

Web development

1st lecture

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- About lecturer
- Consultations

Lectures

- 23.02
- 16.03
- 21.03 (wednesday)
- 23.03
- 6.04
- 13.04
- 25.05
- 1.06 Presentations and Exam

Course themes and tech

Structure and content - HTML

Presentation and styling - CSS

Dynamic content - PHP, Ruby, etc

Webserver - Apache

Client side scripting - JavaScript

Frameworks and CMS - Rails, Drupal, Joomla,

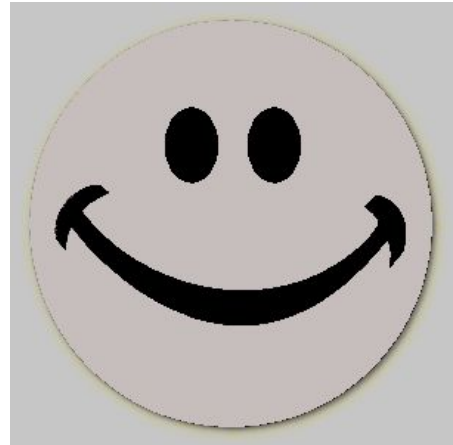
Process

- Lecture - attendance 80%
- Assignments - Missions
- Group work = course work
- Test?

Course requirements

- Complete all missions
- Participate & present group work
- Pass the final test

GOOD LUCK!

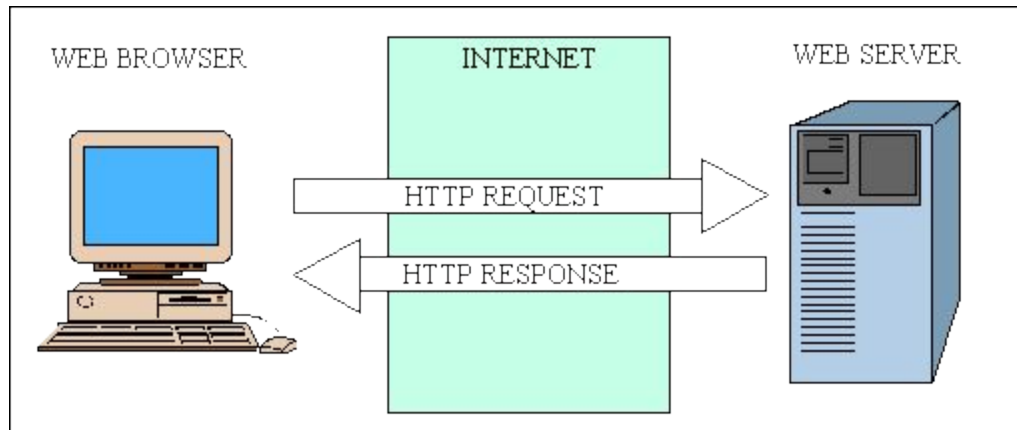


Today on Web Development

- Some basic principles
- HTTP requests, URL
- HTML structure and validation
- HTML syntax

HTTP

- URL - Uniform Resource Locator
- HTTP requests - GET (for retrieving doc) or POST (for sending data)



HTTP request example

Request

GET /index.html HTTP/1.1
Host: www.example.com (CR+LF)
(CR+LF)

