

HYP TECHNOLOGY / FRONT-END

HTML

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Ways to get help:

- o. Google
- 1. After class – most immediate way
- 2. Via e-mail: mirko.gelsomini@polimi.it
- 3. private meeting at I3Lab, Via Golgi 39, building 21

BE READY BY...YESTERDAY

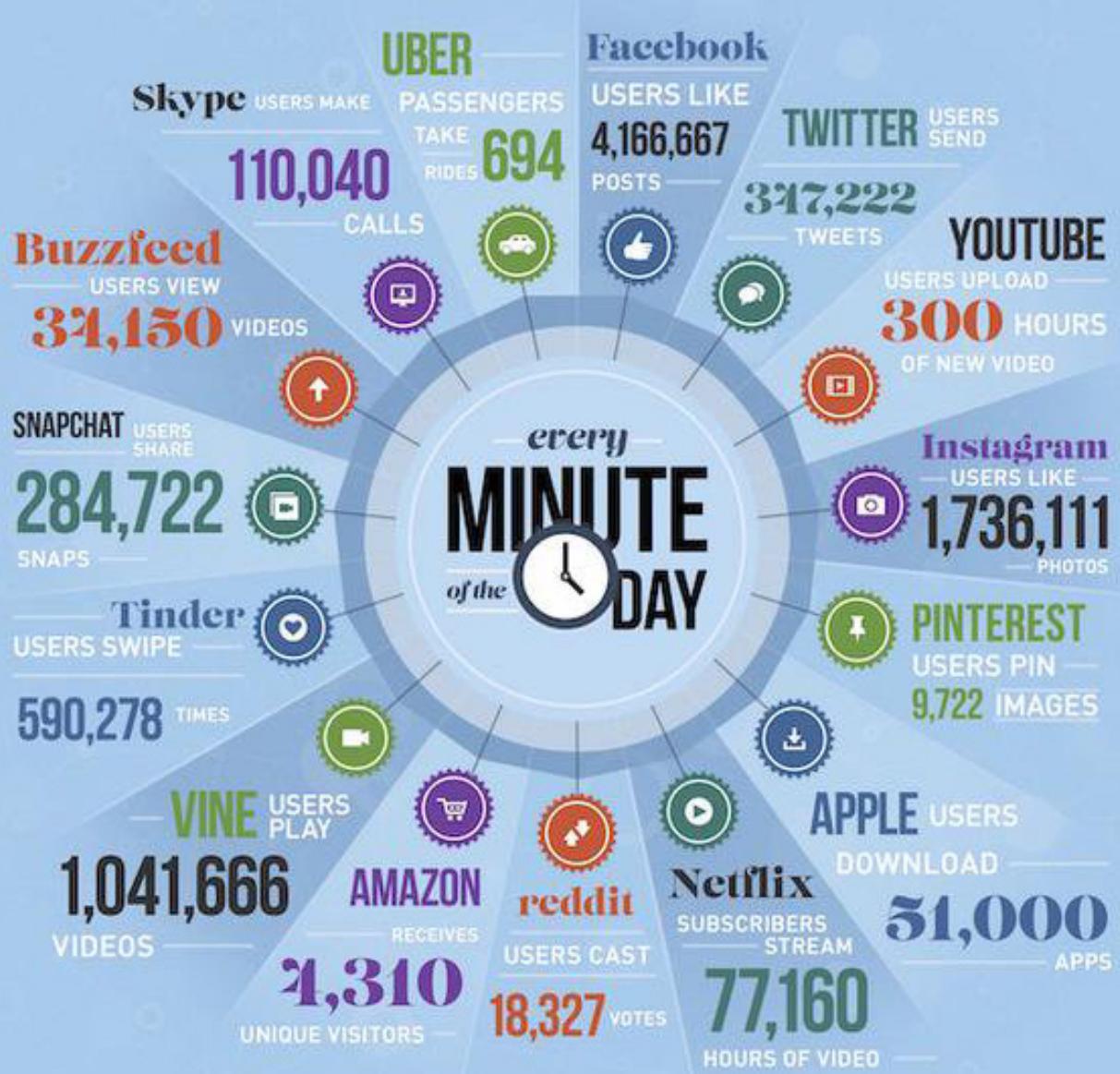
Download:

Google Chrome or Mozilla Firefox

Brackets : <http://brackets.io/> (Adobe Dreamweaver, Sublime Text, Notepad++, Notepad are ok too)

