10265AC	**Developing Data Access Solutions with Microsoft Visual Studio 2010**	**5 DAYS**	**SATV : YES**

Cource Description

In this course the student will learn to develop and optimize data access solutions using Microsoft .NET Framework 4 technologies.

Course Outline

Module 1: Building Optimized Solutions by Using Object Services
- The Stages of Query Execution
- Change Tracking and Object Materialization
- Using Compiled Queries
- Using Design-Time Generated Entity Framework Views
- Monitoring Performance
- Performing Asynchronous Data Modifications

Module 2: Customizing Entities and Building Custom Entity Classes
- Overriding Generated Classes
- Using Templates to Customize Entities
- Creating and Using Custom Entity Classes

Module 3: Using POCO Classes with the Entity Framework
- Requirements for POCO Classes
- POCO Classes and Lazy Loading
- POCO Classes and Change Tracking
- Extending Entity Types

Module 4: Architecture and Data Access Technologies
- Data Access Technologies
- Data Access Scenarios

Module 5: Building Entity Data Models
- Introduction to Entity Data Models
- Modifying the Entity Data Model
- Customizing the Entity Data Model

Module 6: Querying Entity Data
- Retrieving Data by Using LINQ to Entities
- Retrieving Data by Using Entity SQL
- Retrieving Data by Using EntityClient Provider
- Retrieving Data by Using Stored Procedures
- Unit Testing Your Data Access Code

Module 7: Creating, Updating, and Deleting Entity Data
- Understanding Change Tracking in the Entity Framework
- Modifying Data in an Entity Data Model

Module 8: Handling Multi-User Scenarios by Using Object Services
- Handling Concurrency in the Entity Framework
- Transactional Support in the Entity Framework

Module 9: Building an N-Tier Solution by Using the Entity Framework
- Designing an N-Tier Solution
- Defining Operations and Implementing Data Transport Structures
- Protecting Data and Operations

Module 10: Handling Updates in an N-Tier Solution by Using the Entity Framework
- Tracking Entities and Persisting Changes
- Managing Exceptions in an N-Tier Solution

Module 11: Building Occasionally Connected Solutions
- Offline Data Caching by Using XML
- Using the Sync Framework

Module 12: Querying Data by Using WCF Data Services
- Introduction to WCF Data Services
- Creating a WCF Data Service
- Consuming a WCF Data Service
- Protecting Data and Operations in a WCF Data Service

Module 13: Updating Data by Using WCF Data Services
- Creating, Updating, and Deleting Data in a WCF Data Service
- Preventing Unauthorized Updates and Improving Performance
- Using WCF Data Services with Nonrelational Data

Module 14: Using ADO.NET
- Retrieving and Modifying Data by Using ADO.NET Commands
- Retrieving and Modifying Data by Using DataSets
- Managing Transactions and Concurrency in Multiuser Scenarios

Module 15: Using LINQ to SQL
- Implementing a Logical Data Model by Using LINQ to SQL
- Managing Performance and Handling Concurrency