Entity Framework 6.1, Part 2 of 6: Data Model

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Meet the expert: Don Kiely is a featured instructor on many of our SQL Server and Visual Studio courses. He is a nationally recognized author, instructor, and consultant specializing in Microsoft technologies. Don has many years of teaching experience, is the author or co-author of several programming books, and has spoken at many industry conferences and user groups. In addition, Don is a consultant for a variety of companies that develop distributed applications for public and private organizations.

Prerequisites: This course assumes that you are experienced with relational database design and programming concepts. Entity Framework is all about data access, and the course doesn't spend any time on data fundamentals. You'll also need a good understanding of object-oriented programming in C#, so that you know how to use the entity data objects that Entity Framework generates from your data model. You'll also need to have a working knowledge of Language INtegrated Queries (LINQ) in C#. The course uses Entity Framework with various SQL Server databases, so you should know enough about SQL Server to know how to perform various tasks and be able to connect to a database. But you don't need deep knowledge of SQL Server to use Entity Framework productively. You should have already viewed the Entity Framework 6.1: Introduction course before taking this course.

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Course description: In this course you'll explore some of the ways that you can create data models using the tools provided with Entity Framework and SQL Server Data Tools in Visual Studio. Then we'll reach down into the guts of the XML that makes up the three Entity Data models, conceptual, storage and mapping. So that you have a good understanding of how Entity Framework implements many of its features. The XML might be intimidating just from the sheer volume of it, even for a simple data base. Put you'll see how it is pretty straight forward and quite understandable.

Course outline:

Intro to Entity Data Model
- Introduction
- Introduction
- The Models within the Model
- Creating and Using an ED Model
- Demo: Creating a Model
- Demo: Model - finishing
- Summary

Data Model Designer
- Introduction
- Demo: EDM Model Designer
- Demo: Designer - multiplicity
- Demo: Object properties
- Demo: Datatype Facets
- Demo: Property Relationship
- Summary

Using Model First Design
- Introduction
- Creating Using Model-First
- Model-First Design Example
- Demo: Model First Design
- Demo: Adding Items
- Demo: Add More Properities
- Summary

Objects and Associations
- Introduction
- Demo: Derived Objects
- Demo: Derived Associations
- Demo: Create Database
- Demo: Tables
- Demo: Model Browser
- Summary

In the Raw Designer Section
- Introduction
- Entity Data Model in the Raw
- Demo: EDMX File
- Demo: EDMX Designer
- Summary

In the Raw Conceptual Model
- Introduction
- Demo: EDMX Conceptual Model
- Demo: Conceptual Entity
- Demo: Conceptual Views
- Summary

Storage and Mapping Models
- Introduction
- Demo: Storage Model
- Demo: Comparisons
- Demo: Mapping
- Model Build Mechanics
- Demo: Back in the Designer
- Summary