

Building Rich Web Applications with AJAX and DHTML

Course Summary

Description

This course will introduce the student to the techniques and concepts used to program with Asynchronous JavaScript and XML (AJAX), including the generation of XML on the server and the manipulation of a web page using JavaScript and CSS (DHTML). Through hands-on exercises, the student will learn to open an AJAX connection to request additional information from the server, to utilize Java on the server to respond to the AJAX request, and to create web pages that react intelligently to the response from the server.

Topics

- Introduction to Ajax
- Ajax on the Client-Side
- Ajax on the Server-Side
- DHTML
- Ajax JavaScript Libraries
- JSON
- DWR

Prerequisites

The student should have experience with HTML, JavaScript and Server Side Java (Servlets and JSP).

Audience

This course is designed for Web Developers who are familiar with HTML, CSS, and JavaScript, and who want to create more efficient, effective and intelligent web pages.

Duration

Four days

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Course Outline

- I. Introduction to Ajax**
 - A. Techniques Used Before Ajax
 - B. Why Use Ajax?
 - C. Benefits of Ajax
 - D. Drawbacks of Ajax
 - E. The Partial Page Reload
- II. Ajax on the Client-Side**
 - A. The XMLHttpRequest Object
 - B. Cross-Platform Instantiation of XMLHttpRequest
 - C. Methods Used to Create an Ajax Request
 - D. Ajax Ready States
 - E. Synchronous vs. Asynchronous
 - F. Overwriting the onreadystatechange Handler
 - G. Parsing XML with JavaScript
- III. Ajax on the Server-Side**
 - A. XML Generation Techniques
 - B. Ajax and Java Servlets
 - C. Ajax and JSPs
 - D. Building XML with the DOM
 - E. Generating XML with JAXB
- IV. DHTML**
 - A. JavaScript and the DOM
 - B. Proper Use of CSS
 - C. Creating Animations
 - D. Dynamic Forms
 - E. Hiding/Showing Page Components
- V. Ajax JavaScript Libraries**
 - A. Prototype
 - B. Scriptaculous
 - C. JQuery
 - D. Dojo
- VI. JSON**
 - A. What is JavaScript Object Notation?
 - B. JSON vs. XML
 - C. Generating JSON in Java on the Server-Side
 - D. Receiving JSON on the Client-Side
- VII. DWR**
 - A. What is Direct Web Remoting?
 - B. DWR Callbacks
 - C. DWR and JSON
 - D. DWR Security
 - E. Reverse Ajax