

**III/IV B. TECH. SECOND SEMESTER
ADVANCED JAVA & WEB TECHNOLOGIES LAB(Required)**

Course Code: CS 6L1**Credits: 2****Lab Hours: 3 periods/ week****Internal assessment: 25 Marks****Semester end examination: 50 Marks**

Prerequisites: Advanced Java & Web Technologies

Course Objectives:

Create a fully functional website to develop an online book store

1. HyperText Markup Language (HTML) and Cascading Style Sheets (CSS) for laying out (formatting) pages that contain text, images and graphics.
2. Extensible Markup Languages (XML is used to store and transport data among webpages), a mechanism for defining new tag sets and interchanging data among web applications.
3. Client-side Programming using JavaScript for validating the data.
4. Creation of software components (objects used for client and server communication) using Beans.
5. Server-Side Programming using servlets are to generate static content and Java Server Pages are used to generate dynamic content.
6. Creating a pure Dynamic Web Application which retrieves the data from Database according to the client request using JDBC.

Course Outcomes:

At the end of this course student will:

- CO1) Create and Mange static web pages for given scenario
- CO2) Apply server side technologies to establish dynamic applications
- CO3) Implement web applications with effective data management
- CO4) Develop secure web applications with session management API's

Syllabus:**Exercise 1: To practice HTML fundamental constructs.**

1. Headings
2. Links
3. Paragraph
4. Images
5. Tables

Exercise 2: To practice HTML fundamental constructs.

6. Frames
7. Forms and HTML controls

Exercise 3: Project on HTML fundamentals Exercise**4: To practice Cascading style sheets**

8. Internal
9. External
10. Inline

Exercise 5: To practice JavaScript and DHTML

11. Simple Programs
12. Handling Events
13. Objects in JavaScript

Exercise 6: Project on DHTML**Exercise 7: To practice XML**

- Presenting XML using XSLT

Exercise 8: To practice JDBC connectivity

14. Statement
15. PreparedStatement

Exercise 9: To practice Servlet programming

- 16. Simple servlet Programming
- 17. Understanding Life cycle Methods

Exercise 10: To practice Servlet programming

- 18 Working with initialization parameters
- 19. RequestDispatcher interface

Exercise 11: To practice JSP

- 20. JSP basic tags
- 21. Implicit objects

Exercise 12: To practice JSP

- 22. Working with Action tags

Learning Resource**Text Books**

1. Web Technologies, Black Book, Kogent Learning Solutions Inc, Dreamtech Press.
2. JDBC, Servlets, and JSP, New Edition, Santhosh Kumar K, Kogent Learning Solutions Inc, Dreamtech Press.