

Chapter 1 : Introduction to Web Technology 1-1 to 1-48

1.1 Web Essentials : Clients, Servers and Communication..... 1-1

1.2 HTML5 – Fundamental Syntax and Semantics 1-7

 1.2.1 HTML Basics..... 1-7

 1.2.2 Tables..... 1-10

 1.2.3 List..... 1-15

 1.2.4 Image..... 1-18

 1.2.5 HTML5 Control Elements..... 1-20

 1.2.6 Semantic Elements 1-21

 1.2.7 Drag and Drop in HTML..... 1-25

1.3 CSS31-30

 1.3.1 Inline CSS..... 1-31

 1.3.2 Internal/Embedded CSS 1-31

 1.3.3 External CSS 1-32

 1.3.4 Basics of Bootstrap 1-43

Chapter 2 : Front End Development 2-1 to 2-56

2.1 Java Script : An introduction to JavaScript..... 2-1

 2.1.1 Introduction to ES6..... 2-1

 2.1.2 New Features in ES6..... 2-2

 2.1.3 Difference between ES5 & ES6..... 2-8

2.2 JavaScript DOM Model..... 2-8

2.3 Date and Objects2-11

2.4 Regular Expressions2-13

2.5 Exception Handling.....2-15

2.6	Validation-Built-in objects-Event Handling.....	2-17
2.6.1	eval.....	2-17
2.6.2	parseInt.....	2-18
2.6.3	parseFloat.....	2-19
2.6.4	escape.....	2-19
2.6.5	unescape.....	2-20
2.6.6	Array Object:.....	2-20
2.6.7	Boolean Object.....	2-21
2.6.8	Date Object.....	2-22
2.6.9	Math Object.....	2-23
2.6.10	Number Object.....	2-23
2.6.11	String Object.....	2-23
2.6.12	Events.....	2-23
2.7	DHTML with JavaScript.....	2-24
2.8	JSON introduction.....	2-26
2.9	JSON Syntax.....	2-27
2.10	Function Files.....	2-28
2.11	Http Request -SQL.....	2-29

Chapter 3 : Back End Development	3-1 to 3-42
---	--------------------

3.1	Servlet - Introduction.....	3-1
3.2	Java Servlet Architecture.....	3-2
3.3	Servlet Life Cycle.....	3-3
3.3.1	The init() Method.....	3-3
3.3.2	The service() Method.....	3-3
3.3.3	The doGet() Method.....	3-4



3.3.4	The doPost() Method	3-4
3.3.5	The destroy() Method.....	3-4
3.3.6	Servlets – Examples	3-5
3.4	Form GET and POST Actions	3-7
3.4.1	GET Method.....	3-7
3.4.2	POST Method	3-8
3.5	Session Handling.....	3-13
3.6	Understanding Cookies	3-14
3.6.1	Types of Cookie.....	3-14
3.6.2	Advantage of Cookies.....	3-15
3.6.3	Disadvantage of Cookies.....	3-15
3.6.4	Constructor of Cookie Class	3-15
3.6.5	Useful Methods of Cookie Class.....	3-15
3.6.6	Other Methods Required for Using Cookies.....	3-15
3.6.7	Simple Example of Servlet Cookies	3-16
3.7	Installing and Configuring Apache Tomcat Web Server	3-17
3.8	Database Connectivity.....	3-17
3.8.1	JDBC perspectives.....	3-18
3.8.2	JDBC program example	3-19
3.9	JSP : Understanding Java Server Pages.....	3-21
3.9.1	JSP - Architecture	3-22
3.9.2	JSP Processing	3-23
3.9.3	JSP - Life Cycle	3-23
3.9.4	JSP Compilation	3-24
3.9.5	The Scriptlet.....	3-24

