



## **.Net Training Syllabus**

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DOT NET is the one of high in demand course today. There are many professionals already in the market quipped with this knowledge. But you can stand apart and above all of them by doing the course from an experienced and reputed .net training institute like Project Development. Project Development provides a little more, little differently to give that extra impetus to your CV. Project Development has a training course named MICROSOFT .NET Training. Learning at Project Development is a very pleasant experience as the whole course is students get practical exposure to all the concepts, contents are well-structured to meet the industry requirements covering all the verticals and parallels in the technology, live project experience under the guidance of experts from the industries. The experienced faculties understand the varying understanding capacities of individuals and provide one to one attention to every student. Project Development wants to ensure every student benefits out of the course. Last but not the least, a certification from Project Development can give you a glittering edge over others.

**TRAINING DURATION**      70 Hrs / 8 Weeks / Customized

**TRAINING CHARGE**      15,000+ Service Tax

### **Details of .Net Training Modules**

- 1. C#**
  - Introduction to C#
  - C# Basic Syntax
  - C# Keywords
  - C# Data Types
  - C# Variables
  - C# Operators
  - C# Decision Making

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Address- 572, Sector-4, Vaishali, Ghaziabad, Uttar Pradesh-201010 (INDIA)

Phone:-01204375244, +91-8586890684

Website: [www.projectdevelopment.co.in](http://www.projectdevelopment.co.in), E-mail: [info@projectdevelopment.co.in](mailto:info@projectdevelopment.co.in)



- C# Loops
  - C# Methods
  - C# Arrays
- ## 2. Core .NET
- Introduction to .NET
  - Introduction of Language
  - Introduction of Web Application
  - Platform Dependence , Independence & Portability
  - Introduction of .NET Framework
  - Introduction of Compiler & MSIL
  - Introduction of CLR
  - Introduction of CLS, CTS, CLI

### **OOPs Implementation**

- Encapsulation, Abstraction, Class & object
- Relation b/w objects and reference variables
- Method Overloading & Types of Methods
- Description of Memory blocks: Stacks, Heap & Class Area
- Constructors and Destructor & Garbage Collection
- Using Scope & Dispose Method
- Usage of this keyword
- Static Data members, Constructors & methods
- Relation & Implementing Has-A relation
- Implementing Is-A relation using Inheritance
- Method Overriding & Hiding
- Usage of Base keyword



- Static & Dynamic binding
- Runtime polymorphism and generalization
- Abstract classes & methods
- Interfaces and Role based Inheritance
- Usage of sealed, partial, out, ref, param keyword
- Namespace
- Assembly & GAC
- Property & Indexer
- Windows Application
- Delegates & Event
- Event Handling
- Windows App. Component.
- Object class and its role

## **String Handling**

- String class & concept of Immutability
- Pool of String Constants & its use
- Common String operations
- Use of String Builder

## **Exception Handling**

- Difference b/w exception and error
- Exception Handling & Robustness
- Common Exceptions and Errors



- Try and catch block
- Exception handlers
- throw keyword and its usage
- Role of finally
- Exception Class Methods & properties
- Creating User defined Exceptions

## **Multithreading in .NET**

- Multitasking and Multithreading
- Process & thread
- States of Thread
- Thread based execution model of .NET Applications
- Implementing User threads
- Thread synchronization
- Inter Thread communication
- Thread Interrupting
- Daemon Threads and their use

## **Input Output Streams**

- Streams & their advantages over conventional input output
- Reading & writing data byte by byte, line by line, and in one go.
- Redirecting Standard input & output streams
- Serialization & Deserialization
- Serialization Formatter



- Xml Formatter
- Binary Formatter
- Soap Formatter
- Json Formatter
- File class and File System Interaction
- Zip & Unzip Files

## Reflection

- Understanding object representation of classes
- Loading classes dynamically
- Instantiating classes indirectly
- Obtaining information of classes dynamically
- Invoking methods indirectly
- Referencing data members indirectly
- Overriding access policy and referencing private members

## Collection Framework

- Role and Importance of Collection Framework
- Index Based Collection Array List, Stack, Queue
- Use Define Collection
- Map Based Collection Use of Key & Value pair (Entry)
- Hash Table, Sorted List
- Searching elements in List, Hash and Tree based collections



