HTML & CSS

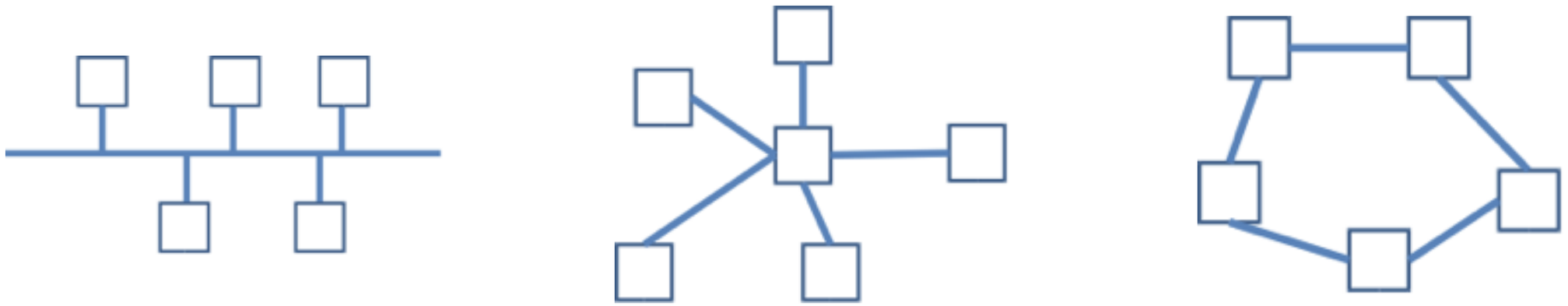
Andrea Ferracani - http://www.micc.unifi.it/ferracani/

Cos'é il web

Internet e il Web sono due cose diverse:

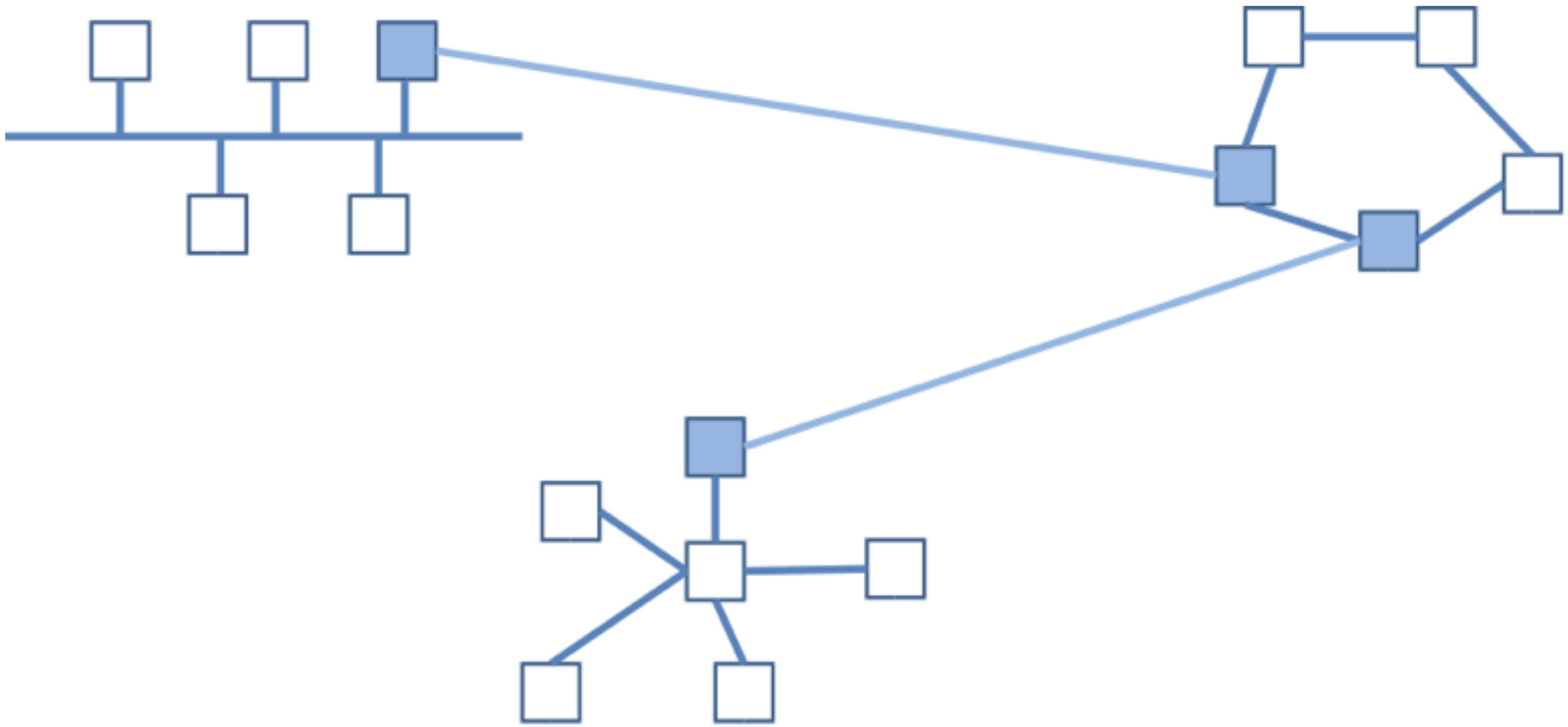
- Il world wide web è una rete mondiale di ipertesti che vengono trasmessi tra computer diversi attraverso il protocollo http. E' una applicazione di Internet, ma ne esistono altre (reti di telefonia, mail)

- Internet è una rete mondiale di computer comunicanti tra loro attraverso connessioni fisiche.



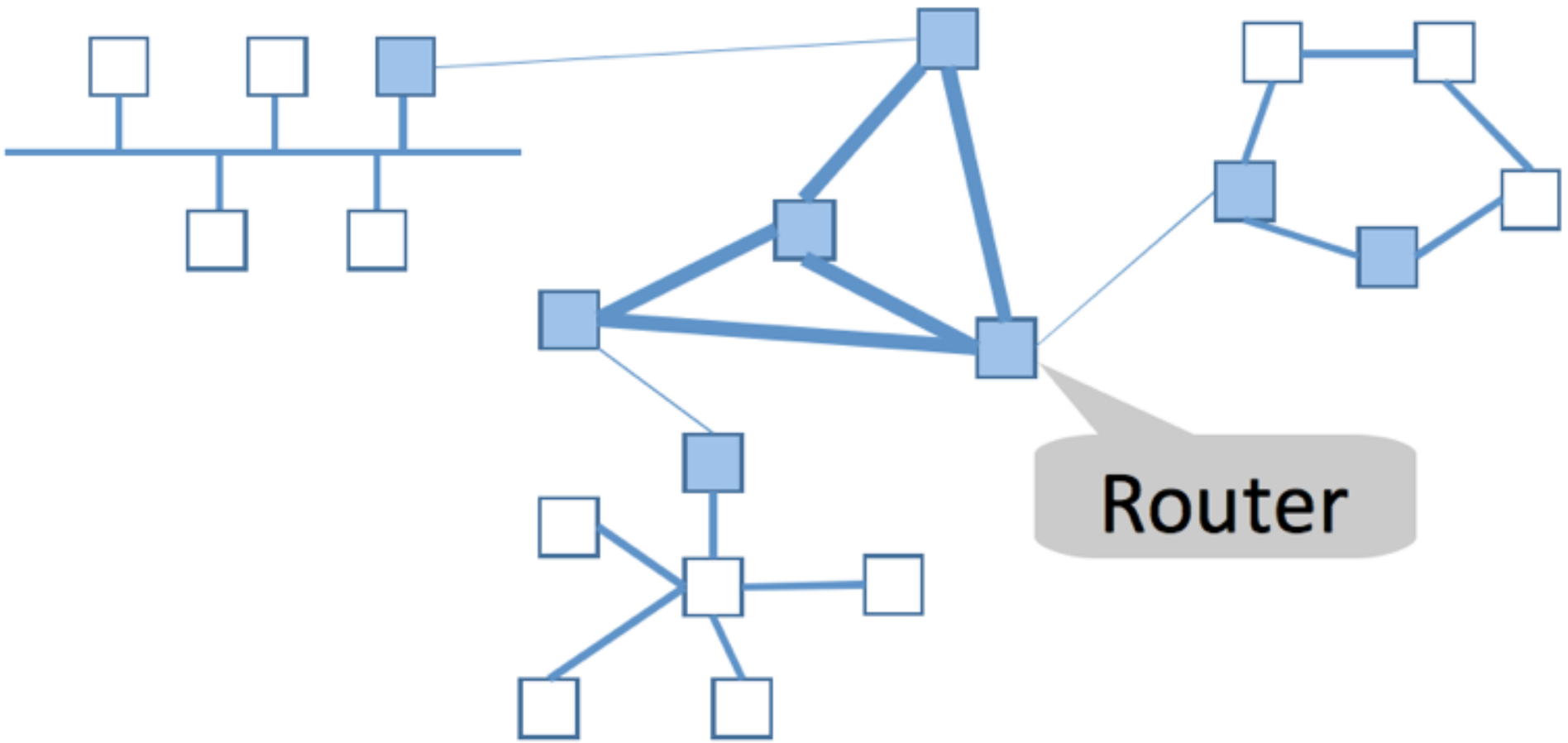
Reti di computer

Le reti di computer possono essere collegate fra loro:



Reti di computer

Internet di fatto è una rete di reti

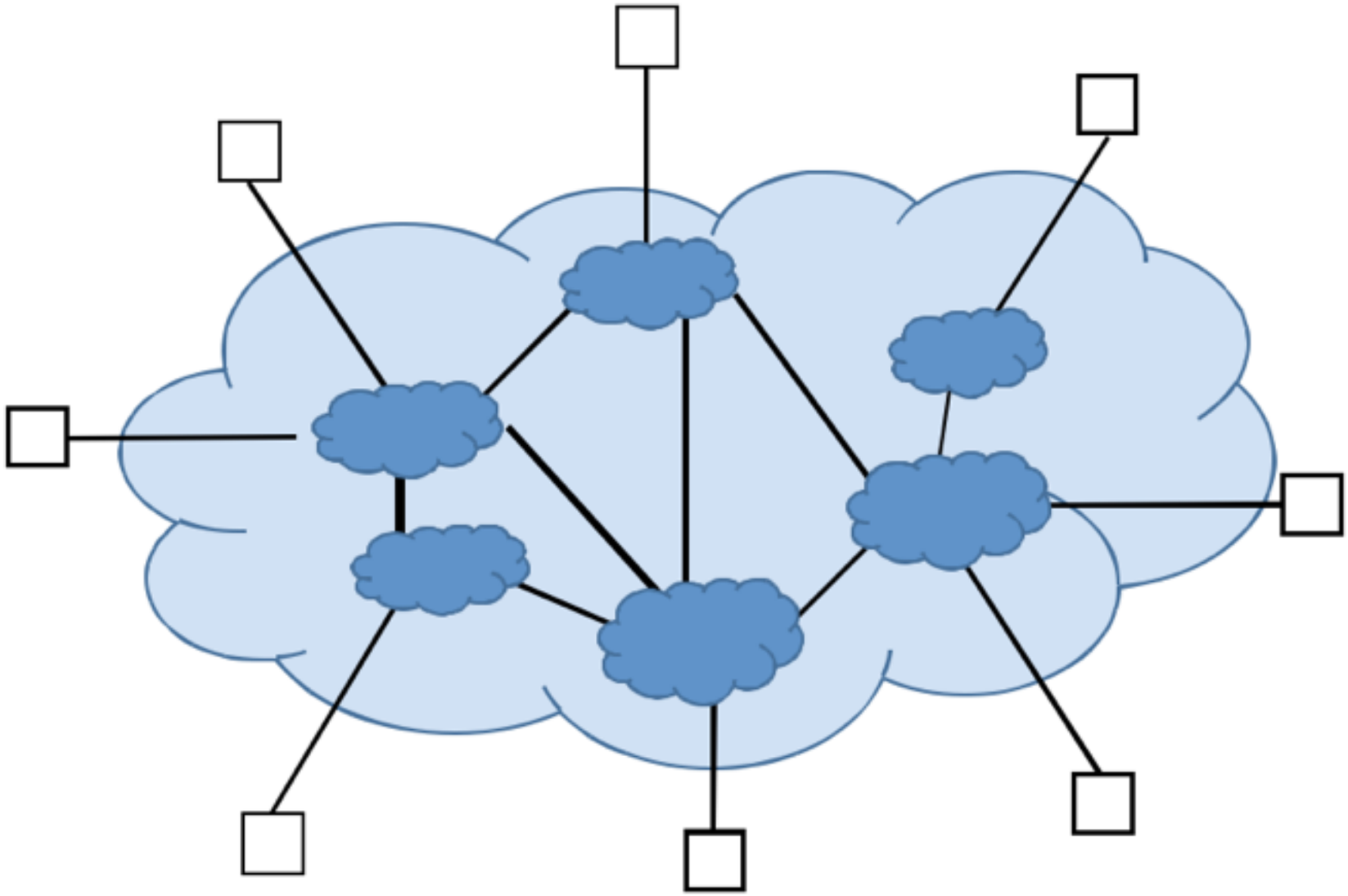


Router: cos'è

Router in inglese significa instradatore: è dunque quel device che si preoccupa di leggere le informazioni da internet (dalla rete) ed inviarle ai vari computer che vi si connettono suddividendo la banda disponibile

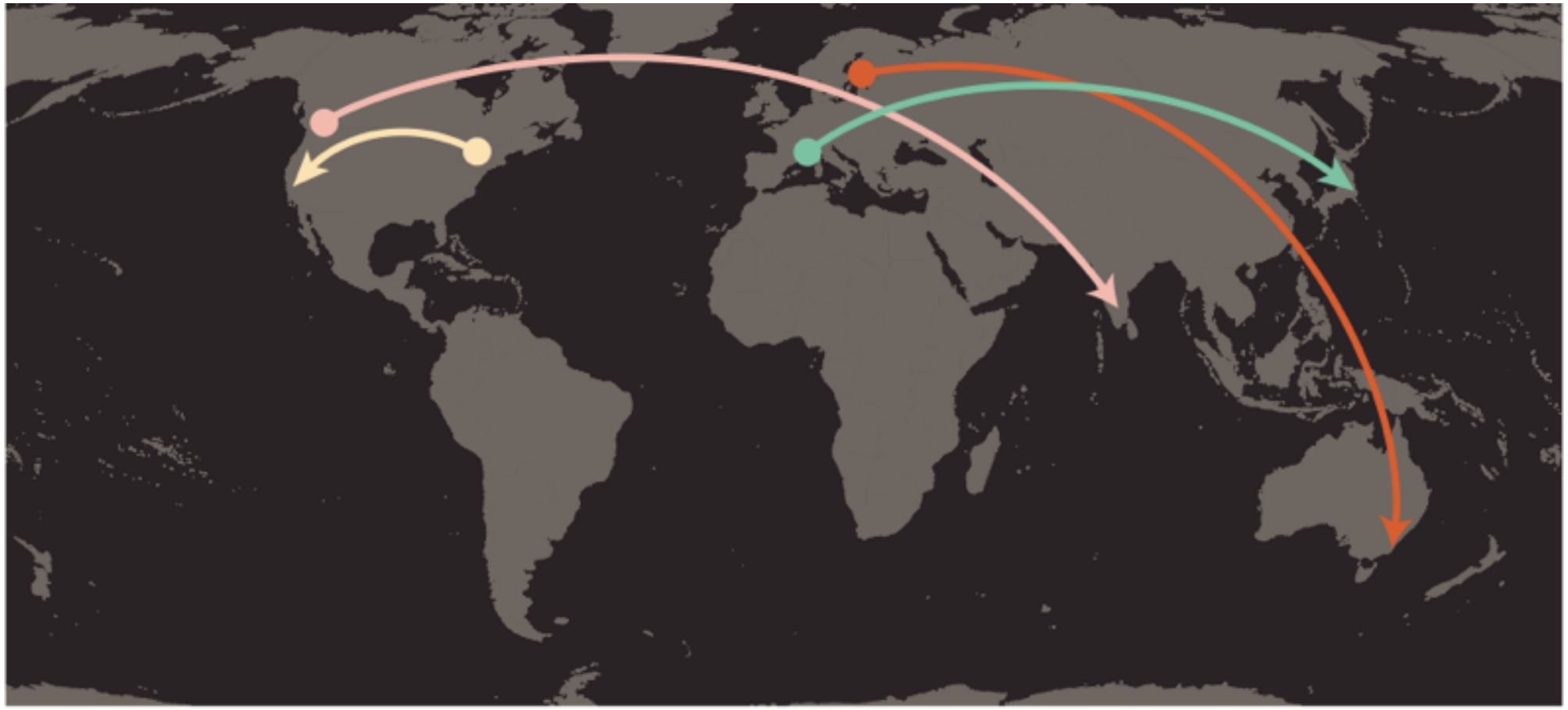
Reti di computer

Tutti noi percepiamo Internet come un'unica rete virtuale



Come funziona il web

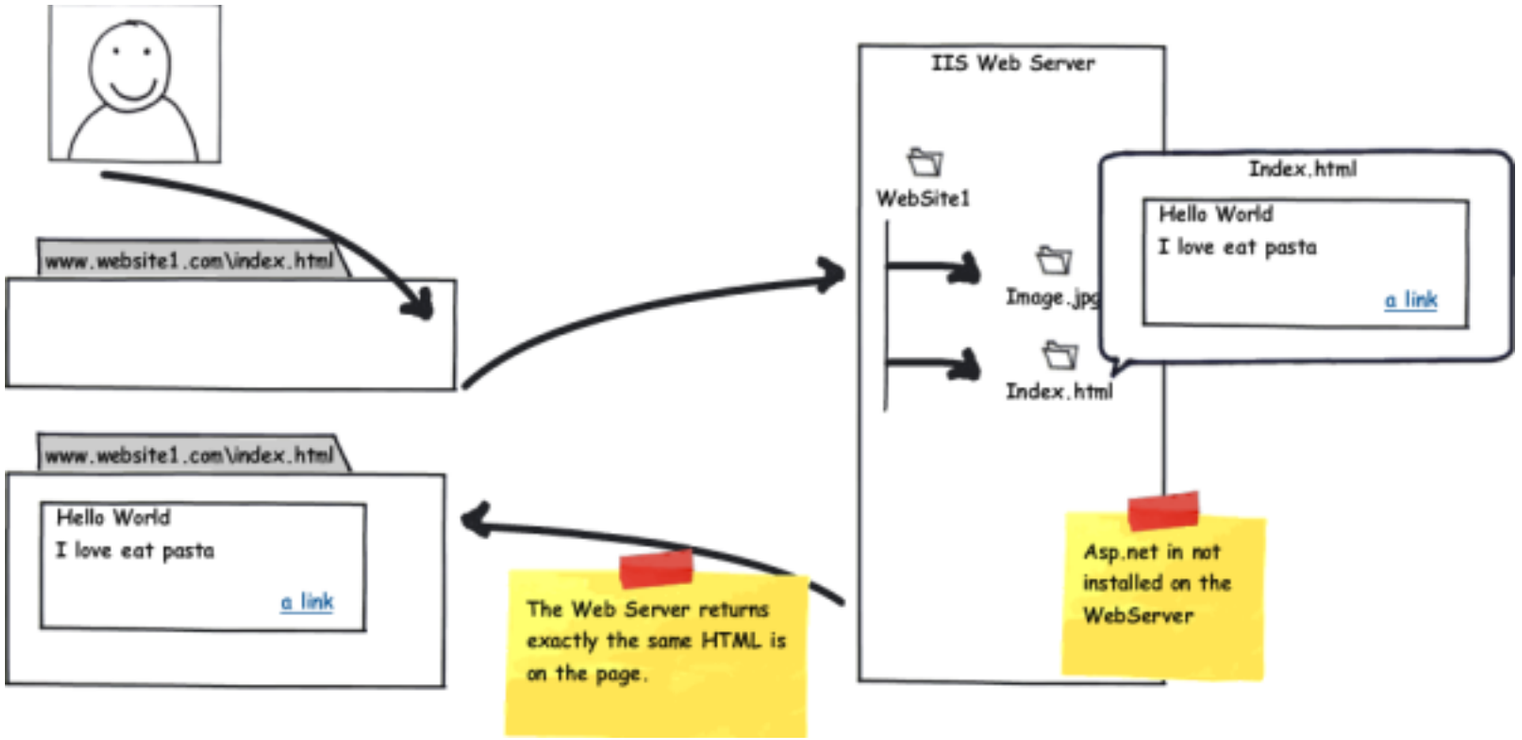
Diversi web clients contattano attraverso DNS (Domain Name System) i web servers



Come funziona il web

- Un client si connette al web attraverso un ISP (Internet Service Provider). L'utente digita un dominio nel web address (google.com)
- Il DNS è come un phone book ed individua il computer che state contattando sulla rete attraverso un IP (150.217.35.77)
- Con questo numero il browser chiama il server
- Il server invia al browser la pagina html ed il css, linguaggi che è in grado di leggere e visualizzare

Come funziona il web



Cos’è un IP

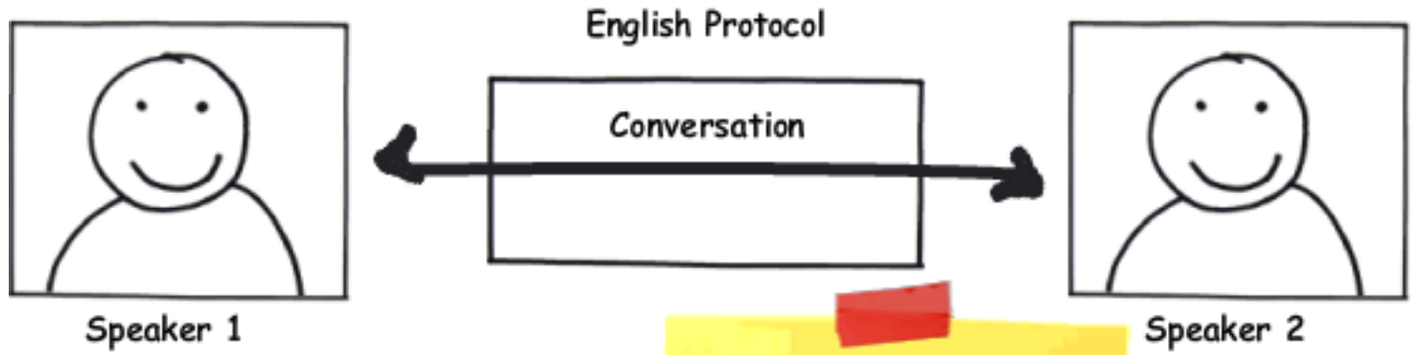
Internet Protocol (IP) è un protocollo di rete appartenente alla suite di protocolli Internet TCP/IP su cui è basato il funzionamento della rete Internet.

IPv4 (Internet Protocol version 4) è la quarta revisione dell'Internet Protocol. Il protocollo è nato nel1981, ed è il più usato a livello di rete, poiché fa parte della suite di protocolli Internet

4 interi fra 0 e 2^8-1 = 255 Es.: 192.128.0.205

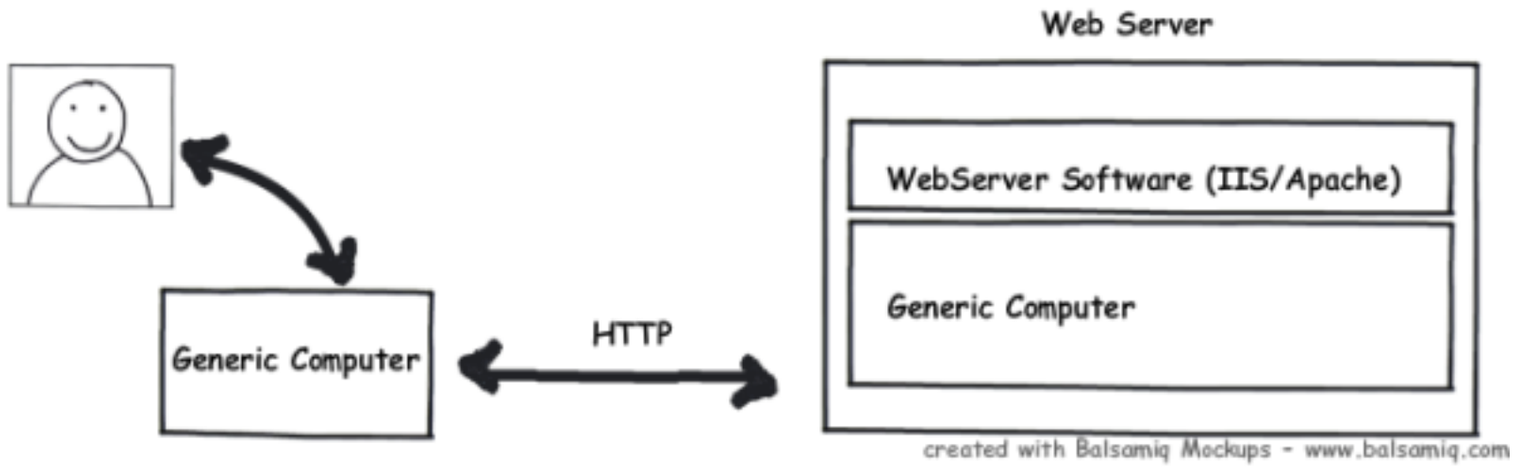
La comunicazione

Due computer connessi in rete comunicano attraverso un protocollo di comunicazione che specifica regole e formati per il trasferimento del messaggio.



La comunicazione

La comunicazione nel web avviene attraverso un protocollo che si chiama HTTP (hypertext transfer protocol)



HTTP specifica la grammatica ma non sa niente e non è in grado di far passare le informazioni da un computer all'altro. E' solo la lingua.