Online tools: <https://jsfiddle.net/>

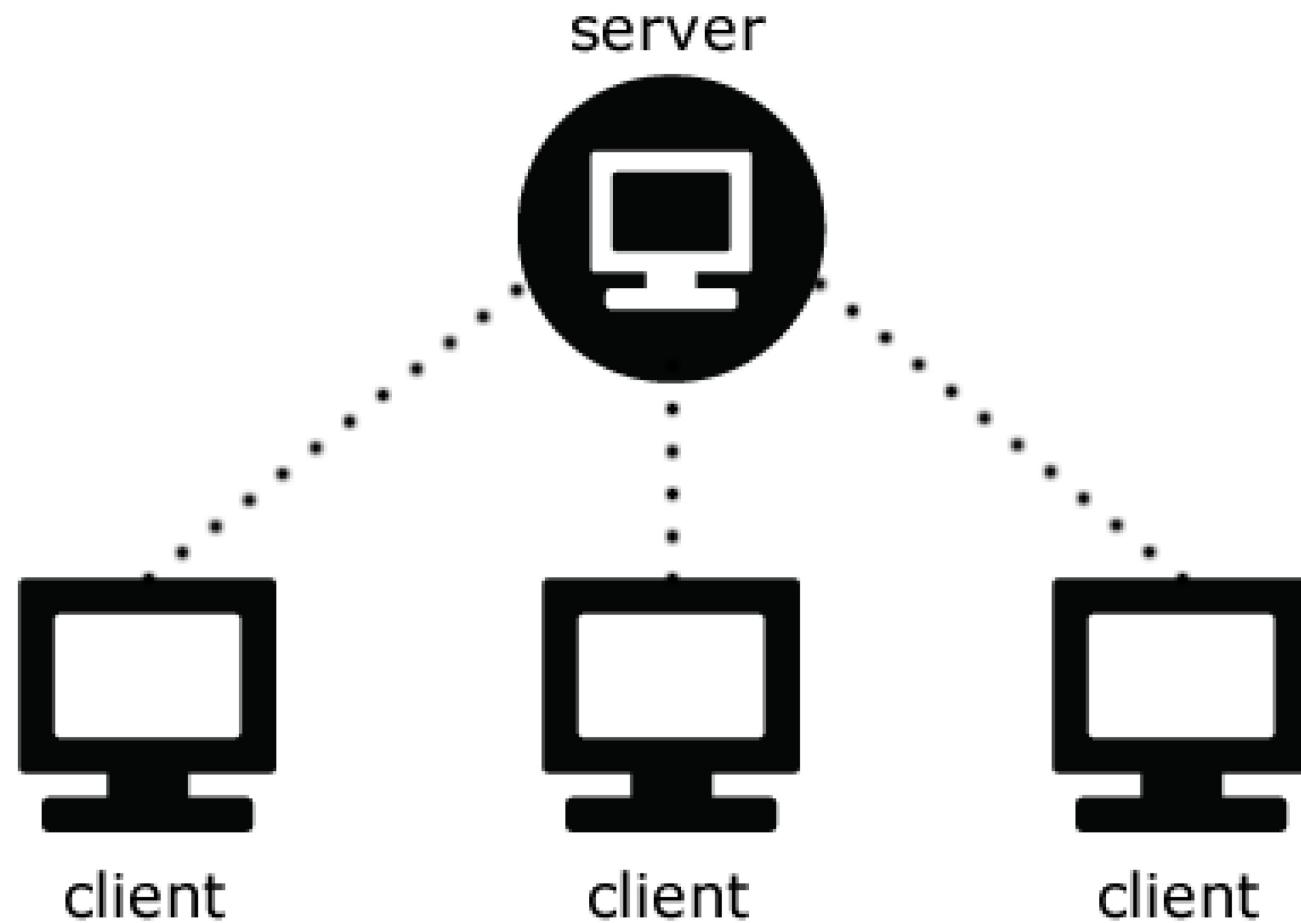




COMMON TERMS

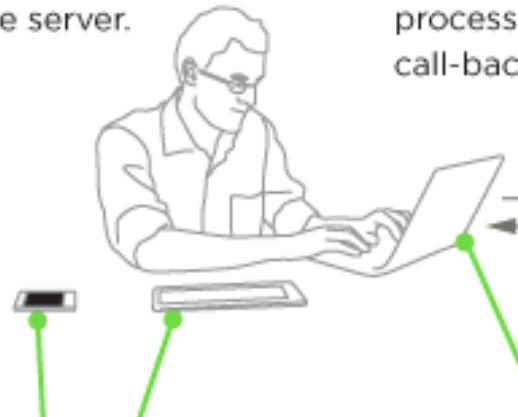
- **WWW:** World Wide Web
- **HTTP:** Hypertext Transfer Protocol, an application protocol for distributed, collaborative, hypermedia information systems
- **HTTPS:** Secured version of HTTP
URL: Uniform Resource Locator, a type of Uniform Resource Identifier (URI); the generic term for all types of names and addresses that refer to objects on the World Wide Web.
- **HTML:** Hypertext Markup Language
- **CSS:** Cascading Style Sheet
- **JS:** JavaScript
- **FTP:** File Transfer Protocol
- **SEO:** Search Engine Optimization

GENERAL ARCHITECTURE



FRONT-END DEVELOPMENT

1 A site is loaded in a browser from the server.



2 Client-side scripts
Run in the browser and process requests without call-backs to the server



Responsive front-end design allows a site to adapt to a user's device.

Everything a user sees in the browser is a mix of **HTML**, **CSS**, and **JavaScript**.

3 When a call to the database **is** required JavaScript and AJAX send requests to the back end.



4 The **back-end server-side scripts** process the request, pull what they need from the database then send it back.

5 Server-side scripts process the data, then update the site—populating drop-down menus, loading products to a page, updating a user profile, and more.

FTP

The File Transfer Protocol (FTP) is a standard network protocol used to transfer computer files from one host to another host over a TCP-based network.

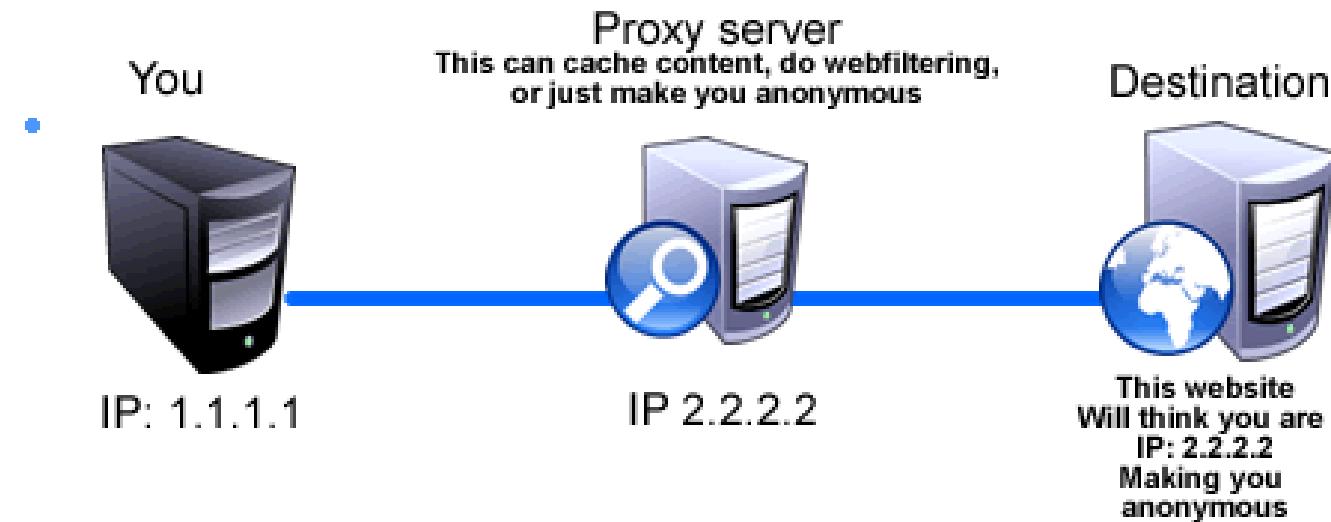


MY (WEB) ADDRESS

An Internet Protocol address (IP address) is a numerical label assigned to each device (e.g., computer, printer) participating in a computer network that uses the Internet Protocol for communication

