

UNIT - I

➤ Chapter 1 : Introducing .Net	1-1 to 1-26
✓ Syllabus Topic : .Net Frame Work and C#, VB.....	1-1
1.1 .Net Frame Work Architecture.....	1-1
✓ Syllabus Topic : The .NET Language and The Common Language Run Time (CLR).....	1-1
1.1.1 The Common Language Run Time (CLR)	1-1
✓ Syllabus Topic : The .Net Class Library	1-2
1.1.2 The .Net Class Library	1-2
✓ Syllabus Topic : C# Language Basics.....	1-4
1.2 Introduction to C#	1-4
✓ Syllabus Topic : Variables.....	1-5
1.2.1 Variables.....	1-5
✓ Syllabus Topic : Data Types.....	1-5
1.2.2 Data Types.....	1-5
✓ Syllabus Topic : Variable Operations	1-7
1.3 Operators	1-7
1.3.1 Bitwise Operator	1-10
1.3.2 Type Casting	1-10
✓ Syllabus Topic : Object Based Manipulation.....	1-11
1.4 Object Based Manipulation.....	1-11
✓ Syllabus Topic : Conditional Logic and Loops.....	1-14
1.5 Control Flow Statement	1-14
1.5.1 Arrays	1-22
1.5.1.1 Multidimensional Arrays.....	1-22
✓ Syllabus Topic : Methods.....	1-23
1.6 Methods.....	1-23
➤ Chapter 2 : Types, Objects and Name Spaces	2-1 to 2-13
2.1 Object Oriented Programming	2-1
✓ Syllabus Topic : The Basics About Classes	2-2
2.2 Classes	2-2
✓ Syllabus Topic : Building a Basic Class	2-3
2.2.1 Defining a class	2-3



2.2.2	Adding Properties.....	2-4
2.2.3	Constructor.....	2-5
2.2.4	C# Destructors.....	2-5
2.2.5	Adding an Event.....	2-6
✓	Syllabus Topic : Value Types and reference Types	2-7
2.3	Types-Value and Reference	2-7
✓	Syllabus Topic : Understanding Namespace and Assemblies	2-8
2.4	Namespace	2-8
2.4.1	Assembly.....	2-9
2.4.1.1	Components of Assembly	2-9
✓	Syllabus Topic : Advanced Class Programming	2-10
2.5	Advanced c# programming	2-10
2.5.1	Inheritance.....	2-10
2.5.2	Multiple Inheritance in C#	2-12

UNIT - II

➤	Chapter 3 : Web Form Fundamentals	3-1 to 3-19
✓	Syllabus Topic : Web Application Fundamental - Writing Code	3-1
3.1	Web Application Fundamentals.....	3-1
3.1.1	ASP.NET Web Forms Model	3-1
✓	Syllabus Topic : Using the Code-Behind Class	3-4
3.2	Code-behind	3-4
✓	Syllabus Topic : Adding Event Handlers	3-5
3.3	Event Handling.....	3-5
3.3.1	Creating Event Handlers	3-5
3.3.2	Event Handling Using Controls	3-6
✓	Syllabus Topic : Understanding the Anatomy of an ASP.NET Application	3-8
3.4	Anatomy of ASP.Net Application.....	3-8
3.4.1	ASP.Net File Types.....	3-9
3.4.2	ASP.NET Application Directories.....	3-10
✓	Syllabus Topic : Introducing Server Control	3-10
3.5	Introducing Server Control	3-10
3.5.1	HTML Server Control.....	3-11
3.5.2	Web Controls.....	3-12



✓	Syllabus Topic : Using Page Class	3-14
3.6	Using Page Class.....	3-14
3.6.1	Properties of the Page Class.....	3-14
✓	Syllabus Topic : Using Application Events	3-15
3.7	Application Events.....	3-15
✓	Syllabus Topic : Configuring Asp.Net Application	3-17
3.8	Configuring Asp.Net Application.....	3-17
➤ Chapter 4 : Form Controls		4-1 to 4-45
✓	Syllabus Topic : Stepping Up to Web Controls	4-1
4.1	Web Controls.....	4-1
✓	Syllabus Topic : Web Control Classes	4-2
4.2	The Web Control Tags.....	4-2
✓	Syllabus Topic : List Controls	4-5
4.3	List Controls.....	4-5
4.3.1	The List Item Collection	4-6
4.3.2	Radio Button List and Check Box list.....	4-7
4.3.3	Bulleted Lists and Numbered Lists	4-8
✓	Syllabus Topic : Table Controls	4-8
4.4	Table Controls.....	4-8
✓	Syllabus Topic : Web Controls Events and Auto Post Back	4-9
4.5	Web Controls Events and Post Back.....	4-9
✓	Syllabus Topic : Validation and Understanding Validation	4-11
4.6	Validation.....	4-11
4.6.1	Properties of Base Validator Class.....	4-12
4.6.2	Validation Summary	4-15
✓	Syllabus Topic : Using Validation Control	4-16
4.6.3	Using Validation Control	4-16
✓	Syllabus Topic : Rich Controls	4-19
4.6.4	Rich Controls.....	4-19
✓	Syllabus Topic : Calendar	4-19
4.6.5	Calendar	4-19
✓	Syllabus Topic : AdRotator	4-21
4.6.6	AdRotator.....	4-21



