

# MICROSOFT DOT NET PROGRAM

(includes **AJAX**, COMPLETE C#, ASP.NET, VB.NET, ADO.NET, XML, WEB SERVICES, WINDOWS SERVICES, REMOTING, THREADING AND SQL SERVER )

**DURATION : 2 MONTHS**

## COMPLETE ASP.NET

### INTRODUCTION TO ASP.NET

- W** Web Application Fundamentals
- W** Creating a Virtual Directory
  - From ASP to ASP.NET
  - Limitations of ASP
  - Benefits of ASP.NET
  - An Echo Program
  - ASP.NET Features
  - Compiled Code
  - Server Controls
  - Browser Independence
  - Separation of Code and Content
  - State Management

### CACHING IN ASP.NET

- What Is Caching?
- Need for Caching (Why Cache?)
- Data to be Cached - Time Frame
- ASP vs. ASP.NET Response Model
- Caching in ASP.NET
- Three Types of Caching in ASP.NET
- Output Caching
- K** @ OutputCache Directive
- @ OutputCache - Attributes in Detail
- K** VaryByParam in Detail
- K** Insert and Add Methods
- Expiration
- Problems in Caching

### WEB FORMS ARCHITECTURE

- K** Web Forms Architecture
  - HelloCodebehind.aspx
- K** HelloCodebehind.aspx.cs
  - Page Class
- W** Inheriting from Page Class
  - Web Forms Life Cycle
  - View State
- K** Web Forms Event Model
  - Page Processing
  - Page Events
  - Page Properties
  - Page Directive
  - Tracing
- W** Code-Behind in ASP.NET 2.0
- W** ASP.NET 2.0 Code-Behind Page

### MORE SERVER CONTROLS

- W** ASP.NET Control Improvements
- K** New Controls in ASP.NET
  - Master Pages
  - Using a Menu Control
- K** Creating Content Pages
  - TreeView Control
- K** Master Page Application
- W** Visual Studio 2005 Solutions

### DATA ACCESS IN ASP.NET

- K** Data Access in ASP.NET
- K** Creating a Connection
- K** Using Database Explorer
- Performing Queries

## ASP.NET AND HTTP

- W** Classical Web Programming
  - Active Server Pages Object Model
- K** Request/Response Objects
  - HTML Code
  - ASP Code
- W** Request/Response in ASP.NET
  - HttpRequest Class
- W** Properties of HttpRequest
- K** Using HttpRequest Class
  - HTTP Collections
  - HttpResponse Class
  - Redirect
  - HttpUtility
- K** Echo Program in ASP.NET
  - Echo.aspx
  - EchoBack.aspx
- K** GET and POST Compared
  - QueryString and Forms Collections

## WEB APPLICATIONS USING VISUAL STUDIO

- Using Visual Studio
- Visual Web Developer
- Using Components in ASP.NET 2.0
- Compilation Error
- Shadow Copying
- Temporary Copy of the Component
- ASP.NET Applications
- Sessions
- Global.asax
- Log Class
- StringStore Class
- Data Binding
- Session Data
- Sessions Using IIS
- Absolute Positioning
- K** Adding Global.asax File

## STATE MANAGEMENT AND WEB APPLICATIONS

- Session and Application State
- Session Object

- K** SQL Generation Options
- K** Enable Edit and Delete
  - Editing Records
  - GridView Control
  - DetailsView Control
  - Storing the Connection String
  - Protecting the Configuration String
  - FormView Control
- K** Master/Detail Web Pages
  - Data Binding
  - Template Editing
  - Using XML Data
- W** Multiple-Tier Data Access
  - Object Data Source

## DATABASE PROGRAMMING USING ADO.NET

- ADO.NET
- ADO.NET Architecture
- .NET Data Providers
- Programming with ADO.NET Interfaces
- .NET Namespaces
- K** Connected Data Access
- K** ADO.NET Class Libraries
  - Using Commands
- W** Creating a Command Object
  - ExecuteNonQuery
  - Using a DataReader
  - Data Bound Controls
  - DataGrid in Visual Studio 2005
  - Binding a DataReader to a DataGrid
- K** Disconnected Datasets
  - Data Adapters
  - Command Builder
  - Main Program
  - Creating a Data Adapter and Generating Commands
    - Filling the Dataset
    - b Displaying the Data Set
    - A Adding a Row to the Data Set
      - Deleting a Row
      - Changing a Row
    - b Updating the Database
    - A Creating A Dataset Manually
      - Using XML Data
      - XML Schema and Data

