

# Programming Data Access using ADO.NET

## Course Description

In this Course you learn how to use ADO.NET class in .NET framework to access database. This class will go in deep with details on data access with some popular database such as Microsoft SQL Server or other OLEDB source or XML data.

## Course Level

Advanced

## Who should attend?

.NET Developer who want to write an application to access database s and Support Microsoft Exam 526

## Pre-requisites

Basic understanding Database Concept and Basic concept of Programming .NET Application

## Course Objectives

- What is the ADO.NET
- Make a Connection to Database
- Using Disconnected Technology
- Using Database on Web Application
- Query Database using Command
- Manage Database Transaction
- Using XML with Disconnected Data
- Manage XML Database
- Use DOM to Manage XML

## Course Durations

12 Hours

## Course Outline

### 1. Working with ADO.NET

What ADO.NET  
Connect to a Databases with DataProvider  
Introduction Connected and Disconnected

*Hand-On Lab:*

*Make a Connection to Database*

### 2. Performing Connected Operations

Create DataReader Object  
Display Data by DataReader Object

*Hand-On Lab:*

*Use Connected Operations to Database*

### 3. Performing Disconnected Operations Programmatically

Create DataSets and DataTables  
DataTable Constraints and Relations  
Create and Configure a Data Adapter  
Load and Save Data in a DataSet  
View and Modify Data in a DataTable  
Navigate Relations Between DataTables  
Use Row States and Row Versions  
Handle DataTable Events and Errors  
Merge DataSet Contents  
Create and Use DataViews  
Handle DataView Events

*Hand-On Lab:*

*Create and Manage Disconnected Data*

### 4. Databases for Web Application

Shared Code Folders in ASP.NET Web Sites  
Connect to a Database by Using ADO.NET  
Connection String in an Application Configuration File  
Encrypt Configuration Sections Using RSA  
Retrieve a Connection String from an Application Configuration File  
Execute Simple Database Queries  
Handle Connection Events  
Handle Connection Exceptions  
Configure Connection Pooling  
Monitor Connection Pooling

*Hand-On Lab:*

*Using Database on Web Application*

### 5. Querying and Updating Databases by Using Commands

Execute Query Commands  
Data Binding in ASP.NET 2.0  
Retrieve Data from a Business Object  
Execute Parameterized Commands  
Using Server Explorer  
Execute Update Commands Collations  
Localize Dates, Times, and Numeric Values

*Hand-On Lab:*

*Use Command to Update Database*

### 6. Performing Transactional Operations

Manage Local Transactions  
Manage Transactions in the Data Tier

View Information About a Transaction  
Manage Distributed Transactions

*Hand-On Lab:*

*Manage Database Transaction*

### 7. Performing XML Operations on Disconnected Data

Database Tables and Stored Procedures  
Save a DataSet as XML Data  
Nest DataRelations  
Load a DataSet from XML  
Save DataSet Schema Information  
Load DataSet Schema Information

*Hand-On Lab:*

*Using XML with DataSet*

### 8. Reading and Writing XML Data

Create an XmlWriter  
Write an XML Document  
Write a Message to a MSMQ  
Read a Message from a MSMQ  
Create an XmlReader  
Read an XML Document  
Send an E-Mail Message

*Hand-On Lab:*

*Manage XML Data*

### 9. Processing XML Data by Using DOM

Load an XML Document into a DOM Tree  
Read XML Data by Using DOM  
Create a Document in a DOM Tree  
Modify XML Data by Using DOM  
Save a DOM Tree to an XML Document

*Hand-On Lab:*

*Use XML DOM*

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