

Course Outline



Tel: +44 (0) 118 979 4000 Fax: +44 (0) 118 979 4000

Email: training@ptr.co.uk Web: www.ptr.co.uk

ADO.NET using VB.NET

Course Description:

This three-day, intensive course teaches the essential elements of ADO.NET such that, at the end of the course, the programmer is able to utilize its tremendous database manipulation powers to build effective database applications. The course includes a major case study demonstrating the use of ADO.NET in a realistic setting.

Target Audience: VB.NET .NET developers needing to communicate with datasources.

This course covers the subject areas covered in Microsoft Course MS2389.

Pre-requisites:

SQL Programming, Fundamentals of XML and The .NET Framework Using VB.NET. The ability to write simple Windows Forms applications and a working knowledge of SQL Server Re recommended.

Course Content:

- **Introduction to ADO.NET**
 - Microsoft Data Access Technologies
 - From ADO to ADO.NET
 - Namespaces and Classes
 - Interfaces
 - DataSets and Disconnected Access
 - First ADO.NET Programs
 - Acme Computer Case Study

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Registered Office: Grenville Court Britwell Road Burnham Bucks SL1 8DF Company Registered No: 2442290 – VAT registration No:532 1929 56

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- **ADO.NET Connections**
 - .NET Data Providers
 - IDbConnection
 - Connection Classes
 - Connection Strings
 - Connection Pooling
 - Connection Events
 - Error Handling

- **ADO.NET Commands**
 - IDbCommand
 - Command Objects
 - Creating Commands
 - Executing Commands
 - Parameterized Queries
 - Command Types
 - Using Stored Procedures
 - Batch Queries

- **DataReaders and Connected Access**
 - DataReaders
 - IDataReader
 - IDataRecord
 - Type-Safe Accessors
 - Null Columns
 - ExecuteReader Options
 - Multiple Result Sets
 - Obtaining Schema Information

- **DataSets and Disconnected Access**
 - DataSet
 - DataAdapter
 - Command Objects
 - DataTable
 - DataColumn
 - DataRow

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- **DataSets and Disconnected Access**
 - Row States and Versions
 - Accept or Reject Chnges
 - DataTable Events
 - Updating a Database from a DataSet
 - Command Builders

- **More About DataSets**
 - Filtering DataTables
 - Multiple Table DataSets
 - Schema
 - Constraints
 - Relations
 - Navigating a DataSet
 - DataMapping
 - Creating a DataSet Programmatically

- **XML and ADO.NET**
 - Strong Coupling Between ADO.NET and XML
 - Rendering XML from a DataSet
 - XML Schema and DataSets
 - Typed DataSets
 - Synchronizing DataSets and XML
 - XML Serialization

- **Data Binding**
 - Data Binding in Windows Forms
 - Simple Data Binding
 - Complex Data Binding
 - DataGrid Binding
 - DataView
 - Filtering and Sorting
 - Data Binding in ASP.NET Web Forms

- **Concurrency and Transactions**
 - DataSets and Concurrency
 - Optimistic Concurrency

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- **Concurrency and Transactions**
- Handling Concurrency Violations
- ADO.NET Transactions
- Database Transactions

Course Duration:

3 Days