17HS063 Web Technologies

Course Objective

- To provide knowledge on web architecture, web services, client side and server side scripting technologies to focus on the development of web-based information systems and web services.
- To provide skills to design interactive and dynamic web sites.

Course Outcome

1. To understand the web architecture and web services.
2. To practice latest web technologies and tools by conducting experiments.
3. To design interactive web pages using HTML and Style sheets.
4. To study the framework and building blocks of .NET Integrated Development Environment.
5. To provide solutions by identifying and formulating IT related problems.

Unit I

Client/Server Architecture, J2EE Multi Tier Architecture. HTML Common tagsBlock Level and Inline Elements, Lists, Tables, Images, Forms, Frames; Cascading Style sheets, CSS Properties

Unit II

Introduction to Java Script, Objects in Java Script, Dynamic HTML with Java Script. The Need for XML, SGML and XML, Well-Formed XML, Valid XML, Displaying XML, XML Application Languages, Document type definition, XML Schema.

Unit III

Data Base, Database Schema, A Brief Overview Of The JDBC Process, JDBC Driver Types, JDBC Packages, Database Connection, Associating The JDBCODBC Bridge With Database, Creating, Inserting, Updating And Deleting Data In Database Tables, Result Set, Metadata.

Unit IV

Tomcat web server, Introduction to Servlets: Servlets, the Advantage of Servlets over "Traditional" CGI, Basic Servlet Structure, Simple Servlet Generating Plain Text, Compiling and Installing the Servlet, Invoking the Servlet, Lifecycle of a Servlet, The Servlet API, Reading Servlet parameters, Reading Initialization parameters, Context Parameters, Handling Http Request & Responses, Using Cookies-Session Tracking, Servlet with JDBC.

Unit V

The Problem with Servlet. The Anatomy of a JSP Page, JSP Processing, JSP Application Development: Generating Dynamic Content, Using Scripting Elements, Implicit JSP Objects, Declaring Variables and Methods , Sharing Data Between JSP pages, Users Passing Control

and Data between Pages, JSP application design with JDBC, JSP Application Design with MVC.

Text Books:

1. Beginning Web Programming-Jon Duckett, WROX, 2008.

2. Core Servlets and Java Server pages Vol. 1: Core Technologies By Marty Hall and Larry Brown Pearson, 2006.

References:
1. Harvey M. Deitel and Paul J. Deitel, **"Internet & World Wide Web How to Program", 4/e,** Pearson Education.
2. Uttam Kumar Roy, Web Technologies from Oxford University Press
3. Jason Cranford Teague "Visual Quick Start Guide CSS, DHTML & AJAX", 4e, "Pearson Education.
4. Tom Nerino Doli smith "JavaScript & AJAX for the web" Pearson Education 2007.
5. Joshua Elchorn "Understanding AJAX" Prentice Hall 2006.
6. Hal Fulton "The Ruby Way", 2e, Pearson Education 2007.
7. David A. Black "Ruby for rails" Dreamtech Press 2006.
8. Bill Dudney, Johathan lehr, Bill Willies, Lery Mattingly "Mastering Java Server Faces" Wiely India 2006.