



## MS.Net

Available Delivery Methods:

E-learning

Instructor Led Virtual Class

Instructor Led Face to Face Class

### Course Outline

#### NET FUNDAMENTALS

- Why .NET?
- The .NET initiative
- Introduction to .NET framework
- Advantages of .NET framework
- System requirements

#### MS.NET FUNDAMENTALS

- Base class libraries
- Common language-runtime (CLR)
- Microsoft intermediate language (MSIL)
- Optimized just-in-time (JIT)
- Common type systems
- (CTS)
- Common language specification (CLS)
- Compilation and execution of .NET application
- Assemblies
- Namespace

#### INTRODUCTION TO VISUAL STUDIO .NET

- The Start Page
- Solution Explorer
- The Object Browser and Class View Window
- The Code Editor
- The Form Designer and the Toolbox
- The Server Explorer window
- Macro Explorer
- Running a Visual Basic Console Application

#### INTRODUCTION TO VB.NET

- Features of visual basic .NET
- File extensions used in visual basic .NET
- Visual Basic keywords
- Visual Basic statements
- Procedures, classes, modules, methods and more...
- The Option & Import statements
- Adding classes to project
- Declaring variables
- Data types
- Arrays
- Handling date and time

### Audience Profile

This course is for fresh college graduates, testers, developers and business users possessing good soft skills and wanting to work closely with the business users and technical team. Technology background is not required to take this training!

### Benefits

- ✓ Job oriented training;
- ✓ Visual learning;
- ✓ Real world assignments;
- ✓ Recorded sessions;
- ✓ Mock Interviews;
- ✓ Resume preparation;
- ✓ Supporting Materials;
- ✓ Job Support



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#### INTRODUCTION TO VISUAL STUDIO .NET

- Principles of oops
- Structure Vs classes
- Relationship between classes and objects
- Access Specifiers
- How to create namespaces in S class libraries
- How to use namespaces
- Constructors
- Finalize, Dispose & Garbage collectors
- My Base, my class & my keywords

#### EXCEPTION HANDLING & DEBUGGING

- Exceptions
- .NET exceptions
- User defined exceptions
- Try-catch-finally
- Throw exception
- Debugging application
- Searching for bugs

#### GUI APPLICATION DEVELOPMENT

- Introduction to system windows, forms
- Basic controls and event driven programming
- Advanced controls
- Rich text box, toolbars
- Working with context menus
- Built in dialog boxes

#### STREAMS

- File stream
- Stream reader
- Stream writer

#### FILE HANDLING CONCEPTS COLLECTION

- Generic collections
- Bit collections
- Specialized collections
- Weight collection classes
- User defined collection classes

#### INTRODUCTION OF ADO .NET

- Features of ADO .NET
- Differentiation between ADO & ADO .NET
- ADO .NET namespaces
- Properties, Methods & events of the connection object
- Properties, Methods & events of the command object
- Access & Manipulating data from data grid
- Performing data updates

#### DELEGATES

- Introduction to delegate concept
- Event handling arch with delegate
- Handles, add handler and remove handler



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#### MULTITHREADING

- Thread class
- Thread synchronization
- Creating and controlling threads
- Sleep, suspend and resume threading

#### CREATING & USING WEB SERVICES

- Data accessing through crystal reports
- Accessing filtered data through crystal reports
- Accessing related data through crystal reports

#### ASP .NET PROGRAMMING WITH ADO .NET

- Introduction of ADO .NET
- Features of ADO .NET
- Differentiation between ADO & ADO .NET
- ADO .NET namespace
- Connected architecture through ADO .NET
- Disconnected architecture through ADO .NET
- Working with transaction in ASP .NET etc...

#### ASP .NET INTRODUCTION

- How is ASP .net different from ASP
- ASP .NET design goals
- ASP .NET in .NET framework
- Development environment for ASP .NET application
- Identifying the features of ASP .NET
- Identifying programming modules in ASP .NET
- Web forms
- Web services

#### ASP .NET PROGRAMMING SERVER CONTROLS

- Processing of web pages
- Server control hierarchy
- Web controls
- Buttons, list controls, text boxes, hyper links....
- HTML controls
- HTML anchor, button...

#### STRUCTURE OF AN ASP .NET PAGE ASP .NET PROGRAMMING VALIDATION CONTROLS

- Required field validation
- Regular expression
- Range validation...

#### IDENTIFYING THE DIFFERENT TYPES OF DATA BINDING

- Introduction to data binding
- Single value data binding
- Multi record data binding
- Custom binding

#### USING XML & SEARCH TOOLS IN ASP .NET

- Working with XML server controls in ASP .NET
- Binding XML data to web forms controls
- Connecting relational data to an XML document



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#### CONFIGURING, DEBUGGING & DEPLOYING ASP .NET APPLICATION

- Configuration overview
- Structure of configuration file
- Configuration section
- Tracking and debugging an application
- Deploying an application

#### EXCEPTIONAL HANDLING, MANAGING STATE AND SECURITY ASP .NET WEB APPLICATION

- Introduction state management in [ASP.NET](#)
- Sending E-mail from [ASP.NET](#) page
- Securing ASP .NET application

#### SESSION TRACKING

- Cookies
- Session object and events
- CACHING
- Caching and its methods
- Output caching

#### WEB SERVICES

- Introduction to an ASP .NET web application
- Events of an ASP .NET web application
- Using web services in web application

#### C# .NET C# LANGUAGE BASICS

- Data types
- Type conversion
- Boxing & un boxing
- Conditional statements
- Looping
- Methods in C#
- Properties
- Arrays
- Indexes
- Structures, enumerations
- Strings
- Regular expressions
- Collections

#### POINTERS

- Value types, reference types
- Unsafe
- Structure and pointers

#### MEMORY MANAGEMENT

- Garbage collector
- Stack and heap
- Architecture of GC
- Generations
- M.M. support classes

#### OBJECT ORIENTED PROGRAMMING CONCEPTS EXCEPTION HANDLING

- System defined exceptions
- Custom exceptions
- Try, catch, finally
- Throwing exceptions

#### OPERATOR OVERLOADING

- System defined exceptions
- Custom exceptions
- Try, catch, finally
- Throwing exceptions



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#### ASSEMBLIES

- Introduction to Assemblies
- Benefits
- Contents
- Application-Private Assemblies
- Private vs Shared Assemblies
- Global Assembly Cache (GAC)

#### DELEGATES AND EVENT HANDLING

- Introduction to Delegate Concept
- Event handling Arch with Delegate
- Handles, Add Handler and Remove Handler
- Multi Cast Delegates
- Generic Routines
- Function Pointers

#### GUI APPLICATION PROGRAMMING

- Introduction to system windows, forms
- Basic controls and events driven programming
- Advanced controls
- Rich text box, toolbars...
- Working with context menus
- Built in dialog boxes
- DATA BASE PROGRAMMING
- Introduction of ADO .NET
- Features of ADO .NET
- Differentiation between ADO & ADO .NET
- ADO .NET namespace
- Properties, methods & events of the connection objects
- Properties, methods % events of the command objects
- Access & manipulating data from data grid
- Performing data updates

#### MULTITHREADING

- Thread Class
- Thread Synchronization
- Creating and controlling Threads
- Sleep, Suspend and Resume Threading

#### CREATING & USING WEB SERVICES

- Introduction to Web Services
- Creating Web Service
- Using Web service in a Windows Application
- Working with Window Services