<https://www.whatismyip.com/>

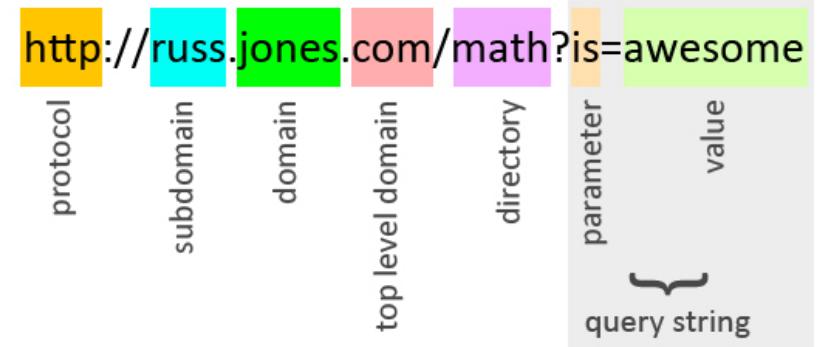
MY (FAKE/PROXIED) ADDRESS



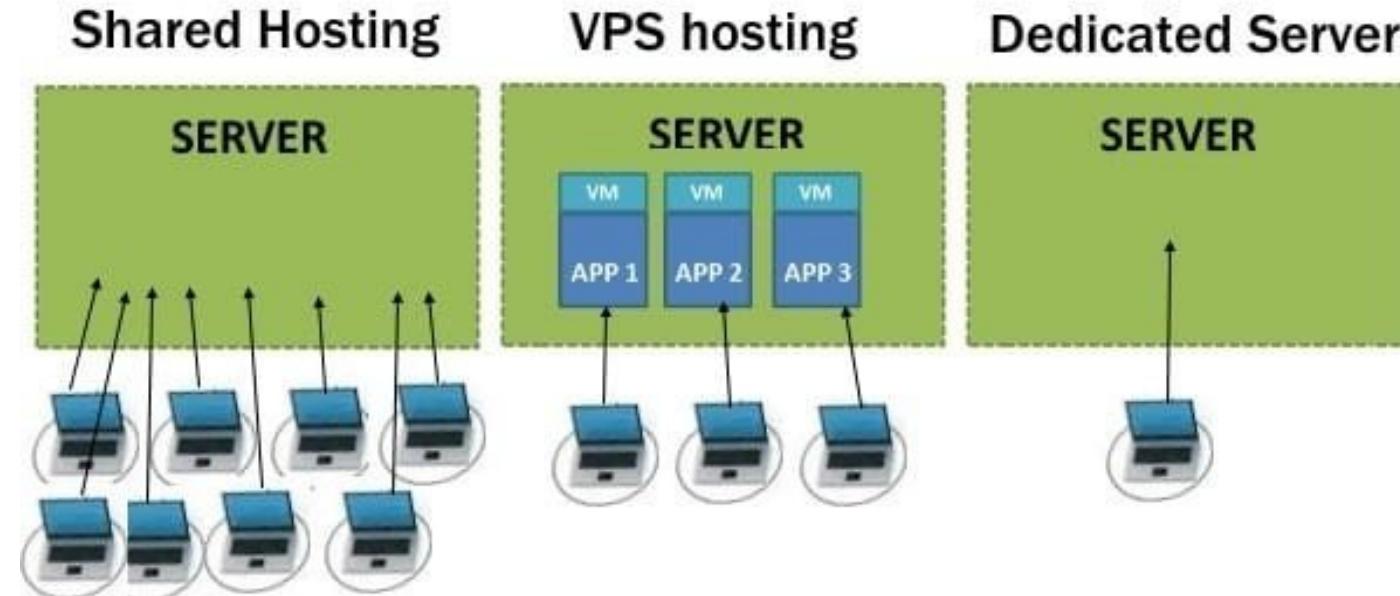
DOMAIN VS HOSTING

DOMAIN: URL of your website, get one free at <https://it.altervista.org/>

URL PARTS



HOSTING



DOMAIN vs HOSTING

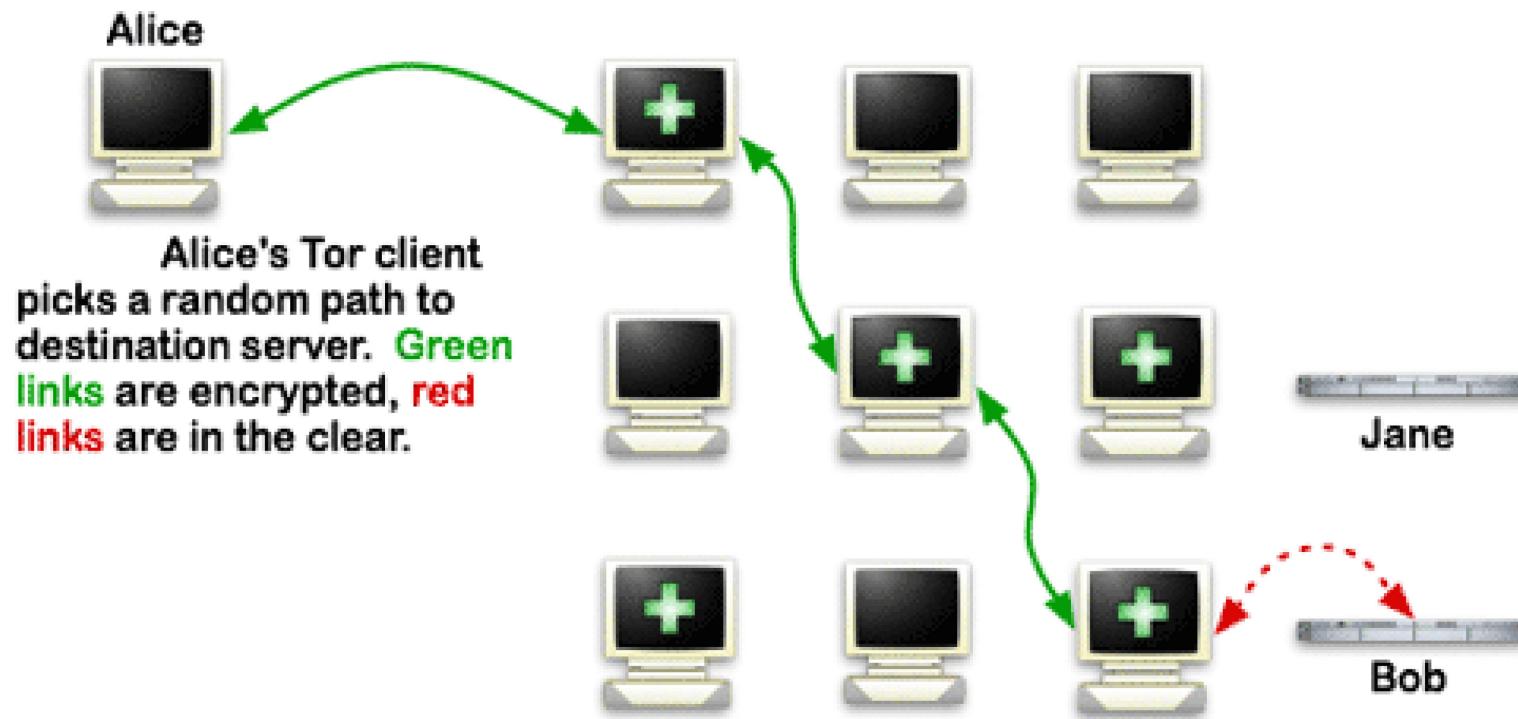
Your domain name is the name of your site or your url (www.mynewcompany.com) and can be purchased by going to a domain name registrar. Domain names usually range from about \$10 to \$50/year depending on the extension.