- Role of equals and hashCode() methods
- Role of Comparable interfaces
- Type safety and Generics
- Generic Collection
- List ,Stack ,Queue ,Dictionary ,Linked List ,Sorted List

## Database Connectivity Using ADO.NET

- Overview of Database & Database Server
- Introduction of SQL Server 2008
- DML & DDL Query
- Join , Trigger , Procedure & function
- Ado.NET API
- Connected Layer
- Connection, Command & Data Reader
- Disconnected Layer
- Adaptor, Data Set, Table, Row & Column
- ODBC, OLEDB, Oracle Client
- Connectivity with Oracle ,Access, Excel & MySql
- Connection Pooling

## Web Application Programming Using Asp.NET

- Web application architecture
- Static Web Page



- Application Life Cycle
- Dynamic Page
- Page Life Cycle & Event Method
- Html & Server Control
- Server Control Event Life Cycle
- State Management
- Url Rewriting, Hidden Form Field, View State, Session, Cookies & Application.
- Global class & Event Method
- Uploading & Downloading
- Page Directives
- Data Source
- SqlDataSource, XmlDataSource, SiteMapDataSource & ObjectDataSource
- Data Control
- DataList, DetailsView, FormView, GridView, ListView & Repeater
- Validation Control
- CompareValidator, CustomValidator, RangeValidator, RegularExpressionValidator & ValidationSummary
- Navigation
- Menu, SiteMapPath & TreeView
- Login Control & Membership
- Login, LoginName, LoginStaus, LoginView, PasswordRecovery, ChangePassword, CreateUserWizaed.
- Ajax Extensions

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- ScriptManager, UpdatePanel, UpdateProgress & Timer
- Globalization & Localization
- Master Page & Style them
- Mail
- SMTP
- POP3

### 3. Advance .Net

#### Networking

- Introduction of Networking
- Understanding socket and port
- Tcp Client & Tcp Listener
- TCP/IP based networking
- HTTP based networking
- HttpRequest
- HttpResponse

#### Remoting

- Application Domain
- Remotable & NonRemotable Object
- Marshal-By-Reference
- ServerActivatedObject(SAO)
- SingleCall
- Singleton





- ClientActivatedObject
- Channels
- TcpChannal
- Service Configuration & Hosting

## Web Services

- Web Service Architectures
- Explaining how to control the way a
- .NET Framework object is serialized to XML.
- Describing the structures of a Simple Object Access Protocol (SOAP) request and response.
- Consuming XML Web Services
- Explaining the structure of a Web Service Description Language (WSDL) document.
- Explaining the Web services discovery process.
- Locating service contracts by using Disco.exe.
- Generating Web service proxies by using Wsdll.exe.
- Implementing a Web service consumer by using Visual Studio .NET.
- Invoking a Web service synchronously and asynchronously by using a Web service proxy
- Creating a Web service project.
- Implementing Web service methods, exposing them, and controlling their behavior.
- Managing state in an ASP.NET-based Web service.
- Debugging Web services.



- Explaining the role of UDDI in Web services.
- Publishing a Web service in a UDDI registry by using the UDDI SDK.
- Searching a UDDI registry to locate Web services by using the UDDI SDK.
- Explaining the various options for publishing a Web service on an intranet.
- Explaining some of the options for modifying the default configuration of a Web service.
- Explaining how to use the security mechanisms that Microsoft Internet Information Services (IIS) and Windows provide for authentication.
- Using SOAP headers for authentication in a Web service.

## LINQ

- Introduction to LINQ
- LINQ expressions
- Using via extension methods
- Filtering
- Sorting
- Aggregation
- Skip and Take operators
- Joins
- Extension methods
- Object initialization syntax
- Anonymous types
- Lambda expressions
- Deferred Execution



- Benefits and drawbacks
- IEnumerable vs IQueryable
- Using across tiers
- Data Projection
- Single result value
- Existing types
- Anonymous types
- Grouping
- LINQ to XML
- New XML classes
- Generating XML
- Querying XML
- Using data projection
- Combining with XPath
- LINQ to SQL
- Attributes and mapping
- Creating a DataContext
- Deferred loading
- Saving changes
- Inserts and deletes
- Transactions

