventureWorks2016**, right-click **Database Diagrams**, and then click **New Database Diagram**.
5. If the **Microsoft SQL Server Management Studio** dialog box appears asking if you wish to create support objects for database diagramming, click **Yes**.
6. In the **Add Table** dialog box, press and hold down the CTRL key, click **Customer (Sales)**, click **SalesOrderDetail (Sales)**, click **SalesOrderHeader (Sales)**, click **ShipMethod (Purchasing)**, click **Add**, and then click **Close**.
7. Review the tables and note the following points:
 1. The **SalesOrderHeader (Sales)** table contains the **SalesOrderID**, which is the primary key column.
 2. The **SalesOrderDetail (Sales)** table also contains a **SalesOrderID** column.
8. In the **SalesOrderDetail (Sales)** table, right-click the **SalesOrderID** column, and then click **Properties**.
9. In the **Properties** window, click the **Description** field, and then click the ellipsis button (...).
10. In the **Description Property** dialog box, note that the column is a primary key column, and that there is a foreign key that references the **SalesOrderID** column in the **SalesOrderHeader** table, and then click **Cancel**.

11. Click the line between the **Customer (Sales)** table and the **SalesOrderHeader (Sales)** table. This line represents a foreign key relationship.
12. In the **Properties** window, click **Description**, and then click the ellipsis button (...).
13. In the **Description Property** dialog box, note that the foreign key references the **CustomerID** column in the **Customer (Sales)** table, and then click **Cancel**.
14. Close the database diagram window, and do not save any changes. Close SQL Server Management Studio.

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