- ( Page\_Load
- \$ Session Variable Issues
  - Session State and Cookies
- \$ Session State Timeout
- .. Session State Store
- .. Application State
  - Implementing Application State
- ( Global.asax
- Users.aspx.cs
- \$ Multithreading Issues
- \$ Bouncing the Web Server
- ( Cookies
  - .. Cookies and ASP.NET
- \$ HttpCookie Properties
  - Acme Travel Agency Case Study

- K Using XML with a DataSet

## ASP.NET CONFIGURATION AND SECURITY

- One-minute Introduction to XML!
- ASP.NET Configuration - Overview
- W** Multi-level Configuration
- K** Configuration Hierarchy
- W** Web.Config File Structure
  - Web.Config Sections
  - Application Settings
- W** ASP.NET Security - Overview
- W** Role-Based Security and CAS
  - Types and Steps
  - Steps in Enabling Role-Based Security
- W** Three Ways to Authenticate
  - Forms Authentication - Default.aspx
  - Forms Authentication - Web.Config
  - Features of Forms Authentication
- W** Forms Authentication Classes
  - Customizing Forms Authentication
- K** Authentication Source
- K** Windows Authentication
- K** Passport Authentication
  - Authorization

## SERVER CONTROLS

- W** Server Controls in ASP.NET
  - HTML Server Controls
- W** Using HTML Server Controls
  - HTML vs. Web Forms Server Control
  - Code for Login
  - HTML Controls in Visual Studio
  - Using HTML Controls
  - Web Controls
  - Validation Controls
- W** Required Field Validation
  - Regular Expression Validation
  - Rich Controls
  - Copying a Web Site
  - User Controls
  - Using a User Control
  - Copyright.ascx
  - Copyright.ascx.cs

## C# (C SHARP)

- Getting Started
- .NET: What Is Really Happening
- .NET Programming in a Nutshell

## METHODS, PROPERTIES, AND OPERATORS

- .. Viewing the Assembly  
Viewing Intermediate Language
- .. Understanding .NET
- .. Visual Studio 2005  
Visual C# 2005 Express Edition  
Creating a Console Application
- .. Saving Your Project  
Adding a C# File  
Using the Visual Studio Text Editor
- ( IntelliSense  
Build and Run the Project
- .. Pausing the Output  
Visual C# and GUI Programs
- .. .NET Documentation

- W** Static and Instance Methods
  - Method Parameters
  - No “Freestanding” Functions in C#
  - Classes with All Static Methods
  - Parameter Passing
- K** Parameter Terminology
  - Value Parameters
  - Reference Parameters
  - Output Parameters
  - Structure Parameters
  - Class Parameters
  - Method Overloading
  - Modifiers as Part of the Signature
  - Variable Length Parameter Lists
  - Properties
  - Operator Overloading
  - Operator Overloading in the Class Library

### FIRST C# PROGRAMS

- Hello, World
- Compiling, Running (Command Line)
- Program Structure
- Namespaces
- Variables
- Expressions
- K** Calculations Using C#
- K** More About Output in C#
- Input in C#
- More About Classes
- InputWrapper Class
- Echo Program
- Using InputWrapper
- K** Compiling Multiple Files
- Multiple Files in Visual Studio
- The .NET Framework

### CHARACTERS AND STRINGS

- Characters
- Character Codes
- ASCII and Unicode
- Escape Sequences
- Strings
- String Class
- String Literals and Initialization
- Concatenation
- Index
- Relational Operators
- String Equality
- String Comparisons
- String Comparison
- String Input
- String Methods and Properties
- StringBuilder Class
- K** StringBuilder Equality
- K** Command Line Arguments
  - Command Line Arguments in the IDE
  - Command Loops
  - Splitting a String

### DATA TYPES IN C#

- Strong Typing
- Typing in C#
- Typing in C++
- K** Typing in Visual Basic 6
- C# Types
- Integer Types
- Integer Type Range
- Integer Literals
- Floating Point Types

### ARRAYS AND INDEXERS

- Arrays

- \$ Floating Point Literals
  - IEEE Standard for Floating Point
- ( Decimal Type
  - Decimal Literals
  - Character Type
- ø Character Literals
  - ( String
  - ø Escape Characters
- ( Boolean Type
  - ø Implicit Conversions
  - ø Explicit Conversions
  - Nullable Types

