

## You and z/OS and the World Wide Web

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### Course Summary

#### Objectives

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

- Describe the conceptual working of the Internet and the World Wide Web
- Design, create and maintain documents coded in HTML 5 that are destined for the World Wide Web, hosted by a z/OS server, including using these features and techniques:
  - Hypertext linking
  - Embedded text and style markup
  - External Cascading Style Sheets
  - Ordered, unordered, and definition lists
  - Embedded images of various kinds
  - Client-side maps
  - Embedded multimedia objects, including AUDIO and VIDEO
- Basic client-side scripting using JavaScript (a.k.a. ECMAScript)
- Use the Document Object Model (DOM) to access, change, insert, and delete document nodes and attributes under script control
- Request and gather information using forms and controls
- Set and retrieve cookies
- Create and use tables on a page
- Use tables to create simple graphs
- Dynamically modify tables under script control
- Inline frames
- Know where and how to find additional information as needed.

#### Topics

- Introduction to the Web
- Introduction to Markup Languages
- Text Markup Elements
- Links and Anchors
- Basics of HTML style
- Introduction to Style Sheets
- Lists
- Images and maps
- Objects
- The AUDIO and VIDEO elements - Optional section
- Introduction to Client-side scripting

#### Prerequisite

Prerequisites: experience working with z/OS UNIX; specifically, the student is expected to be comfortable using the following commands:

- omvs
- oedit
- chmod
- umode
- pax
- mkdir
- cd
- oput
- oget

#### Duration

Five Days

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### Course Outline

#### I. *Introduction to the Web*

- A. The Web - basic concepts
- B. The Web and HTTP
  - Computer Exercise: Setting up for the labs

#### II. *Introduction to Markup Languages*

- A. Overview: Markup Languages
- B. SGML
- C. HTML
- D. XHTML - What is it?
- E. HTML 5 and Browsers
- F. HTML - An Introduction
- G. The HTML, HEAD, META and TITLE elements
- H. Other sub-elements within the HEAD element
- I. HTML on z/OS
  - Computer Exercise: HTML and Unicode

#### III. *Text Markup Elements*

- A. Element types in the body of an HTML document
- B. Events and scripts
- C. The BODY element
- D. The Paragraph element (P)
- E. The Headings elements (H1 - H6)
- F. The Line Break element (BR)
- G. Pre-formatted text: the PRE element
  - Computer Exercise: Using Basic markup

#### IV. *Links and Anchors*

- A. Introduction to Hypertext
- B. Destination Anchors
- C. Hyperlinks
- D. External resource links
- E. The A element
- F. Link types - the Rel Attribute
- G. The Accesskey, Target, and Media Attributes, and MIME types
- H. The LINK element
  - Computer Exercise: Using Links and Access Keys

#### V. *Basics of HTML style*

- A. Inline style elements (B, EM, I, MARK, S, SMALL, STRONG, SUB, SUP, U)
- B. The Style attribute
- C. The STYLE element
- D. External Style sheets
- E. Style precedence
- F. Grouping elements: the DIV element
- G. Grouping text: the SPAN element
- H. Quotations: BLOCKQUOTE and Q elements
- I. Breaking up a page: the HR element
- J. A digression: Lining Up Text
- K. Style Sheets on z/OS
  - Computer Exercise: Getting some style

#### VI. *Introduction to Style Sheets*

- A. Style sheets
- B. Style properties
- C. Style sheets on z/OS
  - Computer Exercise: Using Style Sheets

#### VII. *Lists*

- A. Kinds of lists
- B. List bounds: OL, UL, and DL elements
- C. List content: LI, DT, DD elements
- D. Lists: example
  - Computer Exercise: Displaying lists

#### VIII. *Images and maps*

- A. Included items
- B. The Image element (IMG)
- C. Client-side maps
- D. The MAP element
- E. The AREA element
- F. Areas and coordinates
- G. Applications of maps
- H. Maps with block content
  - Computer Exercise: Images and maps

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### Course Outline (cont.)

#### IX. *Objects*

- A. Introduction - A little background
- B. The EMBED element
- C. OBJECTs - Rationale
- D. Plugins
- E. HTML OBJECTs - Principles
- F. The OBJECT element
- G. The PARAM element
- H. Embedding object examples: a PDF document, another HTML page,
- I. an image, a Java applet
- J. Nested objects
- K. Multimedia
- L. Objects: design and copyright issues
- M. Should you use OBJECT or EMBED?
  - Computer Exercise: Embedding objects

#### X. *The AUDIO and VIDEO elements - Optional section*

- A. Multimedia - Background
- B. Economic factors
- C. Technical factors
- D. The AUDIO element
- E. The SOURCE element
- F. The VIDEO element
- G. Further explorations of media elements
- H. Further resources for media elements
  - Computer Exercise: Audio and Video

#### XI. *Introduction to Client-side scripting*

- A. Scripts
- B. DOM - the Document Object Model
- C. Scripting - Basics
  - Computer Exercise: Basic Scripting