

Year 3: Semester VI

BCA-601: Web Technology (Elective 1)

Web2.0 and XHTML

What Is Web 2.0? Introduction to Web 2.0 terms: Search, Content Networks, Blogging, Social Networking, Social Media, Rich Internet Applications (RIAs), Web Services, Introduction to XHTML, Syntactic Differences between HTML and XHTML, Standard XHTML Document Structure, An example of XHTML covering Basic Syntax, Images, Hypertext Links, Lists and Tables, Creation of an XHTML Form, Internal Linking and MetaElements.

Introduction to XML

XML Basics, XML Document Structure, XML Name-spaces, Document Type Definitions, XML Schema, Displaying XML Documents, XSL and CSS.

Programming with Java Script – DOM and Events

The Document Object Model, Element Access in Java Script, Traversing and Modifying a DOM Tree, DOM Collections and Styles, Events, Examples of Event Handling from Body, Button, Text Box and Password Elements, Dynamic Documents using JavaScript – element moving, visibility, positioning etc., Example program (s), Introduction and example of AJAX.

The Server Side Scripting

Server side scripting and its need, Two-Tier, Three-Tier, N-Tier and Enterprise Architecture, Various Languages / Technologies for server scripting, HTTP Methods (such as GET, POST, HEAD, and so on), Purpose, Technical characteristics, Method selection, Use of request and response primitives, Web container – Tomcat.

JSP – Basics

Basic JSP Life-cycle, JSP Directives and Elements, Script-lets, Expressions, Action Elements, Standard Actions, Comments and Template Data, JSP variables, The out Object, Request, response, sessions and application objects.

JSP Applications

Exceptions and exception handling using JSP, Cookies and sessions, Managing Email using JSP.

JSP Application Development

Example applications using JSP, What is JDBC? Need for JDBC, Database Drivers, Connection using JDBC API, Application development and deployment.

Text Books:

1. Ivan Bay Ross- Web Enable Commercial Application Using HTML, DHTML, BPB Publication
2. Michel Morrison -HTML and XML for Beginners, PHI, New Delhi- 2001
3. H.M Diatal and P.J Diatal -Java How to Program, PHI, New Delhi- 2005

Reference Book:

1. Java Server Side Programming -WROX Publication
2. David S. Plat : Introducing Microsoft .Net, Microsoft Press.

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BCA-602 : CONCEPT OF DATA MINING AND DATA WAREHOUSING (Elective 2)

Introduction : Data Mining – Motivation, Importance of DM Functionalities, Basic Data Mining Tasks, DM Applications, and Social Implications

Data Warehousing : Differences between Operational Database and Data Warehouse – Multi-dimensional Data Model - From Tables to Data Cubes. Schemas, Measures, DW Implementation – Efficient Computation of Data Cubes.

Data Reprocessing, Data Mining Primitives, Languages : Data Cleaning, Data Integration and Transformation, Data Reduction, Discretization and concept of Hierarchy Generation, Task relevant Data, Background Knowledge, Presentation and Visualization of Discovered Patterns.

Data Mining Algorithms : Association Rule Mining, Classification and Prediction – Decision Tree, Bayesian Classification Back Propagation, Cluster Analysis, Outlier Analysis.

Web, Temporal and Spatial Data Mining : Web Content Mining, Web Structure Mining, Web Usages Mining, Spatial Mining, Generalization and specialization, Spatial Rules, Spatial Classification and Clustering Algorithms, Temporal Mining, Modeling Temporal Events, Times Series, Pattern Detection, Sequences.

Reference Books :

1. Jiawei I-lan & Micheline Kambler, "Data Mining: Concepts and Techniques", Harcourt India Pvt. Ltd., First Indian Reprint, 2001
2. Margaret H. Dunham, "Data Mining : Introduction and Advance Topics", Pearson Education, First Indian Reprint, 2003
3. Arun K. Pujari, "Data Mining Techniques", University Press (India) Limited, First edition, 2001
4. Efrem O, Mallach, "Decision Support and Data Warehousing Systems", Mcgraw-Hill International Edition, 2000

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BCA-603 E-COMMERCE

Introduction to E-commerce: E-commerce: The revolution is just beginning, The visions and forces behind E-commerce, Understanding E-commerce.

E-commerce business models and concepts: E-commerce business models, Major business-to-consumer (B2C) business models; Major business-to-business (B2B) business models, Business models in emerging E-commerce areas, How the internet and the Web change business.

E-commerce infrastructure: The Internet, Technology background, The internet today, The world wide web. **Building an E-commerce web site:** A systematic approach, choosing server software, choosing the hardware for an E-commerce site, other E-commerce site tools.

Security and Encryption: The E-commerce security environment, Security threats in the E-commerce environment, Technology solutions, Policies, Procedures and Laws.

E-commerce payment systems: Payment systems, Credit card E-commerce transactions, E-commerce digital payment systems in the B2C arena, B2B payment systems. Ethical, Social, and Political issues in E-commerce: Understanding ethical, social, and political issues in E-commerce, Privacy and information rights, Intellectual property rights, Governance, Public safety and welfare.

Text Book:

1. K.C. Laudon & C.G. Traver, E-commerce, Pearson Education, 2003.

Reference Books:

1. R. Kalakota & A.B. Whinston-' Frontiers of Electronic Commerce, Pearson Education- 2006.
2. K.K. Bajaj & D. Nag- E-Commerce, Tata McGraw Hill, New Delhi, Second Edition.

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