- K** One Dimensional Arrays
  - System.Array
- W** Interfaces for System.Array
- K** Random Number Generation
- K** Constructors for Random
  - Next Methods
  - Jagged Arrays
  - Rectangular Arrays
- K** Arrays as Collections
- K** Bank Case Study—Step 1
  - Account Class
  - Bank Class
  - TestBank Class
  - Atm Class
- K** Running the Case Study
  - Indexers
  - Using the Indexer

## OPERATORS AND EXPRESSIONS

- Operator Cardinality
- Arithmetic Operators
- Multiplication
- Division
- Additive Operators
- K** Increment and Decrement
- Relational Operators
- Conditional Logical Operators
- K** Short-Circuit Evaluation
- W** Ternary Conditional Operator
- Bitwise Operators
- W** Bitwise Logical Operators
- K** Bitwise Shift Operators
- Assignment Operators
- Expressions
- Precedence
- Associativity
- Checking

## CONTROL STRUCTURES

- If Test
- Blocks
- Loops
- while Loop
- do/while Loops
- for Loops
- Arrays
- Foreach Loop
- break

## INHERITANCE

- K** Inheritance Fundamentals
  - Inheritance in C#
  - Single Inheritance
  - Root Class - Object
  - Access Control
- W** Public Class Accessibility
- W** Internal Class Accessibility
  - Member Accessibility
  - Member Accessibility Qualifiers
  - Method Hiding
- W** Method Hiding and Overriding
  - Initialization
- W** Initialization Fundamentals
  - Default Constructor
- K** Overloaded Constructors
- K** Bank Case Study—Step 2
- K** Bank Case Study Analysis
  - Account
  - CheckingAccount
  - SavingsAccount
  - TestAccount

## VIRTUAL METHODS AND POLYMORPHISM

- W** Introduction to Polymorphism

- ( continue
- ( goto
- \$ Structured Programming Multiple Methods
- ( switch
- \$ switch in C# and C/C++

## OBJECT-ORIENTED PROGRAMMING

- Objects
- W** Objects in the Real World
- Object Models
- W** Reusable Software Components
- Objects in Software
- State and Behavior
- Abstraction
- Encapsulation
- Classes
- Inheritance Concept
- W** Relationship among Classes
- Polymorphism
- Object-Oriented Analysis and Design
- Use Cases
- CRC Cards and UML

## CLASSES

- W** Classes as Structured Data
- Classes and Objects
- References
- Instantiating and Using an Object
- W** Assigning Object References
- Garbage Collection
- Methods
- Public and Private
- Abstraction
- Encapsulation
- Initialization
- Initialization with Constructors
- Default Constructor
- this
- W** Static Fields and Methods
- Static Methods
- Static Constructor
- W** Constant and Readonly Fields

- W** Abstract and Sealed Classes
- Virtual Methods and Dynamic Binding
- Type Conversions in Inheritance
- Converting Down the Hierarchy
- W** Converting Up the Hierarchy
- Virtual Methods
- Virtual Method Cost
- Method Overriding
- The Fragile Base Class Problem
- override Keyword
- Polymorphism
- Polymorphism Using “Type Tags”
- W** Polymorphism Using Virtual
- Abstract Classes
- Keyword: abstract
- Sealed Classes
- W** Heterogeneous Collections
- K** Bank Case Study—Step 3
- Case Study Classes
- Run the Case Study
- Account
- CheckingAccount, SavingsAccount
- Bank and Atm
- TestBank

## FORMATTING AND CONVERSION

- W** Introduction to Formatting
- ToString
- W** ToString in Your Own class
- Using Placeholders
- Format Strings
- Simple Placeholders
- Controlling Width
- Format String
- Currency
- String.Format
- PadLeft and PadRight
- K** Bank Case Study—Step 4
- Type Conversions
- W** Conversion of Built-In Types
- Conversion of User-Defined Types

## EXCEPTIONS

## MORE ABOUT TYPES

- K** Overview of Types in C#
  - Structures
- K** Uninitialized Variables
  - Copying a Structure
  - Hotel.cs
  - HotelCopy.cs
- K** Results of Hotel Copy
  - Classes and Structs
  - Enumeration Types
  - Reference Types
  - Class Types
  - Object
  - String
  - Arrays
  - Default Values
  - Boxing and Unboxing

