

Module 1

Introduction to Microsoft SQL Server 2014



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Module Overview

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



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Lesson 1: The Basic Architecture of SQL Server

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

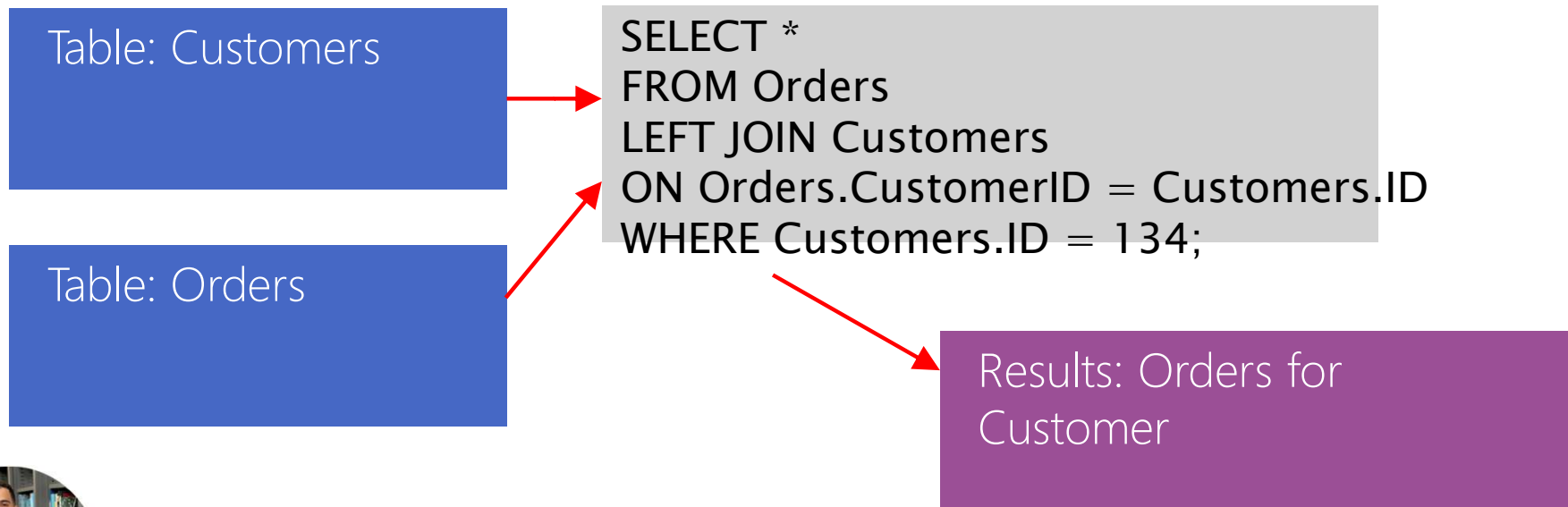


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Relational Databases

Relational databases:

- Typically comprise of multiple tables
- Use joins to extract related data from multiple objects
- Typically contain objects and data



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About the Course Sample Database