Protocolli di rete

Esistono tanti tipi di protocolli. Alcuni esempi:

Protocolli usati per realizzare il servizio di posta elettronica e newsgroup:

- Simple Mail Transfer Protocol (SMTP)
- Post Office Protocol (POP)
- Internet Message Access Protocol (IMAP)
- Network News Transfer Protocol (NNTP)

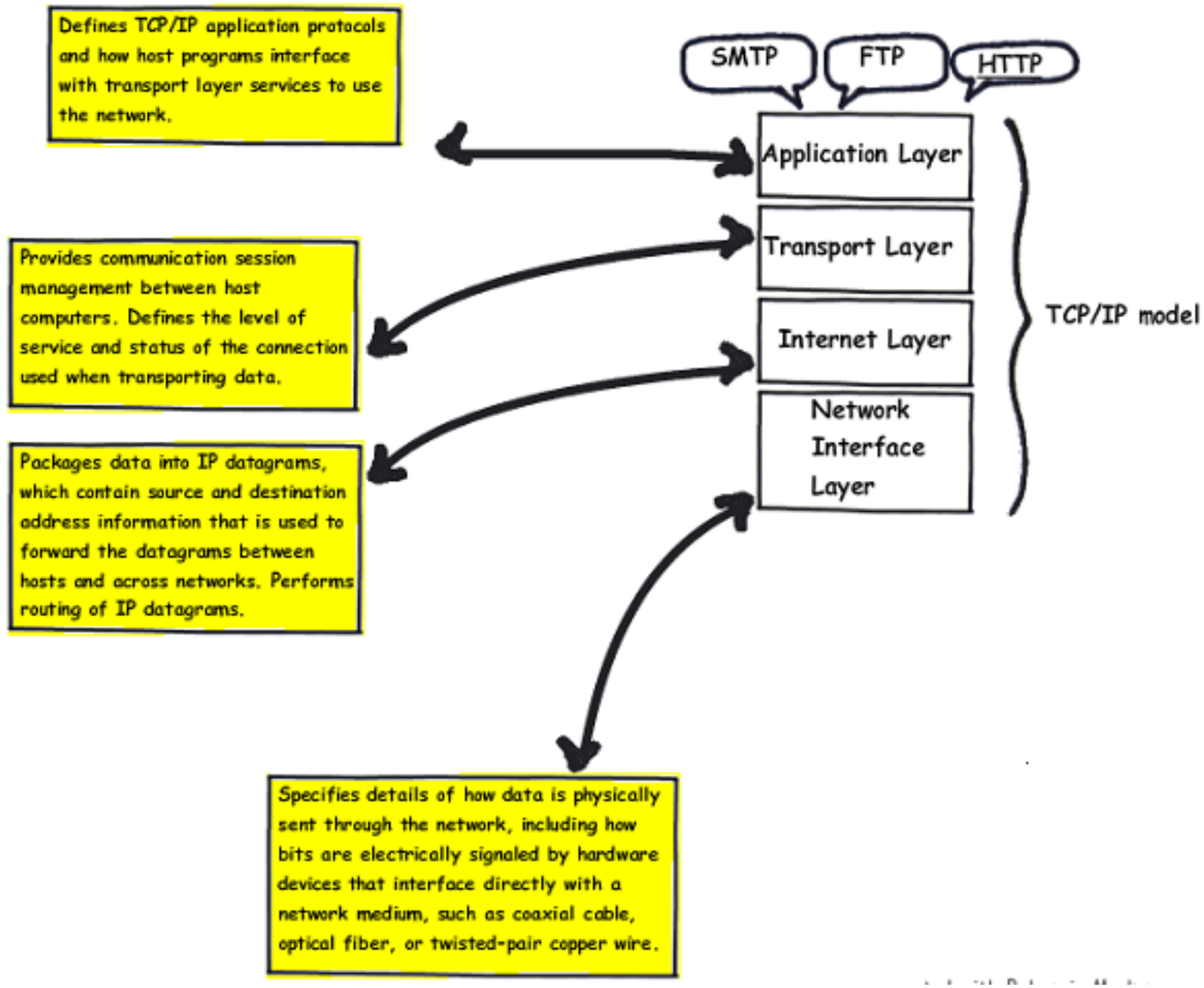
Protocolli di trasferimento file:

- File Transfer Protocol - (FTP)
- Hyper Text Transfer Protocol - (HTTP)

La comunicazione

HTTP si dice dunque essere un protocollo connectionless ma prima di comunicare c'è bisogno di stabilire una relazione.

Un altro protocollo TCP/IP ha il compito stabilire e gestire questa comunicazione



TCP / IP

Transfer Control Protocol è un protocollo di rete a pacchetto di livello di trasporto, appartenente alla suite di protocolli Internet, che si occupa di controllo di trasmissione.

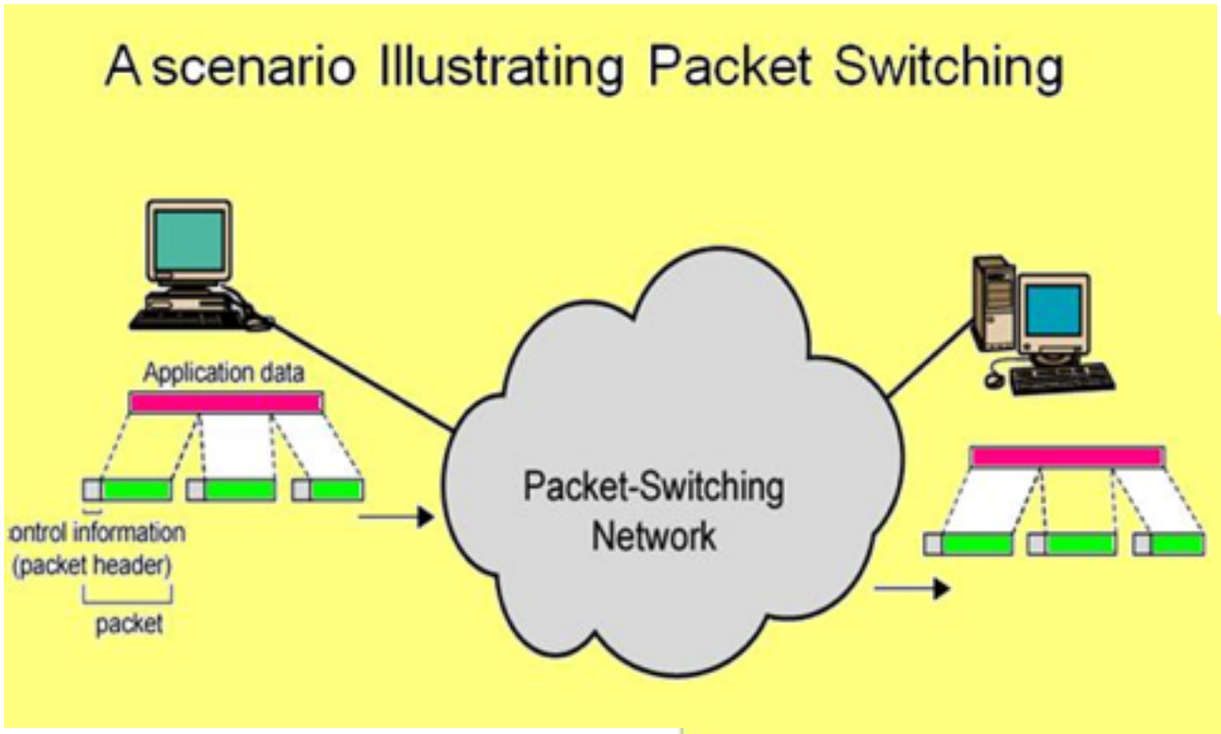
Ogni "data stream" viene spezzettato in pacchetti di informazioni ("datagram")

Ogni pacchetto viene corredato di informazioni per la sua trasmissione, fra cui l'indirizzo di mittente e destinatario

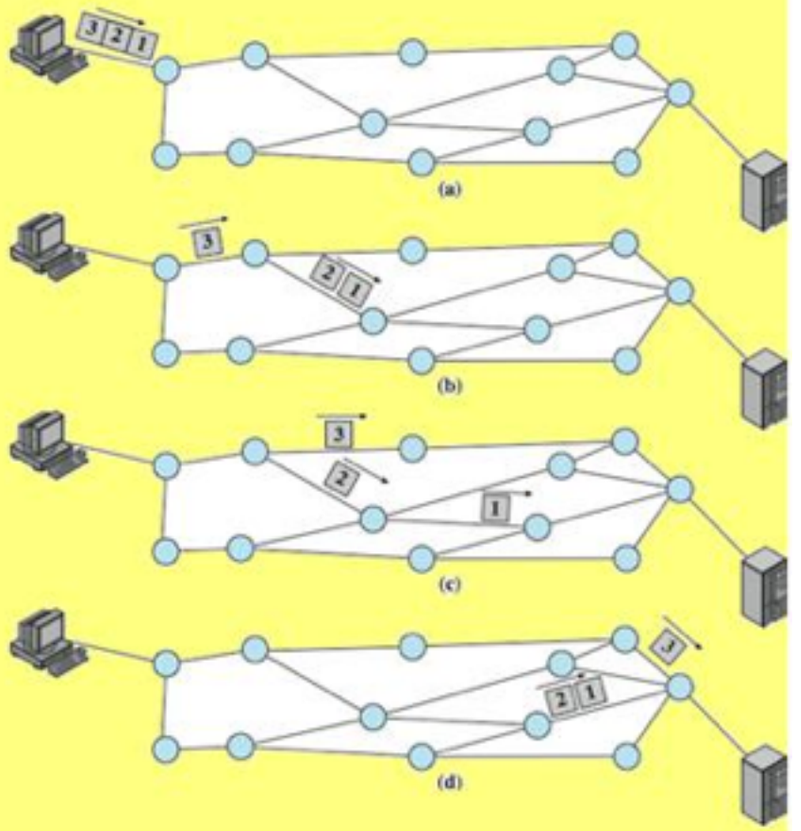
Ogni pacchetto viene inviato singolarmente e può seguire strade diverse dagli altri

"Rete a commutazione di pacchetto" ("packet switching")

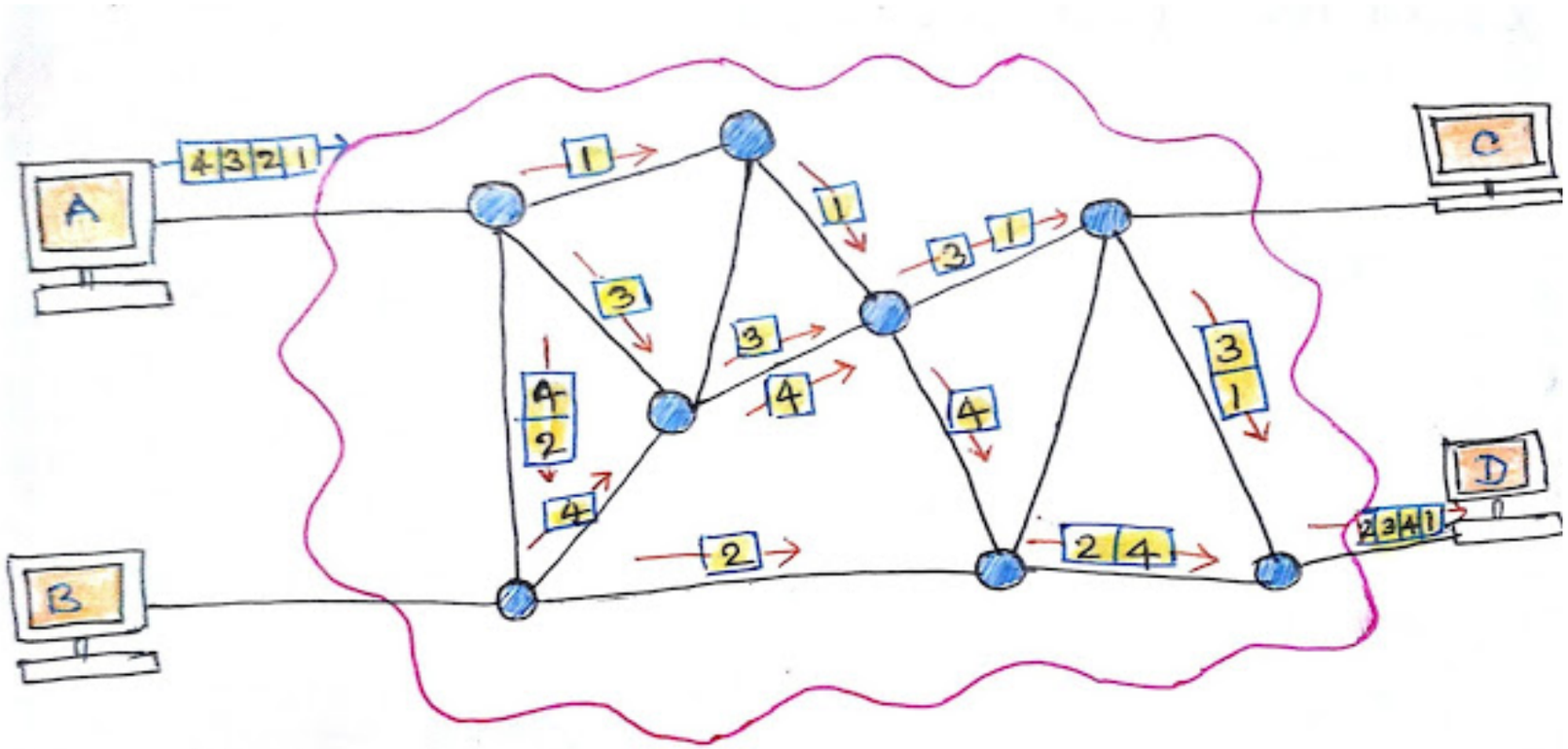
TCP / IP



Datagram
packet
switching



TCP / IP



Datagram approach

Livelli di protocollo

Riassumendo:

Protocollo IP: per trasmettere pacchetti
Protocollo TCP (Transmission Control Protocol): per trasmettere un data stream
Protocollo HTTP: per trasmettere pagine Web
Protocollo FTP: per trasmettere files

DHCP

Dynamic Host Configuration Protocol: protocollo che serve ad assegnare gli indirizzi IP ai nodi di una rete, affinchè siano identificabili e possano comunicare.

Server DHCP: mantengono una tabella di indirizzi IP disponibili localmente.

Ogni nodo chiede a un server DHCP di assegnargli un indirizzo IP (statico o dinamico)

DNS

Domain Number System: un protocollo per dare a ogni computer connesso a internet un nome mnemonico associato a un indirizzo IP.

DNS Server: mantengono tabelle di corrispondenza fra nomi mnemonici e indirizzi IP.

Esempio: http://morpheus.micc.unifi.it

http - protocollo

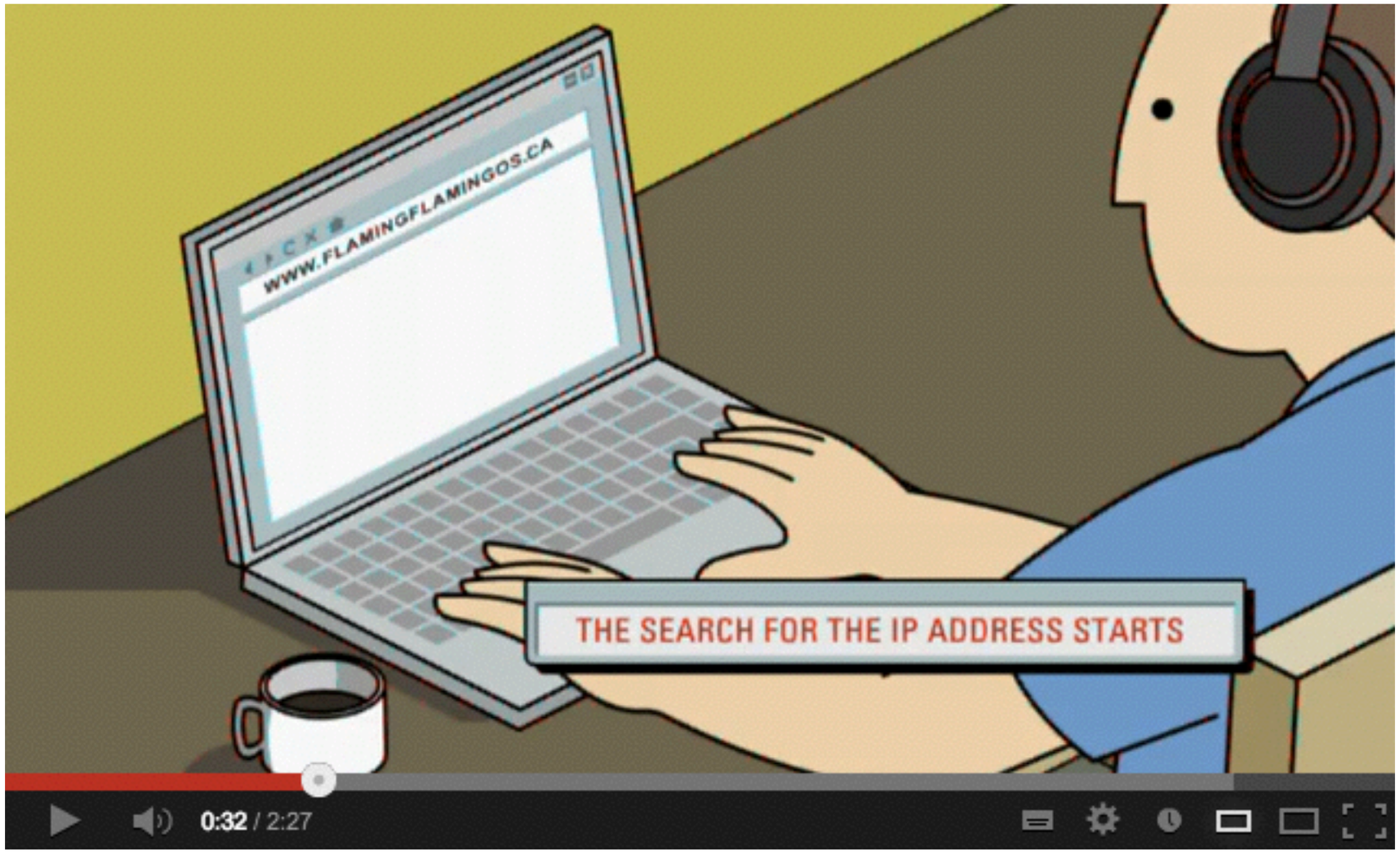
morpheus - nome del computer

micc.unifi.it - dominio (secondo livello)

Corrisponde ad IP: 150.217.35.25

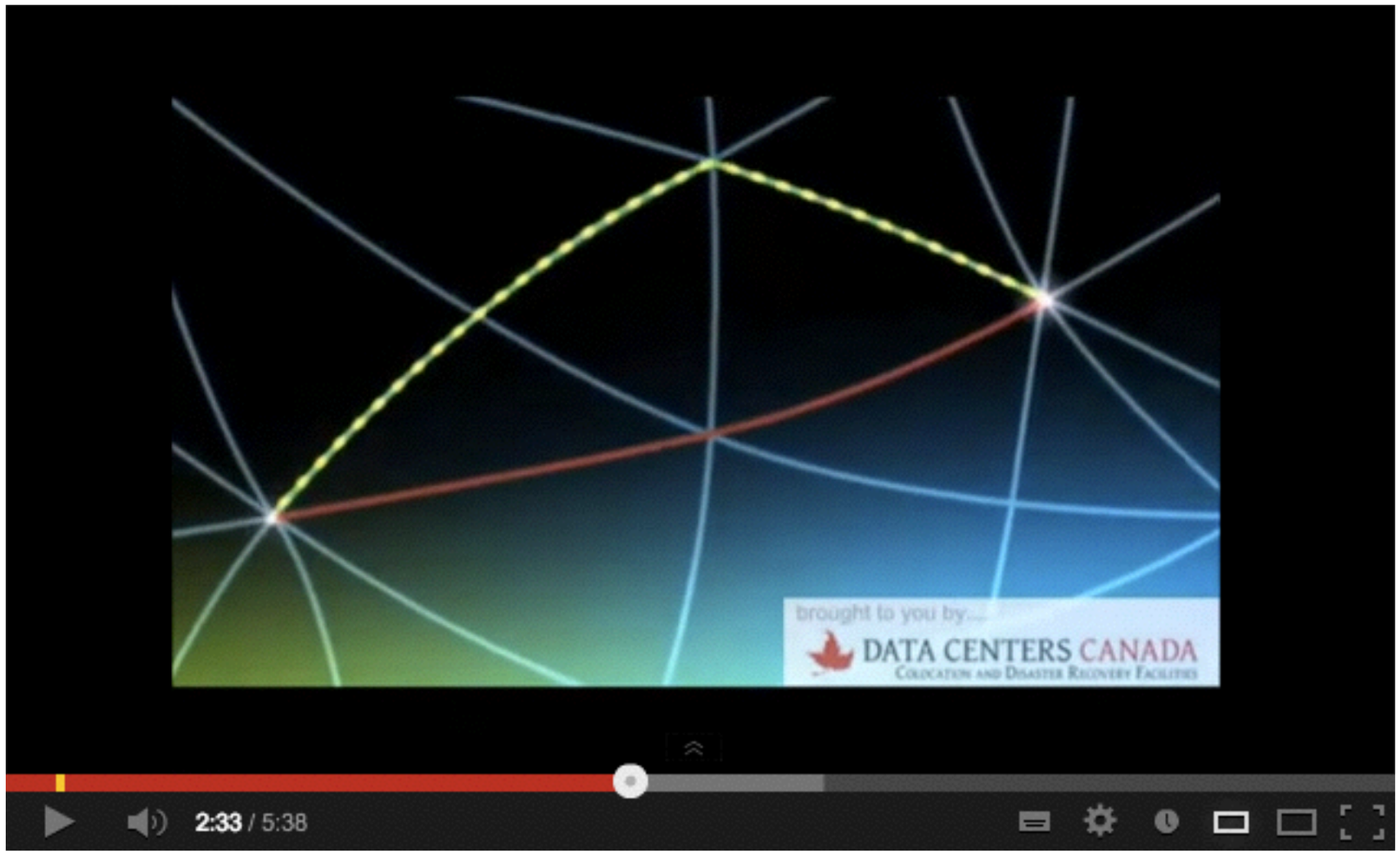
DNS - video

Come funziona (http://www.youtube.com/watch?v=2ZUxoi7YNgs):



Internet - video

Come funziona (http://www.youtube.com/watch?v=i5oe63pOhLI):



ICANN

Internet Corporation for Assigned Names and Numbers: http://www.icann.org/

Organizzazione non-profit che coordina il sistema globale dei nomi di Internet: indirizzi IP, nomi dei protocolli, top-level domains, ecc.

A partire dal 2013 sono attivati nuovi top-level domains (molto costosi) proposti dagli utenti http://www.voanews.com/english/news/science-technology/New-Internet-Name-Rule-Opens-Door-to-Huge-Changes-124180874.html

Sintesi

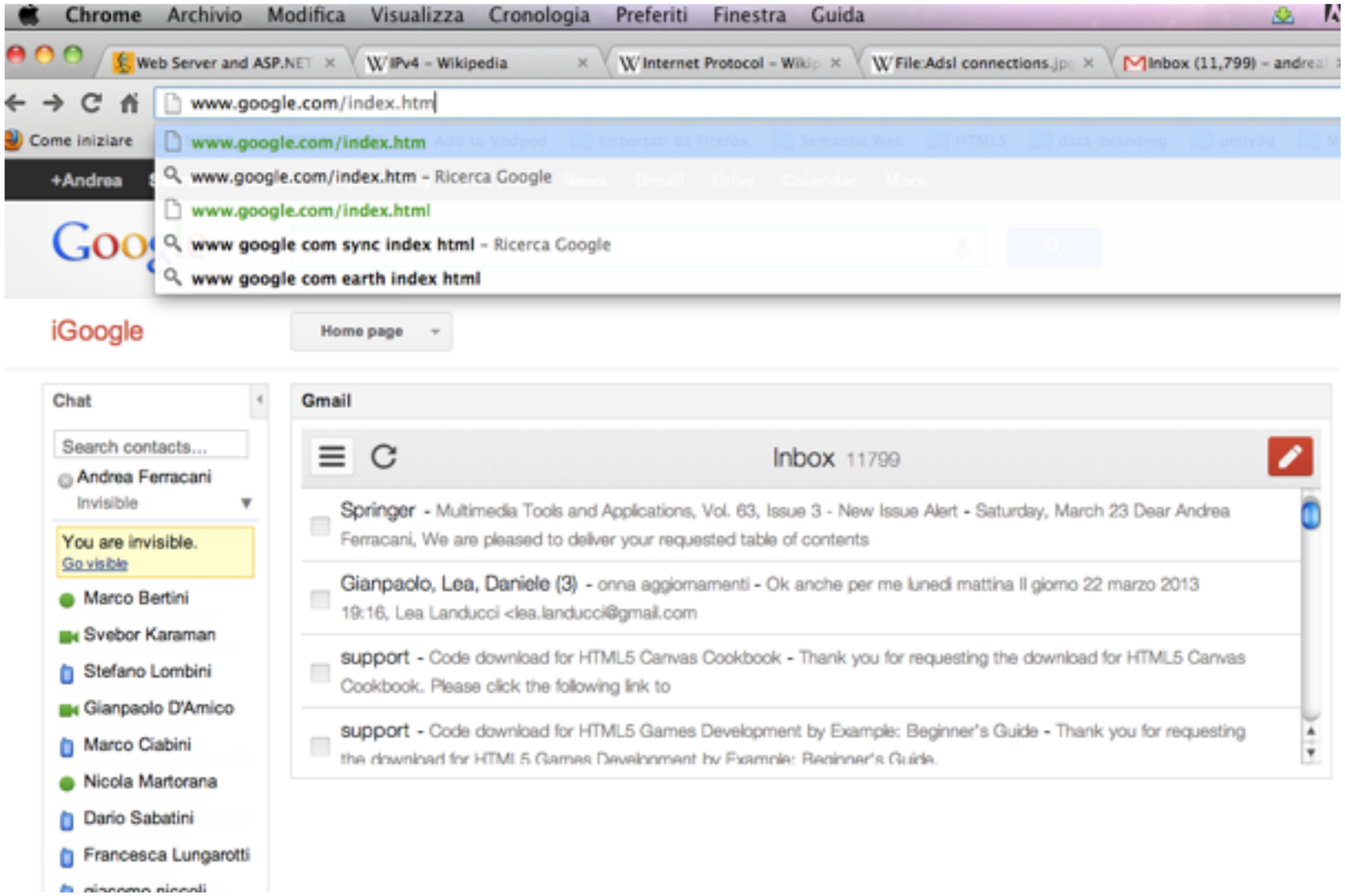
- Internet è una rete di reti
- Il protocollo TCP/IP suddivide il data stream in pacchetti che seguono strade diverse
- I computer sono individuati da un indirizzo IP
- Il DNS associa indirizzi IP a nomi mnemonici strutturati attraverso server distribuiti

Come le persone accedono al web

- web browsers: Firefox, Chrome, Safari, Internet Explorer, Opera
- web servers: rispondono alle richieste dei client (browsers)
- devices: sono lo strumento fisico con cui le persone accedono
- screen readers: software che leggono contenuti dei browsers (per le persone con disabilità)

Comunicazione client-server

Cosa accade quando mettete un indirizzo nella barra del browser?



Comunicazione client-server

Il web è un sistema per la presentazione di documenti multimediali ipertestuali distribuito su tutta Internet e basato su architettura client/server

- il client visualizza i documenti ipertestuali
- il server accede al file system locale e trasmette attraverso la rete fisica i documenti
- il server può collegarsi ad applicazioni server-side ed agire da tramite tra il browser e l"applicazione facendo del browser l'interfaccia dell'applicazione

Comunicazione client-server

1) Il browser suddivide la URL in tre parti:

- Il protocollo (HTTP)
- Il nome del server (www.google.com)
- Il nome del file (index.html)

2) Il browser comunica con il DNS per tradurre il nome del server "www.google.com" in un indirizzo IP, che usa per connettersi alla macchina.

