IT2353 WEB TECHNOLOGY

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OBJECTIVES

- It enables students to explain the Basic concept of HTML, XHTML, Internet and Internet protocol.
- It focus on the concept of Cascading style sheet, JavaScript programming.
- It enables students to explain the Basic DOM, Servlet and session tracking.
- It enables students to explain XML, Ajax, XSLT, Java Bean and MVC Architecture.
- It focuses on the concept of web service creation, XML schema, SOAP, WSDL and Servlet using database.

UNIT I **9**

Web Essentials: Clients, Servers, and Communication. The Internet-Basic Internet Protocols -The World Wide Web-HTTP request message-response message-Web Clients Web Servers-Case Study. Markup Languages: XHTML. An Introduction to HTML History-Versions-Basic XHTML Syntax and Semantics-Some Fundamental HTML Elements-Relative URLs-Lists-tables-Frames-Forms-XML Creating HTML Documents Case Study.

UNIT II **9**

Style Sheets: CSS-Introduction to Cascading Style Sheets-Features-Core Syntax-Style Sheets and HTML Style Rule Cascading and Inheritance-Text Properties-Box Model Normal Flow Box Layout-Beyond the Normal Flow-Other Properties-Case Study. Client- Side Programming: The JavaScript Language-History and Versions Introduction JavaScript in Perspective-Syntax-Variables and Data Types - Statements-Operators-Literals-Functions-Objects-Arrays-Built-in Objects-JavaScript Debuggers.

UNIT III **9**

Host Objects : Browsers and the DOM-Introduction to the Document Object Model DOM History and Levels-Intrinsic Event Handling-Modifying Element Style-The Document Tree-DOM Event Handling-Accommodating Noncompliant Browsers Properties of window-Case Study. Server-Side Programming: Java Servlet- Architecture -Overview-A Servlet-Generating Dynamic Content-Life Cycle-Parameter Data-Sessions-Cookies- URL Rewriting-Other Capabilities-Data Storage Servlet and Concurrency-Case Study- Related Technologies.

UNIT IV **9**

Representing Web Data: XML-Documents and Vocabularies-Versions and Declaration - Namespaces JavaScript and XML: Ajax-DOM based XML processing Event-oriented Parsing: SAX-Transforming XML Documents-Selecting XML Data :XPATH-Template based Transformations: XSLT-Displaying XML Documents in Browsers-Case Study- Related Technologies. Separating Programming and Presentation: JSP Technology Introduction-JSP and Servlet-Running JSP Applications Basic JSP-JavaBeans Classes and JSP-Tag Libraries and Files-Support for the Model-View-Controller Paradigm-Case Study-Related Technologies.

UNIT V **9**

Web Services: JAX-RPC-Concepts-Writing a Java Web Service-Writing a Java Web Service Client-Describing Web Services: WSDL- Representing Data Types: XML Schema-Communicating Object Data: SOAP Related Technologies-Software Installation-Storing Java Objects as Files-Databases and Java Servlet.

OUTCOMES

- Know regarding internet related technologies. Systematic way of developing a website.
- Design dynamic and interactive web pages by embedding Java Script code in HTML. Use Java Script to validate user input.
- Know the advantages and use of different types of CSS.
- Understand the HTML and XML DOM. Know how to use Dynamic HTML.
- Efficiently write Java Servlet.
- Understand the fundamentals of AJAX and JSP.
- Understand the fundamentals of Web Services.

TEXT BOOK

1. Jeffrey C.Jackson, "Web Technologies--A Computer Science Perspective", Pearson Education, 2006.

REFERENCES

1. Robert. W. Sebesta, "Programming the World Wide Web", Fourth Edition, Pearson Education, 2007.
2. Deitel, Deitel, Goldberg, "Internet & World Wide Web How To Program", Third Edition, Pearson Education, 2006.
3. Marty Hall and Larry Brown,"Core Web Programming" Second Edition, Volume I and II, Pearson Education, 2001.
4. Bates, "Developing Web Applications", Wiley, 2006.

IT2357 WEB TECHNOLOGY LAB **L T P C**
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OBJECTIVES

1. Learn how to combine basic HTML elements to create Web pages.
2. Learn how to add absolute URLs, relative URLs, and named anchors to your Web pages.
3. Understand the concept of Servlet.
4. Know the Servlet API.
5. To create asynchronous application using Asynchronous JavaScript and XML

LIST OF EXPERIMENTS

1. Create a web page with the following using HTML
   i) To embed an image map in a web page
   ii) To fix the hot spots
   iii) Show all the related information when the hot spots are clicked.

2. Create a web page with all types of Cascading style sheets.
3. Client Side Scripts for Validating Web Form Controls using DHTML
4. Write programs in Java to create applets incorporating the following features:
   - ☐ Create a color palette with matrix of buttons
   - ☐ Set background and foreground of the control text area by selecting a color from color palette.
   - ☐ In order to select Foreground or background use check box control as radio buttons
   - ☐ To set background images
5. Write programs in Java using Servlet:

To invoke Servlet from HTML forms

- ☐ To invoke Servlet from Applets

6. Write programs in Java to create three-tier applications using JSP and Databases
   - ☐ for conducting on-line examination.
   - ☐ for displaying student mark list. Assume that student information is available in a database which has been stored in a database server.
7. Programs using XML – Schema – XSLT/XSL
8. Programs using AJAX
9. Consider a case where we have two web Services- an airline service and a travel agent and the travel agent is searching for an airline. Implement this scenario using Web Services and Data base.

OUTCOMES

- To understand the concepts of website designing
- To understand the concepts of client & server side programming.
- To understand the concept for building a web page with all types of cascading style sheets.
- To understand Client Side Scripts for Validating Web Form Controls and for building interactive and animated websites using DHTML.
- To understand the concepts for building client side asynchronous web applications with interrelated web development techniques like AJAX(Asynchronous JavaScript and XML).