3.10 JSP Standard Tag Library (JSTL)	3-25
3.10.1 JSP Declarations.....	3-25
3.10.2 JSP Expression.....	3-26
3.10.3 JSP Comments.....	3-26
3.10.4 JSP Directives.....	3-27
3.10.5 JSP Actions	3-28
3.10.6 JSP Implicit Objects	3-28
3.11 Control-Flow Statements	3-31
3.11.1 Decision-Making Statements	3-31
3.11.2 Loop Statements.....	3-32
3.11.3 JSP Operators.....	3-33
3.11.4 JSP Literals	3-34
3.12 Creating HTML forms by Embedding JSP Code	3-34

Chapter 4 : Rich Internet Application (RIA)	4-1 to 4-28
--	--------------------

4.1 Rich Internet Application	4-1
4.1.1 Difference between Desktop Application, Traditional web Application, Rich Internet Application.....	4-1
4.1.2 Characteristics of Rich Internet Application.....	4-2
4.2 Introduction to AJAX	4-3
4.2.1 AJAX design Basic	4-3
4.2.1(A) Steps in AJAX.....	4-4
4.2.2 AJAX Vs Traditional Approach	4-4
4.2.2(A) Understanding Traditional Web Application.....	4-4
4.2.2(B) Steps of interaction between client and server in Traditional Web Application Approach.....	4-5
4.2.2(C) Limitations of Tradition Approach.....	4-5
4.2.3 Understanding the Web Application that uses AJAX.....	4-6



4.2.3(A) Block Diagram OF Functioning of AJAX Web Application.....	4-6
4.2.3(B) Steps of Interaction between Client and Server in AJAX Web Application Approach.....	4-7
4.2.3(C) AJAX Components.....	4-8
4.2.3(D) Advantages of AJAX Enabled Web Applications.....	4-8
4.2.3(E) Limitations of AJAX Enabled Web Applications.....	4-8
4.2.4 Difference between Traditional Approach and AJAX.....	4-9
4.3 Rich Internet Application using AJAX.....	4-9
4.3.1 XMLHttpRequest Object.....	4-9
4.4 JQuery Framework with AJAX.....	4-17

Chapter 5 : Web Extension PHP and XML	5-1 to 5-52
--	--------------------

5.1 Introduction to XML.....	5-1
5.1.1 What is XML?	5-1
5.1.2 Difference Between XML and HTML.....	5-2
5.1.3 XML is Simplified way of storing and transferring data	5-2
5.1.4 How to use XML?.....	5-3
5.1.5 XML Tree Structure.....	5-3
5.1.6 Comments in XML.....	5-4
5.1.7 XML Elements.....	5-4
5.1.8 XML Naming Rules	5-5
5.1.9 XML DTD.....	5-6
5.1.10 XML Schema.....	5-7
5.1.11 XML DOM : XML Document Object Model.....	5-8
5.1.12 Programming Interface	5-9
5.1.13 XML Parser	5-9
5.1.14 XSLT Example.....	5-11

5.2	Introduction to PHP	5-12
5.2.1	What is scripting Language?	5-12
5.2.2	Features of PHP language.....	5-12
5.3	Data Types, Control Structure, Built in Functions etc.....	5-13
5.3.1	My First PHP program to print “Hello World”.....	5-13
5.3.2	Comments in PHP	5-14
5.3.3	Variable in PHP	5-15
5.3.4	PHP Data Types	5-17
5.3.5	PHP Operators.....	5-20
5.3.6	Control Structure	5-27
5.3.7	Developing Web Application Using PHP.....	5-29
5.3.8	PHP and MYSQL database Connectivity.....	5-39
5.3.9	Tracking user: Session in PHP.....	5-49

Chapter 6 :	React js	6-1 to 6-20
--------------------	-----------------	--------------------

6.1	Introduction.....	6-1
6.1.1	What is NPM ?.....	6-2
6.1.2	NPM Installation.....	6-2
6.2	React features	6-3
6.2.1	How React JS Works ?	6-3
6.2.2	Project Structure	6-4
6.2.3	Running App	6-4
6.2.4	Scripts	6-5
6.2.5	Components	6-5
6.3	App “Hello World” Application	6-6
6.4	Introduction to JSX	6-11
6.5	Simple Application using JSX.....	6-14
