Beyond Classical RDBMS: Non-Tabular Data Structures

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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)

- Tabular structures are not always the best for storing some kinds of data. Maybe your data has a bit more dynamic structure than you can represent with tables, or has a very specific structure, like hierarchy. This course introduces how to deal with such data inside a SQL Server database.

Course Introduction (2)

- You will learn how to store and retrieve semi-structured data in XML or JSON format. Then the course introduces support for spatial data in SQL Server. Hierarchical data, like XML and JSON, are just a special case of general data structures called graphs. You will learn also how to use graphs in SQL Server.

Course Introduction (3)

- All these features mentioned are sometimes referred as “beyond relational”. However, data type and language support in a specific database management product has nothing to do with the relational model, which is purely logical model. For many years, we used to associate a RDBMS with the SQL language and simple data types; but there are no limitations for both in the relational model. Therefore, I prefer to use the term “beyond classical RDBMS”.

Course Introduction (4)

- This is the second “beyond relational” course. SQL Server supports also programming languages other than T-SQL, and using specific T-SQL extensions for temporal data and full-text searches. Please see the “Beyond Classical RDBMS: Enhancing Pure T-SQL” for this support.

Modules

- XML Support in SQL Server
- Using JSON
- CLR and Spatial data
- Graph Data

Demo Data

- For the demos, the AdventureWorks sample databases are used
  - Follow the Microsoft documentation on these sample databases for the download and installation

End of module 00: Course Introduction