

**C#,ASP.NET  
and CLOUD-  
80hrs**

**2014**

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# C#.NET-40hrs

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## Chapter 1: Introduction to .NET Framework

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<ul style="list-style-type: none"><li>1. Overview of .NET and .NET Framework</li><li>2. .NET Framework Architecture<ul style="list-style-type: none"><li>2.1. .NET Compliant Languages</li><li>2.2. Common Language Specification (CLS)<ul style="list-style-type: none"><li>2.2.1. Common Type System (CTS)</li></ul></li><li>2.3. Framework Class Library (FCL)<ul style="list-style-type: none"><li>2.3.1. Base Class Library (BCL)</li></ul></li><li>2.4. Common Language Runtime (CLR)</li><li>2.5. Visual Studio IDE</li></ul></li><li>3. Microsoft Intermediate Language (MSIL)</li><li>4. Understanding CLR and Execution of .NET Application<ul style="list-style-type: none"><li>4.1. Components of CLR</li></ul></li></ul>	2hrs	2hrs	

## Chapter 2: Introduction to C#

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>Introduction of C#.Net</b> <ul style="list-style-type: none"><li>1. Conceptual Overview of C#.Net</li><li>2. What is Visual Studio?</li><li>3. C# Programming Language Features</li><li>4. Hello World Program</li><li>5. General Structure of a C# Program</li><li>6. Modifiers (Access Modifiers)</li><li>7. Casting and Type Conversion</li><li>8. Boxing and Unboxing</li></ul>	4hrs	2hrs	2hrs*

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## Chapter 3: Selection & Looping Statement

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>Basics of C# .NET</b> 1. Overview of Selection Statement 2. Selection Statements 2.1. If-else 2.2. Switch 3. Overview of Looping Statement 4. Looping 4.1. While and Do-While 4.2. For 4.3. ForEach	3hrs	2hrs	1hrs

## Chapter 4: Arrays in C#

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>Introduction of Arrays</b> 1. Arrays Overview 2. Arrays in General 3. Declaring Arrays 4. Initializing Arrays 5. Accessing Array Members 6. Arrays are Objects 7. Using foreach with Arrays 8. Types of Array  8.1. Single Dimensional  8.2. Multi-Dimensional  8.3. Jagged Arrays	2hrs	1hrs	1hrs*

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## Chapter 5: Introduction to OOP'S

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Sr. No.	Topic Name	Total Duration	Theory	Practical
3	<b>Introduction to OOP'S</b> 1. Overview of OOP'S 1.1. Features of OOP'S 2. Classes & Objects 2.1. Features of Object 3. Constructor 4. Destructor 5. Properties 6. Method Overloading 7. Method Overriding 8. This & Base keyword 9. Partial Class 10. Sealed Class	6hr	3hr	3hr

## Chapter 6: Interfaces and Abstract classes

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>Interfaces &amp; Abstract Class</b> 1. Interfaces 1.1. Defining and Implementing Single & Multiple Interfaces 2. Abstract Class 3. Difference between Interface & Abstract Class	2hrs	1hrs	1hrs

## Chapter 7: Collection in C#

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Sr. No.	Topic Name	Total Duration	Theory	Practical
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<b>1</b>	<b>Introduction to Collection</b> 1. Non-Generic Collection 1.1. ArrayList 1.2. Stack 1.3. Queue 1.4. HashTable 2. Generic Collection 2.1. List<T> 2.2. Dictionary<T,T> 2.3. Queue<T> 2.4. Stack<T>	3hrs	2hrs	1hrs
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## Chapter 8: Exception Handling

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Sr. No.	Topic Name	Total Duration	Theory	Practical
<b>1</b>	<b>Exceptions and Delegates</b> 1. Exception Handling in C# 1.1. Try...Catch...Finally keywords 1.2. Using Single, Multiple and Catch All Block 1.3. Using Custom Exception	2hrs	1hrs	1hrs

## Chapter 9: Delegates & Event Handling

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Sr. No.	Topic Name	Total Duration	Theory	Practical
<b>1</b>	1. Delegates 1.1. Single Cast Delegate 1.2. Multi Cast Delegate	2hrs	1hrs	1hrs

## Chapter 10: Windows Programming

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Sr. No.	Topic Name	Total Duration	Theory	Practical
<b>1</b>	<b>Basics of C# Windows Forms</b>			

	<ol style="list-style-type: none"> <li>1. Overview of Windows Forms &amp; Controls</li> <li>2. Common Controls Examples</li> <li>3. Simple Windows Applications like Notepad, Calculator, and Browser etc.</li> <li>4. Other toolbox controls examples</li> </ol>	5hrs	2hrs	2hrs
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## Chapter 11: Basics of SQL Server

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>Relational Database Fundamentals</b> <ol style="list-style-type: none"> <li>1. Overview of Relational Database Concepts</li> <li>2. SQL, DML and DDL Languages</li> </ol> <b>Writing Basic SQL Queries</b> <ol style="list-style-type: none"> <li>3. Displaying Table Structures</li> <li>4. Column Data types</li> <li>5. Selecting Column Data From a Table or View</li> <li>6. SELECT DISTINCT Values</li> </ol> <b>Manipulating Table Data Using SQL's Data Manipulation Language (DML)</b> <ol style="list-style-type: none"> <li>7. INSERT into Tables</li> <li>8. UPDATE Table Data</li> <li>9. DELETE from Tables</li> <li>10. TRUNCATE Tables</li> </ol>	2hrs	1hrs	1hrs