## ADO.NET

### INTRODUCTION TO ADO.NET

- Microsoft Data Access Technologies
- ODBC
- OLE DB
- W** ActiveX Data Objects (ADO)
  - Accessing SQL Server Before ADO.NET
  - ADO.NET
  - ADO.NET Architecture
  - .NET Data Providers
  - Programming with ADO.NET Interfaces
  - .NET Namespaces
- K** Connected Data Access
- K** ADO.NET Class Libraries
  - Connecting to an OLE DB Data Provider
  - Using Commands
- W** Creating a Command Object
  - ExecuteNonQuery
  - Using a Data Reader
- K** Disconnected Datasets
  - Data Adapters
  - Command Builder
  - Main Program
  - Creating a Data Adapter and Generating

- W** Introduction to Exceptions
- K** Exception Fundamentals
- K** .NET Exception Handling
- W** Exception Flow of Control
- W** Context and Stack Unwinding
  - System.Exception
  - User-Defined Exception Classes
  - Structured Exception Handling
  - Finally Block
- K** Bank Case Study—Step 5
  - Inner Exceptions
- W** Checked Integer Arithmetic

### ADO.NET COMMANDS

- Command Objects
- Creating Commands
- Executing Commands
- Dynamic Queries
- K** Parameterized Queries
  - Command Types
  - Stored Procedures
- W** Testing the Stored Procedure
- W** Stored Procedures in ADO.NET
  - Batch Queries
  - Transactions

### DATAREADERS AND CONNECTED ACCESS

- DataReaders
- Using a DataReader
- Closing a DataReader
- IDataRecord
- Type-Safe Accessors
- GetOrdinal()
- Null Data

Commands

- Filling the Dataset
- b Displaying the Data Set
- A Adding a Row to the Data Set
- Deleting a Row
- Changing a Row
- b Updating the Database
- b Acme Computer Case Study
- o Buy Computer
- o Model
- o Component
- o Part
- PartConfiguration
- o System
- A SystemId as Identity Column
- SystemDetails
- o StatusCode
- Relationships
- Stored Procedure

**MORE ABOUT DATASETS**

- Filtering DataSets
- K** Using a Single DataTable
- Multiple Tables
- DataSet Architecture
- K** Schema in the DataSet
- Inferring Schema
- AddWithKey
- Relations
- Adding a Primary Key
- Identity Columns
- Navigating a DataSet
- TableMappings
- W** Creating a Dataset Manually
- Manual DataSet Code
- Performing a Query

**ADO.NET CONNECTIONS**

- K** ADO.NET Block Diagram
- .NET Data Providers
- Namespaces for .NET Data Providers
- W** Basic Connection Programming
- Using Interfaces
- K** IDbConnection Properties
- Connection String
- W** SQL Server Connection String
- K** OLE DB Connection String
- K** IDbConnection Methods
- K** BasicConnection (Step 2)
- K** Connection Life Cycle
- K** BasicConnect (Step 3)
- ChangeDatabase
- Connection Pooling
- W** Pool Settings for SQL Server
- Connection Events
- K** ADO.NET Error Handling
- Using List Boxes

**NEW FEATURES IN ADO.NET 2.0**

- AcmePub Database
- W** Creating a Data Connection
- K** Using Database Explorer
- Performing a Query
- K** Using a Data Connection
- W** Connected Database Access
- K** Long Database Operations
- K** Asynchronous Operations
- W** Enumerating Instances of SQL Server
- A Multiple Active Result Sets
- o Bulk Copy

**DATASETS AND DISCONNECTED ACCESS**

- DataSet
- DataSet Architecture
- Why DataSet?
- DataSet Components
- DataAdapter
- Filling a DataSet
- Accessing a DataSet
- W** Updating a DataSet Scenario
- Adding a New Row

- Searching and Updating a Row
- Deleting a Row
- ( Row Versions
- ( Row State
- \$ BeginEdit and CancelEdit
- DataTable Events
- ∅ Updating a Database
- Insert Command
- Update Command
- Delete Command

## COMMAND BUILDERS

## CRYSTAL REPORTS

### A BEFORE YOU BEGIN

- Defining the Purpose of the Report
- Determining the Layout of the Report
- Finding the Data
- Organizing the Data for the Report
- The Workbench

### CONDITIONAL FORMATTING

- K** The Highlighting Expert
- Setting Highlighting Priorities
- Formatting Sections
- Formatting Sections Conditionally
- Conditionally Formatting Fields