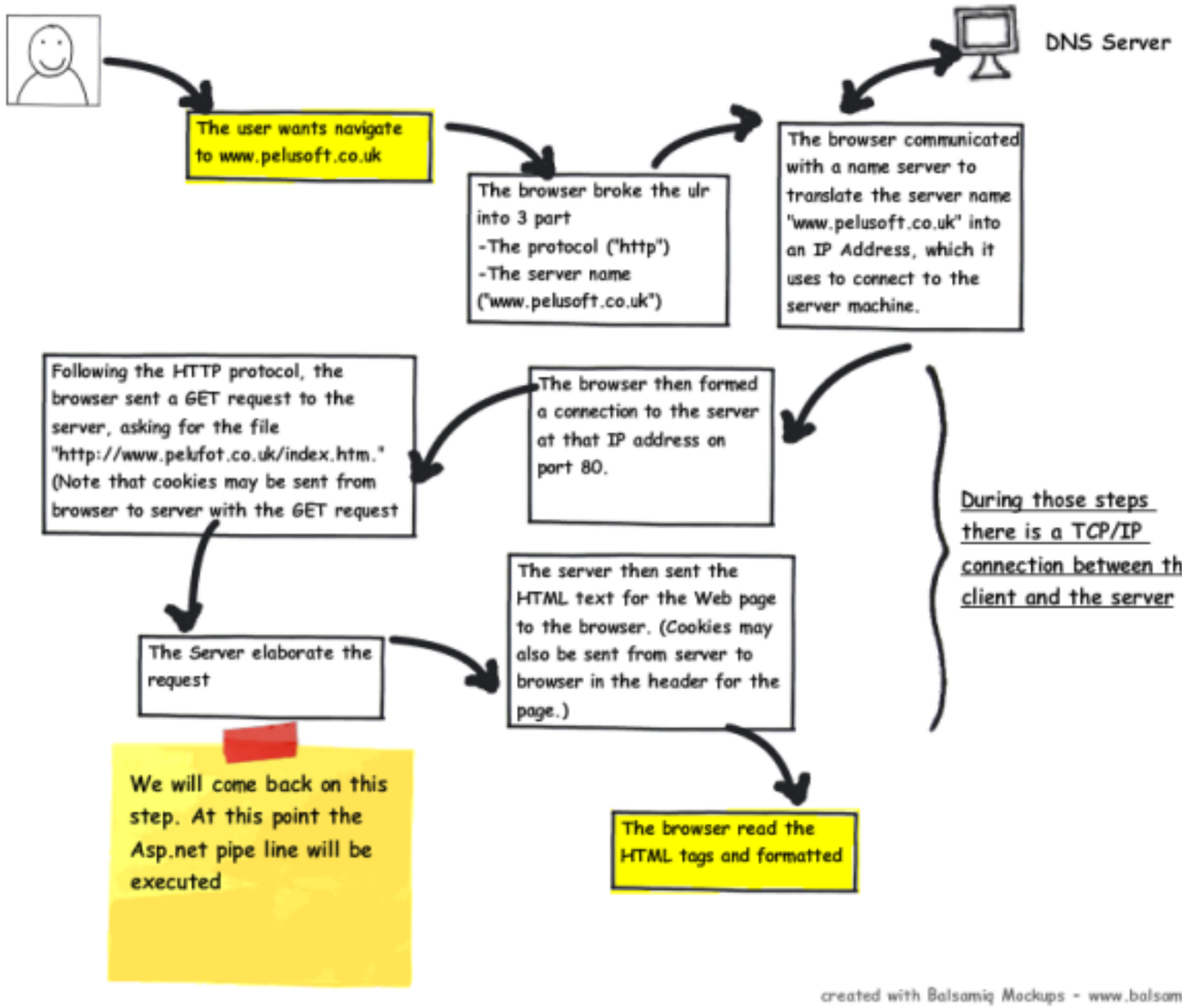
3) Il browser stabilisce una connessione con il server sulla porta 80.

4) Attraverso il protocollo HTTP, il browser manda una richiesta GET chiedendo il file "http://www.google.com/index.htm".

Comunicazione client-server

5) Il server restituisce al client una pagina HTML

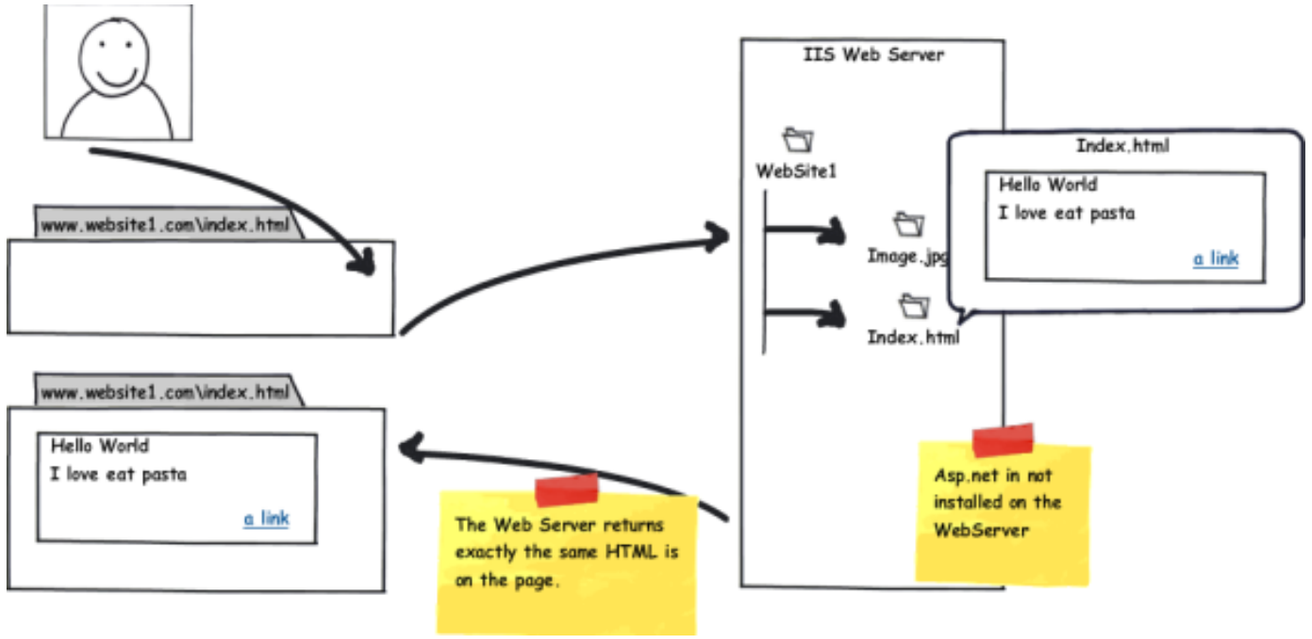
6) Il browser decodifica la pagina e la mostra a schermo



Comunicazione client-server

Con client e server si intendono due computer, l'unica differenza è:

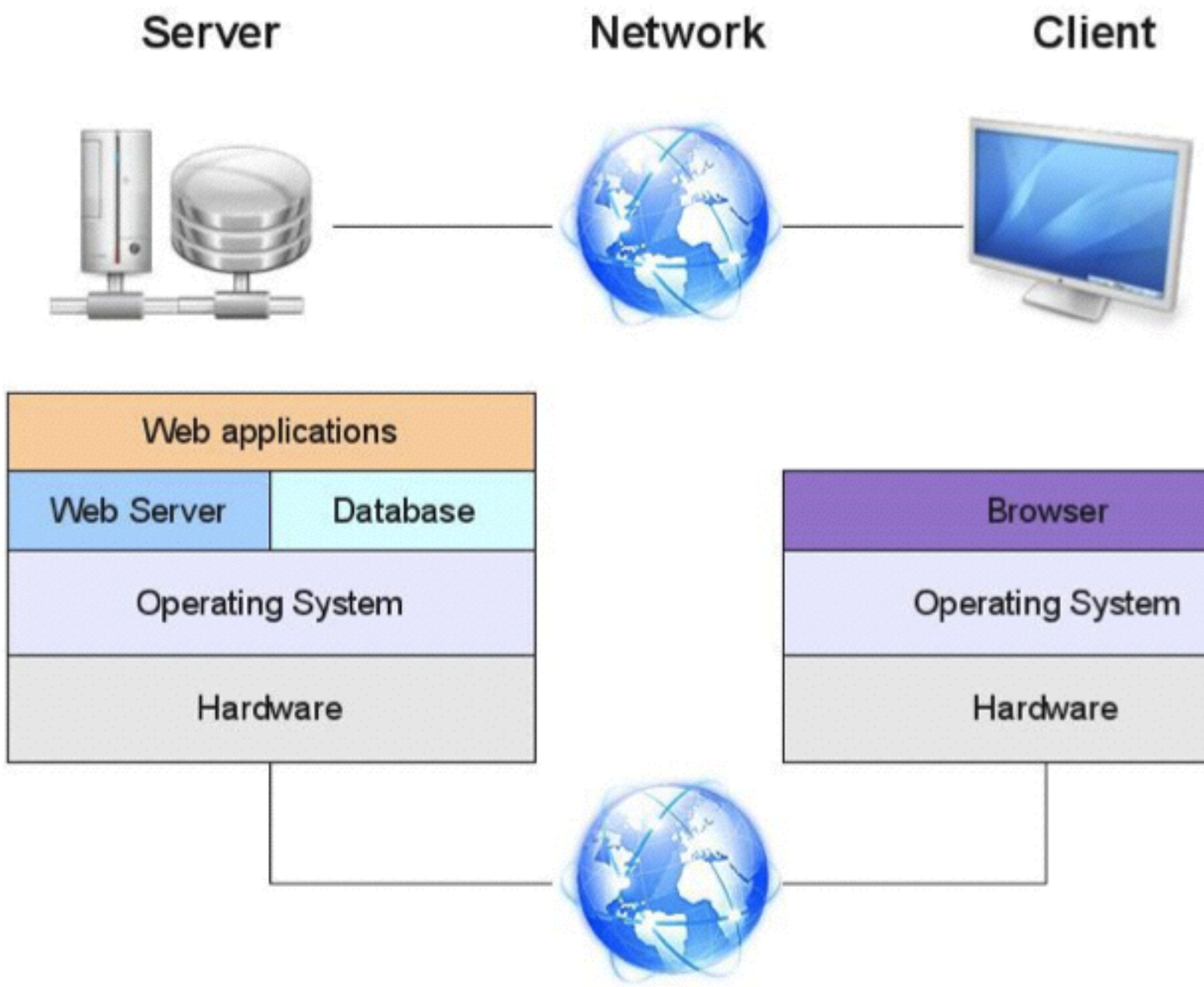
- su un server è installato del software che lo rende in grado di accettare richieste da un qualsiasi computer che faccia una richiesta.



Cosa significa la porta 80?

- di solito è il canale su cui stanno in ascolto i web server

Architettura client-server



Come sono fatti i siti web

- HTML & CSS: linguaggi di markup per semantica ed aspetto
- flash & javascript: linguaggi di programmazione per l'interattività
- CMS: content management system
- HTML5 & CSS3: la novità

Web Apps - strumenti

Web Apps - stato dell'arte

Un po’ di storia

Il world wide web è una rete mondiale di ipertesti.

L’esigenza di evidenziare visivamente riferimenti e connessioni tra testi esiste da sempre.

Commentari a libri importanti (Omero, Bibbia, Talmud, Corano, Divina Commedia, etc.) esistono fin dal tardo impero romano ed utilizzano ogni sorta di trucco grafico e visivo per realizzare effetti di collegamento.

Era inevitabile che la meccanizzazione prima, e l’informatizzazione dopo, cercassero di soddisfare quest’esigenza.

Gli anni 80

Con il progredire della tecnologia, i sistemi ipertestuali escono dai laboratori e diventano un argomento ufficiale di ricerca e produzione software.

Nel 1989 un gruppo di ricercatori del CERN, centro di ricerca in fisica nucleare a Ginevra, ricevette l'incarico di realizzare un meccanismo per la diffusione rapida di articoli, appunti e opinioni tra i fisici che ruotassero intorno al centro.

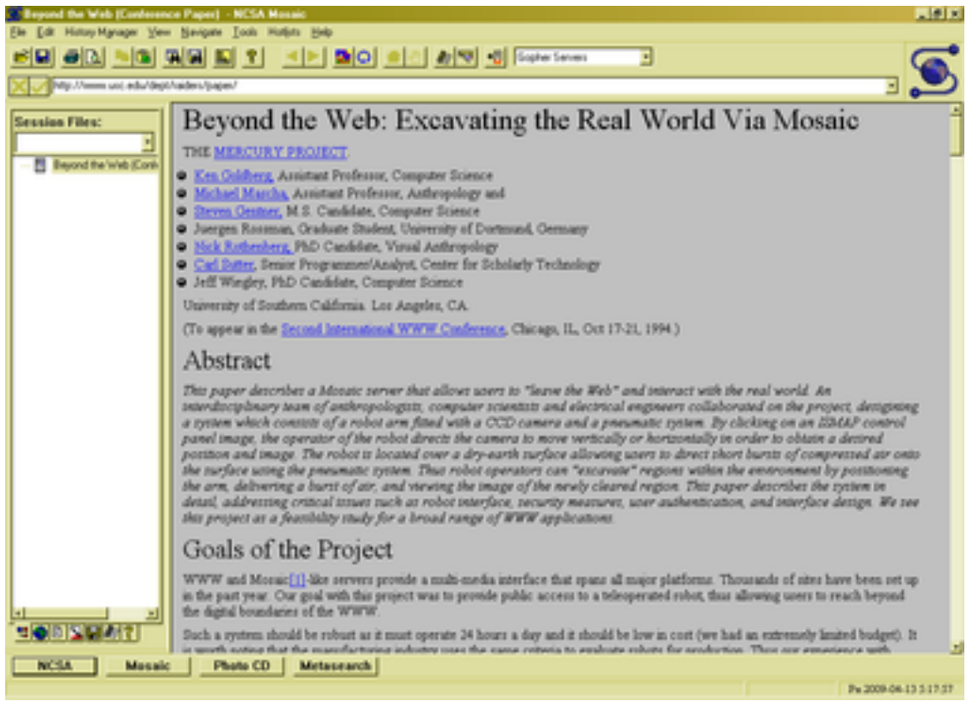
Il WEB

Nel 1991 Tim Berners-Lee e Robert Cailliau mostrarono (con poco successo) il primo prototipo client-server ed il primo browser chiamato: WorldWideWeb

Il prototipo era composto di:

- un server che spediva documenti memorizzati localmente a chi lo richiedesse secondo il protocollo stabilito, e memorizzava documenti spediti da remoto
- un editor di testi parzialmente WYSIWYG che permetteva di visualizzare documenti ipertestuali e di modificarli, creando link e blocchi di testo.

Mosaic



Nell'ottobre del 1992 il National Centre for Supercomputing Applications (NCSA) esaminò il prototipo di WWW e decise di realizzarne una versione propria.

Con la realizzazione del server NCSA e del primo browser WWW, chiamato Mosaic, l'NCSA decretò l'inizio del successo esplosivo del sistema.

W3C

Nel frattempo, Berners-Lee e Cailliau cercano di mantenere il controllo sull'evoluzione del World Wide Web e fondano il W3C, con fondi della ricerca e dell'università.

Diventerà il World Wide Web Consortium, l'istutuzione regolatrice del Web.

I primi browsers

Nel 1995 quando Netscape era diventato quasi monopolista dovette scontrarsi con un agguerrito concorrente: Internet Explorer della Microsoft.

Microsoft decise di distribuire il proprio browser Internet Explorer 3 incluso nel sistema operativo Windows 95, così che cambiarlo diventasse compito degli utenti, i quali spesso non lo facevano.

Sebbene gli utenti di Netscape fossero pochissimi già nel 2003, lo sviluppo di Netscape proseguì fino al 28 dicembre 2007, quando la AOL annunciò ufficialmente la fine del progetto.

Ancora browsers

Internet Explorer ha continuato lo sviluppo in maniera irregolare, senza introdurre cambiamenti importanti e senza rispettare le direttive del W3C.

A partire dal 2004 iniziarono ad affermarsi browser con caratteristiche innovative e maggiore rispetto degli standard.

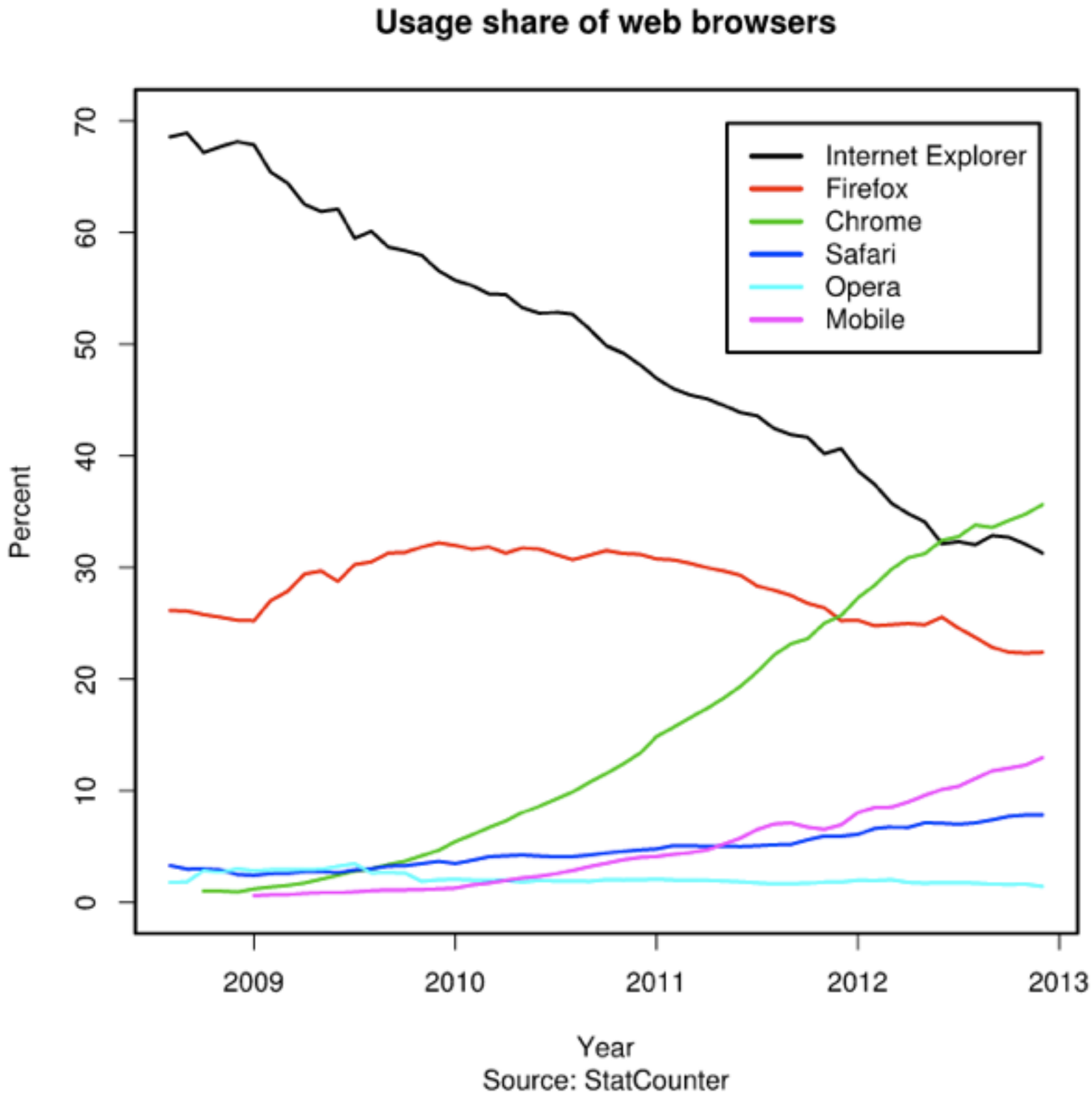
Quelli che hanno intaccato maggiormente l'egemonia Microsoft sono Mozilla Firefox, Opera, Safari e ultimo ma non ultimo Google Chrome.

Browsers - alcuni punti

Un problema molto sentito nell'ambito del web development è il rispetto degli standard web emanati dal W3C:

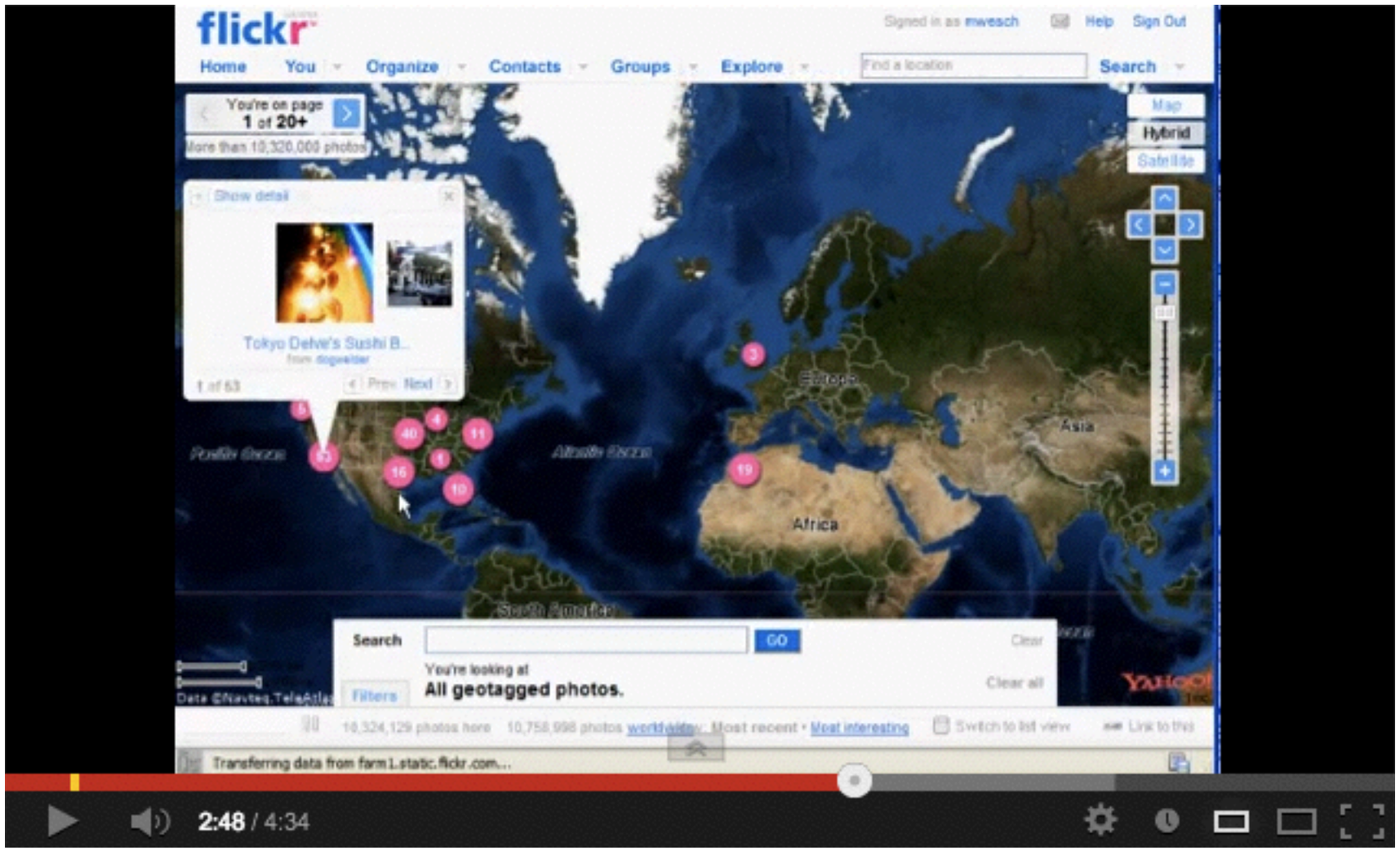
- risulta difficile, in alcuni casi, permettere una corretta visualizzazione del proprio lavoro su qualsiasi browser
- una volta progettato sito web è necessario controllarne la visualizzazione e le funzionalità su diversi browser in modo da assicurarti che tutti i visitatori possano usufruire del servizio
- credere che IE sia lo standard è un errore soprattutto oggi che l"accesso al web avviene dai dispositivi più diversi: Android, iPhone.

Browsers - 2013 - StatsCounter



Web 2.0 - video

Cos'è il web 2.0? (http://www.youtube.com/watch?v=NLIGopyXT_g)



Web 2.0 - 2005

La diffusione sempre più vasta dei sistemi per la gestione dinamica dei contenuti (CMS: blog, wiki, ...) sta modificando la metafora di navigazione rendendo l'utente attivo.

Alcune tecnologie stanno diventando degli standard de facto: AJAX / Rich Internet Applications.

In rete sta sempre più assumendo la conformazione di "rete piccolo mondo" con l'avvento del social network: Facebook, Yahoo groups, del.icio.us, flickr...

Rimane un imperativo: LESS IS MORE!

Web 2.0 - 2005

Il termine Web 2.0 fu coniato 1999 per descrivere siti che usano tecnlogie diverse dai primi siti per il web (statici).

E’ stato attribuito a Tim O'Reilly per la O'Reilly Media Web 2.0 conference tenutasi nel 2004.

Sebbene il Web 2.0 suggerisca una nuova versione del World Wide Web, non si riferisce ad una update della tecnologia, ma piuttosto a cambiamenti cumulativi nel modo in cui i software developers e gli utenti finali usano il web.

