Module 3: Normalization

Demonstration: Identifying Candidate Keys

Objectives

In this demonstration, you will see how to identify candidate keys in a table.

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

2. In the **D:\Demofiles\Mod03** folder, right-click **Setup.cmd**, and then click **Run as administrator**.
3. In the **User Account Control** dialog box, click **Yes**, and wait for setup to complete.
4. Open **Microsoft SQL Server Management Studio**, and then connect to the **MIA-SQL** instance of the database engine by using **Windows Authentication**.
5. On the **File** menu, point to **Open**, and then click **File**.
6. In the **File Open** dialog box, navigate to the **D:\Demofiles\Mod03** folder, click **Candidate Keys.sql**, and then click **Open**.
7. Under the comment *View the columns in the Production.Product table and identify the total number of rows*, select the Transact-SQL statements, and then click **Execute**.
8. Review the results, and in the results pane, in the bottom right corner, note the number of rows that the query returned.
9. Under the comment *Assess ProductID as a candidate key*, select the Transact-SQL statements, and then click **Execute**.
10. Review the results, and in the results pane, in the bottom right corner, note that the number of rows that the query returned is the same as for the query in step 7. This means that **ProductID** is a candidate key because it contains a unique value for each of the rows in the table.
11. Under the comment *Assess Name as a candidate key*, select the Transact-SQL statements, and then click **Execute**.
12. Review the results, and in the results pane, in the bottom right corner, note that the number of rows that the query returned is the same as for the query in step 7. This means that **Name** is also a candidate key because it contains a unique value for each of the rows in the table.
13. Under the comment *Assess ProductNumber as a candidate key*, select the Transact-SQL statements, and then click **Execute**.
14. Review the results, and in the results pane, in the bottom right corner, note that the number of rows that the query returned is the same as for the query in step 7. **ProductNumber** is

another candidate key because it contains a unique value for each of the rows in the table.

15. Under the comment *Assess Color as a candidate key*, select the Transact-SQL statements, and then click **Execute**.
16. Review the results, and in the results pane, in the bottom right corner, note that the number of rows that the query returned is less than the number of rows that the query in step 7 returned. This means that **Color** is not a candidate key because it does not contain a unique value for each of the rows in the table.
17. Close SQL Server Management Studio without saving changes.