

663 - Fundamentals of ASP.NET using VB.NET and C#

Introduction to .NET Programming

- What is the .NET Platform?
- What is the .NET Framework?
- The .NET Languages
- Example: Welcome to .NET Program
- Example: Welcome Using Alert
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Creating a Simple Web Site

- Understanding Web Sites and Applications
- Compile Models for Web Sites in VS.NET 2005
- The ASP.NET Development Web Server
- Understanding Web Forms and Events

Refresher: Introduction to Visual Studio .NET

- What is Visual Studio .NET, and is it required to write .NET and ASP.NET applications?
- The Integrated Development Environment
- Working with Solutions and Projects
- Documentation And Help
- Debugging and Diagnostics

Setting Up Course Exercise Solutions

- Create a Blank Solution

Introducing ASP.NET

- What is ASP.NET?
- What software do I need in order to run ASP.NET applications?
- The Page Class
- Structure of an ASP.NET Web Application
- Example: Outputting the Current Time
- Example: Processing Form Submissions in ASP.NET

Fundamentals of Web Forms and Controls

- The Architecture of a Page: Pages as Web Forms
- Adding Controls to Your Forms

Introduction to Server Controls

- What are Server Controls
- Page Control Hierarchy
- ASP Web Controls vs. HTML Controls

- Using the Visual Studio .NET Web Form Editor
- Example: Calculating Birthdays

Custom User Controls

- What are User Controls?
- The Architecture of a User Control: User Controls as Reusable Components

Events in ASP.NET

- What is an Event?
- Page events
- Web Server Control Events
- Example: Simple Loan Calculator
- Immediate versus Cached Event Submission

Refresher: ADO.NET Introduction

- What is ADO.NET?
- An Overview of Relational Database Concepts
- What is an RDBMS?
- The ADO.NET Object Model
- Getting the Data Out
- The IDataReader Interface
- Introducing the Database Used for the Course
- Example: Selecting Records Using a DataReader
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Refresher: ADO.NET DataSets and the Disconnected Model

- What is a DataSet?
- Accessing Data Through a DataSet's Tables and Rows
- Example: Selecting Records from a Database using a DataSet

Introduction to Data Binding in Web Forms

- What is Data Binding?
- What is a Data Source?
- DataSource Code and DataSource Controls
- Data Binding in Code
- Data Binding with DataSource Controls

Data Drilldowns with Data Bound Controls

- What is a Data Drill Down Interface?
- Example: A sample Data Bound Data Drill Down
- Example: Details and More

Web Development Support

- The Request Object
- The Response Object
- The Server Object

- The Uri Class
- The SmtpClient and MailMessage Classes

ASP.NET Applications, The Application Object, and the HttpApplicationState Class

- What is an Application?
- Inspecting the Global.asax File

The Session Object and the HttpSessionState Class

- What is a Session?
- How Does ASP.NET Keep Track of Sessions?
- Example: A User Name as a Session Variable

Application Configuration With Web.config

- ASP.NET Configuration is XML
- ASP.NET Configuration is Applied in a Cascading Way
- Inspecting Configuration Files
- Example: Using Web.config to Create Custom Error Pages
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Working with Validation Controls

- What are Validation Controls?
- Example: RequiredFieldValidator, CompareValidator, and RangeValidator
- The ValidationSummary Control

Regular Expression Validation

- Introducing Regular Expressions
- The RegularExpression Validator Control

Custom Validators

- The CustomValidator Control

Master Pages

- What are Master Pages?
- Example: A Basic Master Page
- Example: Referencing Properties and Controls on the Master Page

Introducing XML

- What is XML?
- XML Logical Structure
- XML Physical Structure
- XML Design Patterns
- Applications of XML (and related technologies)

Producing XML from Database Data via ADO.NET

- Example: Generate and View XML from a DataSet

Performing XSLT with ASP.NET

- XSLT in ASP.NET

Deployment

- Overview of Deployment in .NET
- VS.NET Build Configurations
- Suggested Build Configuration Model
- Copying a Web Application
- Pre-compiling and Copying a Web Site
- Creating a Web Setup Project

Advanced: Deployment Settings Using Conditional Compilation With Compile-Time Constants

- Compile-Time Compilation Constants
- Example: Using Build Configuration Settings to Show and Hide Controls

Advanced: Introducing Components

- Why Are Components Useful?
- Using Assemblies to Package and Deploy Components