SYNERGETICS
GET IT RIGHT

Entity Framework 5

Workshop Details:

Duration:	2 Days
Objective:	Entity Framework is Microsoft's Data Access platform for .NET development. This session will introduce you to the key concepts and behaviors of using the Entity Framework from designing models, writing data access code and integrating Entity Framework into your software solutions. If you have never used Entity Framework, start here with Visual Studio 2012 and Entity Framework 5. Developers with experience with earlier versions of EF can find useful information throughout about new designer features introduced in Visual Studio 2012 as well new modeling capabilities and API features provided in Entity Framework 5.
Participants' Entry Profile:	Participants attending this workshop must have worked on: ■ .NET 4
Training Methodology:	The workshop will follow Synergetics methodology of Concept Visualization Active Experimentation Application Development. The workshop will be 100% Hands-On with each participant having access to system during the session

Setup Requirements

Hardware and Software Requirements:	Participant's as well as Trainer's Machine are required to have : **Hardware / Software** ■ Pentium Dual-Core machine ■ 2 GB RAM ■ Internet Connectivity ■ 100GB HDD (Free Space) ■ Windows 7 & Windows 8 ■ Microsoft SQL Server 2008 R2 ■ Microsoft Visual Studio 2012
Training Lab Requirements:	Whiteboard 6 feet by 4 feet (minimum) Whiteboard markers – Red, Blue, Green, Black Video Projector (1024 X 768 resolutions)

Course Content

Day 1	
	➢ **Entity Framework** ▪ Introduction ▪ Why Entity Framework ▪ EF's Conceptual Model ▪ EF's Basic Workflow ▪ What's new in EF5 ▪ Upgrading EF4 Projects ▪ DB First ▪ Model First ▪ Code First ➢ **Database First -Modeling** ▪ Introduction ▪ Creating Model ▪ Inspecting the model ▪ Generated code ▪ Model to Database Mappings ➢ **Entities in the Designer** ▪ Visually Break up Model ▪ Updating Model ▪ Stored Procedure Modeling ▪ Enums with Entity Data Model ▪ Spatial with Model ▪ Entities that Map to Views ➢ **Model First -Modeling** ▪ Introduction ▪ Why Model First ▪ Model and your First Entity ▪ Properties and Attributes ▪ Strings in Entities ▪ Strings in Database Tables ▪ Default Values, Spatial Data and Enums ▪ Adding Relationships ▪ Entity Container Properties ▪ Generating the Database Schema ➢ **Code First -Modeling** ▪ Introduction ▪ Why Code First? ▪ The Domain Classes ▪ DbContext Data Layer ▪ Building Database from Model ▪ Initializing a Database from Model ▪ Migrations to Update Database Schema ▪ Seeding a Database During a Migration ▪ Using Data Annotations to Configure Mappings ▪ Configuring Mappings with the Fluent API ▪ Reverse Engineering a Database for Code First

Day 2	➢ **Interacting with Your Data Model**
	▪ Introduction
	▪ The DbContext API
	▪ Queries
	▪ Inserting,
	▪ Updating and Deleting Data
	▪ Building and Inserting Graphs
	▪ Querying with LINQ Expressions
	▪ Loading Related Data
	▪ Working with Stored Procedures
	➢ **EF 5 in Your Solutions**
	▪ Introduction
	▪ Generated Domain Classes from EDMX
	▪ Adding Logic to Generated Code
	▪ Overriding SaveChanges
	▪ Building a Repository to Access your DbContext
	▪ EF Data Layer in a Client App (WPF) Modifying the classes
	▪ EF Data Layer in a Client App (WPF) The tweaked repository
	▪ EF Data Layer in a Client App (WPF) Debugging and Profiling
	▪ EF Data Layer in a Web App (ASP.NET MVC4) Accessing your Data from Mobile Apps