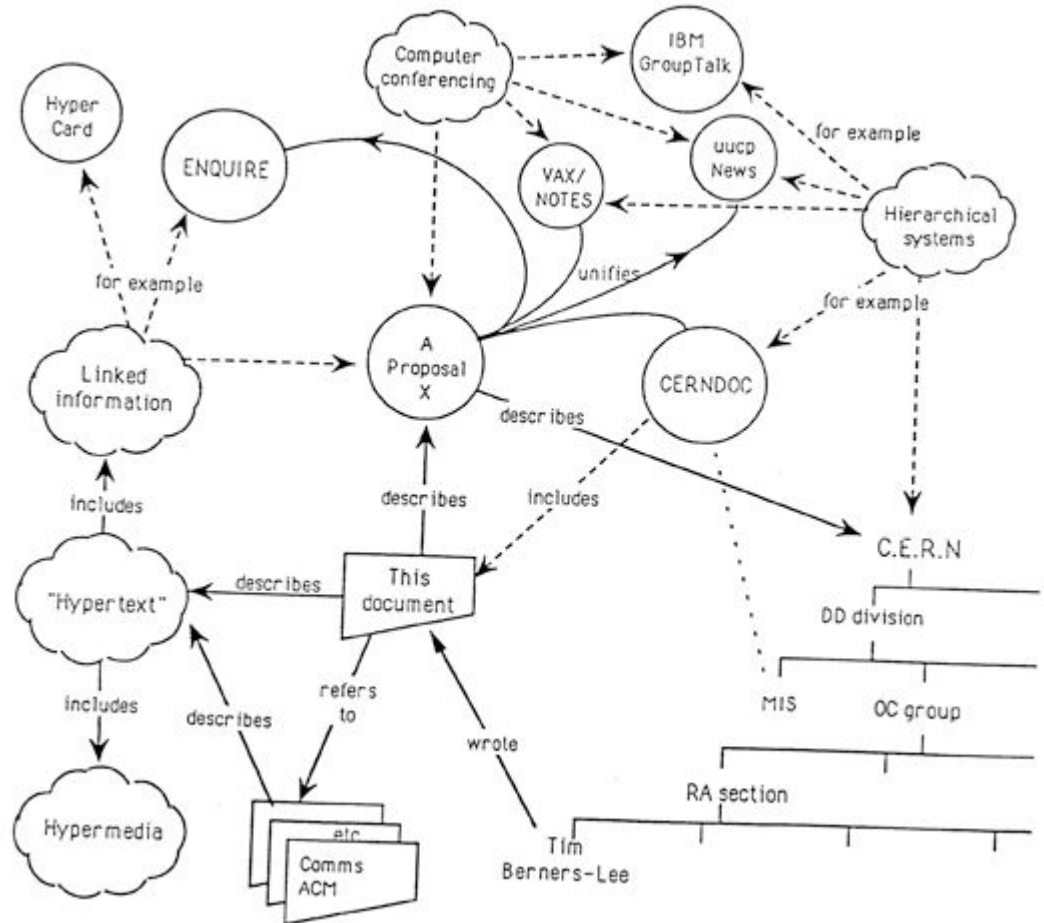
Server answer

HTTP/1.1 200 OK
Date: Mon, 23 May 2005 22:38:34 GMT
Server: Apache/1.3.3.7 (Unix) (Red-Hat/Linux)
Last-Modified: Wed, 08 Jan 2003 23:11:55 GMT
ETag: "3f80f-1b6-3e1cb03b"
Content-Type: text/html; charset=UTF-8
Content-Length: 131
Accept-Ranges: bytes
Connection: close

```
<html>
<head>
  <title>An Example Page</title>
</head>
<body>
  Hello World, this is a very simple HTML document.
</body>
</html>
```

HTML

- With HTML you can create your own Web site.
- Vague, but exciting!



What is HTML?

- HTML is a **markup** language for **describing** web documents (web pages).
- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- A markup language is a set of **markup tags**
- HTML documents are described by **HTML tags**
- Each HTML tag **describes** different document content

HTML5 structure

```
<!DOCTYPE html>
<html>
  <head>
    <!-- a comment -->
    <title> Name of page </title>
    <meta charset="utf-8">
  </head>
  <body>
    ...
  </body>
</html>
```

HTML tags

- HTML tags are **keywords** (tag names) surrounded by **angle brackets**:

`<tagname>content</tagname>`

- HTML tags normally come **in pairs** like `<p>` and `</p>`
- The first tag in a pair is the **start tag**, the second tag is the **end tag**
- The end tag is written like the start tag, but with a **slash** before the tag name

Attributes

- HTML elements can have attributes
- Attributes contain additional information.
- Attributes are always specified in the start tag
- Attributes come in name/value pairs like:
name="value"
- Mostly not visible directly

Example:

