AJAX Duration: 3 days Price: £750 + vat	This 3-day AJAX Training course provides a comprehensive practical introduction to AJAX. AJAX (Asynchronous Java and XML) is a powerful platform for building dynamic web applications with extensive client-side interactivity. Unlike older approaches, which reload the web page with every postback, AJAX uses the JavaScript Document Object Model, XML, and CSS to display only the content that needs to change. Sites created using AJAX can automatically react to user input, be updated when fields are completed (but not submitted), and overall act much more like a desktop application.

AJAX Training Course Objectives:

On completion of this AJAX Training course, delegates will:

- Understand the relationship between the different protocols that comprise AJAX
- Learn best practices in cross browser coding
- Use AJAX to develop web applications for a dynamic user experience

AJAX Course Content:

Essentials of AJAX

- The key elements of AJAX
- Orchestrating the user experience with JavaScript
- Defining look and feel using CSS
- Organizing the view using the DOM
- Loading data asynchronously using XML technologies
- What sets AJAX apart

The HTML Document Object Model (DOM)

- Accessing Nodes
  - Accessing Element Nodes
  - Accessing Attribute Nodes
  - getAttribute
  - Accessing Nodes by Type, Name or Value
  - Accessing Nodes by Class Name
- Removing Nodes from the DOM
  - DOM Differences: The Whitespace Problem
- Creating New Nodes
- Using iframes to perform data trafficking
- Updating HTML documents using hidden frames
- Implementing common AJAX patterns

Introducing order to AJAX

- Examples of re-factoring
- Model-View-Controller
- Third-party libraries and frameworks

The page as an application

- The View in an AJAX application
- The Controller in an AJAX application
- Models in an AJAX application
- Generating the View from the Model

The role of the server

- Working with the server side
- The big picture: common server-side designs
- The details: exchanging data
- Writing to the server

continued…

The user experience

- Keeping the user informed
- Indicating freshness of data
- XML and AJAX
    - Creating a DOM Document with JavaScript
    - Accessing, Creating and Modifying XML Nodes
    - Receiving XML Responses
    - Passing XML to the Server
    - Conclusion
- OO JavaScript and Re-factoring AJAX
    - Illustrating the Problem
    - Object-Oriented JavaScript
        - JavaScript Classes
        - Prototypes
        - Extending Built-in Objects
    - Refactoring the AJAX Request Code
- JavaScript Object Notation (JSON)
    - Object Literals
        - Arrays
        - Objects
        - Arrays in Objects
        - Objects in Arrays
    - JSON
        - JSON Syntax
        - JSON Parsers
- AJAX Examples
    - Form Validation
    - Navigating Through Records

JavaScript Training Course Pre-requisites:

Delegates should have attended our HTML Training and JavaScript Training courses, or have equivalent experience.