

### **C# Language Extensions in 3.5 (Prerequisite)**

- Type Inference
- Object Initializers.
- Anonymous Types
- Extension Methods
- Partial Methods

### **LINQ Architecture**

- Understanding the LINQ Framework
- LINQ Providers
  - ✓ LINQ to Objects
  - ✓ LINQ to SQL
  - ✓ LINQ to Dataset
  - ✓ LINQ to XML

### **LINQ to Objects**

- IEnumerable<T> and IQueryable<T> interfaces
- System.Linq namespace
- Query Expressions
- Lambda Expression
- Using Custom Class Collection

### **LINQ to SQL**

- Defining the Data Model classes
- Using Mapping attributes
- Using the Data Context class
- Defining Relationships using Associations
- Creating a customized Data Context class
- LINQ to SQL Designer (DBML File)
- Performing Add/Edit/Delete/View Operations
- Tracking changes to entities
- Submitting changes

- Concurrency error handling issues
- Join Query
- Validating Entities
- Transaction Handling
- Executing Stored Produces
- LINQ to SQL architecture

### **LINQ to XML**

- Understanding the LINQ to XML Class hierarchy
- Create an XML document
- Loading existing XML document
- Querying XML using LINQ to XML
- Manipulating XML
  - ✓ Adding nodes
  - ✓ Modifying nodes
  - ✓ Deleting nodes

### **LINQ to Dataset**

- Querying DataSets
- Querying typed DataSets
- Using LINQ over DataSet with Table Adapter