Web 2.0 - 2005

Caratteristiche principali del Web 2.0 includono

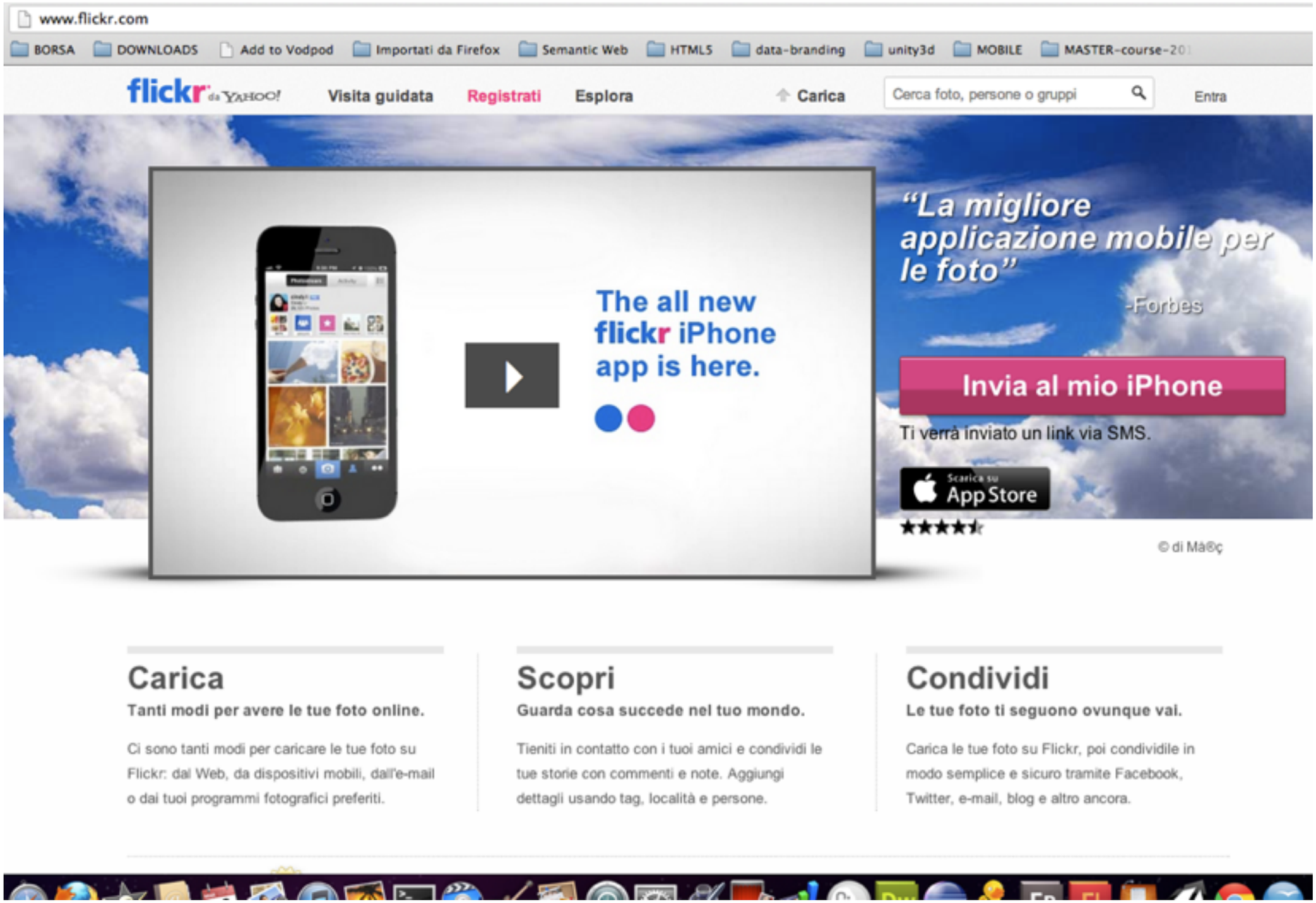
- Condivisione, collaborazione e partecipazione
- Contenuti più importanti dei contenitori
- Utente che genera contenuti e non (più) semplice fruitore
- Ridefinizione di barriere e distinzioni produttori / editori / fruitori
- Non solo i contenuti, ma anche la loro rilevanza basata sugli utenti
- Applicazioni dal desktop al Web
- Semplicità d'uso
- Decentralizzazione (peer to peer)

Web 2.0 - strumenti

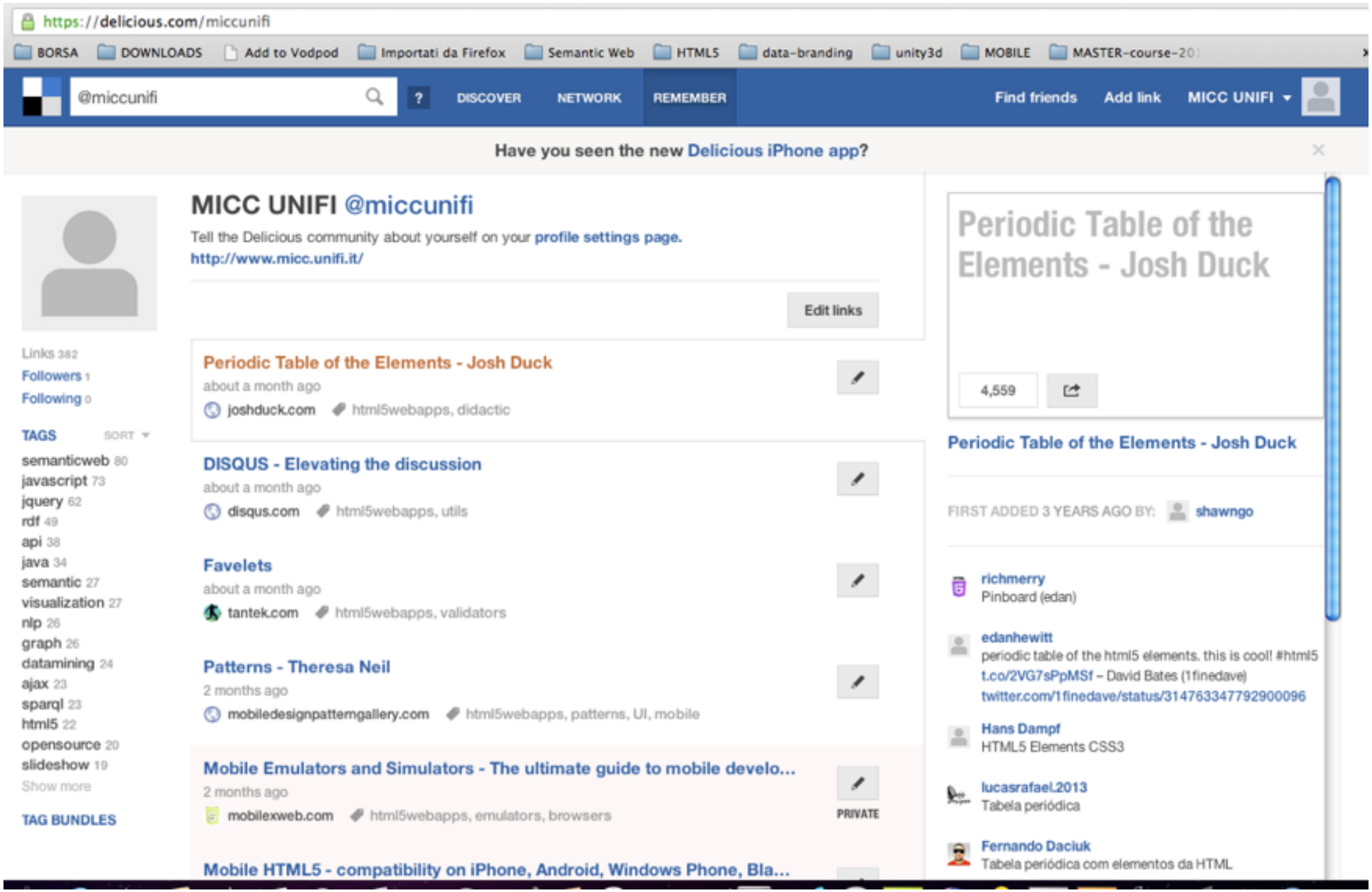
Strumenti dinamici di organizzazione delle conoscenze:

- Wiki
- Tag e folksonomy
- Blog
- Rss-Really Simple Syndication
- Mash up

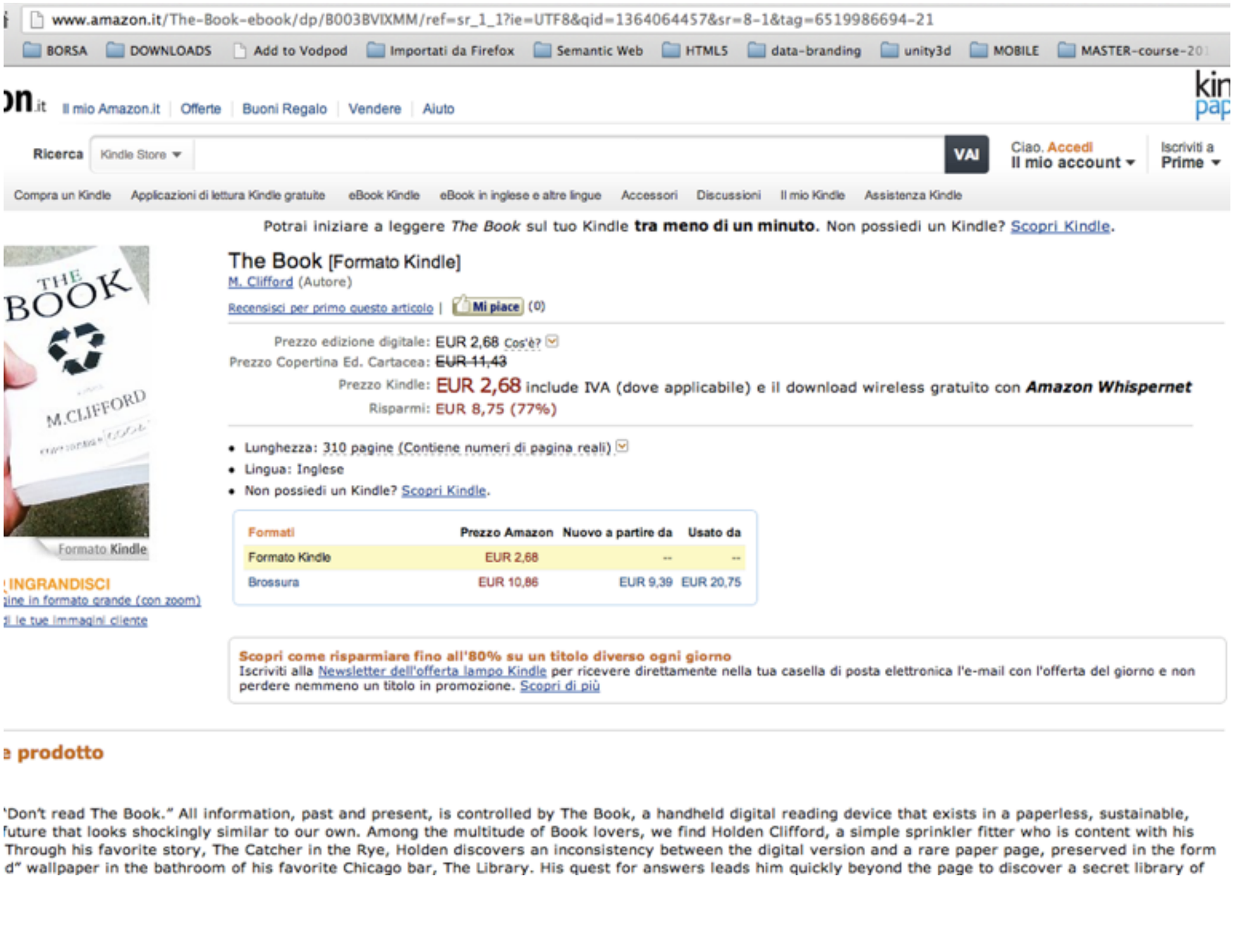
Web 2.0 - alcuni esempi



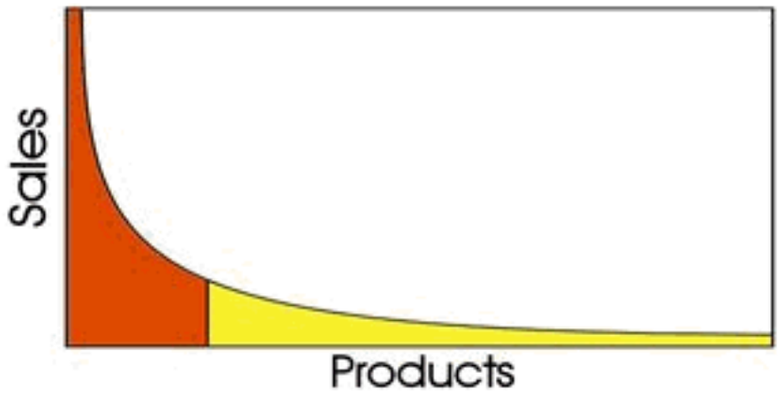
Web 2.0 - alcuni esempi



Web 2.0 - alcuni esempi



The long tail

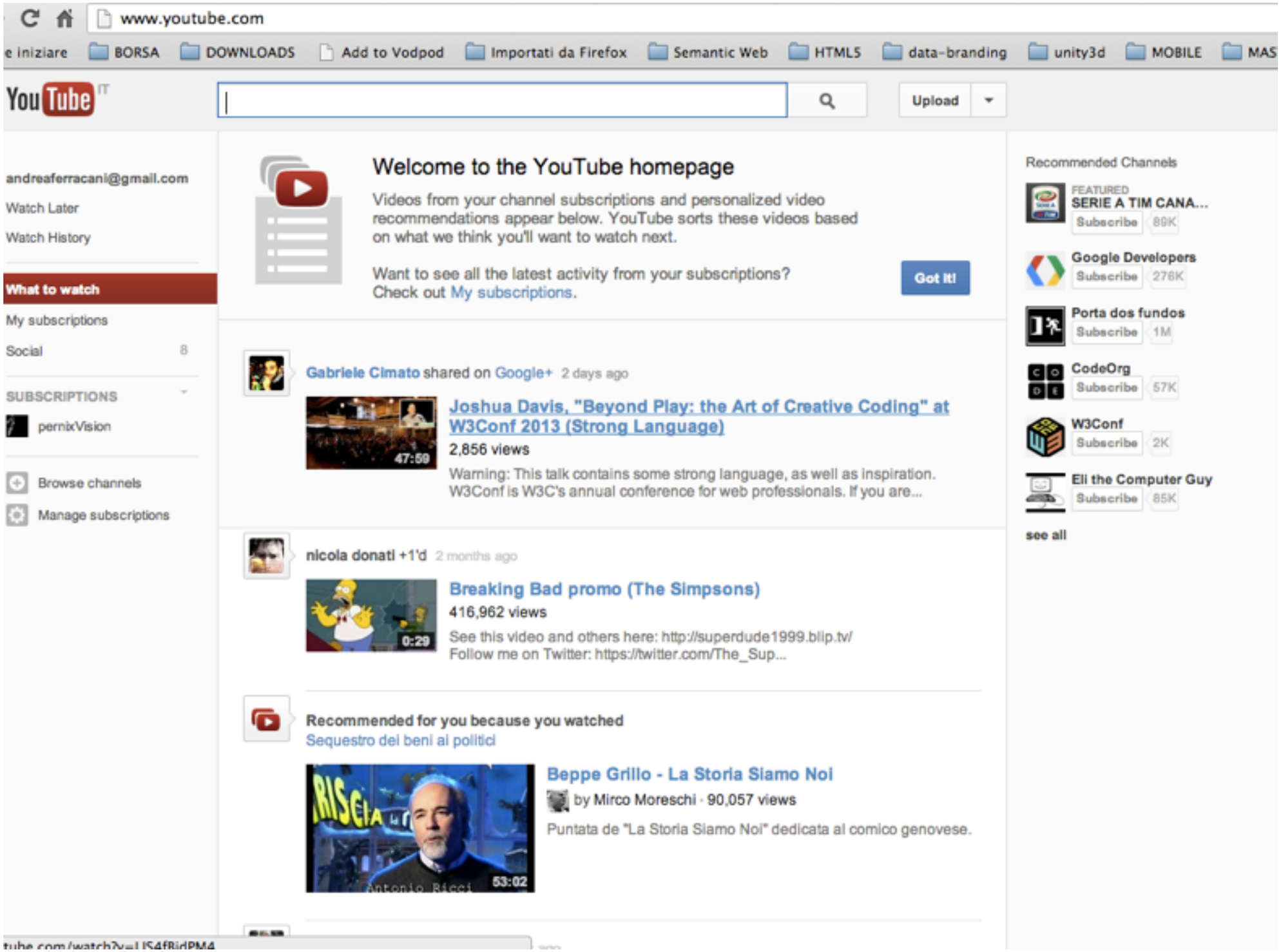


The long tail significa "la lunga coda"

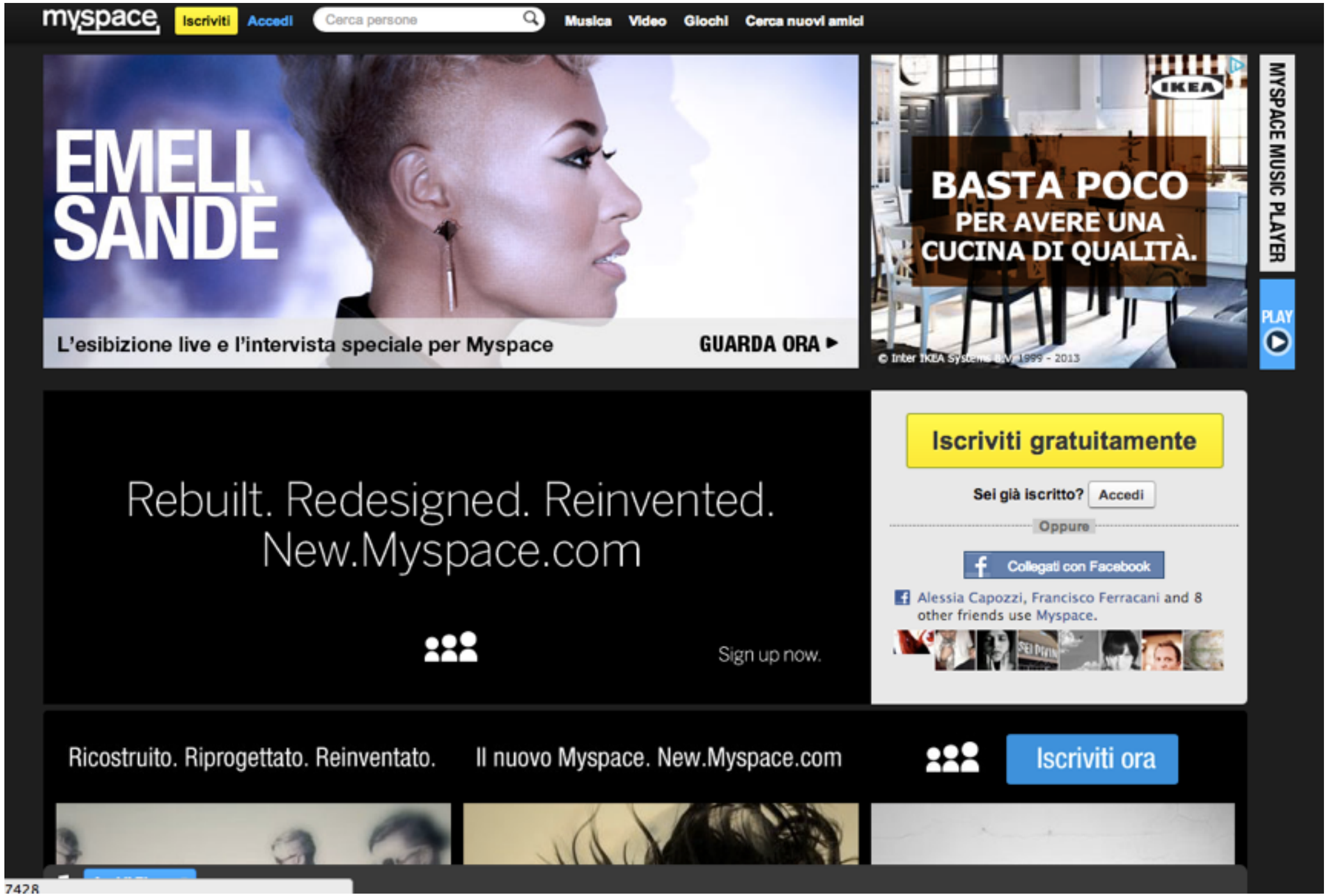
- introdotta da Chris Anderson nel 2004 in un articolo da egli scritto sul Wired Magazine
- gli eventi poco frequenti (rappresentati dalla porzione gialla della curva) – appunto la coda lunga – possono cumulativamente superare in numero o importanza la porzione iniziale della curva definita come testa.
- La crescente diffusione di internet non ha fatto altro che avvalorare la teoria di Chris Anderson; la possibilità di gestire virtualmente un catalogo rendendolo illimitato ha infatti rivoluzionato i modelli economici precedenti
- Ne è un esempio la vendita on line di libri, gestendo un catalogo virtuale, vendendo pochissime copie di migliaia di titoli si possono comunque fare dei rispettabili volumi di ricavi e questo è più redditizio che vendere migliaia di copie di pochi titoli.

Esempio SEO

Web 2.0 - alcuni esempi



Web 2.0 - alcuni esempi



Web 2.0 - alcuni esempi

Visita la pagina principale

WIKIPEDIA
L'enciclopedia libera

Voce | Discussione | Leggi | Modifica | Visualizza cronologia | Ricer

Pagina principale
Ultime modifiche
Una voce a caso
Vetrina
Aiuto

Comunità
Portale Comunità
Bar
Il Wikipediano
Fai una donazione
Contatti

Stampa/esporta
Crea un libro
Scarica come PDF
Versione stampabile

Strumenti
Puntano qui
Modifiche correlate
Carica su Commons
Pagine speciali
Link permanente
Informazioni sulla pagina
Cita questa voce

Altri progetti

Wiki

Da Wikipedia, l'enciclopedia libera.

Un **wiki** è una pagina (o comunque una collezione di documenti ipertestuali) che viene aggiornata dai suoi utilizzatori e i cui contenuti sono sviluppati in collaborazione da tutti c
modifica dei contenuti è aperta, nel senso che il testo può essere modificato da tutti gli utenti (a volte soltanto se registrati, altre volte anche anonimi) contribuendo non solo pe
solitamente nei forum, ma anche cambiando e cancellando ciò che hanno scritto gli autori precedenti.

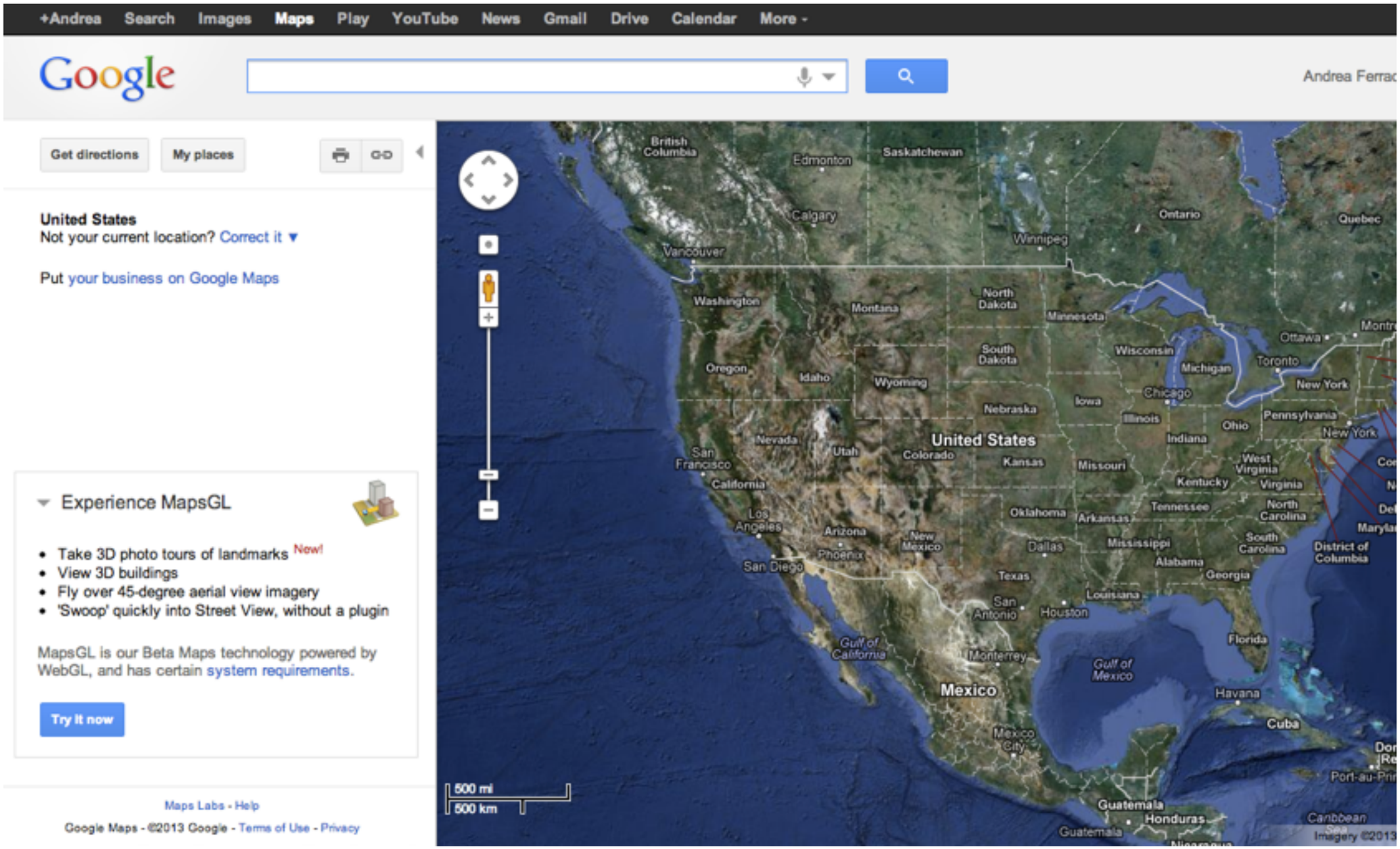
Ogni modifica è registrata in una cronologia che permette in caso di necessità di riportare il testo alla versione precedente; lo scopo è quello di condividere, scambiare, immaga
conoscenza in modo collaborativo. Il termine "wiki" indica anche il software collaborativo utilizzato per creare il sito web e il server.

Wiki, in base alla etimologia, è anche un modo di essere.

Indice [nascondi]

Etimologia [modifica]

Web 2.0 - alcuni esempi



Sintesi - definizioni

Da Wikipedia:

“Il Web 2.0 è un termine utilizzato per indicare genericamente uno stato di evoluzione di Internet (e in particolare del World Wide Web), rispetto alla condizione precedente.

Si tende ad indicare come Web 2.0 l'insieme di tutte quelle applicazioni online che permettono uno spiccato livello di interazione sito-utente (blog, forum, chat, sistemi quali Wikipedia, Youtube, Facebook, Myspace, Twitter, Gmail, Wordpress, Tripadvisor ecc.).

La locuzione pone l'accento sulle differenze rispetto al cosiddetto Web 1.0, diffuso fino agli anni novanta, e composto prevalentemente da siti web statici, senza alcuna possibilità di interazione con l'utente eccetto la normale navigazione tra le pagine, l'uso delle email e l'uso dei motori di ricerca.”

Sintesi definizioni

Da Enciclopedia Britannica:

"next envisioned iteration of the World Wide Web, in which the 2.0 appellation is used in analogy with common computer software naming conventions to indicate a new, improved version…many of the most vocal advocates of the Web 2.0 concept have an almost messianic view of harnessing social networking for business goals"

Prospettive di sviluppo

Tim O'Reilly e John Battelle (Web 2.0 Summit) - 2009:

Cosa sarà il web 3.0?

"semantic web?
Is it the social web?
The mobile web?
Is it some form of virtual reality?
It is all of those, and more."

Articolo (in inglese)

Prospettive di sviluppo

Tim O'Reilly e John Battelle (Web 2.0 Summit) - 2009:

Tagline: Web Squared "Web meets World - that's Web Squared"

Quali caratteristiche?

