WEB PROGRAMMING
(Common to CSE & IT)

Course Code :13CT1116

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Course Educational Objectives:

The main objective of the course is to expose the students to different web technologies and prepare him to design , develop and maintain a web site .

❖ Describe and explain the relationship among HTML, XHTML, CSS, JavaScript, XML and other web technologies.

❖ Create and publish advanced HTML pages with the help of frames, scripting languages, and CSS.

❖ understand and use JavaScript variables, control structures, functions, arrays, and objects.

❖ Understand and develop XML Technologies such as XML Schemas, XSLT.

❖ Understand and develop Server-Side Programming using Servlets and JSP's.

❖ Develop web pages using AJAX and PHP.

Course Outcomes:

At the end of the course the student should be able to

❖ Describe and explain the relationship among HTML, XHTML, CSS, JavaScript, XML and other web technologies.

❖ Create and publish advanced HTML pages with the help of frames, scripting languages, and CSS.

❖ Understand and use JavaScript variables, control structures, functions, arrays, and objects. Understand and develop XML Technologies such as XML Schemas, XSLT.

❖ Understand and develop Server-Side Programming using Servlets and JSP's.

❖ Develop web pages using AJAX and PHP.

UNIT-I   (14 Lectures)

INTRODUCTION TO HTML5:

Part 1, Introduction to HTML5: Part 2: New HTML5 Form input Types, Introduction to Cascading Style Sheets: Part 1: Inline Styles, Embedded Style Sheets , Conflicting Styles , Linking External Style Sheets (Text Book : 1)

Java Script: Introduction to scripting, Control Structures-I, Control Structures-II, Functions, Arrays, Objects. (Text Book: 1)

UNIT-II   (8 Lectures)

XML: Introduction, XML Basics, Structuring Data, XML Namespaces, Document Type Definitions (DTDs), W3C XML Schema Documents, XML Vocabularies, Extensible Stylesheet Language and XSL Transformations, Document Object Model (DOM): Objects and Collections(Text Book : 1)

UNIT-III   (14 Lectures)

DATABASE ACCESS:

Overview of JDBC, JDBC Drivers, Connecting to a Database, The Statement Interfaces, Result Sets, Using Metadata (Text Book: 3)

SERVLETS :

The Life Cycle of a Servlet, Using Tomcat for Servlet Development, A Simple Servlet, The Servlet API, The javax.servlet Package , Reading Servlet Parameters, The javax.servlet.http Package, Handling HTTP Requests and Responses, Cookies, Session Tracking(Text Book : 2)

UNIT-IV   (12 Lectures)

JSP:

JSP Overview, How JSP Works , A Basic Example, JSP Syntax and Semantics: The JSP Development Model, Components of a JSP Page: Directives, Comments, Expressions, Scriptlets, Declarations, implicit objects, Standard Actions, Tag Extensions, A Complete Example (Text

Book : 3)Expressions , Scriptlets, Expression and Scriptlet Handling by the JSP Container, Implicit Objects and the JSP Environment, Initialization Parameters,

Request Dispatching: Anatomy of Request Processing, include Directive, The <jsp:include> Action, Forwarding Requests , RequestDispatcher Object (Text Book : 3)

UNIT-V   (12 Lectures)

AJAX-ENABLED RICH INTERNET APPLICATIONS WITH XML AND JSON:

Traditional Web Applications vs. Ajax Applications, Rich Internet Applications (RIAs) with Ajax, History of Ajax, Ajax Example Using the XMLHttpRequest Object, Using XML and the DOM, Creating a Full-Scale Ajax-Enabled Application

PHP: Introduction, Simple PHP Program, Converting Between Data Types, Arithmetic Operators, Initializing and Manipulating Arrays, String Comparisons, String Processing with Regular Expressions, Form Processing and Business Logic, Reading from a Database (Text Book : 1)

TEXT BOOKS :

1. Dietel and Dietel : *"Internet and World Wide Web - How to Program"*, 5th Edition, PHI/Pearson Education, 2011

2. Herbert Schildt, *"The complete Reference Java 2"*, 8th Edition, TMH, 2011.

3. Phil Hanna: *"The Complete Reference JSP"*, 1st Edition, TMH, 2003.

REFERENCES:

1. Hans Bergsten : *"Java Server Pages"*, 3rd Edition, O'Reilly publication, 2008.

2. Raj Kamal, *"Internet & Web technologies"*, 8th Edition , Tata McGraw-Hill, 2007.

3. Chris Bates, *"Web Programming, building internet applications"*, 2nd Edition, WILEY, Dreamtech, 2008.

4. Xavier. C, *"Web technology and design"*, 1stEdition, New Age International, 2011.

5. Marty Hall and larry Brown, *"Core servlets and java Server pages volume 1: core   technologies"*, 2nd Edition, Pearson Eduacation, 2007.

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