MIDTERMS

HTML (Hyper Text Mark-up Language)

* a language to create web pages, derived from SGML and XML
* invented by Sir Tim Berners-Lee

Mark-up Language – a language used to get some document

Aspects of a website

1. Structure & Content -> HTML
2. Presentation/Aesthetics-> CSS
3. Behavioral

Versions of HTML

1. HTML 1.0 – the original HTML
2. HTML 2.0 – published as a standard RFC 1866, November 1995
3. HTML 3.0
4. HTML 3.2
5. HTML 4.0 – 1997
6. HTML 4.1 – 1999, Strict, Transitional, Frameset
7. HTML 5.0 – 2015
8. HTML 5.1 – Latest HTML Version, November 2016

XHTML (Extensible HyperText Mark-up Language)

* popular language used to mark-up data

Ian Hickson – decided to take HTML 1.0 and evolve it

WTC – documents that specify the HTML standards

HTML Syntax Versions

1. Typical HTML
2. Script HTML

DOCT TYPE – it is important because it triggers “standards” complice memory, if you don’t put it then the browser will render it using “quirts” mode

Standards – following the rule set of specification

2 children

1. Head – where meta and the document title are placed
2. Body - where actual content is placed

Structure of element

1. Start tag (ex. <h1>)
2. End tag (ex. </h1>)
3. Content (ex. HTML Sample Document)

Tag name – name of element

Attribute – additional info about element

Void element – don’t have a content but it has a certain tag

**Flow**

**Sectioning**

**Heading**

**Metadata**

**Embedded**

**Interactive**

**Phrasing**

Global attributes

* Href
* Target
* Download
* Rel
* Rev
* Hreflang
* Type

HTML Elements:

1. Html

* Root element
* Topmost level
* Consists of 2 children (head,body)

1. Head

* Title, base, link, metal, style
* Title – title of document
* Base – specify a URL
* Link – links to other resources mostly sheets
* Meta – specify the author of document
* Style – styling, embedding

1. Body

* Actual content, article, aside, nav, section, header, footer, main
* Main – main content
* Address – contact info
* Div – generic divider

Headings – h1, h2, h3, h4, h5

1. P – paragraphs
2. Hr – horizontal line, break
3. Pre – preformatted
4. Blockquote – citation and quotation

Key Types

1. Ol – order list, change #
2. Dl – description list

CSS (Cascading Style Sheets)

* Language used to specify the presentation aspects (e.g., layout and formatting) of structural
* Developed by Hakon Wium Lie (CHSS) and Bert Bos (SSP)

CSS Versions:

1. CSS1 – Dec 17, 1996
2. CSS 2.1 – June 7, 2011
3. CSS 3

CSS Processors, CSS Framework

1. SASS (Syntactically Awesome Style Sheet)

* Is an extension of CSS

1. LESS – needs Javascript
2. 960 Grid System
3. Bootstrap
4. Foundation

HTML/XHTML Stylesheets

1. Author styles

– CSS created by the author

* External stylesheets (recommended) – uses link element
* Embedded styles – embedded to HTML itself
* Inline styles – making the style attribute

1. User styles – style used by the user
2. User agent styles – example default CSS 2.1 stylesheet for HTML 4

CSS Statements

1. At-Rules

* @charset
* @import
* @media
* @font-face
* @key frames
* @page

CSS Selectors

Selector – structure used as a condition in a CSS rule to determine which elements in the document tree are matched by the selector and are thus targeted by the formatting specified

Selector syntax – chain of one or more sequences of simple selectors separated by combinators, with one pseudo-element possibly appended to the last sequence

Sequence of simple selectors

* Chain of simple selectors not separated by combinators
* Always starts with a type selector or a universal selector
* Cannot contain other type selectors or universal selectors

Group of selectors

* Comma-separated list of selectors representing the union of all elements selected by each of the selectors in the list

Simple selectors

1. Type selector – name of HTML elements (e.g. p, div, span)
2. Universal selector – represented by \*
3. Attribute selector – allows to target element base on a particular attribute

* [attr]
* [attr=value]
* [attr~=value]
* [attr|=value]
* [attr^=value] – beginning
* [attr$=value] –end
* [attr\*=value]

Class Selector –targeting a specific

ID Selector – id attribute

1. Target pseudo-class -:target()
2. Language pseudo-class –:lang()
3. UI element states pseudo-class

* :enabled
* :disabled
* :checked
* :intermediate

1. Structural pseudo classes

* :root
* :first-child
* :last-child
* :only-child
* :nth-child()
* :nth-last child
* :first-of-type
* :last-of-type
* :only-of-type
* :nth-of-type()
* :nth-last-of-type()
* :empty

1. Negation pseudo classes - :not()

**DOM TREE**

**p**

**p**

**p**

**div**

**p**

**body**

**title**

**head**

**html**