• "Our phones and cameras are being turned into eyes and ears for applications; motion and location sensors tell where we are, what we're looking at, and how fast we're moving"

• Realtà Aumentata

AR - video

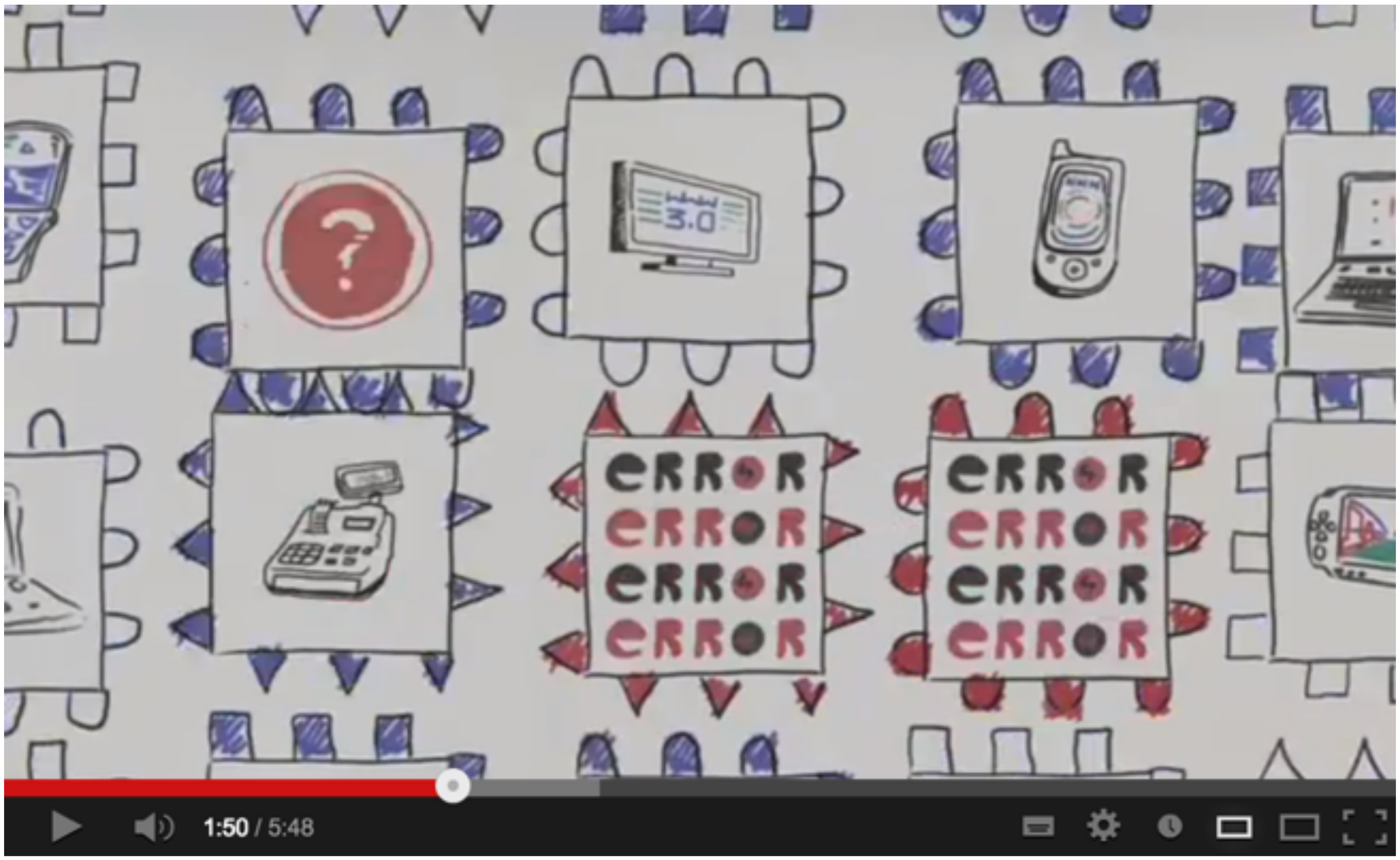
Augmented reality: http://www.youtube.com/watch?v=6br7NreTwD4

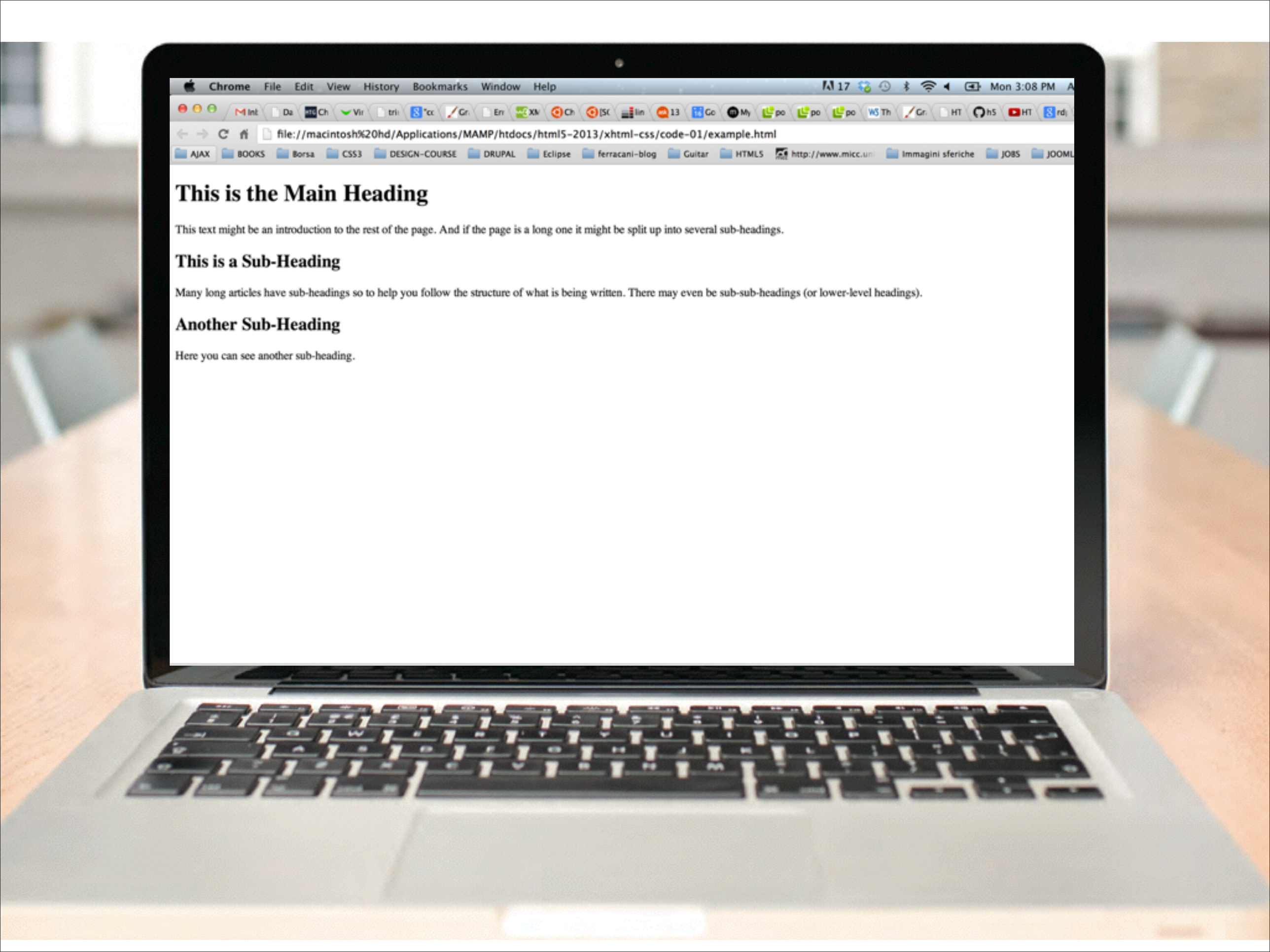
IT - video

Internet of Things: http://www.youtube.com/watch?v=sfEbMV295Kk

IT - video

Internet of Things: http://www.youtube.com/watch?v=off08As3siM

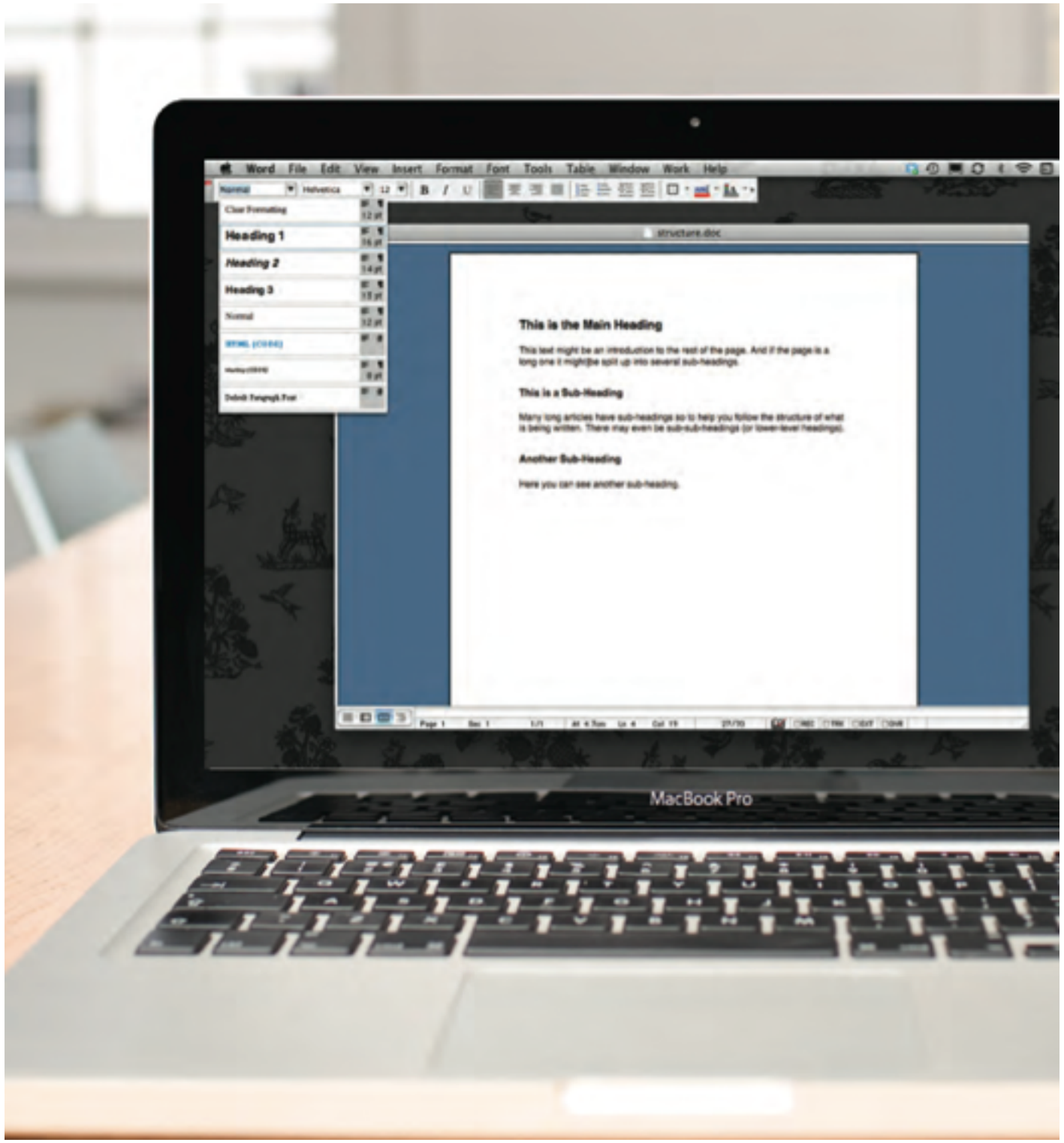



Chrome File Edit View History Bookmarks Window Help
Mon 3:08 PM
file://macintosh%20hd/Applications/MAMP/htdocs/html5-2013/xhtml-css/code-01/example.html
AJAX BOOKS Borsa CSS3 DESIGN-COURSE DRUPAL Eclipse ferracani-blog Guitar HTML5 Immagini sferiche JOBS
This is the Main Heading
This text might be an introduction to the rest of the page. And if the page is a long one it might be split up into several sub-headings.
This is a Sub-Heading
Many long articles have sub-headings so to help you follow the structure of what is being written. There may even be sub-sub-headings (or lower-level headings).
Another Sub-Heading
Here you can see another sub-heading.

Struttura

La struttura dei contenuti sul web è molto simile a quella che conosciamo su altri canali

Struttura



Gerarchia delle informazioni: titoli, sottotitoli, paragrafi

XHTML

Per definire cos'è XHTML possiamo iniziare con una semplice espressione:

XML + HTML = XHTML

XML

XML: è un metalinguaggio: "a common syntax for expressing structure in data" ovvero un linguaggio per definire nuovi linguaggi di markup. XML consente di crearsi i propri tipi di documenti. E' quindi uno strumento per scambiare dati. Esempi

Lo scopo di XML è quello di separare la definizione dei dati dalla rappresentazione, per favorire lo scambio di documenti strutturati.

In particolare i principali obiettivi di XML, dichiarati nella prima specifica ufficiale (ottobre 1998), sono:

- utilizzo del linguaggio su Internet,
- facilità di creazione dei documenti,
- supporto di più applicazioni,
- chiarezza e comprensibilità.

```
<breakfast_menu>
    <food>
        <name>Belgian Waffles</name>
        <price>$5.95</price>
        <description>
            two of our famous Belgian Waffles with plenty of real
            maple syrup
        </description>
        <calories>650</calories>
    </food>

    <food>
        <name>French Toast</name>
        <price>$4.50</price>
        <description>
            thick slices made from our homemade sourdough bread
        </description>
        <calories>600</calories>
    </food>

    <food>
        <name>Homestyle Breakfast</name>
        <price>$6.95</price>
        <description>
            two eggs, bacon or sausage, toast,
            and our ever-popular hash browns
        </description>
        <calories>950</calories>
        </food>
</breakfast_menu>
```

HTML

HTML è l'acronimo di HyperText Markup Language.

HTML è un linguaggio di marcatura per presentare i contenuti di una pagina web (per la descrizione di come appaiono documenti all'interno di un browser) . La sua semplicità è la base dell'esplosione di Internet. Fornisce strumenti per presentare titoli, paragrafi, font, link, immagini.

Con il termine marcatura (markup) si intende una sequenza di caratteri o altri simboli che si inseriscono all'interno di un documento per indicare come il contenuto deve apparire o per descrivere la struttura logica del documento.

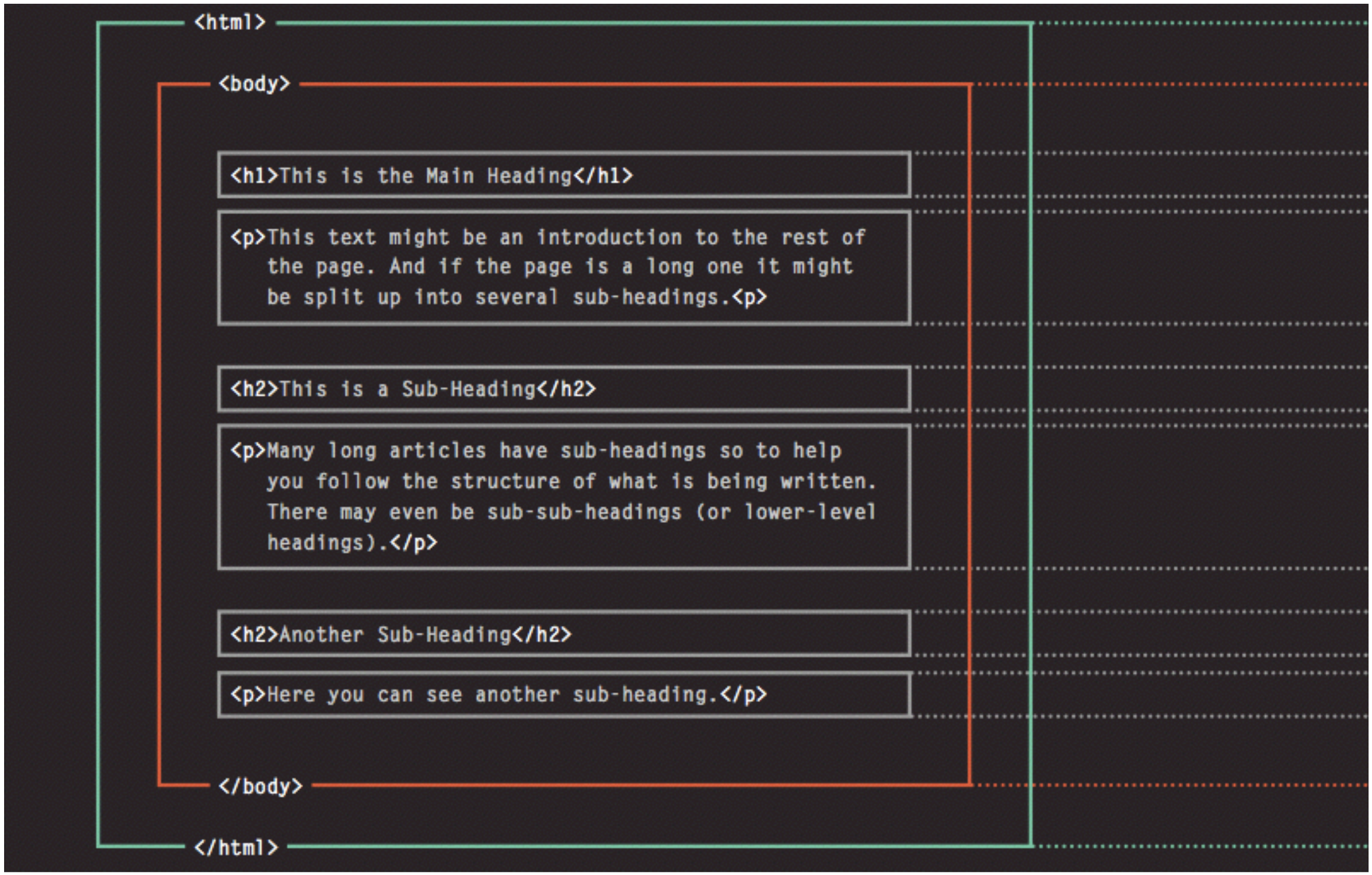
HTML

L'HTML descrive la struttura della pagina:

```
<html>
    <body>
    <h1>This is the Main Heading</h1>
    <p>This text might be an introduction to the rest of
    the page. And if the page is a long one it might
    be split up into several sub-headings.<p>
    <h2>This is a Sub-Heading</h2>
    <p>Many long articles have sub-headings so to help
    you follow the structure of what is being written. There may even be sub-sub-headings (or lower-level headings).</p>
    <h2>Another Sub-Heading</h2>
    <p>Here you can see another sub-heading.</p>
    </body>
</html>
```

L'HTML è fatto di tag che prevedono un elemento di apertura ed uno di chiusura. Il tag definisce ciò che contiene a livello semantico

HTML


<html>
<body>
<h1>This is the Main Heading</h1>
This text might be an introduction to the rest of
the page. And if the page is a long one it might
be split up into several sub-headings.
<h2>This is a Sub-Heading</h2>
Many long articles have sub-headings so to help
you follow the structure of what is being written.
There may even be sub-sub-headings (or lower-level
headings).
<h2>Another Sub-Heading</h2>
Here you can see another sub-heading.
</body>
</html>

HTML

The opening <html> tag indicates that anything between it and a closing </html> tag is HTML code.

The <body> tag indicates that anything between it and the closing </body> tag should be shown inside the main browser window.

Words between <h1> and </h1> are a main heading.

A paragraph of text appears between these and tags.

Words between <h2> and </h2> form a sub-heading.

Here is another paragraph between opening and closing tags.

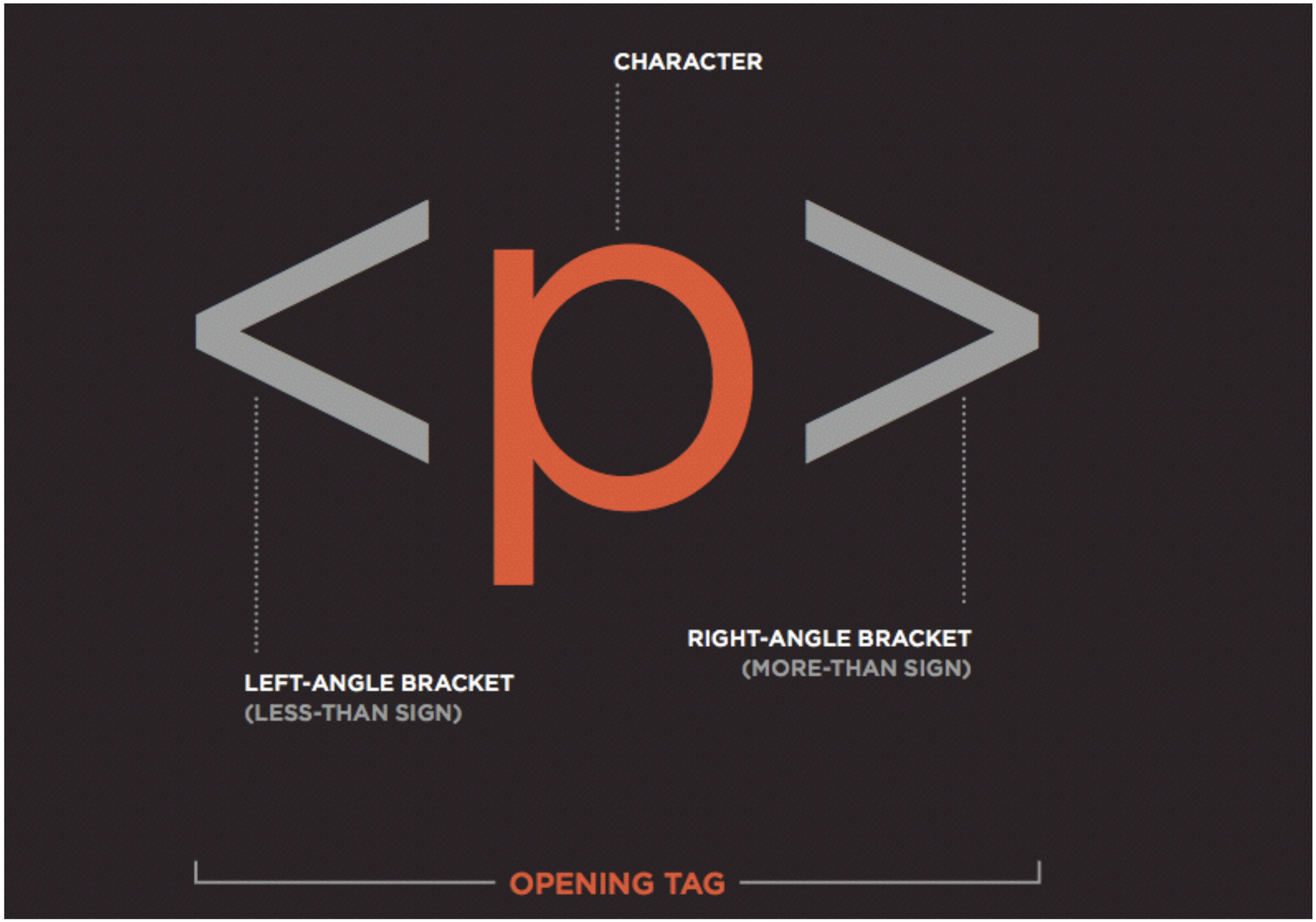
Another sub-heading inside <h2> and </h2> tags.

Another paragraph inside and tags.

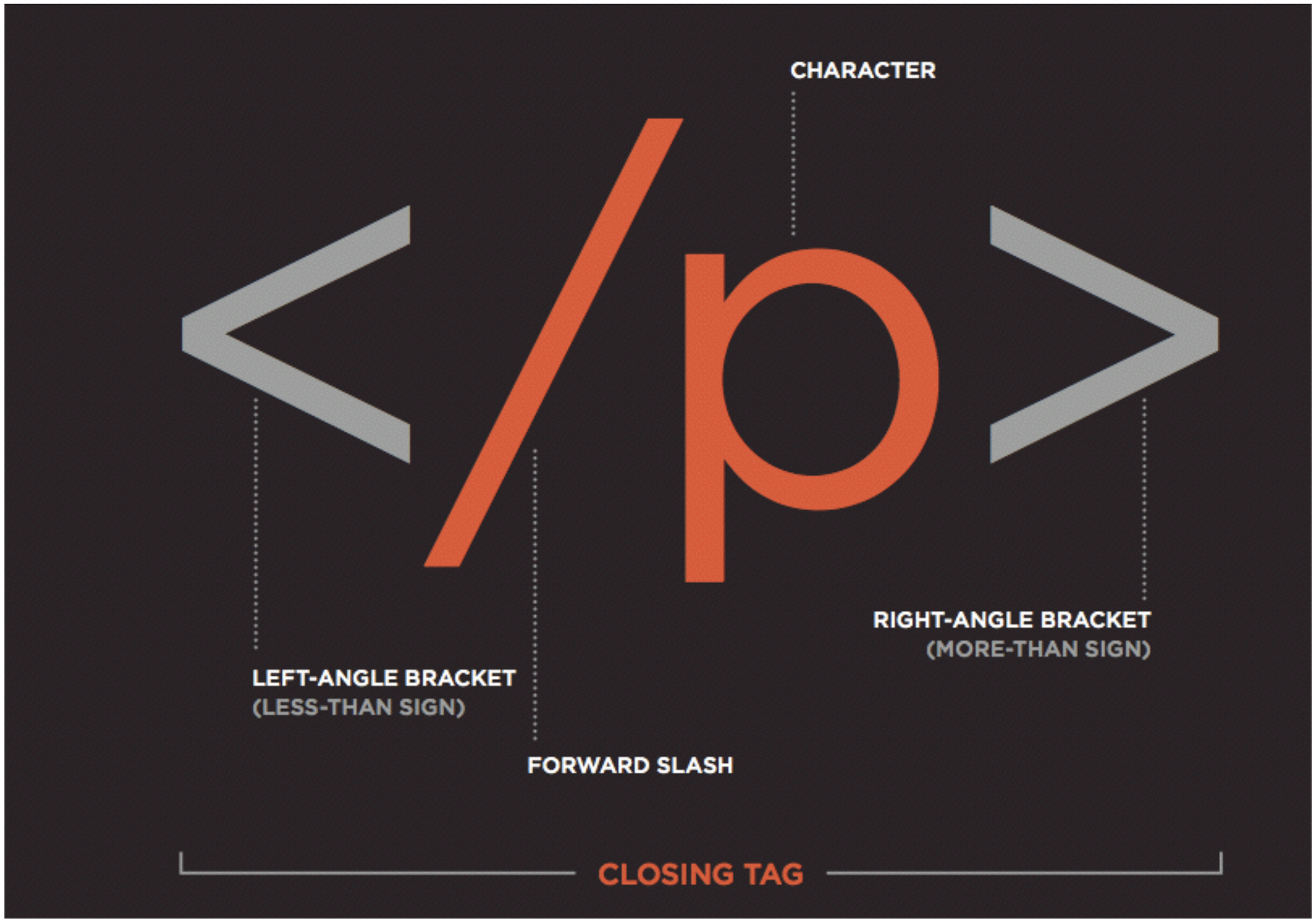
The closing </body> tag indicates the end of what should appear in the main browser window.

The closing </html> tag indicates that it is the end of the HTML code.

