

Starting with SQL Server and Azure SQL Database

Your Development Journey in the Relational World

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Instructor Bio

- Dejan Sarka
 - ~35 years of experience
 - Data Platform MVP, MCT
 - 18 books
 - 20+ courses
 - Focus:
 - Data science
 - Data quality
 - Data modeling



Course Introduction (1)

- No matter how much ado is currently about big data, semi and unstructured data, the appropriate place for the most important data is still the relational database management system (RDBMS)
 - If you need to take care about the data integrity, then you should use the relational model as the logical model for your data and database schema
 - You have to learn the standard language for working with data in a RDBMS, the Structured Query Language (SQL)

Course Introduction (2)

- You need to learn the language that SQL Server and Azure SQL Database understand, the Transact-SQL
 - You will learn how to write basic and advanced queries
 - Create tables and insert, update, and delete data
- Learn the basics about the relational model, normalization and constraints, and the dimensional model
- An overview of advanced database development tasks
 - Handle errors and define user transactions
 - Understand the programmatic objects in a SQL database, including views, functions, stored procedures, and triggers

Modules (1)

- Core Transact-SQL SELECT statement elements
- Advanced SELECT techniques
- Data definition language statements
- Data modification language statements
- Introducing the relational model

Modules (2)

- Normalization and constraints
- Dimensional modeling
- Programming views, functions, stored procedures, and triggers
- Error handling and transactions

RDBMS

- SQL Server and Azure SQL Database (short: MSSQL) are relational database management systems
- They manage data for you, and the data schema is following the relational model
 - The relational model represents data in the form of two-dimension tables, i.e. relations
 - Each table represents some real-world entity (person, place, thing, or event) about which information is collected
- You can use free MSSQL versions for learning

Language and Tools

- The language for MSSQL is Transact-SQL, or T-SQL
 - A dialect of standard ANSI SQL
 - T-SQL is a declarative, set-based language
- In order to write queries, you need a tool to connect to SQL Server
 - SQL Server Management Studio ([SSMS](#))
 - Azure Data Studio ([ADS](#))
 - Tools are also free

SW and Data for the Course

- SQL Server Developer Edition, or Azure SQL Database
 - Start with a [free Azure](#) account and create a single [Azure SQL Database](#)
 - Download the [Developer Edition](#) and [install the Database Engine](#) with the installation wizard
- Install client tools and connect to your instance
- [Install](#) the [WorldWideImportersDW](#) sample database
 - Version SQL Server 2016 RTM (or later) Evaluation / Developer / Enterprise Edition, or
 - Azure SQL Database Standard tier

End of module 00: Course Introduction