✓	Syllabus Topic : Pages with Multiple View	4-23
4.6.7	Pages with Multiple View	4-23
✓	Syllabus Topic : User controls and Graphics	4-26
4.7	User controls	4-26
4.7.1	Creating a Simple User Control	4-26
4.7.2	User Control Events	4-27
✓	Syllabus Topic : Dynamic Graphics	4-27
4.7.3	Dynamic Graphics.....	4-27
✓	Syllabus Topic : The Chart Control	4-30
4.7.4	The Chart control	4-30
✓	Syllabus Topic : Web Site Navigation	4-32
4.8	Web Site Navigation	4-32
✓	Syllabus Topic : URL Mapping	4-34
4.8.1	URL Mapping	4-34
✓	Syllabus Topic : Routing	4-35
4.8.2	Router	4-35
✓	Syllabus Topic : The Site Map Path Control	4-36
4.8.3	Site Map Path	4-36
✓	Syllabus Topic : The Tree View Control	4-38
4.8.4	TreeView	4-38
4.8.4.1	Events	4-40
✓	Syllabus Topic : The Menu Control	4-41
4.8.5	Menu Control	4-41

UNIT - III

➤	Chapter 5 : Error Handling, Logging and Tracing	5-1 to 5-30
✓	Syllabus Topic : Avoiding Common Errors	5-1
5.1	Common Errors	5-1
5.1.1	Redirecting the user to an error page	5-2
✓	Syllabus Topic : Understanding Exception Handling	5-2
5.1.2	Exception Handling.....	5-2
5.1.3	Exception Classes in C#.....	5-2
✓	Syllabus Topic : Handling Exceptions	5-3
5.1.4	Exception Handling.....	5-3



✓	Syllabus Topic : Throwing Your Own Exception	5-5
5.1.5	Throwing Your Own Exception.....	5-5
5.1.6	Tracing	5-6
✓	Syllabus Topic : State Management	5-8
5.2	State Management.....	5-8
✓	Syllabus Topic : Understanding the Problem of State	5-9
5.2.1	Problem of state.....	5-9
✓	Syllabus Topic : Using View State	5-9
5.2.2	View State	5-9
✓	Syllabus Topic : Transferring Information between Pages	5-10
5.2.3	Transferring Information between Pages	5-10
✓	Syllabus Topic : Using Cookies	5-13
5.2.4	Cookies.....	5-13
✓	Syllabus Topic : Managing Session State	5-14
5.2.5	Session State.....	5-14
✓	Syllabus Topic : Configuring Session State	5-15
5.2.6	Configuring Session State	5-15
✓	Syllabus Topic : Application State	5-16
5.2.7	Application State	5-16
✓	Syllabus Topic : Comparing State Management Options	5-17
5.2.8	Comparing State Management Options	5-17
✓	Syllabus Topic : Styles	5-18
5.3	Styles	5-18
5.3.1	Style Types.....	5-19
5.3.1.1	Setting Inline Style.....	5-20
5.3.1.2	Internal Style Sheet	5-21
5.3.1.3	External Style Sheet	5-21
5.3.1.4	Applying Style Sheet Rules	5-22
✓	Syllabus Topic : Themes	5-22
5.3.2	Themes	5-22
5.3.2.1	Skin File	5-23
5.3.2.2	Applying a Simple Theme	5-24
✓	Syllabus Topic : Master Page Basics	5-25
5.3.3	Master Page.....	5-25



✓	Syllabus Topic : Advance Master Pages	5-28
5.3.4	Advance Master Pages	5-28
5.3.4.1	Nesting Master Pages	5-29