In order for your website to appear on the Internet, the files need to be uploaded to a server. These can be “hosted” at a hosting company. Hosting is usually billed monthly or annually at a rate of \$10 to \$50/month depending on how much space and bandwidth you are using or how the type of server you need ...

e.g., <https://www.aruba.it/> or <https://www.godaddy.com/>

TOR NETWORK

EHow How Tor Works

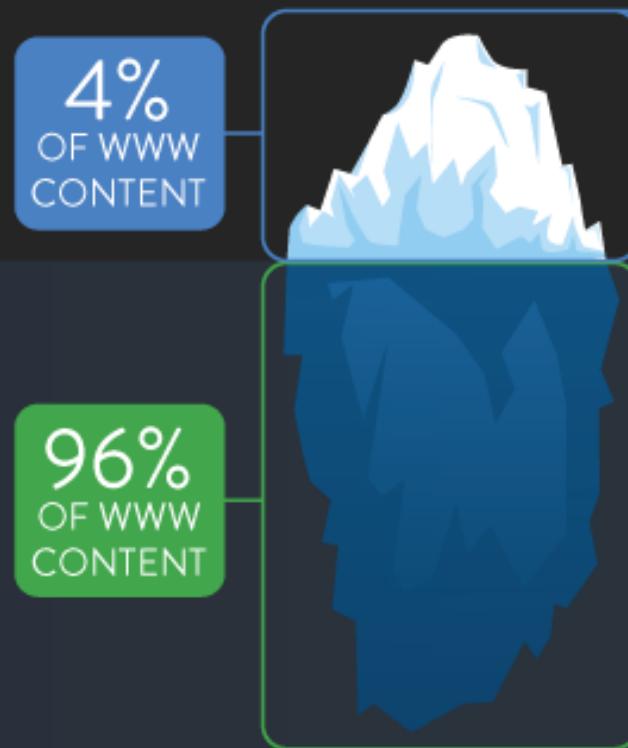


<https://www.torproject.org/> -> Tor Browser

20,000 LEAGUES UNDER THE SEA - WEB

WHAT IS THE DEEP WEB?

Put simply, it is the part of the Internet that is hidden from view.



SURFACE WEB

Also known as the 'Visible Web', it is content that can be found using search engines such as Google or Yahoo. It is under constant surveillance by the government.

DEEP WEB

Also known as the 'Invisible Web', it is the content that cannot be indexed by search engines. And it is hard to keep track of.

The Deep Web is estimated to be **500X** the size of the Surface Web.

More: <http://www.video.mediaset.it/video/iene/puntata/414138/viviani-deep-web.html>

HTML



CSS



JS



Content/Structure

Style

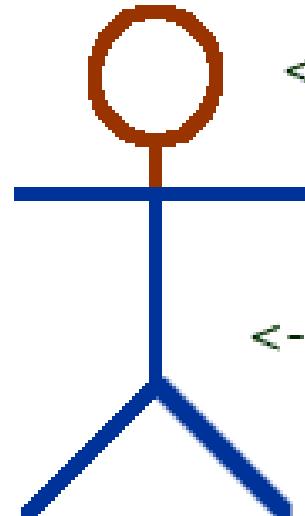
Animation/Dinamicity

HTML

- Basics (tags and terminology)
- Editors and Viewers
- Structure and Divs
- Images and links
- Menu and lists
- Colors, Font and Styling

HTML - HyperText Markup Language

- <!DOCTYPE html>
- <html>
 - <head>
 - </head>
 - <body>
 - </body>
- </html>



```
<html>
  <head>
    <title>
      Title
    </title>
  </head>
  <body>
    ooh! my guts
    are here!
  </body>
</html>
```

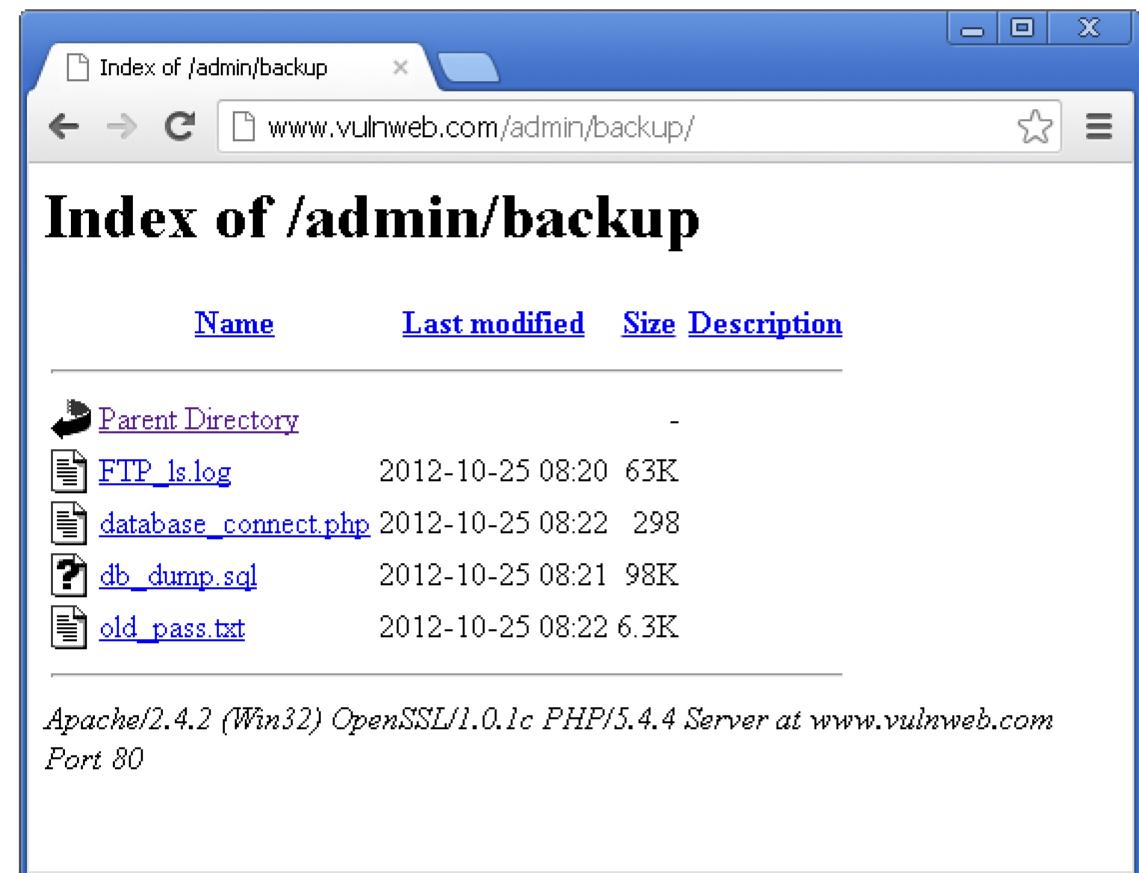
And the head always comes first !