### CREATING A SIMPLE REPORT

- Starting the Crystal Reports Program
- K** Starting a New Report
- The Main Components of the Design Window
- b Exploring the Toolbars
- Managing Resources with Explorers
- A Placing Fields on the Report
- A Selecting and Sizing Objects
- Browsing Field Data
- A Moving and Aligning Objects
- Using Guides and Guidelines to Move and Align Objects
- b Creating Text Objects
- Saving the Report
- b Autosaving the Report
- b Previewing the Report
- Refreshing the Data
- o Getting Help

### CREATING SUMMARY REPORTS AND CHARTS

- W** Creating a Summary Report
- Applying the Drill Down Feature
- Applying the DrillDownGroupLevel
- Producing Charts
- Editing Charts
- Formatting Charts
- K** Using the Chart Options
- Modifying Individual Objects in the Chart
- K** Using Auto-Arrange Chart
- K** Applying Chart Templates

### EXPORTING YOUR REPORTS WITHIN YOUR ORGANIZATION

- Understanding Export Formats and Destinations
- Using an HTML Format for Crystal Reports
- HTML Preview
- Exporting to Windows Applications
- Exporting to a Report Definition Format

## FORMATTING FEATURES

- Quick Formatting with the Template Expert
- Formatting Objects
- Format Painter
- A** Inserting Lines and Boxes
- Drawing a Line
- Drawing a Box
- Inserting Graphics
- Working with the Page Commands
- A** Working with Text Objects
- Adding Fields into a Text Object
- Formatting Part or All of an Object
- b** Inserting Special Fields

## GROUPING AND SORTING DATA

- When and Why to Group Records
- Creating a Group
- K** Group and Sort Direction
- W** Customize Group Name Field
- Modifying Groups
- Creating Multiple Groups in a Report
- Using the Group Tree to Navigate the Report
- Reordering Groups
- Sorting Records within a Group
- Summarizing Groups
- A** Additional Summary Options
- Grouping Data in Date/Time Intervals
- b** Calculating Percentages
- Ordering Groups Based on Their Subtotals
- Using the Group Sort Expert

## WEB SERVICES

### INTRODUCTION TO ASP.NET WEB SERVICES

- An Introduction to Web Services

## USING THE REPORT WIZARDS

- W** What are the Report Wizards?
- Create a Report Using the Standard Report Creation Wizard
- The Data Dialog Box
- b** The Fields Dialog Box
- b** The Grouping Dialog Box
- b** The Summaries Dialog Box
- A** The Group Sorting Dialog Box
- The Chart Dialog Box
- The Record Selection Dialog Box
- b** The Template Dialog Box

## COMBINING MULTIPLE TABLES

- Understanding Tables, Records, and Fields
- K** Learning about Linking
- Adding Multiple Tables to a Report

## CREATING AND USING FORMULAS

- Understanding Crystal Formula Syntax without Being a Programmer
- A** About the Formula Workshop

### SOAP: NOT JUST FOR HANDS ANYMORE

- What is SOAP?

Component-Based Development

\$ What Are Web Services?

\$ Web Service Terminology

XML Refresher

Web Service Request Architecture

SOAP in Action

SOAP Encoding

## XML SCHEMAS

XML Schema Defined

XML Namespaces

XML Schema Elements

## W VALIDATION USING XML SCHEMAS

## INTERACTING WITH THE SOAP MESSAGE

**W** Processing a SOAP Message

HTTP Modules

HTTP Handlers

SOAP Extensions

## CALLING SOAP FROM THE CLIENT

Improving the User Experience

DHTML Behaviors

**K** The WebService Behavior

## CREATING A WEB SERVICE

**K** The Web Service Puzzle

**W** Configuring Your Environment

**W** Implementing a Web Service

**K** Testing Your Web Service

**W** Deploying Your Web Service

## DESCRIBING YOUR WEB SERVICE

What Is WSDL?

**K** The WSDL Specification

**K** Generating the WSDL File

**W** Customizing the WSDL File

# XML

## GETTING STARTED WITH XML

**W** Data and Document Structure

XML

Well-Formed XML

**W** Valid vs. Well-Formed XML

Enforcing Valid Documents: DTDs

Presentation Style

XSL and XSLT

Using XML

## NAMESPACES

Why Namespaces?