Il tag


CHARACTER
<p>
LEFT-ANGLE BRACKET
(LESS-THAN SIGN)
RIGHT-ANGLE BRACKET
(MORE-THAN SIGN)
OPENING TAG

Il tag


CHARACTER
</p>
LEFT-ANGLE BRACKET
(LESS-THAN SIGN)
FORWARD SLASH
RIGHT-ANGLE BRACKET
(MORE-THAN SIGN)
CLOSING TAG

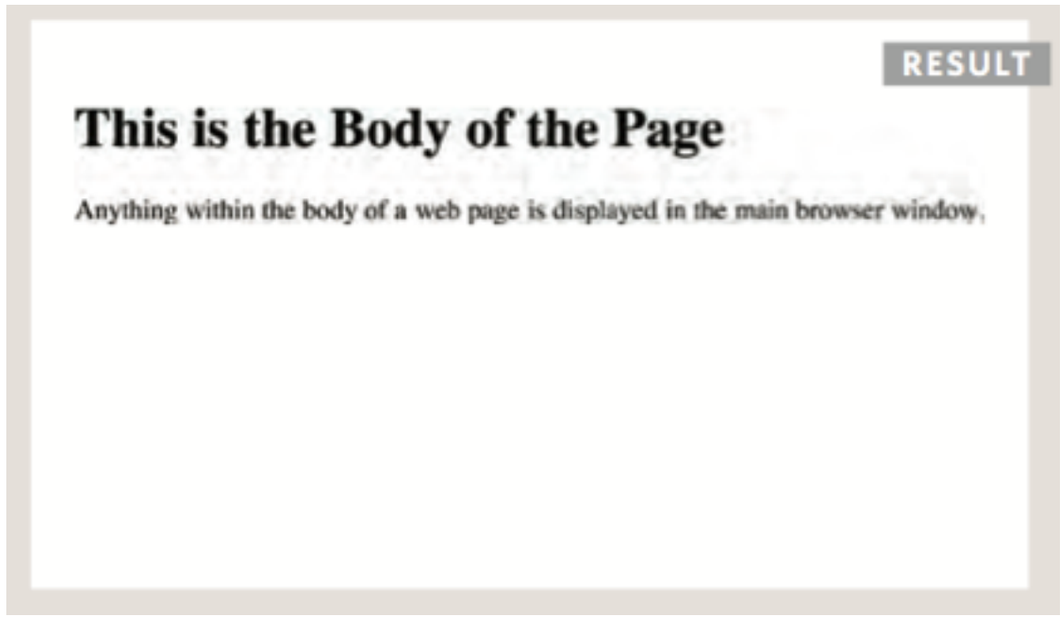
Tag

Gli attributi aggiungono semantica ai tag

Code

/code-01/body-head-title.html

```
<html>
        <head>
                <title>This is the Title of the Page</title>
        </head>
        <body>
                <h1>This is the Body of the Page</h1>
                <p>Anything within the body of a web page
                is displayed in the main browser window.
                </p>
```



- <body>: ciò che è visibile nella finestra del browser
- <head>: meta-informazioni pagina
- <title>: ciò che appare nella tab del browser

Struttura Documento HTML

Un documento HTML è normalmente diviso in due sezioni:

Testa - <head>

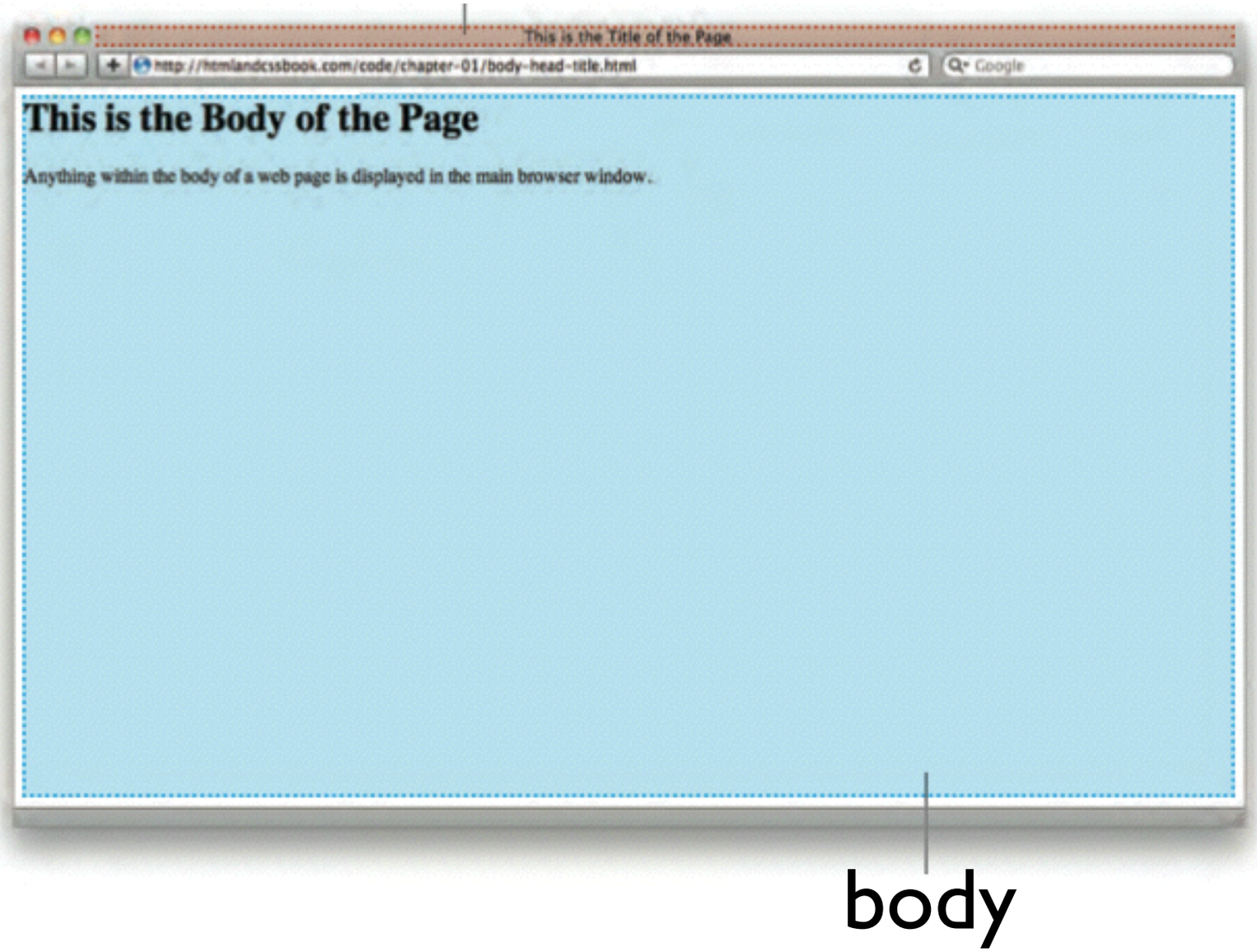
Contiene informazioni che riguardano il modo in cui il documento deve essere letto e interpretato.
Questo è il luogo dove scrivere, ad esempio, i meta-tag (p.e. per i motori di ricerca), script JavaScript, fogli di stile

Corpo - <body>

Contiene il contenuto del documento

Code

title



body

HTML

- Le pagine HTML sono documenti di testo
- L'HTML usa i tag per dare significato a parti del testo.
- I tag si aprono e si chiudono
- I tag posso avere attributi.
- Gli attributi sono coppie nome / valore.
- Per scrivere HTML bisogna conoscere il significato dei tag

Esercizio: code-01/example.html

HTML - attributi

Ai TAG possono essere associati attributi e agli attributi un valore. Il contenuto va inserito tra l'apertura e la chiusura del TAG medesimo.

La struttura di un TAG è quindi: <TAG attributi>contenuto</TAG>

La struttura di un attributo è: attributo="valore"

Ecco un esempio, con una sintassi che serve a disporre un testo giustificato a destra: <P align="right">testo</P>

In generale quindi la struttura di un TAG è:
<TAG attributo_1="valore1" attributo_2="valore2">contenuto</TAG>

HTML - attributi esempi

<body bgcolor="blue">
impostare un colore di sfondo è necessario impostare il relativo attributo del tag body

<body background="imgSfondo.gif">
inserire un'immagine come sfondo. L'immagine di sfondo verrà ripetuta in orizzontale e in verticale.

<body bgcolor="#0000ff" background="imgSfondo.gif">
combinare sullo sfondo il colore con l'immagine

<body bgcolor="#0000FF">
per scegliere il colore è comunque più opportuno utilizzare la corrispondente codifica esadecimale

Codifica esadecimale

colore	parola chiave	notazione esadecimale
arancione	orange	#FFA500
blu	blue	#0000FF
bianco	white	#FFFFFF
giallo	yellow	#FFFF00
grigio	gray	#808080
marrone	brown	#A52A2A
nero	black	#000000
rosso	red	#FF0000
verde	green	#008000
viola	violet	#EE82EE

HTML - esempio

Creiamo un file HTML e incolliamoci questo codice a visualizziamolo nel browser:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN"
"http://www.w3.org/TR/html4/loose.dtd">
<html>
    <head>
        <title>title</title>
    </head>
    <body
        leftmargin="0”
        topmargin="0"
        bgcolor="#66CCFF"
        lang="it”>
            Testo di prova
    </body>
</html>
```

HTML - tag speciali

Alcuni particolari TAG non hanno contenuto - perché ad esempio indicano la posizione di alcuni elementi, come il TAG delle immagini - conseguentemente questi TAG non hanno neanche chiusura.

La loro forma sarà dunque: <TAG attributi />.

Questo tipo di TAG viene detto "empty", cioè "vuoto".

Un esempio di TAG empty per una immagine è:

```
<IMG width="20" height="20" SRC="miaImmagine.gif" ALT="alt” />
```

HTML

I TAG possono essere annidati l'uno dentro l'altro:

<TAG1 attributi> contenuto 1

<TAG2>contenuto 2</TAG2>

</TAG1>

Ad esempio, per attribuire formattazioni successive al testo che stiamo inserendo:

<P align="right">testo 1 </P>

<P align="left">testo 2</P>

HTML

HTML è case unsensitive, è del tutto indifferente se scrivere i TAG in maiuscolo o in minuscolo:

<P ALIGN="RIGHT">

e

<p align="right">

vengono letti allo stesso modo dal browser

XHTML è invece case sensitive

HTML - commenti

Per rendere il codice più leggibile è opportuno inserire "commenti" nei punti più significativi: in modo da mantenere l'orientamento anche in file molto complessi e lunghi.

La sintassi è la seguente:

<!-- questo è un commento -->

XHTML

XHTML è la riformulazione di HTML come applicazione XML. Ciò significa essenzialmente una cosa: un documento XHTML deve essere valido e ben formato.
Una pagina XHTML può essere sottoposta ad un validatore.

Il validatore controlla:

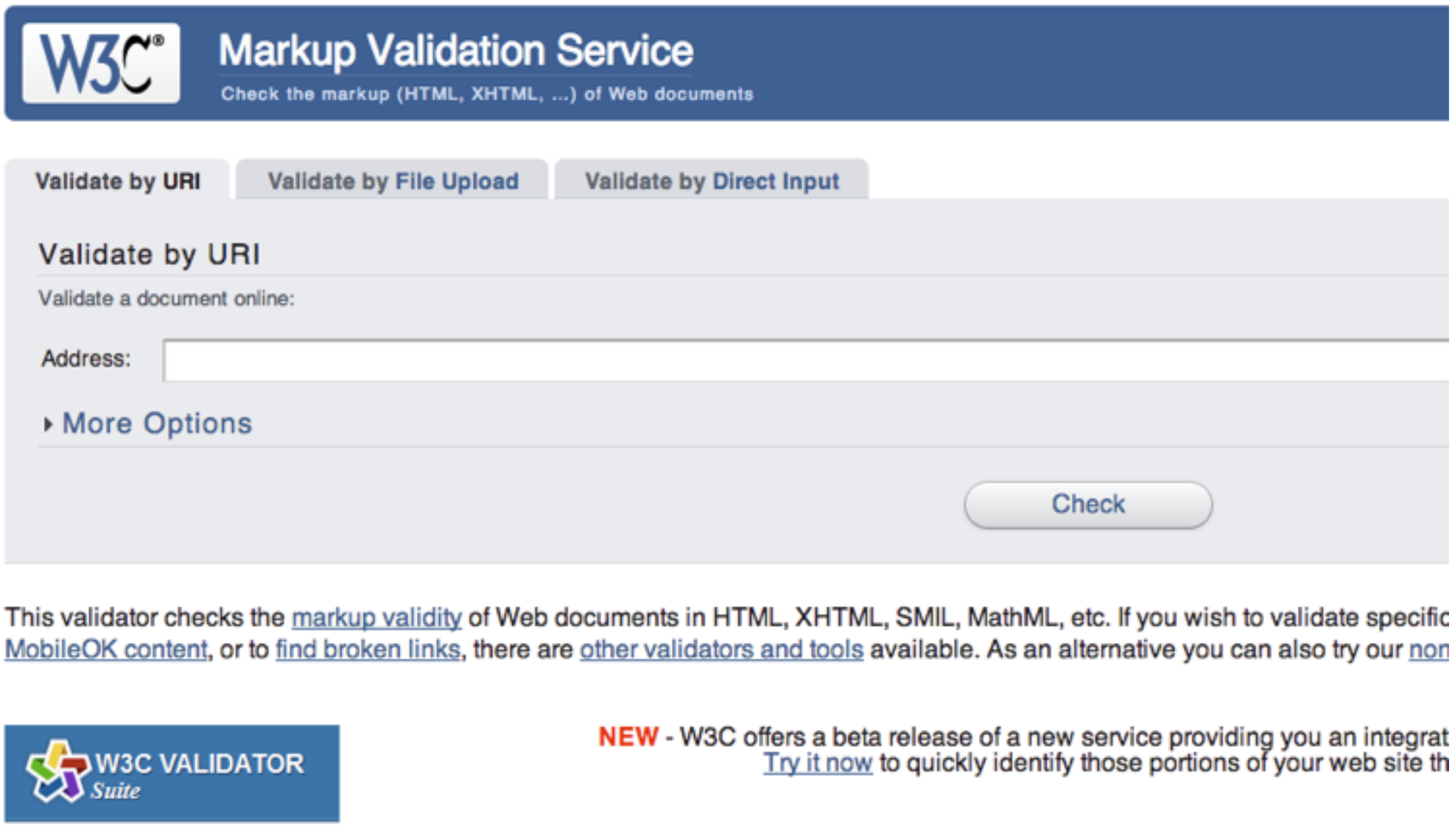
- che il codice sia ben formato, ovvero rispetti la corretta grammatica e sequenza di tag
- che il codice sia valido, ovvero che sia conforme ai tipi di dato definiti nel DTD.

Il W3C definisce quale tipo di dato deve essere definito all'interno di un documento XHTML 1 Strict
http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd

XHTML - validazione

W3C Markup validation service

http://validator.w3.org



XHTML

Con l'introduzione di XHTML, piuttosto che sfornare una nuova versione del linguaggio, un HTML 5.0, il W3C ha compiuto un'opera di ridefinizione:

Niente nuovi tag, attributi o metodi. Questi rimangono essenzialmente quelli di HTML 4.0.

Il vocabolario rimane uguale, ma cambiano le regole sintattiche. Se vengono inseriti elementi non supportati (font, larghezza per le celle di tabelle o margini per il body, per citare solo alcuni esempi) il documento non è valido.

Con XHTML, almeno nella sua versione Strict, si torna ad un linguaggio che definisce solo la struttura. La formattazione si fa con i CSS.

XHTML risponde a due esigenze fondamentali:

- portare HTML nella famiglia XML con i benefici che ciò comporta in termini di estensibilità e rigore sintattico
- mantenere la compatibilità con i software che supportano HTML 4.0

XHTML

HTML era "figlio" del linguaggio di markup SGML: Standard Generalized Markup Language

XML è un sottoinsieme di SGML caratterizzato dal fatto di avere restrizioni sulla grammatica dei tag

XHTML è "figlio" di XML, segue pertanto la sua filosofia di correttezza e validità.

In XHTML il contenuto deve essere rigorosamente separato dalla presentazione. Si usano TAG che hanno un contenuto semantico: <h1> ad esempio rappresenta un header, non come deve essere visualizzato

XHTML - versioni

Con HTML è possibile omettere gli elementi html, head, body e DOCTYPE. In XHTML sono obbligatori.

Con HTML è possibile omettere alcuni TAG di chiusura. In XHTML sono obbligatori, anche con i TAG vuoti.

Con HTML è possibile omettere le virgolette per i valori degli attributi che non contengono spazi, o caratteri speciali. In XHTML sono obbligatorie.

HTML non fa differenze tra minuscole e maiuscole (case unsensitive). In XHTML impone che gli elementi, gli attributi e i valori predefiniti siano scritti in minuscolo.

XHTML - doctype

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml11/DTD/xhtml11-transitional.dtd">

<html xmlns="http://www.w3.org/1999/xhtml">
    <head>
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
    <title>Untitled Document</title>
</head>
```

La dichiarazione DOCTYPE indica che tipo di XHTML è usato, in questo modo i browser sanno come interpretare il codice e i validatori sanno come verificare la sintassi.

HTML5

HTML5 è il nuovo standard di HTML.

La versione precedente, HTML 4.01, è nata nel 1999. Il web è cambiato enormemente da allora.

HTML5 è ancora un work in progress. Comunque, i browser principali supportano molte delle nuove HTML5 elements and APIs.

HTML5 è nato da una cooperazione fra il World Wide Web Consortium (W3C) ed il Web Hypertext Application Technology Working Group (WHATWG). WHATWG lavorava su web forms and applications, ed il W3C stava lavorando con XHTML 2.0. Nel 2006, decisero di cooperare e creare una nuova versione di HTML.

HTML5 - video

HTML5 video: http://www.youtube.com/watch?v=6BAfIsaNRnk

HTML5

Alcune regole osservate nel formulare HTML5:

- le nuove funzionalità sono basate su HTML, CSS, DOM, and JavaScript
- ridurre l'uso di plugin esterni (Flash)
- miglior gestione degli errori
- più markup invece che scripting
- HTML5 deve essere indipendente dai device
- il processo di sviluppo deve essere pubblico

Alcune delle nuove funzionalità in HTML5:

- <canvas> tag per il disegno 2D
- <video> e <audio> tags per media playback
- Supporto per local storage
- New content-specific elements, like <article>, <footer>, <header>, <nav>, <section>
- New form controls, like calendar, date, time, email, url, search

HTML5 - browsers

HTML5 non è ancora uno standard ufficiale, e nessuno dei browsers ha un supporto completo.

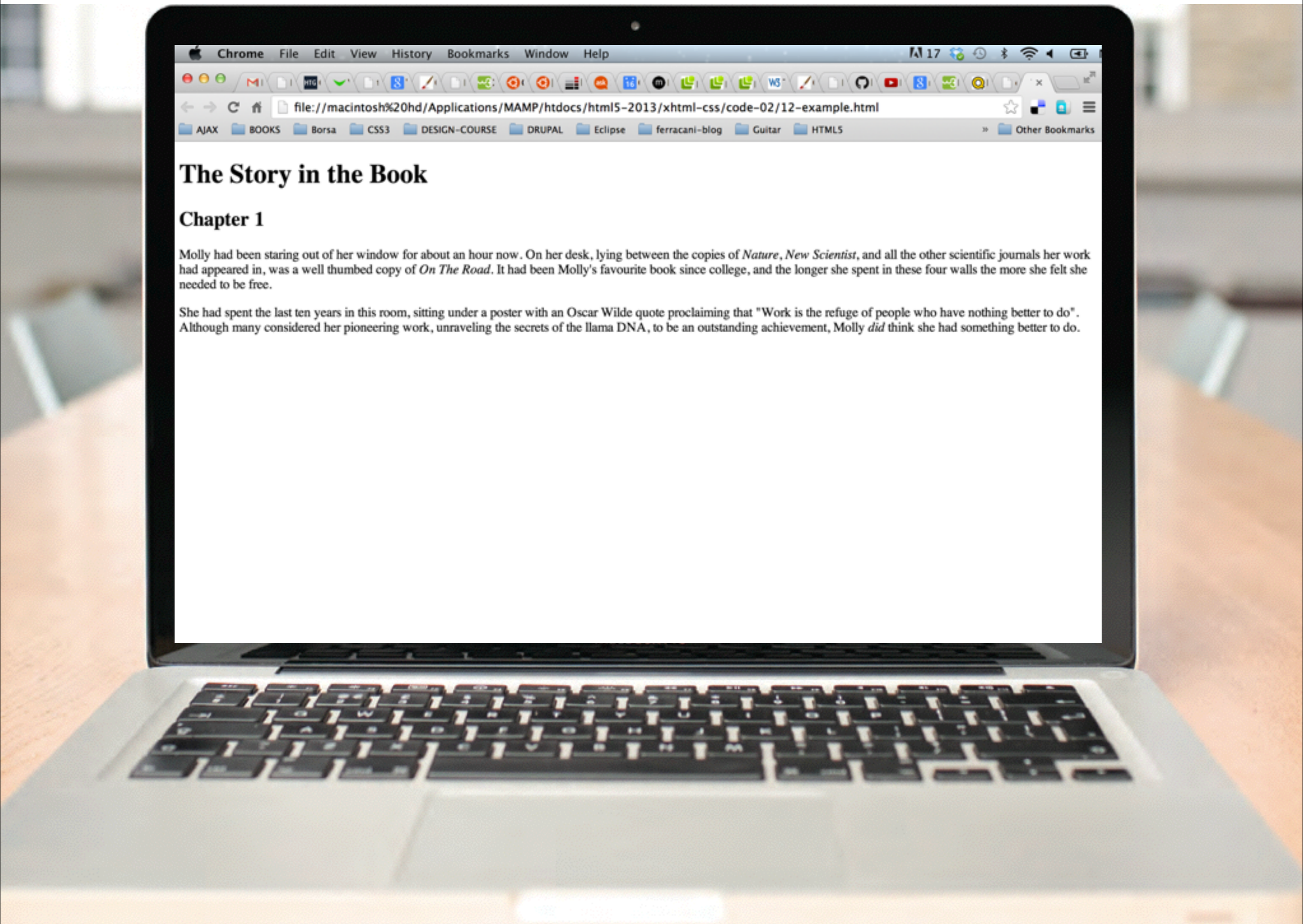
Ma tutti i maggiori browsers (Safari, Chrome, Firefox, Opera, Internet Explorer) continuano ad aggiungere nuove funzionalità HTML5 alle loro ultime versioni.

HTML5 - pagina di base

```
<!DOCTYPE html>
<html>
    <head>
        <title>Title of the document</title>
    </head>

    <body>
        The content of the document.....
    </body>
</html>
```

HTML5


HTML5 is The New HTML Standard
HTML
HTML5
New Elements
New Attributes
Full CSS3 Support
Video and Audio
2D/3D Graphics
Local Storage
Local SQL Database
Web Applications


Chrome File Edit View History Bookmarks Window Help
file://macintosh%20hd/Applications/MAMP/htdocs/html5-2013/xhtml-css/code-02/12-example.html
AJAX BOOKS Borsa CSS3 DESIGN-COURSE DRUPAL Eclipse ferracani-blog Guitar HTML5 Other Bookmarks
The Story in the Book
Chapter 1
Molly had been staring out of her window for about an hour now. On her desk, lying between the copies of Nature, New Scientist, and all the other scientific journals her work had appeared in, was a well thumbed copy of On The Road. It had been Molly's favourite book since college, and the longer she spent in these four walls the more she felt she needed to be free.
She had spent the last ten years in this room, sitting under a poster with an Oscar Wilde quote proclaiming that "Work is the refuge of people who have nothing better to do". Although many considered her pioneering work, unraveling the secrets of the llama DNA, to be an outstanding achievement, Molly did think she had something better to do.

Text markup

```
<html>
    <head>
    <title>Text</title>
    </head>
    <body>
    <h1>The Story in the Book</h1>
    <h2>Chapter 1</h2>
    <p>Molly had been staring out of her window for about
    an hour now. On her desk, lying between the copies of <i>Nature</i>, <i>New Scientist</i>, and all
    the other scientific journals her work had appeared in, was a well thumbed copy of <cite>On The
    Road<cite>. It had been Molly's favorite book since college, and the longer she spent in these four walls
    the more she felt she needed to be free.</p>
    <p>She had spent the last ten years in this room, sitting under a poster with an Oscar Wilde quote
    proclaiming that <q>Work is the refuge of people who have nothing better to do</q>. Although many
    considered her pioneering work, unraveling the secrets of the llama <abbr
    title="Deoxyribonucleic acid">DNA</abbr>, to be an outstanding achievement, Molly
    <em>did</em> think she had something better to do.</p>
    </body>
</html>
```

Esercizio: code-02/12-example.html

Chrome File Edit View History Bookmarks Window Help

file://macintosh%20hd/Applications/MAMP/htdocs/html5-2013/xhtml-css/code-03/5-example.html

AJAX BOOKS Borsa CSS3 DESIGN-COURSE DRUPAL Eclipse ferracani-blog Guitar HTML5 http://www.micc.un

Scrambled Eggs

Eggs are one of my favorite foods. Here is a recipe for deliciously rich scrambled eggs.