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## Chapter 12: ADO.NET

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>ADO.NET</b> <ol style="list-style-type: none"> <li>1. ADO.NET Overview</li> <li>2. Architecture of ADO.NET               <ol style="list-style-type: none"> <li>2.1. Connected</li> <li>2.2. Disconnected</li> </ol> </li> <li>3. SqlConnection class</li> <li>4. SqlCommand class</li> <li>5. DataReader class</li> <li>6. SqlDataAdapter class</li> <li>7. DataSet class</li> </ol>	4hrs	2hrs	2hrs

	8. Datagrid view with DML Operations like sorting, paging etc.			
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## Chapter 13: XML

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>1. Introduction to XML</b> <b>a. Structure and components of XML</b> <b>b. Creating XML files</b> <b>2. XmlTextReader and XmlTextWriter</b> <b>3. XpathQuery</b>	3hrs	2hrs	1hrs

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# ASP.NET-22hrs

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## Chapter 1: Introduction to ASP.NET & Controls

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>Introduction to ASP.NET</b> 5. Background to .NET Framework & Introduction to ASP.NET 6. The way the web works 7. ASP.NET Web Page 8. Hello World Web Application	3hrs	2hrs	1hrs
2	9. <b>Using the Standard Controls</b> 9.1. AdRotator Control 9.2. Label Controls 9.3. Textbox controls 9.4. RadioButtonList Controls 9.5. CheckBoxList Controls 9.6. Button controls			
3	10. <b>Validation Controls in ASP.NET</b> 10.1. RequiredFieldValidator Control 10.2. RegularExpressionValidator Control 10.3. CompareFieldValidator Control 10.4. RangeValidator Control			

## Chapter 2: State Management in ASP.NET

Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>State Management in ASP.NET</b> 1. What is State Management and its importance? 2. What is State? 3. Client Side State Management 3.1. ViewState 3.2. HiddenField 3.3. QueryString	2hrs	1hrs	1hrs*



	3.4. Cookies 4. Server Side State Management 4.1. Application 4.2. Session			
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## Chapter 3: Master Pages & Caching

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>Master Pages</b>  1. Simple Master Page 2. Navigation Controls			
2	<b>Caching in ASP.NET</b> 1. What is Caching? 2. Types of Caching? <ol style="list-style-type: none"> <li>Page/Output Caching</li> <li>Data Caching</li> </ol>	5hrs	3hrs	2hrs

## Chapter 4: MVC

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>MVC</b>  1. <b>Getting Started with ASP.NET MVC:</b> ASP.NET MVC project templates; What's new in ASP.NET 5 and 5.1; Understanding the structure of an ASP.NET MVC project; Naming conventions; Creating views; Defining controllers; Defining a data model  2. <b>Creating a Complete ASP.NET MVC Application:</b> Creating strongly-typed views; Understanding URLs and action methods; Using HTML helpers; Handling form post-backs; Data validation	5hrs	3hrs	2hrs

	<b>3. Using the Razor View Engine:</b> Razor design goals; Implementing a Razor view; Razor syntax; Accessing model data in Razor views			
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## Chapter 5: Entity Framework

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	<b>Entity Framework</b> <ol style="list-style-type: none"> <li>1. Introduction to LINQ and Basic operations <ol style="list-style-type: none"> <li>a. LINQ to Object and DataSet</li> </ol> </li> <li>2. Entity Framework Architecture</li> <li>3. POCO and Visual Studio Designer Support in the Entity Framework</li> <li>4. Design Patterns</li> <li>5. Code-First</li> <li>6. Concurrency and Stored Procedures</li> <li>7. Managing Connections and Transactions</li> </ol> <ol style="list-style-type: none"> <li>8. N-Tier Applications</li> </ol>	5hrs	3hrs	2hrs

## Chapter 6: AJAX

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1.	<b>AJAX</b> <ol style="list-style-type: none"> <li>1. Introduction of AJAX</li> <li>2. Ajax Controls like Update Panel, Update Panel History</li> <li>3. Ajax Control Toolkit (Latest Version)</li> </ol> <p>Few Controls of Toolkit like Editor, Calendar Extender, Password Strength and so on</p>	2hrs	2hrs	2hrs

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## WEB CLOUD- 20hrs

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Sr. No.	Topic Name	Total Duration	Theory	Practical
1	What's Cloud what does it offer	1hr	1	0
2	IAAS,PAAS & SAAS	2hr	2	0
3.	Introduction to Azure	2hr	2	0
4.	Alternatives to azure	1hr	1	0
5.	Creating azure account	2hr	1	1
6.	Creating websites	4hr	2	2
7.	Managing websites on Azure	4hr	2	2
8.	Deploying your ASP.net website on azure	4hr	2	2