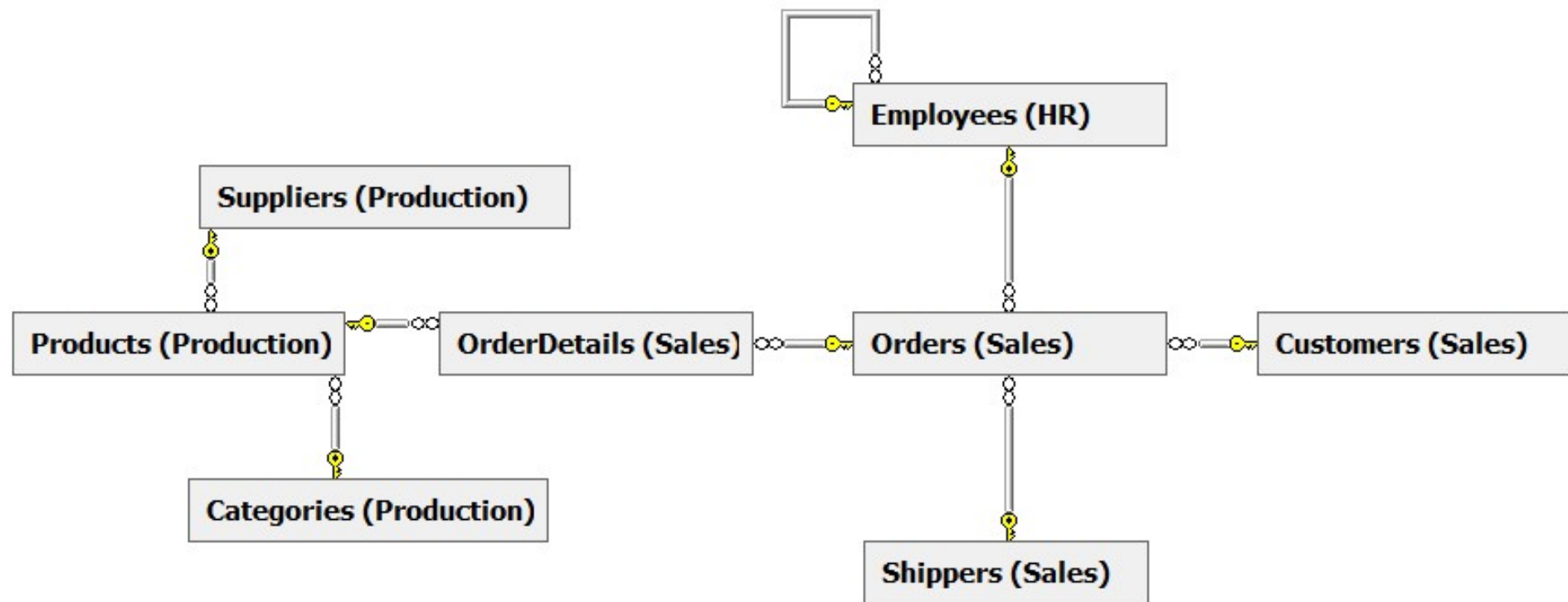
- TSQL database used in course
- Represents a business with products, customers, orders, suppliers, employees
- Contains sample schemas:
 - HR, Production, Sales
- Contains sample tables, views
- Scripts provided with labs and demos to recreate database if needed



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About the Course Sample Database

- TSQL database used in course



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Client Server Databases

- Client software is separate from database engine
- Client software and database engine can be on the same machine or connected over a network
- With correct configuration, databases can access data in other databases over the network



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Queries

- Set-based language
- Scripts
- Batches

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

```
GO
```

```
INSERT INTO HumanResources.Employees(  
    EmployeeID, LastName, FirstName)  
VALUES  
    (123, O'Neill, Carlene);
```

```
GO
```



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Lesson 2: SQL Server Editions and Versions

- SQL Server Versions
- SQL Server Editions



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SQL Server Versions

SQL Server Versions

Version	Release Year
1.0	1989
1.1	1991
4.2	1992
4.21	1994
6.0	1995
6.5	1996
7.0	1998
2000	2000
2005	2005
2008	2008
2008 R2	2010
2012	2012
2014	2014



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SQL Server Editions

- SQL Server Editions

Main Editions	Other Editions
Enterprise	Parallel Data Warehouse
Standard	Web
Business Intelligence	Developer
	Express
	Express LocalDB



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Lesson 3: Getting Started with SQL Server Management Studio

- Starting SSMS
- Connecting to SQL Server
- Working with Object Explorer
- Working with Script Files and Projects
- Executing Queries
- Using Books Online
- Demonstration: Introducing Microsoft SQL Server 2014



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Starting SSMS

- Launch SSMS from the Windows Start screen
 - Or type "SSMS" into the "Search Programs and Files" box
- Connect to an instance or work disconnected
- Settings include:
 - Fonts and colors, line numbering, word wrap
 - Which windows open at start
- Useful windows include query editor, Object Explorer, and Solution Explorer



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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 logons
 - Authentication
 - May be Windows Authentication or SQL Server Authentication
 - Account must be provisioned by a database administrator