## WCF



- Wcf Framework
- Wcf ABC
- Wcf Address
- Wcf Binding
- Wshttp
- Basichttp
- Nettcp
- netPeertcp
- Msmq
- Wcf Contract
- Service Contract
- Operaton Contract
- Data Contract
- Service Hosting
- IIS Hosting
- Local host (Service Host)
- Broadcasting
- Messaging
- Data Base Servicing
- Wcftestclient tool
- Svcconfigeditor tool
- Svcutil Tool

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## WPF

- WPF Introduction
- Wpf Control
- Wpf Binding
- Style
- Template
- Trigger
- Navigation
- Data Binding
- Wcf & web Service Communication

## SilverLight

- Silverlight Introduction
- Framework
- Component's
- Silverlight Control & Component Events
- Styles and Templates
- Using Sample Data
- Silverlight enabled WCF services
- Silverlight enabled Web services
- Working with Data
- Data Binding & Event



- File IO
- Out of Browser
- Uploading
- Downloading
- Threading
- Navigation
- Session Management
- Integration With ASP.NET

## Project

- Project Description
- Project Architecture
- Project Conventions and Deliverables
- Data sources, Work flows and Modules
- Project Interface Design
- Creating project prototype
- Testing, Modification & Acceptance
- Commencement of next Iteration
- Testing, Modification & Acceptance...
- Integration Testing and project deployment

## Frame Works

### MVC3

- Introduction to MVC3
- The Model-View-Controller Pattern

- Differences Between MVC and Web Forms Applications
- Building a Simple MVC Application with Visual Studio
- Working with Controllers and Actions
- Introduction to Controllers
- Using a Controller to Manage the Application
- Controller Actions
- Returning Action Results
- Creating MVC Models
- Data and Business Rules in MVC Applications
- Creating a Custom Data Model
- Data Validation and Data Annotations
- Using MVC Views
- Views in ASP.NET MVC
- Creating Views
- Adding Content to a View
- HTML Helpers and Action Filters
- Using HTML Helpers in MVC
- Creating a Custom Helper
- Using Action Filters
- Creating a Custom Filter
- Routing and URLs
- Customizing Application URLs
- Creating Route Constraints
- Routing and Web Forms
- Using MVC and AJAX and JQuery
- Integrating Client-Side Script with MVC
- Using the MVC AJAX Helpers
- Working with JSON Data

## Entity Framework



- The Entity in 'Entity Framework'
- Entity Framework Backend
- Entity Framework Features
- The EDM in the Designer Window
- Code Generation from EDM to Classes
- CSDL: The Conceptual Schema Definition Language
- SSDL: The Store Schema Definition Language
- Querying the Model
- LINQ to Entities Queries
- Entity SQL Queries
- EntityClient Queries
- Translation of Queries to Database Queries
- Cud Operation inEntity Framework
- HowObjectContext Manages Entities
- Adding New Entities
- Updating entities
- Deleting Entities
- Stored Procedure with EDM
- Adding Stored Procedures to the Model
- Working with Functions
- Implementing Functions
- Mapping Table
- Mapping Table per Type Inheritance
- Implementing Table per Hierarchy Inheritance
- Mapping Table per Concrete (TPC) Type Inheritance
- Using Entity Splitting to Map a Single Entity to More Than One Table
- Using Conditional Mapping
- Creating Complex Types
- Using DefiningQuery
- Deconstructing Relationships in the Entity Data Model

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- Defining Relationships Between Entities

### **NHibernate**

- Introduction to ORM and NHibernate
- NHibernate Architecture
- NHibernate Configuration
- Introduction to Session and SessionFactory
- Persisting Object using NHibernate
- Inheritance Mapping
- Collection Mapping
- Bidirectional Association Mapping
- NHibernate Query Language

**TRAINING SCHEDULE** - Please contact us for latest training schedule

### **TRAINING MODE**

We give flexible learning options to trainees

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### **CONTACT DETAILS**

DP Project Development Pvt. Ltd.

**Address** 572, Sec-4, Vaishali, Ghaziabad, Uttar Pradesh-201010, INDIA

**Mobile** +91-8586890684, +91-120-4375244

**Email** [training@projectdevelopment.co.in](mailto:training@projectdevelopment.co.in)

**Website** <http://www.projectdevelopment.co.in>

**Skype** dp.trainer