LINQ

Part 1: Pro LINQ: Language Integrated Query in C#

1 Hello LINQ

A Paradigm Shift

Query XML

Query a SQL Server Database

Introduction

LINQ Is About Data Queries

How to Obtain LINQ

LINQ Is Not Just for Queries

Tips to Get You Started

Use the var Keyword When Confused

Use the Cast or OfType Operators for Legacy Collections

The OfType Operator versus the Cast Operator

Don’t Assume a Query Is Bug-Free

Take Advantage of Deferred Queries

Use the DataContext Log

2 C# Language Enhancements for LINQ

C# Language Additions

Lambda Expressions

Expression Trees

Keyword var, Object Initialization, and Anonymous Types

Extension Methods

Partial Methods

Query Expressions

Part 2: LINQ to Objects

3 LINQ to Objects Introduction

LINQ to Objects Overview

IEnumerable<T>, Sequences, and the Standard Query Operators

Returning IEnumerable<T>, Yielding, and Deferred Queries

Func Delegates

The Standard Query Operators Alphabetical Cross-Reference

A Tale of Two Syntaxes

4 Deferred Operators

Referenced Namespaces

Referenced Assemblies

Common Classes

The Deferred Operators by Purpose

- Restriction
- Projection
- Partitioning
- Concatenation
- Ordering
- Join
- Grouping
- Set
- Conversion
- Element
- Generation

5 Nondeferred Operators

Referenced Namespaces

Part 3: LINQ to SQL

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7 LINQ to SQL Tips and Tools

8 LINQ to SQL Database Operations

9 The LINQ to SQL DataContext

10 LINQ to SQL Concurrency Conflicts

Part 4: LINQ to Entities

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Part 5: LINQ to XML

12 The LINQ to XML API

- Creating Streaming Elements with XStreamingElement
- Creating Text with XText
- Creating CData with XCData

XML Output

- Saving with XDocument.Save()
- Saving with XElement.Save()

XML Input

- XML Loading with XDocument.Load()
- Loading with XElement.Load()
- Parsing with XDocument.Parse() or XElement.Parse()

XML Traversal

- Traversal Properties
- Traversal Methods

XML Modification

- Adding Nodes
- Deleting Nodes
- Updating Nodes
- XElement.SetElementValue() on Child XElement Objects

XML Attributes

- Attribute Creation
- Attribute Traversal
- Attribute Modification

XML Annotations

- Adding Annotations with XObject.AddAnnotation
- Accessing Annotations with XObject.Annotation() or XObject.Annotations()
- Removing Annotations with XObject.RemoveAnnotations()
- Annotations Example

XML Events

- XObject.Changing
- XObject.Changed

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Part 6: LINQ to DataSet

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