HTML - index.html/htm/*

The browser will always look for a file called «index.*» unless you change the .htaccess

Using a Default File Name like **index.html** is a Security Feature as Well. ... If you don't put in an **index.html** file in a directory, by default most web servers will display a file listing of all the files in that directory.

e.g: <http://web.stanford.edu/class/cs20si/lectures/>



HTML Tags

`<tag attribute="value"> Content </tag>`

THIS SAYS
"BEGIN ITALICS NOW."

THIS IS THE
ACTUAL TEXT

THIS SAYS
"END ITALICS NOW."

`<i>text</i>`

THIS IS WHAT
SHOWS UP ON
YOUR SCREEN

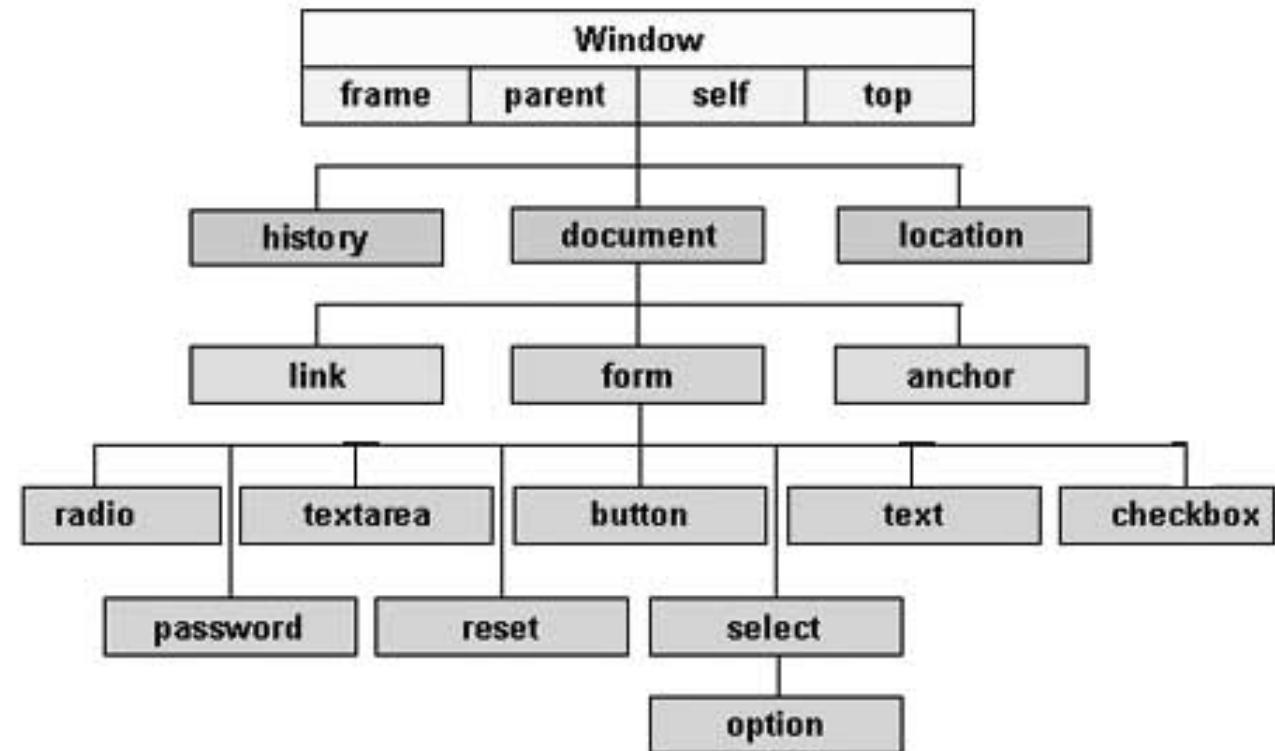
 text

Some tags

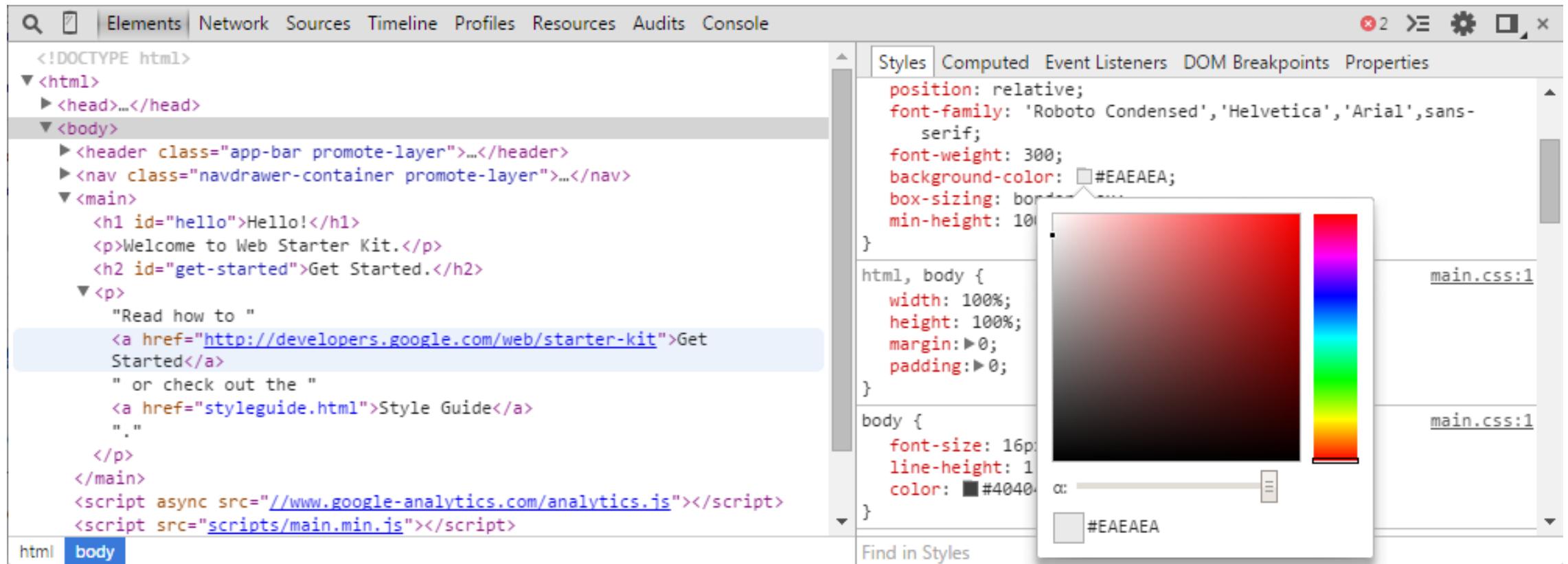
- Title
- Headings
- Paragraph
- Images
- Lists
- Divs
- Tables

Dom – Document Object Model

- Every web page resides inside a browser window which can be considered as an object.
- A Document object represents the HTML document that is displayed in that window. The Document object has various properties that refer to other objects which allow access to and modification of document content.