Ingredients

- 2 eggs
- 1tbs butter
- 2tbs cream

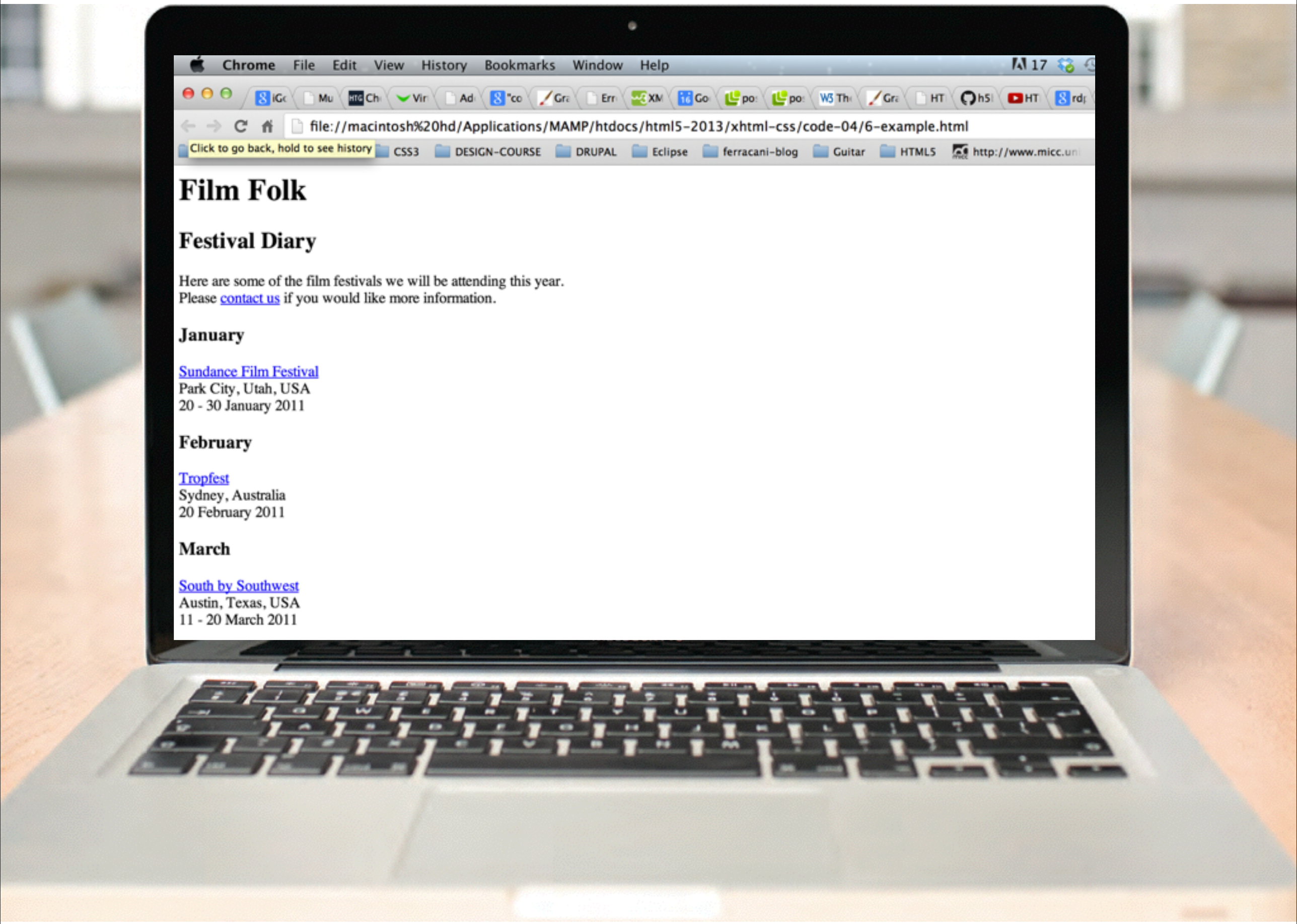
Method

1. Melt butter in a frying pan over a medium heat
2. Gently mix the eggs and cream in a bowl
3. Once butter has melted add cream and eggs
4. Using a spatula fold the eggs from the edge of the pan to the center every 20 seconds (as if you are making an omelette)
5. When the eggs are still moist remove from the heat (it will continue to cook on the plate until served)

List markup

```
<html>
	<head>
	<title>Lists</title>
	</head>
<body>
	<h1>Scrambled Eggs</h1>
	<p>Eggs are one of my favourite foods. Here is a recipe for deliciously rich scrambled eggs.</p>
	<h2>Ingredients</h2>

	<ul>
	<li>2 eggs</li>
	<li>1tbs butter</li>
	<li>2tbs cream</li>
	</ul>

	<h2>Method</h2>

	<ol>
	<li>Melt butter in a frying pan over a medium heat</li>
	<li>Gently mix the eggs and cream in a bowl</li>
	<li>Once butter has melted add cream and eggs</li>
	<li>Using a spatula fold the eggs from the edge of the pan to the center every 20 seconds (as if you are making an omelette)</li>
	<li>When the eggs are still moist remove from the heat (it will continue to cook on the plate until served)</li>
	</ol>

</body>
</html>
```

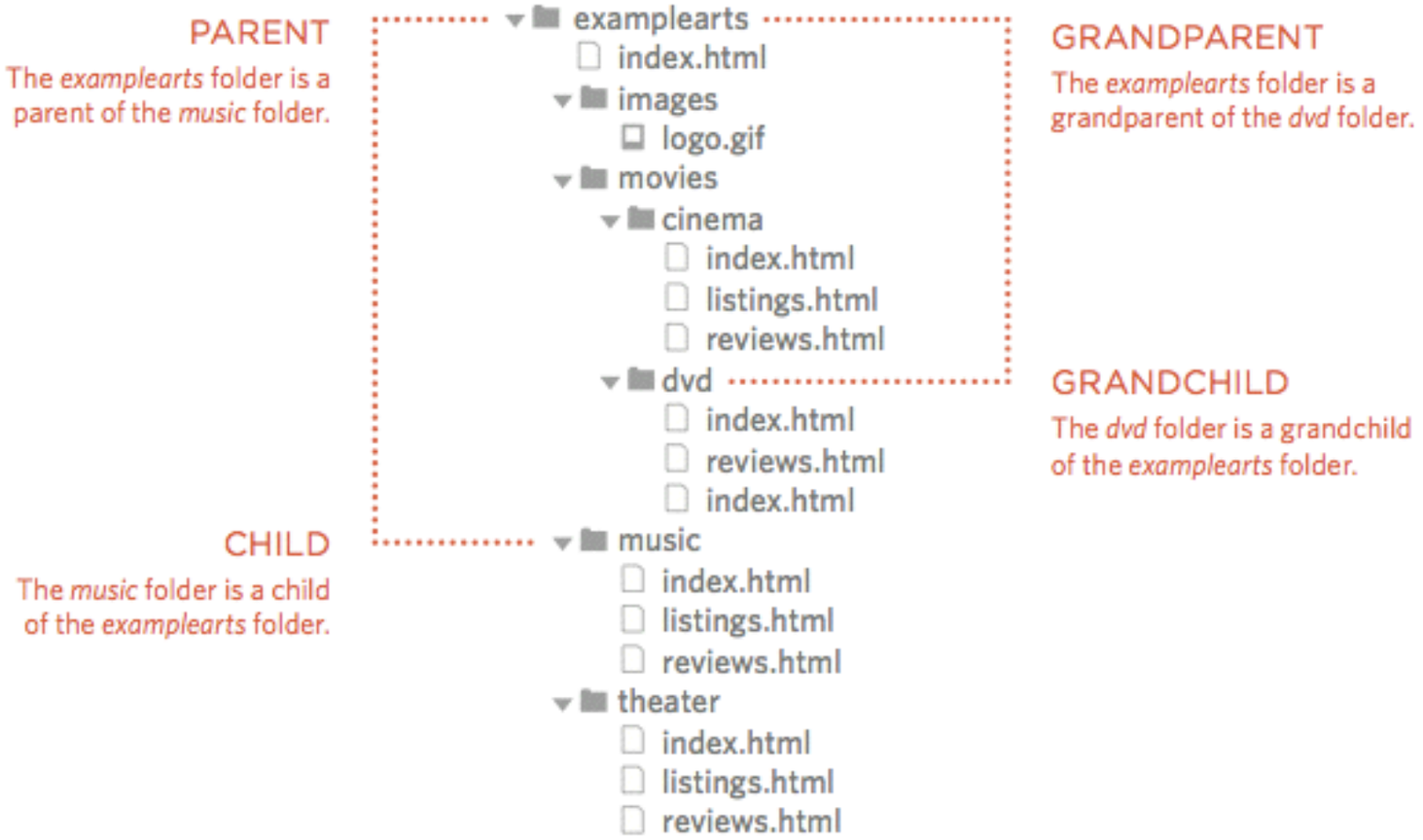
Esercizio: code-03/5-example.html


Chrome File Edit View History Bookmarks Window Help
file://macintosh%20hd/Applications/MAMP/htdocs/html5-2013/xhtml-css/code-04/6-example.html
Click to go back, hold to see history
CSS3
DESIGN-COURSE
DRUPAL
Eclipse
ferracani-blog
Guitar
HTML5
Film Folk
Festival Diary
Here are some of the film festivals we will be attending this year.
Please contact us if you would like more information.
January
Sundance Film Festival
Park City, Utah, USA
20 - 30 January 2011
February
Tropfest
Sydney, Australia
20 February 2011
March
South by Southwest
Austin, Texas, USA
11 - 20 March 2011

Links


THIS IS THE PAGE THE LINK TAKES YOU TO
THIS IS THE TEXT THE USER CLICKS ON
IMDB
OPENING LINK TAG
CLOSING LINK TAG

Struttura delle directories di un sito web



Relative URLs

RELATIVE LINK TYPE	EXAMPLE (from diagram on previous page)
SAME FOLDER To link to a file in the same folder, just use the file name. (Nothing else is needed.)	To link to music reviews from the music homepage: `<a href="reviews.html">Reviews</a>`
CHILD FOLDER For a child folder, use the name of the child folder, followed by a forward slash, then the file name.	To link to music listings from the homepage: `<a href="music/listings.html">Listings</a>`

GRANDCHILD FOLDER
Use the name of the child folder, followed by a forward slash, then the name of the grandchild folder, followed by another forward slash, then the file name.
	To link to DVD reviews from the homepage:
	`<a href="movies/dvd/reviews.html">`
	`Reviews</a>`

PARENT FOLDER Use `../` to indicate the folder above the current one, then follow it with the file name.	To link to the homepage from the music reviews: `<a href="../index.html">Home</a>`
GRANDPARENT FOLDER Repeat the `../` to indicate that you want to go up two folders (rather than one), then follow it with the file name.	To link to the homepage from the DVD reviews: `<a href="../../index.html">Home</a>`

Example links

```
<html>
<head>
	<title>Links</title>
</head>
<body>
	<h1 id="top">Film Folk</h1>
	<h2>Festival Diary</h2>
	<p>Here are some of the film festivals we will be attending this year.<br />Please <a
	href="mailto:filmfolk@example.org">contact us</a> if you would like more information.</p>
	<h3>January</h3>
	<p><a href="http://www.sundance.org">Sundance Film Festival</a><br /> Park City, Utah, USA<br /> 20
	- 30 January 2011</p>
	<h3>February</h3>
	<p><a href="http://www.tropfest.com">Tropfest</a><br /> Sydney, Australia<br /> 20 February 2011</
	p>
	<!-- additional content -->
	<p><a href="about.html">About Film Folk</a></p>
	<p><a href="#top">Top of page</a></p>
</body>
</html>
```

Esercizio: code-04/6-example.html

Chrome File Edit View History Bookmarks Window Help

Mon 6:08 PM Andrea

iGoogle | From A to Zucchini

file://macintosh%20hd/Applications/MAMP/htdocs/html5-2013/xhtml-css/code-05/test.html

AJAX BOOKS Borsa CSS3 DESIGN-COURSE DRUPAL Eclipse ferracani-blog Guitar HTML5 http://www.micc.un Immagini sferiche JOBS JOOMLA

From A to Zucchini

Chocolate cake

Other recipes

MacBook Pro

Salvare le immagini per il web

OTHER SOFTWARE

Adobe Fireworks
Pixelmator
PaintShop Pro
Paint.net

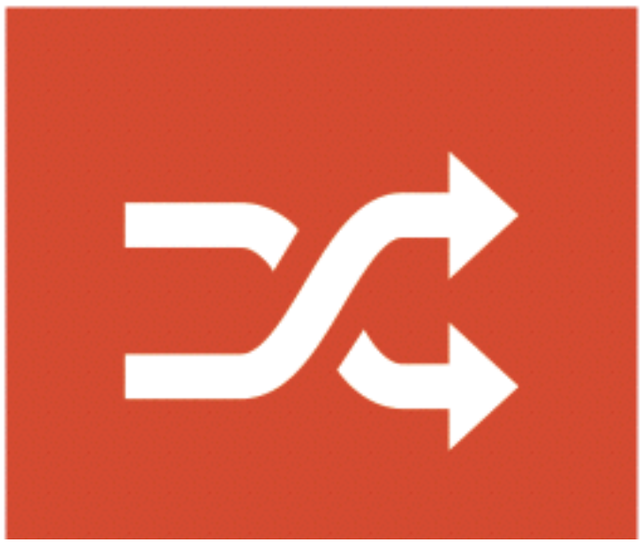
ONLINE EDITORS

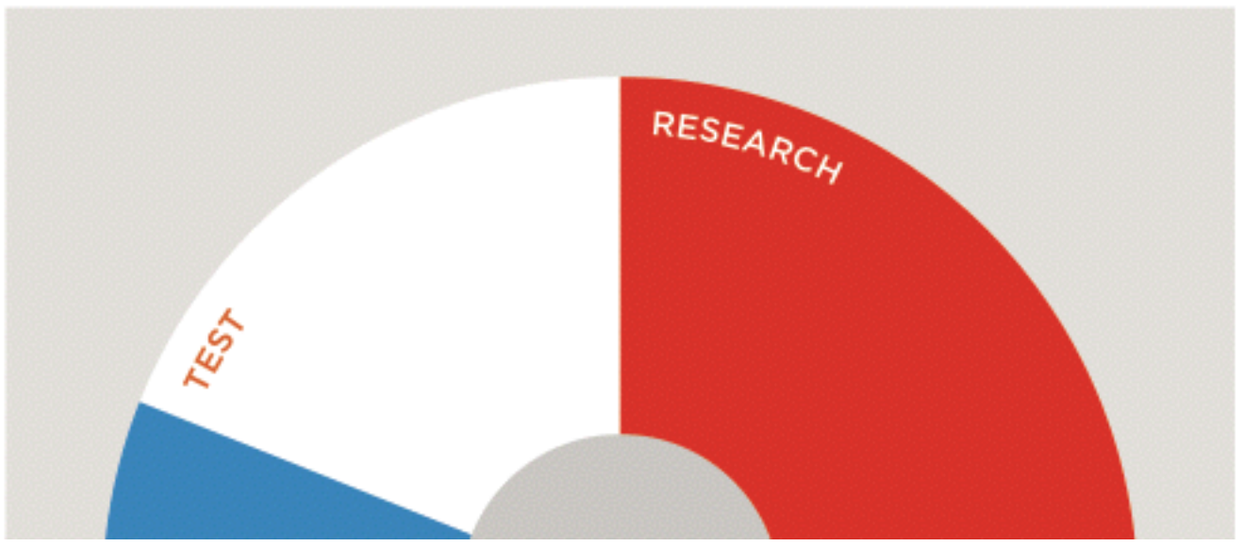
www.photoshop.com
www.pixlr.com
www.splashup.com
www.ipiccy.com

Photoshop: File > Save for web and devices

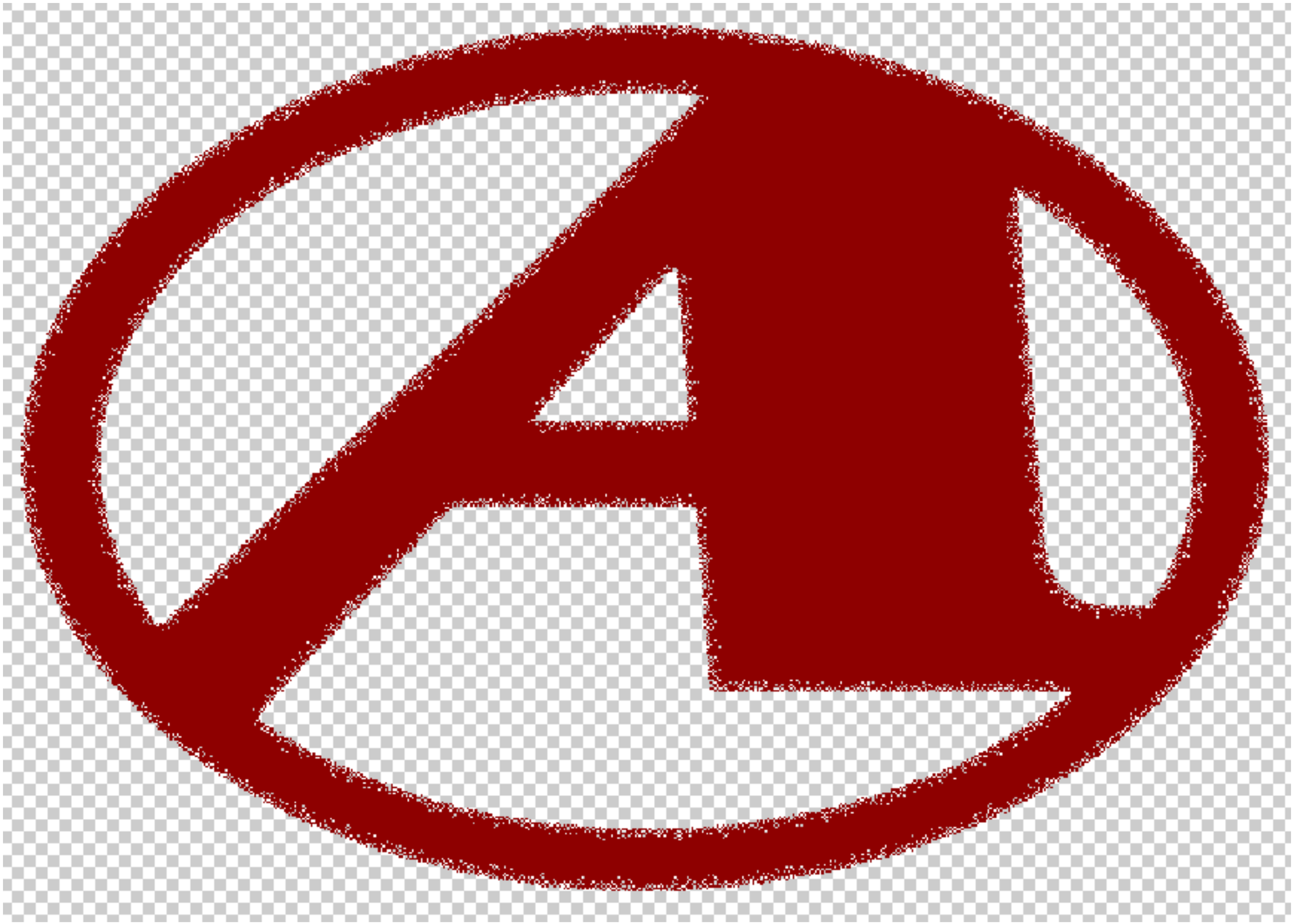
IMAGE FORMATS: JPEG

IMAGE FORMATS: GIF





Use GIF or PNG format when saving images with few colors or large areas of the same color.



Immagini vettoriali

Possono essere visualizzate dai browser, la risoluzione non dipende dal pixel ma da formule matematiche

Illustrator > svg, swf

Risoluzione

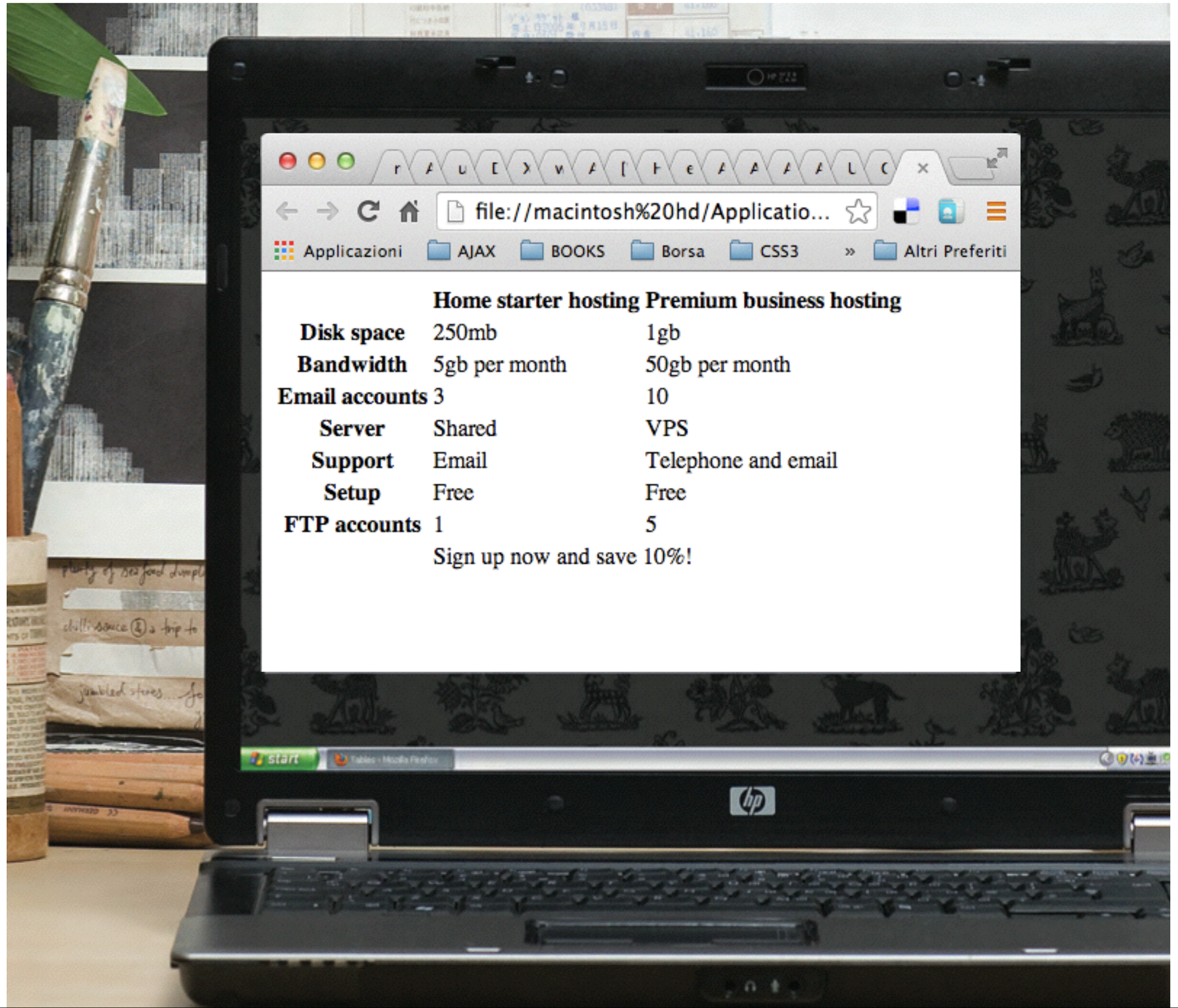
I display dei computer visualizzano le immagini a 72ppi

Stampa: 300ppi

Example images

```
<html>
    <head>
        <title>Images</title>
    </head>
    <body>
        <h1><img src="images/logo.gif" alt="From A to Zucchini" /></h1>
        <figure>
            <img src="images/chocolate-islands.jpg" alt="Chocolate Islands" title="Individual Chocolate Cakes"
/>
            <p>
                <figcaption>
                    This recipe for individual chocolate cakes is so simple and so delectable!
                </figcaption>
            </p>
        </figure>
        <h4>More Recipes:</h4>
        <p>
            <img src="images/lemon-posset.jpg" alt="Lemon Posset" title="Lemon Posset" />
            <img src="images/roasted-brussel-sprouts.jpg" alt="Roasted Brussel Sprouts" title="Roasted
Brussel Sprouts" />
            <img src="images/zucchini-cake.jpg" alt="Zucchini Cake" title="Zucchini Cake" />
        </p>
    </body>
</html>
```

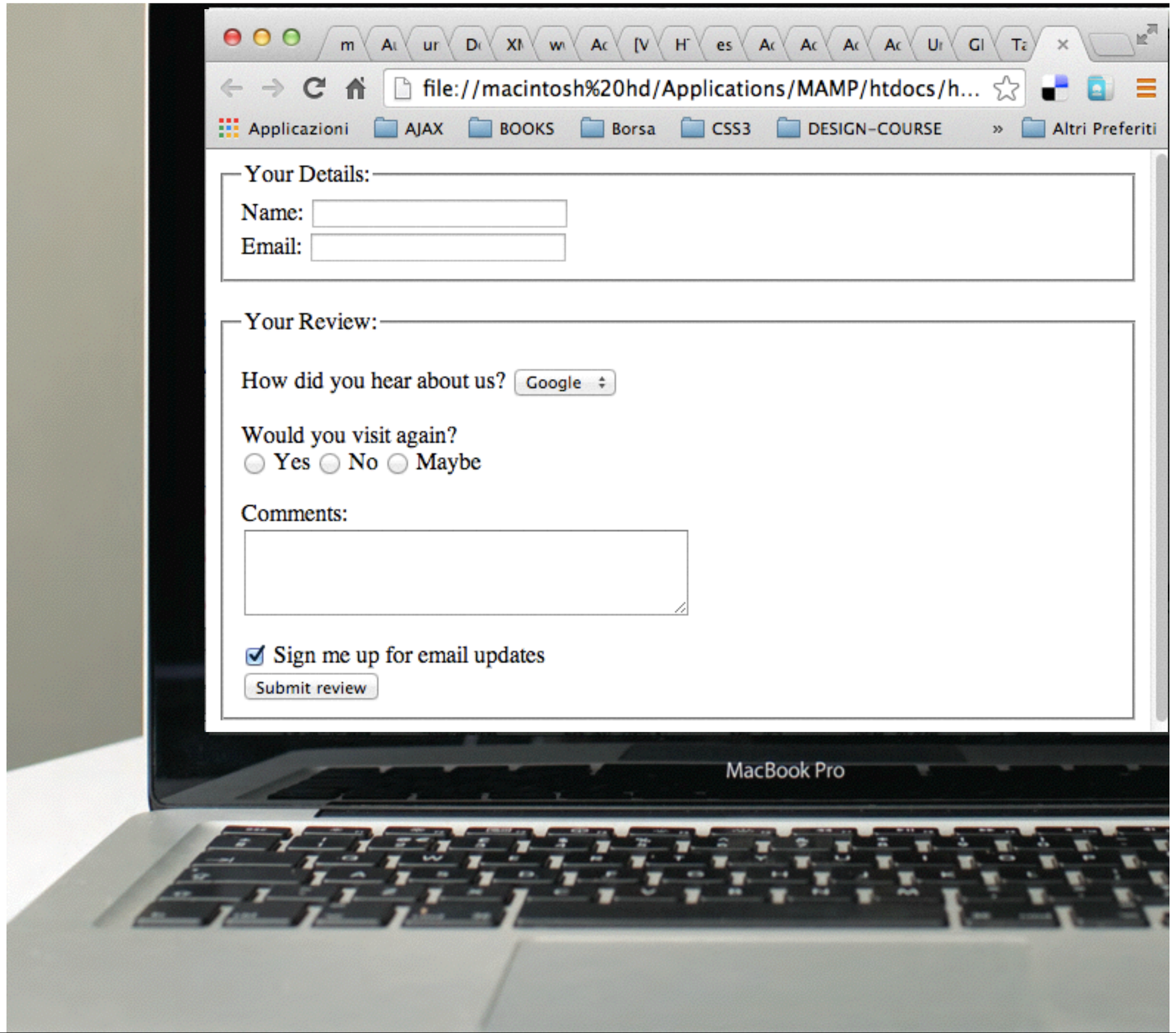
Esercizio: code-05/6-example.html


file://macintosh%20hd/Applicatio...
Applicazioni
AJAX
BOOKS
Borsa
CSS3
Altri Preferiti
Home starter hosting
Premium business hosting
Disk space 250mb 1gb
Bandwidth 5gb per month 50gb per month
Email accounts 3 10
Server Shared VPS
Support Email Telephone and email
Setup Free Free
FTP accounts 1 5
Sign up now and save 10%!
start

Example table

```
<html>
    <head>
    <title>Tables</title>
    </head>
    <body>
    <table>
    <thead>
    <tr>
    <th></th>
    <th scope="col">Home starter hosting</th>
    <th scope="col">Premium business hosting</th>
    </tr>
    </thead>
    <tbody>
    <tr>
    <th scope="row">Disk space</th> <td>250mb</td> <td>1gb</td></tr>
    <tr><th scope="row">Bandwidth</th><td>5gb per month</td><td>50gb per month</td></tr>
    <!-- more rows like the two above here -->
    </tbody>
    <tfoot>
    <tr><td></td><td colspan="2">Sign up now and save 10%!</td> </tr>
    </tfoot>
    </table>
    </body>
</html>
```

Esercizio: code-06/8-example.html


file://macintosh%20hd/Applications/MAMP/htdocs/h...
Applicazioni
AJAX
BOOKS
Borsa
CSS3
DESIGN-COURSE
Altri Preferiti
Your Details:
Name:
Email:
Your Review:
How did you hear about us?
Google
Would you visit again?
Yes
No
Maybe
Comments:
Sign me up for email updates
Submit review
MacBook Pro

Forms types

ADDING TEXT:

Text input (single-line)
Used for a single line of text such as email addresses and names.