`Videzme University`

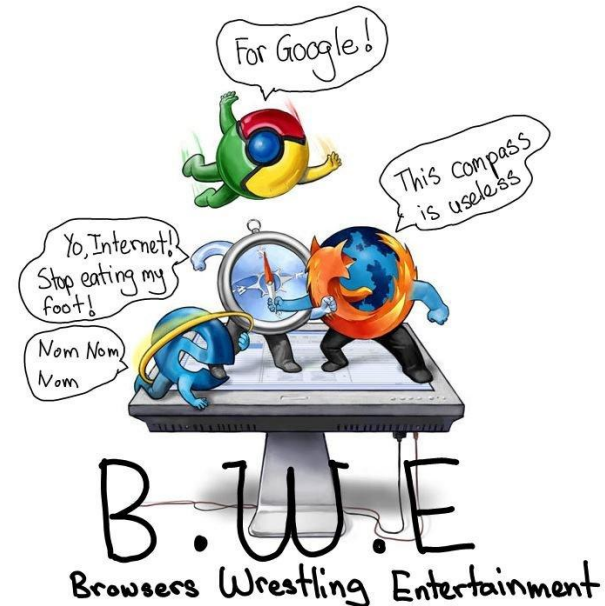
<a> tags point to different pages using address specified in href attribute

Often used attributes

- **alt** - Specifies an alternative text for an image
- **disabled** - Specifies that an input element should be disabled
- **href** - Specifies the URL (web address) for a link
- **id** - Specifies a unique id for an element
- **src** - Specifies the URL (web address) for an image
- **style** - Specifies an inline CSS style for an element
- **title** - Specifies extra information about an element (displayed as a tool tip)
- **value** - Specifies the value (text content) for an input element.

Web Browsers

- The purpose of a web browser (Chrome, IE, Firefox, Safari) is to read HTML documents and display them.
- The browser does not display the HTML tags, but uses them to determine how to display the document



“Must have” tags

<html>

<head>

<body>

Meta info

- Must be included in <head>
- <title>
- <meta>
 - <meta name="keywords" content="lecture" />
 - <meta http-equiv="content-type" content="text/html; charset=UTF-8" />

or

<meta charset="UTF-8" /> and also save it that way

Special tags

- `<link>`
 - `<link rel="stylesheet" type="text/css" href="stili/style.css" />`
- `<style>`
- `<script>`

Periodic Table of the Elements

html																col	table						
head	span																fieldset	form	body	h1	section	colgroup	tr
title	a																meter	select	aside	h2	header	caption	td
meta	rt	dfn	em	i	small	ins	hr	p	div	blockquote	legend	optgroup	address	h3	nav	menu	th						
base	rp	abbr	time	b	strong	del	br	figcaption	ol	dl	label	option	datalist	h4	article	command	tbody						
link	noscript	q	var	sub	mark	kbd	wbr	figure	ul	dt	input	output	keygen	h5	footer	summary	thead						
style	script	cite	samp	sup	ruby	bdo	code	pre	li	dd	textarea	button	progress	h6	hgroup	details	tfoot						
										img	area	map	embed	object	param	source	iframe	canvas	track*	audio	video	device*	

HTML validation

- To check if HTML document is correct use a validator
- <http://validator.w3.org/>,

!DOCTYPE

- `<!DOCTYPE ..>` needs to be specified in the 1st line
- **`<!DOCTYPE html>` will be ok**

<http://www.w3.org/QA/2002/04/valid-dtd-list.html>

Few guidelines

- Content is king
- Don't rely only on color combinations
- Navigation and performance is important
- KISS (Keep it simple and stupid)

Useful to try and remember

<h1><h2><h3><h4><h5><h6> -> heading

<p> paragraph

<a> hyperlink *link text*

 image

 line break

 unordered list

 ordered list

Useful to try and remember

`<form>`

`<input>` different types

text -> Defines normal text input

radio -> Defines radio button input (for selecting one of many choices)

submit -> Defines a submit button (for submitting the form)

`<form>`

First name:

`<input type="text" name="firstname">`

`
`

`<input type="radio" name="sex" value="male" checked>Male`

`
`

`<input type="submit" value="Submit">`

`</form>`

Styling

- Use the **style** attribute for styling HTML elements
- Use **background-color** for background color
- Use **color** for text colors
- Use **font-family** for text fonts
- Use **font-size** for text sizes
- Use **text-align** for text alignment

`<h1 style="text-align:center">Centered Heading</h1>`

Text formatting

 Defines bold text

 Defines emphasized text

<i> Defines italic text

<small> Defines smaller text

 Defines important text

<sub> Defines subscripted text

<sup> Defines superscripted text

<ins> Defines inserted text

 Defines deleted text

<mark> Defines marked/highlighted text

GO TO THE MISSION NR.1