Dev Tools (F12)



HTML 5 NEW TAG

TAG NOT SUPPORTED IN HTML 5

<!---->	Define a comment
<!DOCTYPE>	Defines the document type
<a>	Defines a hyperlink href, hreflang, media, ping , rel, target, type
<abbr>	Defines an abbreviation
<acronym>	Used to define an embedded acronyms
<address>	Defines an address element
<applet>	Used to define an embedded applet
<area>	Defines an area inside an image map alt, coords, href, hreflang, media, ping, rel, shape, target, type
<article>	Defines an article cite, pubdate
<aside>	Defines content aside from the page content
<audio>	Defines sound content autobuffer, autoplay, controls, src
	Defines bold text
<base>	Defines a base URL for all the links in a page href, target
<basefont>	Used to define a default font-color, font-size, or font-family for all the document
<bdo>	Defines the direction of text display dir
<big>	Used to make text bigger
<blockquote>	Defines a long quotation cite
<body>	Defines the body element
 	Inserts a single line break
<button>	Defines a push button autofocus, disabled, form, formaction, formenctype, formmethod, formnovalidate, formtarget, name, type, value
<canvas>	Defines graphics height, width
<caption>	Defines a table caption
<center>	Used to center align text and content
<cite>	Defines a citation
<code>	Defines computer code text autobuffer, autoplay, controls, src
<col>	Defines attributes for table columns
<colgroup>	Defines groups of table columns span
<command>	Defines a command button checked, disabled, icon, label, radiogroup, type

<datalist>

Defines a dropdown list

<dd>	Defines a definition description
	Defines deleted text cite, datetime
<details>	Defines details of an element open
<dialog>	Defines a dialog (conversation)
<dfn>	Defines a definition term
<dir>	Used to define a directory list
<div>	Defines a section in a document
<dl>	Defines a definition list
<dt>	Defines a definition term
	Defines emphasized text
<embed>	Defines external interactive content or plugin height, src, type, width
<fieldset>	Defines a fieldset disabled, form, name
<figure>	Defines a group of media content, and their caption
	Used to define font face, font size, and font color of text
<footer>	Defines a footer for a section or page
<form>	Defines a form accept-charset, action, autocomplete, enctype, method, name, novalidate, target
<frame>	Used to define one particular window (frame) within a frameset
<frameset>	Used to define a frameset, which organized multiple windows (frames)
<h1> to <h6>	Defines header 1 to header 6
<head>	Defines information about the document
<header>	Defines a header for a section or page
<hgroup>	Defines information about a section in a document
<hr>	Defines a horizontal rule
<html>	Defines an html document manifest, xmlns
<i>	Defines italic text
<iframe>	Defines an inline sub window height, name, sandbox, seamless, src, width
	Defines an image alt, src, height, ismap, usemap, width
<input>	Defines an input field accept, alt, autocomplete, autofocus, checked, disabled, form, formaction, formenctype, formmethod, formnovalidate, formtarget, height, list, max, maxlength, min, multiple, name, pattern, placeholder, readonly, required, size, src, step, type, value, width

<ins>

Defines inserted text

	Defines a generated key in a form autofocus, challenge, disabled, form, keytype, name
<kbd>	Defines keyboard text
<label>	Defines an inline sub window for, form
<legend>	Defines a title in a fieldset
	Defines a list item value
<link>	Defines a resource reference href, hreflang, media, rel, sizes, type
<map>	Defines an image map name
<mark>	Defines marked text
<menu>	Defines a menu list label, type
<meta>	Defines meta information charset, content, http-equiv, name
<meter>	Defines measurement within a predefined range high, low, max, min, optimum, value
<nav>	Defines navigation links
<noframes>	Used to display text for browsers that do not handle frames
<noscript>	Defines a noscript section
<object>	Defines an embedded object data, form, height, name, type, usemap, width
	Defines an ordered list reversed, start
<optgroup>	Defines an option group label, disabled
<option>	Defines an option in a drop-down list disabled, label, selected, value
<output>	Defines some types of output for, form, name
<p>	Defines a paragraph
<param>	Defines a parameter for an object name, value
<pre>	Defines preformatted text
<progress>	Defines progress of a task of any kind max, value
<q>	Defines a short quotation cite
<rp>	Used in ruby annotations to define what to show browsers that do not support the ruby element
<rt>	Defines explanation to ruby annotations
<ruby>	Defines ruby annotations
<s>, <strike>	Used to define strikethrough text.

<samp>

Defines sample computer code

<script>	Defines a definition list async, type charset defer, src
<section>	Defines a section cite
<select>	Defines a selectable list autofocus, disabled, form, multiple, name, size
<small>	Defines small text
<source>	Defines media resources media, src, type
	Defines a section in a document
	Defines strong text
<style>	Defines a style definition type, media, scoped
<sub>, <sup>	Defines sub/super-scripted text
<table>	Defines a table summary
<tbody>	Defines a table body summary
<td>	Defines a table cell colspan, headers, rowspan
<textarea>	Defines a text area autofocus, cols, disabled, form, maxlength, name, placeholder, readonly, readonly, required, rows, wrap
<tfoot>, <thead>	Defines a table footer / head
<th>	Defines a table header colspan, headers, rowspan, scope
<time>	Defines a date/tim datetime
<title>	Defines the document title
<tr>	Defines a table row datetime
<tt>	Used to define teletype text
<u>	Used to define underlined text
	Defines an unordered list
<var>	Defines a variable
<video>	Defines a video autobuffer, autoplay, controls, height, loop, src, width

HTML5 TAG CHEAT SHEET

Created by WebsiteSetup.org

Children

An element that is an immediate descendent of another element or nested within another element is called a child. These become useful when using CSS child selectors and psuedo-elements.

