Web Languages Series – Course 1:
JavaScript Fundamentals (October 2002)

JavaScript Fundamentals is a 12-hour course that teaches developers how to use the features of the JavaScript language to design client-side, platform-independent solutions. Students learn how to write JavaScript programs, script for the JavaScript object model, control program flow, validate forms, animate images, target frames, and create cookies. Students will also understand and use the most popular applications of JavaScript.

Topics

Introduction to JavaScript
Origins of JavaScript
JavaScript Characteristics
Common Programming Concepts
Java and JavaScript
Server-Side vs. Client-Side Applications
Annotating Code with Comments

Working with Variables and Data
Communicating with the User
Using Data More Than Once: Variables
JavaScript Expressions
Operators
Inline Scripting, Simple User Events, and
    the *onLoad* and *onUnload* Event
    Handlers
Keywords and Reserved Words

Functions, Methods and Events
Functions
Defining a Function
Calling a Function
User and JavaScript Event Handlers
Methods as Functions

Controlling Program Flow
Controlling Decisoinal Program Flow
The *if...else* Statement
The *while* Statement
The *do...while* Statement
The *for* Statement
The *break* Statement
The *continue* Statement
The *switch* Statement

The JavaScript Object Model
The JavaScript Object Model
Commonly Used Objects
The *window* Object
The *document* Statement
The *with* Object
The *image* Object
The *history* Object
The *location* Object
The *navigator* Object

JavaScript Language Objects
JavaScript Language Objects
The *String* Object
Additional *String* Object Methods
Evaluating Strings
Regular Expressions
The *Array* Object
The *Date* Object
Setting and Extracting Time Information
The *Math* Object

Developing Interactive Forms
Interactive Forms
Overview of Form Elements
Referring to *form* Element
The *form* Object
The *button* Object
The *checkbox* Object
The *text* and *textarea* Objects
The *radio* Object
The *select* Object
Multiple-Selection Lists
Form Validation

Cookies and JavaScript Security
Security and Cookies
What Are Cookies?
How Are Cookies Sent?
Who Can Send Cookies?
Storing Cookies
Why Use Cookies?
Assigning a Cookie
Testing for Cookie Presence
Clearing a Cookie
Controlling Cookies in the Browser
JavaScript Security Issues

Controlling Frames in JavaScript
Using Frames and Windows
Targeting Frames in JavaScript
Changing Two or More Frames
Frames, Functions and Variables
Targeting Windows
Windows, Functions and Variables

Custom JavaScript Objects
Creating Custom Objects
Custom Object Demonstration
Creating the Object: The Contructor
Creating an Instance of a Custom Object
Creating Object Methods
Creating Functions for Your Objects
Complex Custom Objects

Target Audience

Webmasters, software developers, application programmers, client/server developers, and desktop publishers.

Job Responsibilities

Implement and maintain hypertext-based Web sites using authoring and scripting languages; apply human-factors principles to design; create Web content; and use Web management tools and digital media tools.

Prerequisites

Students must have CIW Foundations certification or equivalent experience, and be proficient in Hypertext Markup Language (HTML) authoring. No previous programming experience is required.

Duration

12 hours