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Working with Object Explorer

- Object Explorer is a graphical tool for managing SQL Server and browsing objects at instance and database levels
- Context-sensitive shortcut menus provide frequently used commands
- Object definitions can be scripted out as T-SQL statements to a query window, the clipboard, or a file
- New query windows can be started by right-clicking databases in Object Explorer
 - Changing the selected object in Object Explorer does not change the existing connection in the query window



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Working with Script Files and Projects

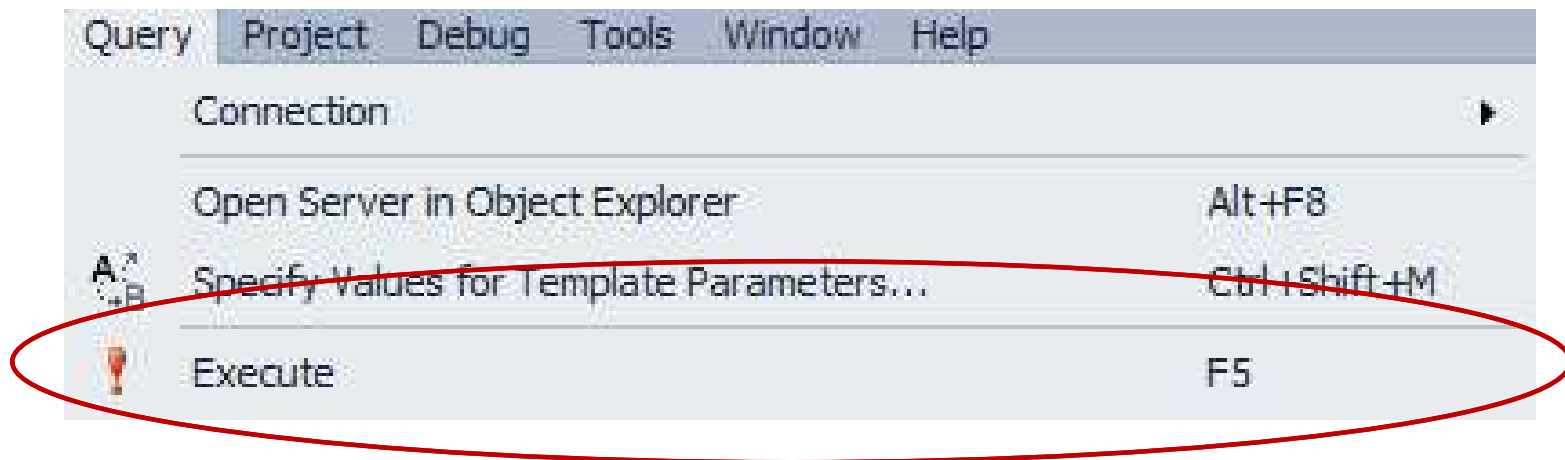
- T-SQL scripts are text files, typically given an .sql extension
- SSMS can open, edit, and execute code in script files directly
- SSMS can also organize scripts into logical containers.
 - Scripts can be associated with SQL Server Script projects (*.ssmssqlproj)
 - Projects can be organized in solutions (*.ssmssln)
- Opening a solution in SSMS provides convenient access to scripts in projects
- You will use projects throughout this course and its labs



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Executing Queries

- To execute queries in SSMS:
 - Open an existing script or start a new query editor document
 - Type in or select existing T-SQL statements
 - Select Execute from the Query menu, press F5, or click the Execute toolbar button



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Using Books Online

- Books Online is the product documentation for SQL Server
- In SQL Server 2014, Books Online does not ship with the SQL Server installation media
- Configure Help to display content from MSDN Library or download Help Collections to a local computer
- Once configured, Help is available from:
 - SSMS query editor (context-sensitive)
 - SSMS Help menu
 - Windows Start menu



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Demonstration: Introducing Microsoft SQL Server 2014

In this demonstration, you will see how to:

- Use SSMS to connect to an on-premises instance of SQL Server 2014
- Explore databases and other objects
- Work with T-SQL scripts



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