Example

```
<div id="parent">
    <div id="child">I'm a child of parent!</div>
</div>
```

HTML - Comments

<!--This is a comment. Comments are not displayed in the browser-->

`<p>This is a paragraph.</p>`

HTML Attributes

- All HTML elements can have **attributes**
- The **title** attribute provides additional "tool-tip" information
- The **href** attribute provides address information for links
- The **width** and **height** attributes provide size information for images
- The **alt** attribute provides text for screen readers
- W3Schools suggest using **lowercase** attribute names
- W3Schools suggest **quoting** attribute values with double quotes

Attribute	Description
alt	Specifies an alternative text for an image, when the image cannot be displayed
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)

Attributes

CLASS

HTML elements can have one or more classes, separated by spaces. You can style elements using CSS by selecting them with their classes.

Example

```
<div class="big-box yellow-box">This is a big yellow box.</div>
```

Attributes

ID

An HTML element can have an id attribute to identify it. id elements should always be unique to that single element, and each element should never have more than one id.

Example

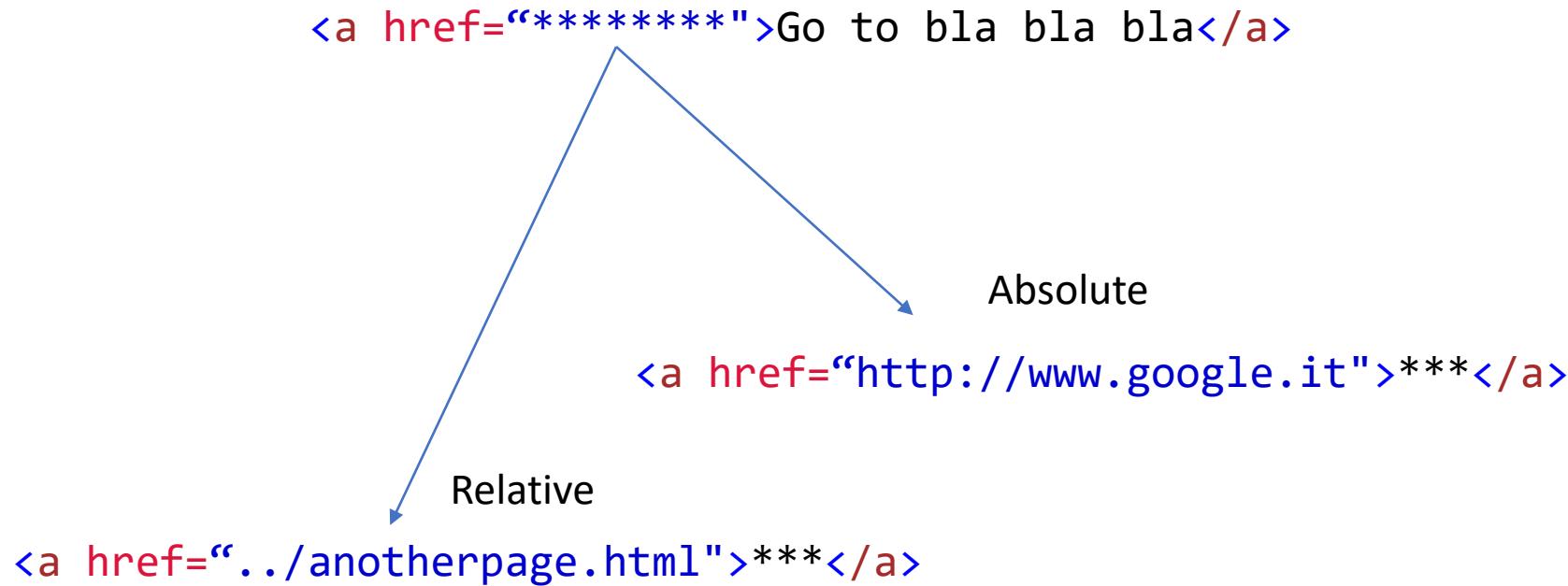
```
<div id="my-box">This is my box! Put your text in some other box.</div>
```

Forms

- <form>
- <input>

Value	Description
button	Defines a clickable button (mostly used with a JavaScript to activate a script)
checkbox	Defines a checkbox
color	Defines a color picker
date	Defines a date control (year, month and day (no time))
datetime-local	Defines a date and time control (year, month, day, hour, minute, second, and fraction of a second (no time zone))
email	Defines a field for an e-mail address
file	Defines a file-select field and a "Browse..." button (for file uploads)
hidden	Defines a hidden input field
image	Defines an image as the submit button
month	Defines a month and year control (no time zone)
number	Defines a field for entering a number
password	Defines a password field (characters are masked)
radio	Defines a radio button
range	Defines a control for entering a number whose exact value is not important (like a slider control). Default range is from 0 to 100
reset	Defines a reset button (resets all form values to default values)
search	Defines a text field for entering a search string
submit	Defines a submit button
tel	Defines a field for entering a telephone number
text	Default. Defines a single-line text field (default width is 20 characters)
time	Defines a control for entering a time (no time zone)
url	Defines a field for entering a URL
week	Defines a week and year control (no time zone)

Linking pages (Relative vs Absolute)



Our first website

(800 x 600 empfohlen)

STRÆT

CHRISTEN

DEUS

JESUS

MUTEN

CHR

[FRAMES] [NOFRAMES]

Hallo!

Eine wichtige Bemerkung vorweg: Damit diese Seite korrekt angezeigt werden kann, musst ihr die TTF-COMIX REGULAR herunterladen und installieren. Klickt einfach mit der rechten Maustaste auf den Link unter "Sichern unter". Viel Spaß!

 Liebe junge Christen!

Viele Leute sagen, hey, diese Christen-Front ist doch ein Busen-alten Kerlen. Aber das ist totally wrong!

In der Christen-Front sind viele young people wie ich, und wir sind alles andere als von gestern! Cool!

Wie alle anderen Younixters lieben auch wir tolle Music (wie die background-Midi ja wohl beweist), und wir gehen gern aus und danceen eins.

Aber es gibt natürlich Differences! Wir nehmen no drugs, und wir haben nur eine Ehe. Ist das so bad? Oder gar wrong?

Wir denken: No! Und deshalb moechten wir auf diesen Jugendseiten der Christen-Front allen young people einen Ueberblick geben, was heute cool und was nicht!

Ach ja: Viele People kommen immer an und sagen: "Hey, sind das nicht too Farben?" Aber Colours sind cool, sie sind funny, und sie machen Dich happy. Also da ist ein voll uncooler Typ, der uns ein echt doofes "Zertifikat" gemalt hat. Lest das, Friends! Das ist voll uncool!

Greetinx,
euer Franz

The Geocities-izer

Make Any Webpage Look Like It Was

Type any URL in the box below and click Submit to see how it would look as a [Geocities page](#).

Or Try one of these: [The New York Times](#) [YouTube](#) [BoingBoing](#)

Some pages may work very slowly or not at all. Many webapps are just too advanced for Geocities.

Turn your sound up for the full effect.

