



Introduction to Microsoft SQL Server DBMS



Microsoft®
SQL Server®

Presentation Overview

- The Basic Architecture of SQL Server
- SQL Server Editions and Versions
- Getting Started with SQL Server Management Studio

Basic Architecture of SQL Server

- Relational Databases
- About the Course Sample Database
- Client Server Databases
- Queries

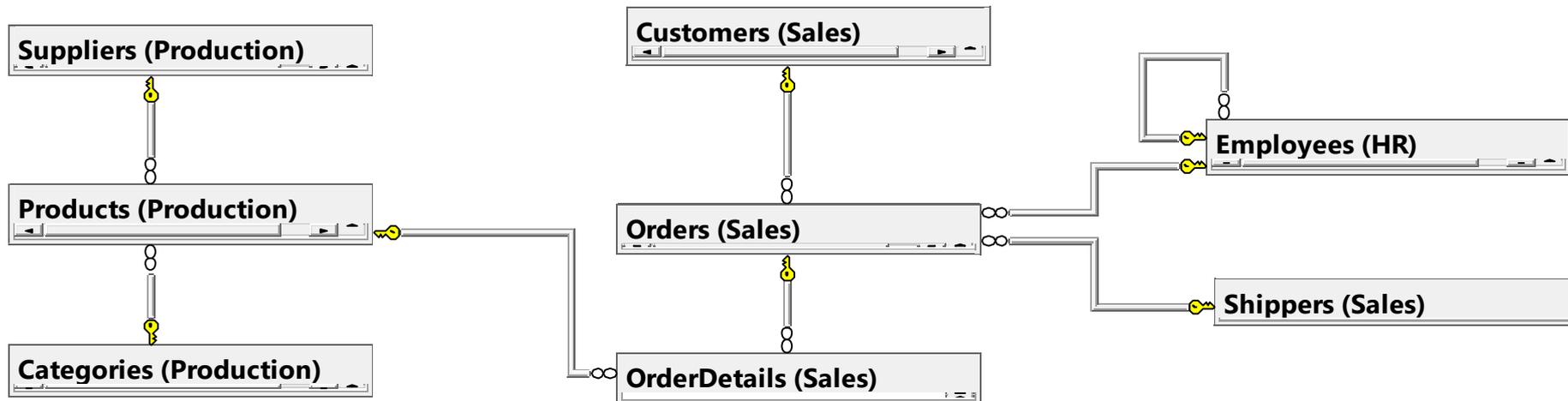
Relational Databases

- SQL Server is a relational database management system
- Databases contain objects and data
- Each database has multiple tables
- Tables are joined together to extract meaningful information



About the Course Sample Database

- TSQL Database



Client Server Databases

- The client software is separate from the server database engine
- Client/Server refers to the separation of functionality—not where the software is actually located
- Client software and server database engine can be on the same machine
- Databases can access data in other databases over a network

Queries

- T-SQL is a set-based language
- T-SQL is written in scripts with **.sql** extension
- **GO** keyword separates batches

```
CREATE TABLE dbo.Employees
(
    EmployeeID int PRIMARY KEY,
    LastName nvarchar(25),
    FirstName nvarchar(25)
);
GO

INSERT INTO dbo.Employees
    (EmployeeID, LastName, FirstName)
VALUES
    (121, N'O'Neil', N'Carlene');
GO
```

SQL Server Versions

SQL Server Versions

Version	Release Year
2016	2016
2014	2014
2008 R2	2010
2008	2008
2005	2005
2000	2000
7.0	1998
6.5	1996
6.0	1995
4.2.1	1994
4.2	1992
1.1	1991
1.0	1989

SQL Server Editions

- SQL Server Editions

Main Editions	Other Editions
Enterprise	Developer
Standard	Express
Business Intelligence	Compact
Azure SQL Database	

Getting Started with SQL Server Management Studio

- Starting SSMS
- Connecting to SQL Server
- Working with Object Explorer
- Script Files and Projects
- Executing Queries
- Using SQL Server 2016 Technical Documentation
- Demonstration: Introducing Microsoft SQL Server 2016

Starting SSMS

- Launch SSMS from the Windows Start screen
 - Or type **SSMS** into the Search Programs and Files box
- Connect to an SQL Server instance
 - Or work disconnected
- Settings available in Tools, Options include:
 - Fonts and colors, line numbering, and word wrap
 - Which windows open when SSMS is launched
- Useful windows include:
 - Query Editor
 - Object Explorer
 - Solution Explorer

Connecting to SQL Server

- Connecting to SQL Server requires three items:
 - Instance name
 - Use the form host/instance, except for the default instance
 - Database name
 - A default database can be assigned to a logon
 - Authentication
 - Windows Authentication or SQL Server Authentication
 - Account must be provisioned by a database administrator

Working with Object Explorer

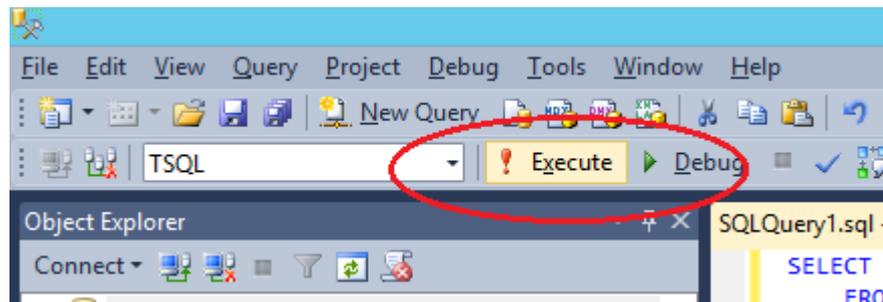
- Object Explorer is a hierarchical, graphical view of SQL Server objects
- Explore objects in the default instance, and additional named instances
- Right-click for context-sensitive menu with frequently used commands
- Create T-SQL scripts of object definitions, and send to the query window, clipboard or a file
- Start a new query window by right-clicking a database
 - Changing the selected object does not change the existing connection

Script Files and Projects

- T-SQL scripts are text files with a .sql extension
- SSMS can open, edit, and execute code in script files
- SSMS allows you to organize script files into:
 - Solutions (*.ssmssl)
 - Projects (*.ssmssqlproj)
- Opening a solution is a convenient way to open all relevant files

Executing Queries

- To execute queries in SSMS:
 - Open a saved script, or write a new query
 - Three ways to execute the query:
 - From the Query menu, select **Execute**
 - Press **F5**
 - Click the **Execute** toolbar button



Using SQL Server 2016 Technical Documentation

- Books Online (BOL) is the product documentation for SQL Server
- Configure Help to display content from MSDN or download Help Collections to a local computer
- Once configured, Help is available from:
 - SSMS query window (context-sensitive when you highlight a keyword)
 - SSMS Help menu
 - Windows Start menu

Thanks for your attention!