Namespace Prefixes and Declaration

Multiple Namespace Declarations

Declaring Namespaces in the Root Element

Default Namespaces

DTDs and Namespaces

## XML SYNTAX

- XML Fundamentals
- Tag Attributes
- Naming Rules
- W** Empty and Non-Empty Elements
- Nesting and Hierarchy of Tags
- Processing Instructions and the XML Declaration
- Other XML Constructs
- Entity and Character References

## WRITING DTDS

- XML DTDs
- DOCTYPE
- Element Conditions and Quantifiers
- Attributes
- Attribute Default
- K** Parsed General Entities
- Parsed Parameterized Entities

## SQL SERVER

### SQL SERVER TOUR

- SQL Server Editions
- Graphical Tools
- Exploring the Enterprise Manager
- Working with SQL Server Books Online

## BASIC XML SCHEMAS

- Schema Overview
- A Minimal Schema
- Associating Unqualified XML with a Schema
- A** Simple and Built-in Types
- Complex Types
- Element Declarations
- b** Attribute Declarations
- (** Choices
- (** Named Types and Anonymous Types

## TRANSFORMING XML USING XSLT

- Transformations
- Templates
- K** XPath: Selecting a Node
- W** XPath: Navigating the Tree
- W** Extracting Element Values
- K** Choosing Specific Cases
- Multiple Element Transformation
- Sorting Elements

## XML IN APPLICATIONS

- Reasons and Places for Using XML
- DOM Parsers
- SAX Parsers
- Web Services

### BASIC QUERYING

- Introduction to the Query Analyzer
- Retrieving Data
- Joining Tables

## INSTALLING SQL SERVER

- Multiple Instances
- Installing an Instance of SQL Server
- K** Configuring the Server

## ACTION QUERIES

- Modifying Data
- Inserting Data
- Updating Data
- Deleting Data

## DESIGNING AND CREATING A DATABASE

- Relational Database Design Principles
- K** Implementing the Design

## USING THE QUERY ANALYZER

- K** Query Analyzer Features
- The File Menu Items
- The Edit Menu
- Query Menu Items
- Tools Menu Items
- Window Menu Items
- Help Menu Items

## BACKUPS AND MAINTENANCE

- W** Creating a Backup Strategy
- Implementing Backups
- K** Restoring from a Backup
- The Database Maintenance Plan Wizard

## PROGRAMMING WITH TRANSACT-SQL

- K** Overview of Transact-SQL
- K** Using Built-In Functions
- Control of Flow
- Error Handling

## STORED PROCEDURES AND TRIGGERS

- W** Building Stored Procedures
- Building Triggers

## CREATING VIEWS

- What is a View?
- Creating Views
- Updating Views

## K USING INSTEAD OF TRIGGERS

## USER-DEFINED FUNCTIONS

- User-Defined Functions in SQL Server 2000
- Scalar Functions
- Inline Table-Valued Functions
- Multi-Statement Table-Valued Functions
- Functions, Views, and Stored Procedures

## NET REMOTING AND THREADING

### NET REMOTING

- Distributed Programming in .NET

### THREADING

- Single /Multi thread

Webcom Technologies

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- .NET Remoting Architecture
- Remote Objects and Mobile Objects
- Object Activation and Lifetime
- \$ Singleton and SingleCall
- ( Channel
- \$ Marshal by Ref. Object
- ( Formatter
- ( Message Sink
- ( Proxy

- Synchronization
- Thread Sleep
- Resume / Suspend
- Thread Life Cycle
- Thread Priority

#### WINDOWS SERVICES

- Create Services
- Service Program
- Configuration Program
- K** Service Control Manager
- Service Configuration
- Service Accessing using client

## AJAX

- Using JavaScript
  - JavaScript and the Browser
  - Data Types and Variables
  - Control Structures
  - Functions
  - Strings
  - Arrays
  - Objects
- DHTML, DOM and CSS
  - What Is DHTML?
  - Cascading Style Sheets
- Partial Page Rendering
  - UpdatePanel Control
  - Update Modes
  - Triggers
  - Using a Timer
  - PageRequestManager
  - Partial Page Update Lifecycle
  - UpdateProgress Control
- Limitations and Performance Issues
- Remote Method Calls
  - Web Service Methods
  - Handling Errors
  - Using Context
  - Page Methods
  - JSON Serialization
  - ScriptMethod Attribute
- AJAX Control Toolkit
  - Extender Controls
  - Use of Style Sheets
  - Page Layout Controls
  - Popup Controls
  - ACT Controls and Web Services



**Program Duration :** 2 Months (80 hrs.)

**Program Fee :** Rs.14000/-

Weekdays or Weekends option available.

Program duration can be extended or reduced.