Created by Wonder-Tonic

Web Design From £49.99
Award Winning Custom Built Sites Instant Quotes
Great After Service
www.webdesignmegastore.co.uk

Free Website eBook
Everything You Need To Know About Website Designing. Download Today!
www.Internet.com

Ads by Google



14/7/01

HTML (v4) vs HTML (v5)

Add <!DOCTYPE html> in HTML5

Html	Html5
Doctype declaration in Html is too longer <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">	DOCTYPE declaration in Html5 is very simple "<!DOCTYPE html>"
character encoding in Html is also longer <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">	character encoding (charset) declaration is also very simple <meta charset="UTF-8">
Audio and Video are not part of HTML4	Audio and Videos are integral part of HTML5 e.g. <audio> and <video> tags.
Vector Graphics is possible with the help of technologies such as VML, Silverlight, Flash etc	Vector graphics is integral part of HTML5 e.g. SVG and canvas
It is almost impossible to get true GeoLocation of user browsing any website especially if it comes to mobile devices.	JS GeoLocation API in HTML5 helps identify location of user browsing any website (provided user allows it)
Html use cookies.	It provides local storage in place of cookies.
Not possible to draw shapes like circle, rectangle, triangle.	Using Html5 you can draw shapes like circle, rectangle, triangle.
Does not allow JavaScript to run in browser. JS runs in same thread as browser interface.	Allows JavaScript to run in background. This is possible due to JS Web worker API in HTML5
Works with all old browsers	Supported by all new browser.

HTML5 – Video and Audio

```
<video width="320" height="240" controls>
  <source src="video.mp4" type="video/mp4">
  <source src="video.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>
```

```
<audio controls>
  <source src="audio.ogg" type="audio/ogg">
  <source src="audio.mp3" type="audio/mpeg">
  Your browser does not support the audio tag.
</audio>
```

https://www.w3schools.com/tags/tag_audio.asp
https://www.w3schools.com/tags/tag_video.asp

Attribute	Value	Description
autoplay	autoplay	Specifies that the video will start playing as soon as it is ready
controls	controls	Specifies that video controls should be displayed (such as a play/pause button etc).
height	<i>pixels</i>	Sets the height of the video player (VIDEO only)
loop	loop	Specifies that the video will start over again, every time it is finished
muted	muted	Specifies that the audio output of the video should be muted
poster	<i>URL</i>	Specifies an image to be shown while the video is downloading, or until the user hits the play button (VIDEO only)
preload	auto metadata none	Specifies if and how the author thinks the video should be loaded when the page loads
src	<i>URL</i>	Specifies the URL of the video file
width	<i>pixels</i>	Sets the width of the video player (VIDEO only)

Why HTML5 become so dominant in web development?



<STORAGE>

Data can be stored on a user's computer or mobile device, so Web apps work without an Internet connection.



<TYPE>

Web pages can have flashier type with more fonts, shadows, colors and other effects.



< MOTION >

Objects move on Web pages and react to the movements of a cursor.



<GAMES>

Interactive games can run with just a Web browser without installing other software or plug-ins.



Key features of the next Web programming standard.



<VIDEO>

Video can be embedded in a Web page without a plug-in. Browser makers have not agreed on formats.



<3D>

A technology called WebGL can create interactive 3-D effects using a computer's graphics processor.



<AUDIO>

Audio is played without a plug-in. Browser makers have not agreed on formats.

HTML 5

- Tryout from here: <http://media.mediatemple.netdna-cdn.com/wp-content/uploads/images/html5-cheat-sheet/html5-cheat-sheet.pdf>
- <http://www.html5rocks.com/en/>
- <http://html5demos.com/>
- <http://slides.html5rocks.com>

CSS

- Graphics vs Contents
- Syntax (Selectors and Cascading Concept)
- Tags, Id, Classes, parenthood
- Pseudo-classes and multiselectors
- Positioning (margin, borders and padding)
- Floating, absolute, relative and fixed

Connecting HTML, CSS and JS



```
<head>
<link rel="stylesheet" type="text/css" href="theme.css">
</head>
```



```
<script src="myscripts.js"></script>
```



CHEAT SHEET: <http://www.cheatography.com/davechild/cheat-sheets/html4/>

CSS - Cascading Style Sheets

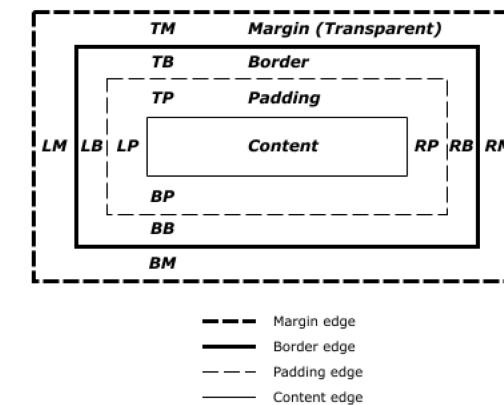
- Tryout from here:
- <http://www.cheatography.com/davechild/cheat-sheets/css2/>
- <http://www.smashingmagazine.com/wp-content/uploads/images/css3-cheat-sheet/css3-cheat-sheet.pdf>
- <http://overapi.com/css/>

http://www.w3schools.com/css/demo_default.htm

Hands On CSS

<http://www.cheetyr.com/css-selectors>

- Tags, Id, Classes, parenthesis
- Pseudo-classes and multiselectors
- Positioning (margin, borders and padding)
- Floating, absolute, relative and fixed
- Dimension: width, height
- Font, Colors



JS

- Tryout from here: <http://www.cheatography.com/davechild/cheatsheets/javascript/>

On the web – in case you missed this class

- <https://developers.google.com/web/fundamentals/> (en - free)
- <http://www.codecademy.com/tracks/web> (en - free)
- <http://www.html.it/guide/guida-html5/> (ita - free)
- <https://www.codeschool.com/paths/html-css> (en)
- <http://teamtreehouse.com/tracks/front-end-web-development> (en)
- Official Ref (en):
 - HTML: <http://www.w3schools.com/html/>
 - CSS: <http://www.w3schools.com/css/>

Being stuck?

0. Google (Stack Overflow suggested, Yahoo Answers not suggested)
1. Meet Mirko just After class – most immediate way
2. Via e-mail: mirko.gelsomini@polimi.it
3. Meet Mirko at I3Lab, Via Golgi 39, building 21



VERY POPULAR Techno Song?? HELP!!! They play it in clubs!!?

I ALWAYS hear this song on the radio or when I'm up in the club but I can't find what its called...its all beats one part of the song is like this

k like it will get real low then slowly start picking back up and it will go faster as it does

its like

dun dun dun dun

dun dun dun dun

err

dun dun dun dun dun dun dun
dundundundundundundundundun

er der der der der derr