UNIT - IV

➤ Chapter 6 : ADO.Net Fundamentals	6-1 to 6-33
---	--------------------

✓	Syllabus Topic : Understanding Databases	6-1
6.1	Understanding Databases	6-1
✓	Syllabus Topic : Configuring Your DataBase	6-2
6.1.1	Configuring DataBase	6-2
✓	Syllabus Topic : Understanding SQL Basics	6-4
6.1.2	Understanding SQL Basics	6-4
✓	Syllabus Topic : Understanding The Data Provider Model	6-6
6.1.3	Data Provider Model	6-6
✓	Syllabus Topic : Using Direct Data Access	6-6
6.1.4	Using Direct Data Access	6-6
✓	Syllabus Topic : Using Disconnect Data Access	6-10
6.1.5	Using Disconnected Data Access.....	6-10
✓	Syllabus Topic : Introducing Data Binding	6-11
6.2	Data Binding	6-11
✓	Syllabus Topic : Using Single –Value Data Binding	6-12
6.2.1	Single –Value data binding	6-12
✓	Syllabus Topic : Using Repeated-Value Data Binding	6-13
6.2.2	Using Repeated-Value Data Binding	6-13
✓	Syllabus Topic : Working With Data Source Control	6-16
6.2.3	Working with Data Source Control.....	6-16
✓	Syllabus Topic : Data Controls	6-19
6.3	Data Controls.....	6-19
6.3.1	The Grid View.....	6-19
✓	Syllabus Topic : Formatting GridView	6-21
6.3.2	Formatting GridView	6-21
✓	Syllabus Topic : Selecting Grid View Row	6-23
6.3.3	Selecting Grid View Row	6-23
✓	Syllabus Topic : Editing with the Grid View	6-24



6.3.4	Edit Row in Gridview	6-24
✓	Syllabus Topic : Sorting the Grid View	6-26
6.3.5	Sorting	6-26
✓	Syllabus Topic : Paging the Grid View	6-27
6.3.6	Paging.....	6-27
✓	Syllabus Topic : Using GridView Templates.....	6-29
6.3.7	Using GridView Templates.....	6-29
✓	Syllabus Topic : The Details View and Form View	6-29
6.3.8	Details View and Form View.....	6-29
6.3.8.1	Details View	6-29
6.3.8.2	Form View.....	6-31

UNIT - V

➤	Chapter 7 : XML	7-1 to 7-25
✓	Syllabus Topic : XML Explained and the XML Clauses.....	7-1
7.1	XML (eXtensible Markup Language).....	7-1
✓	Syllabus Topic : XML Validation	7-2
7.2	XML Validation	7-2
7.2.1	Well- formed XML document	7-2
7.2.2	Valid XML document	7-3
✓	Syllabus Topic : XML Display and Transform.....	7-4
7.3	XML Display and Transform.....	7-4
7.3.1	Working of XSLT	7-5
7.3.2	Typical Workflow	7-5
7.3.3	XSLT Declaration	7-5
7.3.4	XSLT Processing.....	7-5
✓	Syllabus Topic : Understanding Security Requirements.....	7-6
7.4	Security in ASP.NET	7-6
✓	Syllabus Topic : Authentication	7-7
7.4.1	Authentication	7-7
✓	Syllabus Topic : Authorization.....	7-8
7.4.2	Authorization.....	7-8
7.4.3	Confidentiality.....	7-8
7.4.4	Integrity	7-8



✓	Syllabus Topic : Forms Authentication	7-9
7.5	Forms-Based Authentication.....	7-9
✓	Syllabus Topic : Windows Authentication	7-12
7.6	Windows Authentication.....	7-12
7.7	Passport Authentication.....	7-13
✓	Syllabus Topic : ASP.NET AJAX	7-14
7.8	ASP.NET AJAX.....	7-14
7.8.1	Advantages of Ajax.....	7-16
✓	Syllabus Topic : Understanding Ajax	7-17
7.9	Understanding Ajax.....	7-17
✓	Syllabus Topic : Using Partial Refreshes	7-17
7.10	Using Partial Refreshes	7-17
✓	Syllabus Topic : Using Progress Notification	7-19
7.11	Using Progress Notification	7-19
7.11.1	Properties.....	7-20
7.11.2	Methods.....	7-20
✓	Syllabus Topic : Implementing Timed Refreshes	7-21
7.12	Implementing Timed Refreshes	7-21
✓	Syllabus Topic : Working with the ASP.NET AJAX Control Toolkit	7-24
7.13	Working with Ajax Control Toolkit.....	7-24
7.13.1	Adding the ASP.NET AJAX Control Toolkit Reference to Your Web Site	7-24
7.13.2	To Create an ASP.NET AJAX Web Application in Visual Studio	7-24
➤	Lab Manual	L-1 to L-109
➤	Appendix-A : Solved University Question Papers of Nov. 2018	
	and May 2019	A-1 to A-16
➤	University Question Papers	Q-1 to Q-3

