Introduction to Dojo JavaScript Framework for AJAX

Course Summary

Description

This course teaches attendees how to build powerful JavaScript Ajax applications using the Dojo Toolkit Dijit, and DojoX.

Objectives
By the end of this course, participants will be able to:

- Understand Dojo's API design and feature set
- Master the use of Dojo's core features
- Manipulate and traverse the Document Object Model using Dojo's DOM APIs
- Create and control your own class hierarchy using Dojo's OO toolkit

- Manage events via dojo/on and Dojo's publish/subscribe capabilities
- Explore Dijit, the Dojo UI widget library
- Learn how to debug Dojo applications
- Use the Dojo Objective Harness to test your Dojo-based applications

Topics

- Intro to Dojo
- Retrieving elements
- dojo/query
- Basic styling
- Dojo and JavaScript
- Dojo and Events
- Dojo and Ajax
- Dojo and Classes

- Dijit Widgets
- Styling Widgets
- Creating your own widget
- Subclassing a widget
- Possible additional topics (which would require extra time)
- Conclusion

Prerequisites

All students should have a working knowledge of JavaScript.

Duration

Three days

Introduction to Dojo JavaScript Framework for AJAX

Course Outline

I. Intro to Dojo
   A. What Dojo is and isn't
   B. Our first, basic Dojo script
   C. How to do things the Dojo way
      1. Asynchronous Modules and AMD
      2. Requiring the code you need
      3. Loading Dojo
   D. Baseless Dojo
   E. dojoConfig: Configuring how Dojo is loaded

II. Retrieving elements
   A. dojo/dom: Asking for an element by name
   B. What do I get backDOMNodes and Nodes
   C. Creating nodes
   D. Placing nodes
   E. Removing nodes

III. dojo/query
   A. A different way of retrieving elements
   B. Using CSS Selectors (up to CSS3)
   C. Processing NodeLists

IV. Basic styling
   A. Accessing style information
   B. Changing style settings

V. Dojo and JavaScript
   A. Array enhancements
   B. Function enhancements
   C. Working with dates
   D. Working with numbers and strings

VI. Dojo and Events
   A. Hooking up events with dojo/on
   B. Removing event handlers
   C. Distributing events across a NodeList
   D. Using dojo's publish/subscribe model

VII. Dojo and Ajax
   A. Ajax architecture
   B. Dojo and Ajax: dojo/request
   C. Typical Ajax tasks
      1. Changing the content of a node
      2. Form processing
   D. Processing data with Ajax
      1. JSON data
      2. XML data
   E. Other dojo/request capabilities

VIII. Dojo and Classes
   A. dojo/declare(): Creating classes
   B. Defining methods and properties
   C. Inheritance and Mixins
   D. Constructors

IX. Dijit Widgets
   A. Declarative vs programmatic UI
   B. Form widgets
   C. Layout widgets
   D. Other widgets

X. Styling Widgets
   A. Using customizable properties
   B. On-the-fly

XI. Creating your own widget
   A. From scratch
   B. Using a template
   C. Creating attributes, getters and setters

XII. Subclassing a widget
   A. Using OO
   B. Adding capabilities

XIII. Possible additional topics (which would require extra time)

XIV. Conclusion