

# Ajax Training - Curriculum

## Introduction

Getting familiar with the online environment

Short introduction of participants

Summary of the curriculum & planning

Objectives of the training

## Ajax Overview and Architecture – 30min

What is Ajax?

- Narrow definition
- Broad definition
- Rich Internet Applications
- Web 2.0

Why Ajax?

- Differences between normal web pages and Ajax
- Benefits of Ajax (usability, performance, etc)
- Limitations of Ajax

## Hands-On: Fundamental Web Technologies – 5.5hrs

XHTML

- Compared to HTML 4
- XHTML Doctypes

CSS

- CSS Selectors
- CSS Positioning and Styling
- Border-box and content-box models
- Tableless design

JavaScript basics

- Syntax
  - Variables
  - Conditional Statements
  - Operators
  - Functions
  - Loops
  - Events
  - Objects
  - Arrays
  - Error handling
- JavaScript Style Guide (<http://manual.dojotoolkit.org/Book111>)

#### Document Object Model

- Introduction
- Manipulation of the DOM with JavaScript (appendChild, remove, ...)
- innerHTML

#### XMLHttpRequest

- What does it do?
- Using the XHR object
- Callbacks

#### Data handling

- XML / XHTML
- XSLT
- JSON

#### Performance

- Latency
- Rendering
- Psychological aspects

#### Security

- Cross-site scripting
- Input validation

#### Tools

- Firefox
- Firebug
- LiveHttpHeaders
- YSlow
- IE Developer Toolbar
- Fiddler

## **Hands-On: build your first Ajax app – 2hrs**

#### Ajax Design Patterns

- Example: Observer Pattern
- Model-View-Controller
- Server-interaction

#### Build your own Ajax application

## **Ajax Frameworks – 1.5 hrs**

Introduction to Frameworks

- Why frameworks?
- Types of frameworks: snippets, widgets, frameworks
- Overview of Script.aculo.us, Dojo and Backbase

Hands-on with Script.aculo.us

Hands-on with Dojo

Hands-on with Backbase

## **Wrap-up – 30 min**

Summary

Covering optional topics

Final Q&A