Lab Index

Statement	Name of the Program	Page Nos.
	L.1 Working with basic C# and ASP .NET	L-1
Program 1(a)	Create an application that obtains four int values from the user and displays the product.	L-1
Program 1(b)	Create an application to demonstrate string operations.	L-2
Program 1(c)	Write an application that receives the following information from a set of students : (Student Id, Student Name, Course Name, Date of Birth) The application should also display the information of all the students once the data is Entered. Implement this using an Array of Structures.	L-3
Program 1(d)	Create an application to demonstrate the following operations : (i) Generate Fibonacci series (ii) Test For Prime Numbers (iii) Test For vowels (iv) Use of foreach loop with arrays (v) Reverse a number and find sum of digits of a number	L-5 L-5 L-6 L-8 L-9 L-10
	L.2 Working with object oriented c# and asp.net	L-11
Program 2(a)	Create simple application to perform following operations (i) Finding factorial value (ii) Money Conversion (iii) Quadratic equation (iv) Temperature Conversion	L-11 L-11 L-12 L-15 L-18
Program 2(b)	Create simple application to demonstrate use of following concepts (i) Function Overloading (ii) Inheritance (All Types) (iii) Constructor overloading (iv) Interfaces	L-19 L-19 L-21 L-29 L-32



Statement	Name of the Program	Page Nos.
Program 2(c)	Create simple application to demonstrate use of following concepts	L-34
	(i) Using Delegates and events	L-34
	(ii) Exception Handling	L-35
L.3 Working with Web Forms and Controls		L-37
Program 3(a)	Create a simple web page with various sever controls to demonstrate setting and use of their properties. (Example : AutoPostBack)	L-37
Program 3(b)	Demonstrate the use of Calendar control to perform following operations.	L-41
	(a) Display messages in a calendar control	L-41
	(b) To display vacation in a calendar	L-43
	(c) Selected day in a calendar control using style.	L-45
	(d) Difference between two calendar dates	L-48
Program 3(c)	Demonstrate the use of Treeview control perform following operations.	L-50
	(a) Treeview control and datalist	L-50
	(b) TreeView Operations	L-52
L.4 Working with Form Controls		L-55
Program 4(a)	Create registration form to demonstrate the use of various validation controls	L-55
Program 4(b)	Create Web Form to demonstrate use of Adrotator Control.	L-57
Program 4(c)	Create Web Form to demonstrate use User Controls.	L-58
L.5 Working with Navigation, Beautification and Master page.		L-61
Program 5(a)	Create Web Form to demonstrate use of Website Navigation controls and Site Map.	L-61
Program 5(b)	Create a web application to demonstrate use of Master Page with applying Styles and Themes for page beautification.	L-64
Program 5(c)	Create a web application to demonstrate various states of ASP.NET Pages.	L-67



Statement	Name of the Program	Page Nos.
	L.6 Working with database	L-71
Program 6(a)	Create a web application bind data in a multiline textbox by querying in another textbox.	L-71
Program 6(b)	Create a web application to display records by using database.	L-72
Program 6(c)	Demonstrate the use of data link control.	L-74
	L.7 Working with Database	L-76
Program 7(a)	Create a web application to display Databinding using dropdownlist control.	L-76
Program 7(b)	Create a web application for to display the phone no of an author using database.	L-77
Program 7(c)	Create a web application for inserting and deleting record from a database. (Using Execute-Non Query).	L-79
	L.8 Working with data control	L-82
Program 8(a)	Create a web application to demonstrate various uses and properties of Sql Data Source.	L-82
Program 8(b)	Create a web application to demonstrate data binding using DetailsView and FormView Control.	L-85
Program 8(c)	Create a web application to display Using Disconnected Data Access and Databinding using GridView.	L-88
	L.9 Working With Grid View Control	L-89
Program 9(a)	Create a web application to demonstrate use of GridView control template and GridView hyperlink.	L-89
Program 9(b)	Create a web application to demonstrate use of GridView button column and GridView events.	L-92
Program 9(c)	Create a web application to demonstrate GridView paging and Creating own table format using GridView.	L-93
	L.10 Working with AJAX and XML	L-94
Program 10(a)	Create a web application to demonstrate reading and writing operation with xml.	L-94

Statement	Name of the Program	Page Nos.
Program 10(b)	Create a web application to demonstrate Form Security and Windows Security with proper Authentication and Authorization properties.	L-96
	(i) AIM : To Implementing Forms-Based Security for a website.	L-96
	(ii) AIM: To change the authentication mode to Windows for a web page of Employee	L-104
	(iii) AIM : To change the authorization mode of Employee page so that only users who have logged in as MANAGER will have the authority to access the page	L-104
Program 10(c)	Create a web application to display time in textbox when user clicks on show time button. Implement 2 second delay in between, and within 2 second delay display message please wait for sometime(using AJAX control).	L-105
	L.11 Program to Create and Use DLL	L-107
Program 11(a)	Create a program by using DLL.	L-107