Password input
Like a single line text box but it masks the characters entered.

Text area (multi-line)
For longer areas of text, such as messages and comments.

MAKING CHOICES:

Radio buttons
For use when a user must select one of a number of options.

Checkboxes
When a user can select and unselect one or more options.

Drop-down boxes
When a user must pick one of a number of options from a list.

SUBMITTING FORMS:

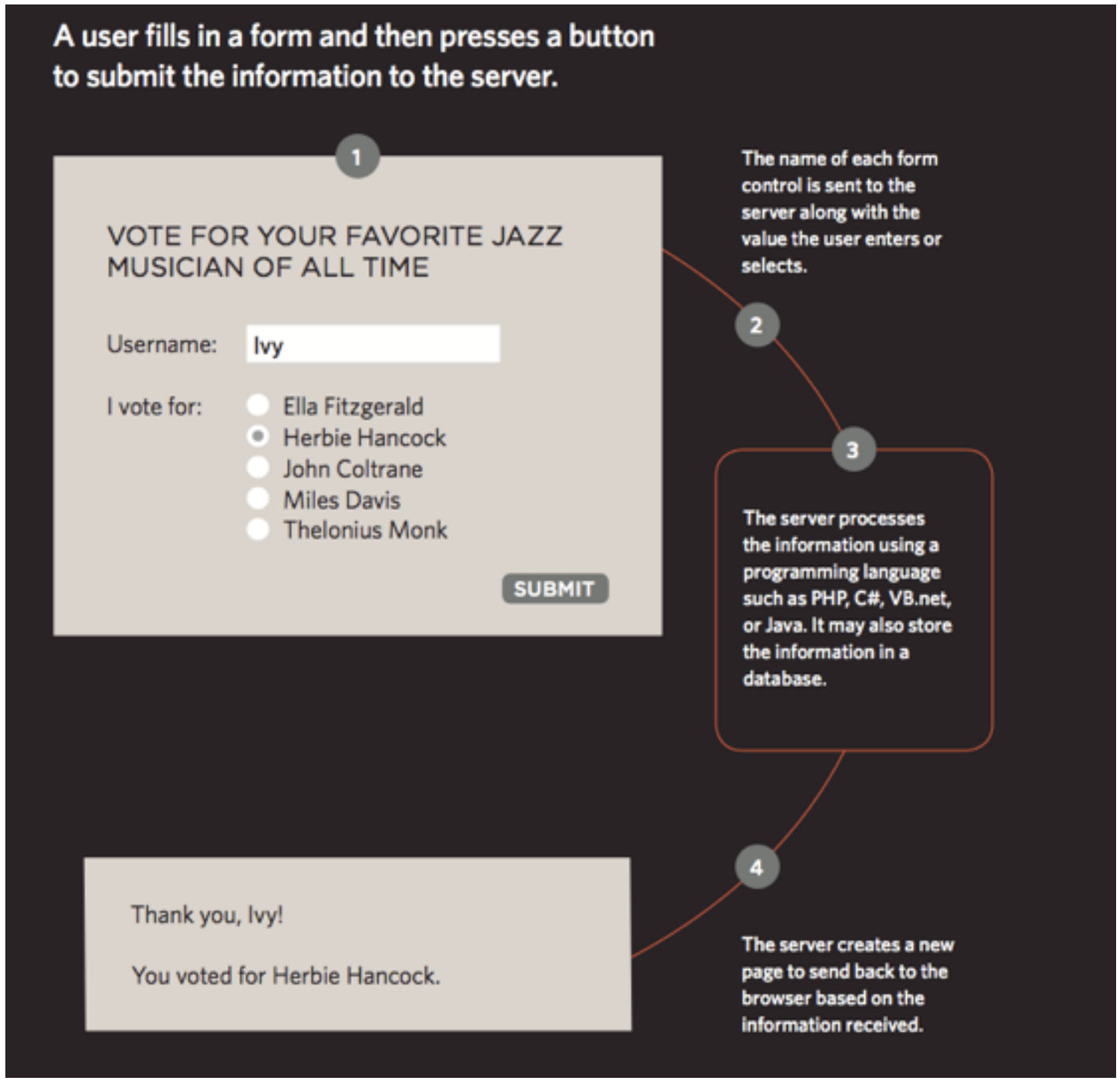
Submit buttons
To submit data from your form to another web page.

Image buttons
Similar to submit buttons but they allow you to use an image.

UPLOADING FILES:

File upload
Allows users to upload files (e.g. images) to a website.

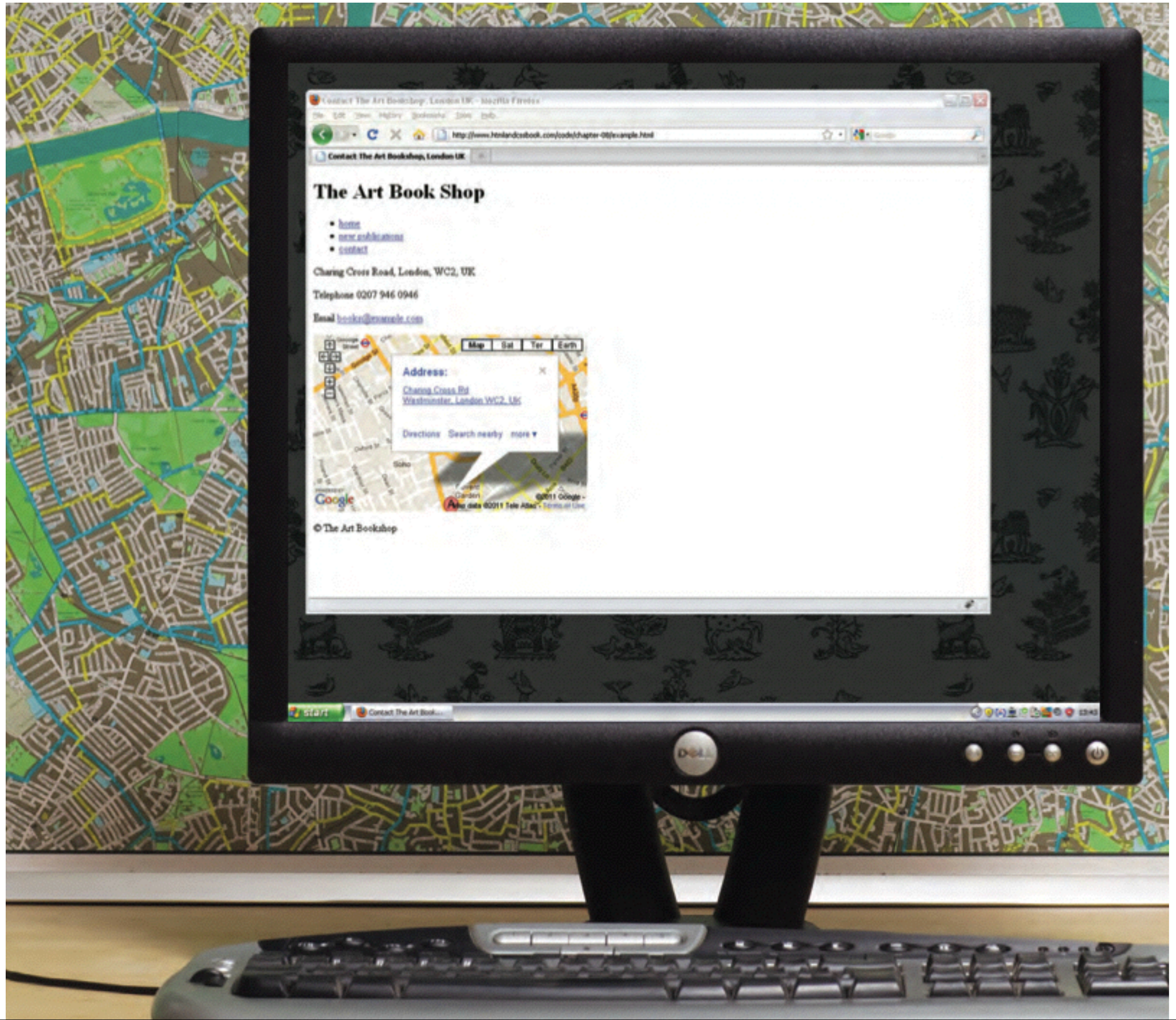
How forms work



Example forms

```
<html>
    <head>
        <title>Forms</title>
    </head>
    <body>
        <form action="http://www.example.com/review.php" method="get">
            <fieldset>
                <legend>Your Details:</legend>
                <label>Name: <input type="text" name="name" size="30" maxlength="100"></label><br />
                <label>Email: <input type="email" name="email" size="30" maxlength="100"></label><br />
            </fieldset><br />
            <fieldset>
                <legend>Your Review:</legend>
                <p>
                    <label for="hear-about">How did you hear about us?</label>
                    <select name="referrer" id="hear-about">
                        <option value="google">Google</option>
                        <option value="friend">Friend</option>
                        <option value="advert">Advert</option>
                        <option value="other">Other</option>
                    </select>
                </p>
                <p>
                    Would you visit again?<br />
                    <label><input type="radio" name="rating" value="yes" /> Yes</label>
                    <label><input type="radio" name="rating" value="no" /> No</label>
                    <label><input type="radio" name="rating" value="maybe" /> Maybe</label>
                </p>
                <p>
                    <label for="comments">Comments:</label><br />
                    <textarea rows="4" cols="40" id="comments"></textarea>
                </p>
                <label><input type="checkbox" name="subscribe" checked="checked" /> Sign me up for email updates</label><br />
                <input type="submit" value="Submit review" />
            </fieldset>
        </form>
    </body>
</html>
```

Esercizio: code-07/20-example.html


Contact The Art Bookshop, London UK
http://www.htmlandcssbook.com/code/chapter-08/example.html
The Art Book Shop
home
new publications
contact
Charing Cross Road, London, WC2, UK
Telephone 0207 946 0946
Email books@example.com
Map
Sat
Ter
Earth
Address:
Charing Cross Rd
Westminster, London WC2, UK
Directions
Search nearby
more
Soho
Google
©2011 Google -
Map data ©2011 Tele Atlas - Terms of Use
© The Art Bookshop
start
Contact The Art Book...
DELL

Example extra markup

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
<html>
    <head>
        <meta name="description" content="Telephone, email and directions for The Art Bookshop, London, UK" />
        <title>Contact The Art Bookshop, London UK</title>
    </head>
    <body>
        <div id="header">
            <h1>The Art Book Shop</h1>
            <ul>
                <li><a href="../code-08/index.html">home</a></li>
                <li><a href="../code-08/index.html">new publications</a></li>
                <li class="current-page"><a href="../code-08/index.html">contact</a></li>
            </ul>
        </div><!-- end header -->
        <div id="content">
            <p>Charing Cross Road, London, WC2, UK</p>
            <p><span class="contact">Telephone</span> 0207 946 0946</p>
            <p><span class="contact">Email</span> <a href="mailto:books@example.com">books@example.com</a></
p>
            <iframe width="425" height="275" frameborder="0" scrolling="no" marginheight="0" marginwidth="0"
src="http://maps.google.co.uk/maps?f=q&amp;source=s_q&amp;hl=en&amp;geocode=&amp;q=charing+cross+road
+london&amp;output=embed">
                </iframe>
        </div><!-- end content -->
        <p>&copy; The Art Bookshop</p>
    </body>
</html>
```

Esercizio: code-08/example.html

Example doctype

HTML5 — HTML

```
<!DOCTYPE html>
```

HTML 4

```
<!DOCTYPE html PUBLIC
  "-//W3C//DTD HTML 4.01 Transitional//EN"
  "http://www.w3.org/TR/html4/loose.dtd">
```

Transitional XHTML 1.0

```
<!DOCTYPE html PUBLIC
  "-//W3C//DTD XHTML 1.0 Transitional//EN"
  "http://www.w3.org/TR/xhtml1/DTD/
   xhtml1-transitional.dtd">
```

Strict XHTML 1.0

```
<!DOCTYPE html PUBLIC
  "-//W3C//DTD XHTML 1.0 Strict//EN"
  "http://www.w3.org/TR/xhtml1/DTD/
   xhtml1-strict.dtd">
```

XML Declaration

```
<?xml version="1.0" ?>
```

Esercizio: code-08/example.html

<

Less-than sign
`<`
`<`

¢

Cent sign
`¢`
`¢`

‘

Left single quote
`‘`
`‘`

>

Greater-than sign
`>`
`&`

£

Pound sign
`£`
`£`

’

Right single quote
`’`
`’`

&

Ampersand
`&`
`&`

¥

Yen sign
`¥`
`¥`

“

Left double quotes
`“`
`“`

"

Quotation mark
`"`
`"`

€

Euro sign
`€`
`€`

”

Right double quotes
`”`
`”`

©

Copyright symbol
`©`
`©`

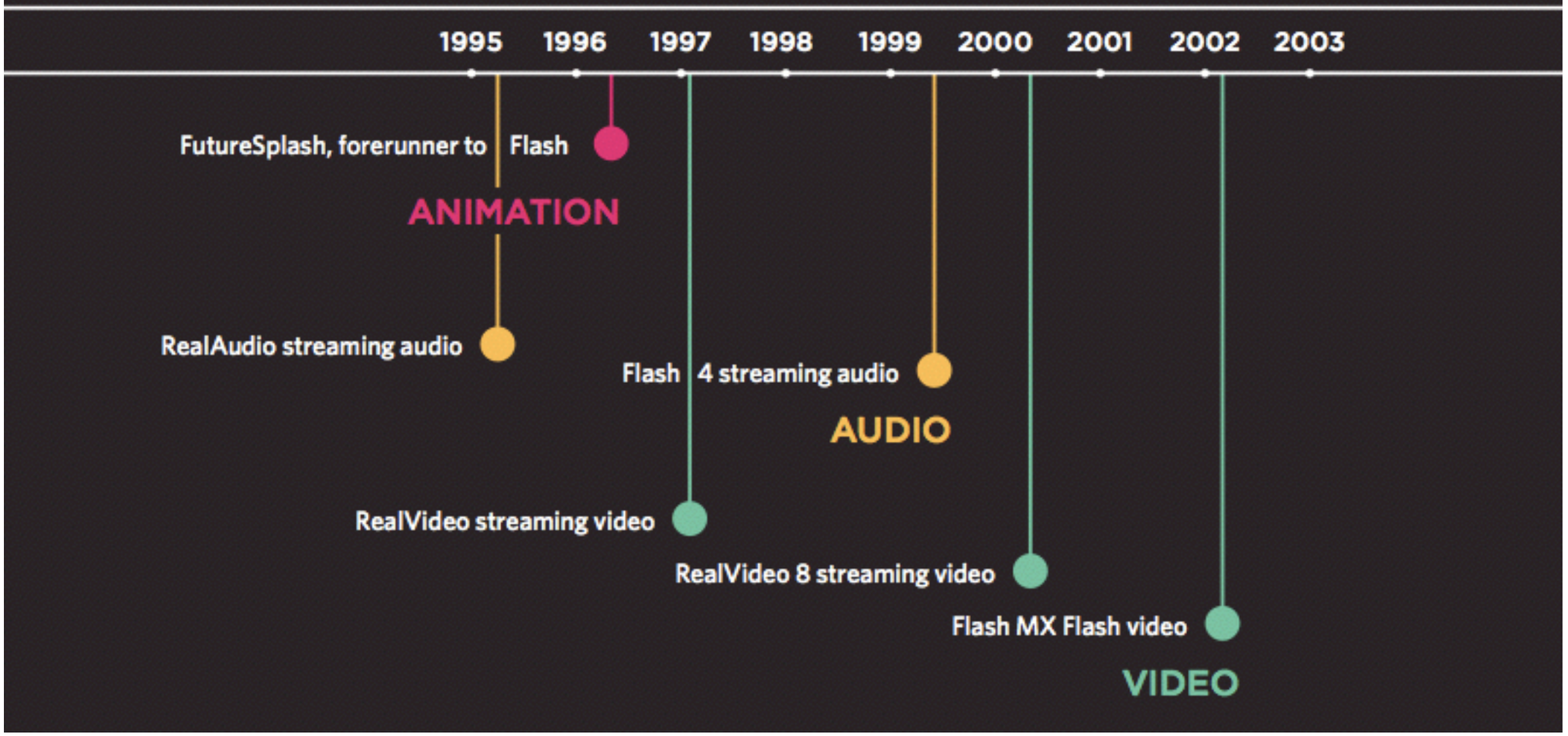
×

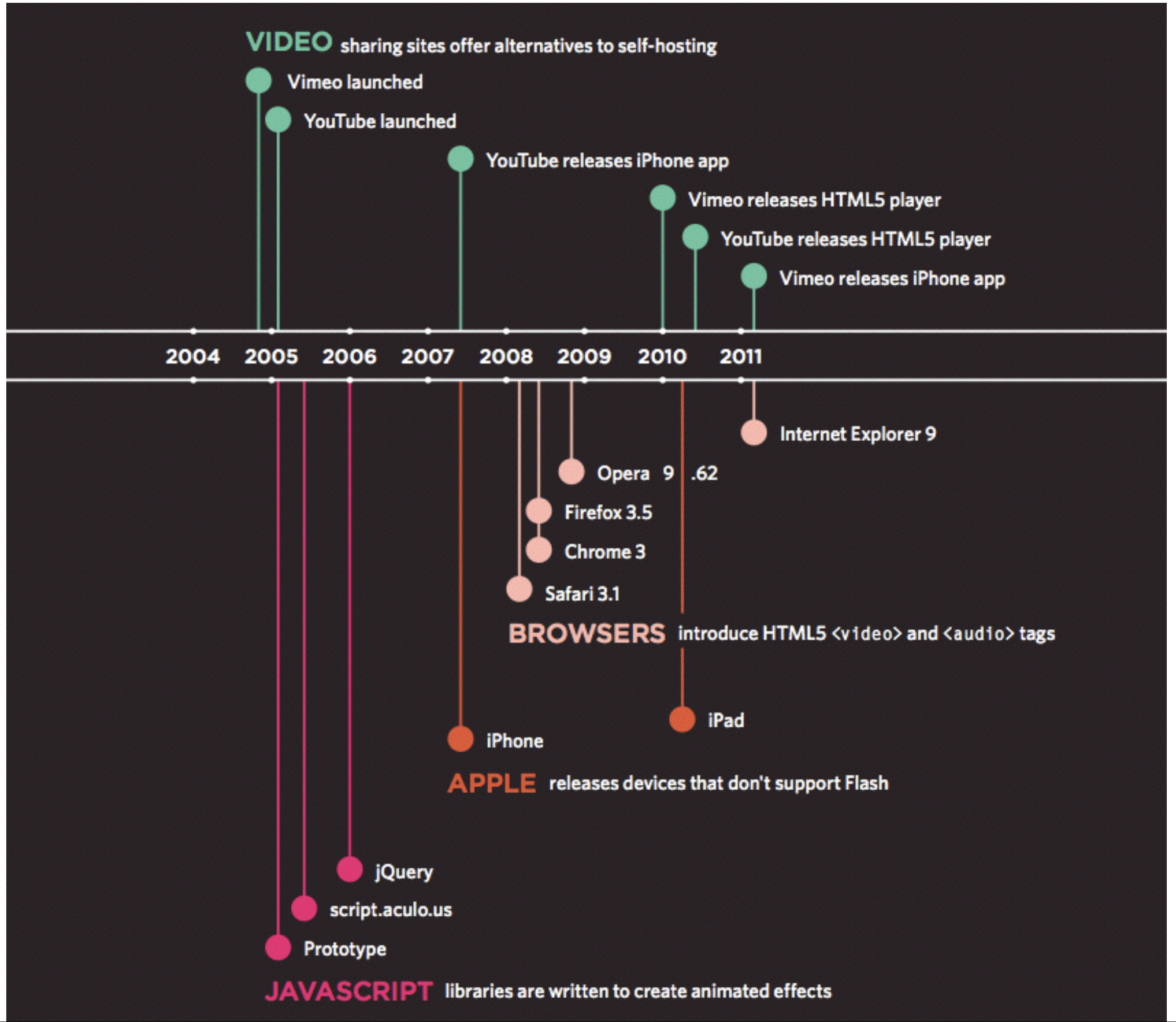
Multiplication sign
`×`
`×`

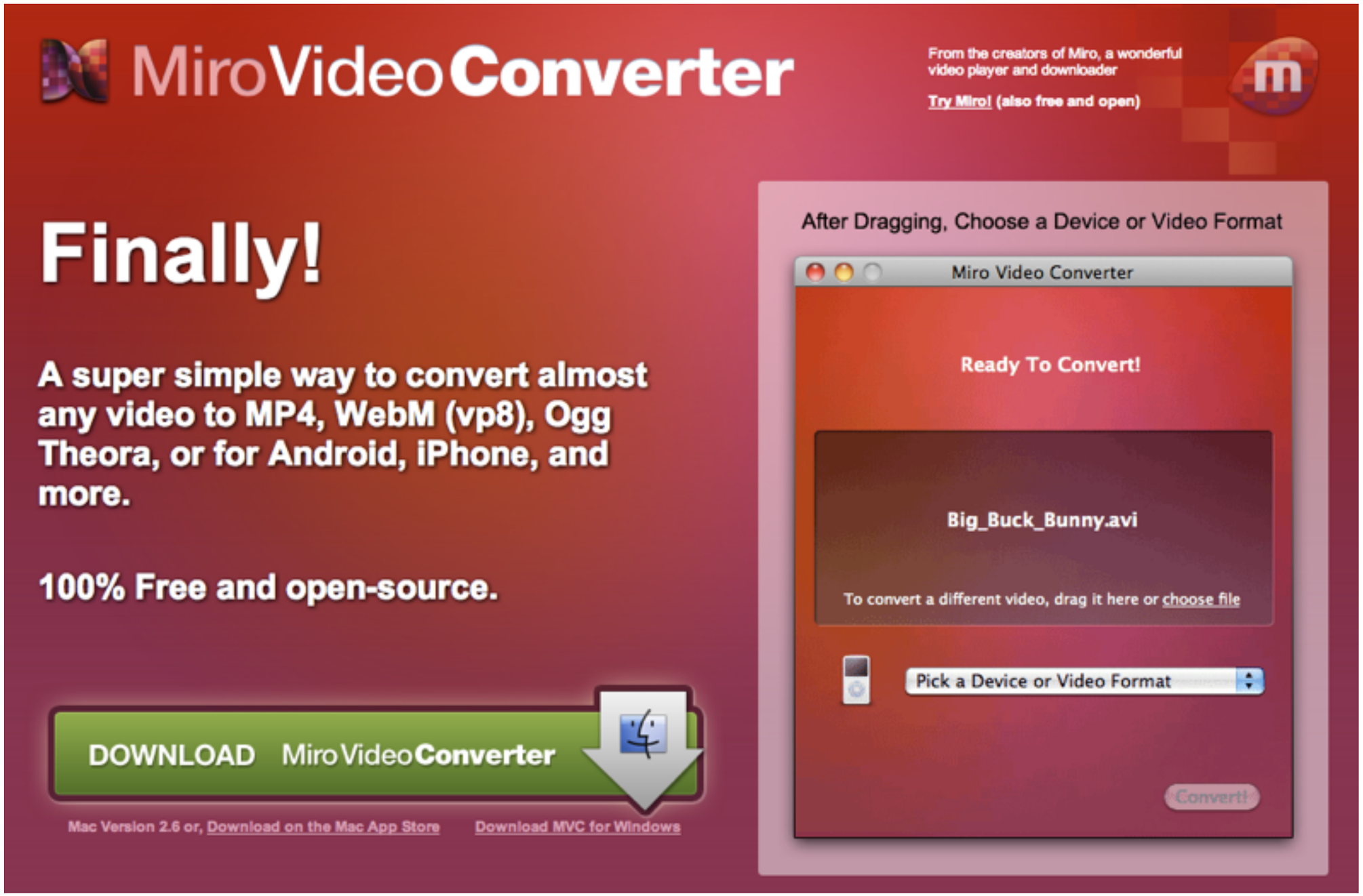

Safari File Edit View History Bookmarks Develop Window Help
Flash, Video and Audio
http://www.htmlandcssbook.com/code/chapter-09/example.html
Google
MacBook Pro

TIMELINE: FLASH, VIDEO & AUDIO

Web technologies change quickly. Here you can see some of the changes in how animation, video, and audio are created on the web.




VIDEO sharing sites offer alternatives to self-hosting
Vimeo launched
YouTube launched
YouTube releases iPhone app
Vimeo releases HTML5 player
YouTube releases HTML5 player
Vimeo releases iPhone app
2004
2005
2006
2007
2008
2009
2010
2011
Internet Explorer 9
Opera 9 .62
Firefox 3.5
Chrome 3
Safari 3.1
BROWSERS introduce HTML5 <video> and <audio> tags
iPad
iPhone
APPLE releases devices that don't support Flash
jQuery
script.aculo.us
Prototype
JAVASCRIPT libraries are written to create animated effects



http://www.mirovideoconverter.com/

http://www.getmiro.com/download/for-osx/

Example video

```
<!DOCTYPE html>
<html>
    <head>
    <title>Flash, Video and Audio</title>
    <script type="text/javascript" src="http://ajax.googleapis.com/ajax/libs/swfobject/2.2/swfobject.js"></
    script>
    <script type="text/javascript">
    var flashvars = {};
    var params = {movie: "../video/puppy.flv"};
    swfobject.embedSWF("flash/osplayer.swf", "snow", "400", "320", "8.0.0", flashvars, params);
    </script>
    </head>
    <body>
    <video poster="images/puppy.jpg" width="400" height="320" controls="controls">
    <source src="video/puppy.mp4" type='video/mp4; codecs="avc1.42E01E, mp4a.40.2"' />
    <source src="video/puppy.webm" type='video/webm; codecs="vp8, vorbis"' />
    <div id="snow">
    <p>You cannot see this video of a puppy playing in the snow because this browser does not support our
    video formats.</p>
    </div>
    </video>
    </body>
</html>
```

Esercizio: code-09/example.html


Safari File Edit View History Bookmarks Develop Window Help
Introducing CSS
http://www.htmlandcssbook.com/code/chapter-10/example.html
Google
From Garden to Plate
A potager is a French term for an ornamental vegetable or kitchen garden. Often flowers (edible and non-edible) and herbs are planted with the vegetables to enhance the garden's beauty. The goal is to make the function of providing food aesthetically pleasing.
What to Plant
Plants are chosen as much for their functionality as for their color and form. Many are trained to grow upward. A well-designed potager can provide food, cut flowers and herbs for the home with very little maintenance. Potagers can disguise their function of providing for a home in a wide array of forms - from the carefree style of the cottage garden to the formality of a knot garden.

Example CSS

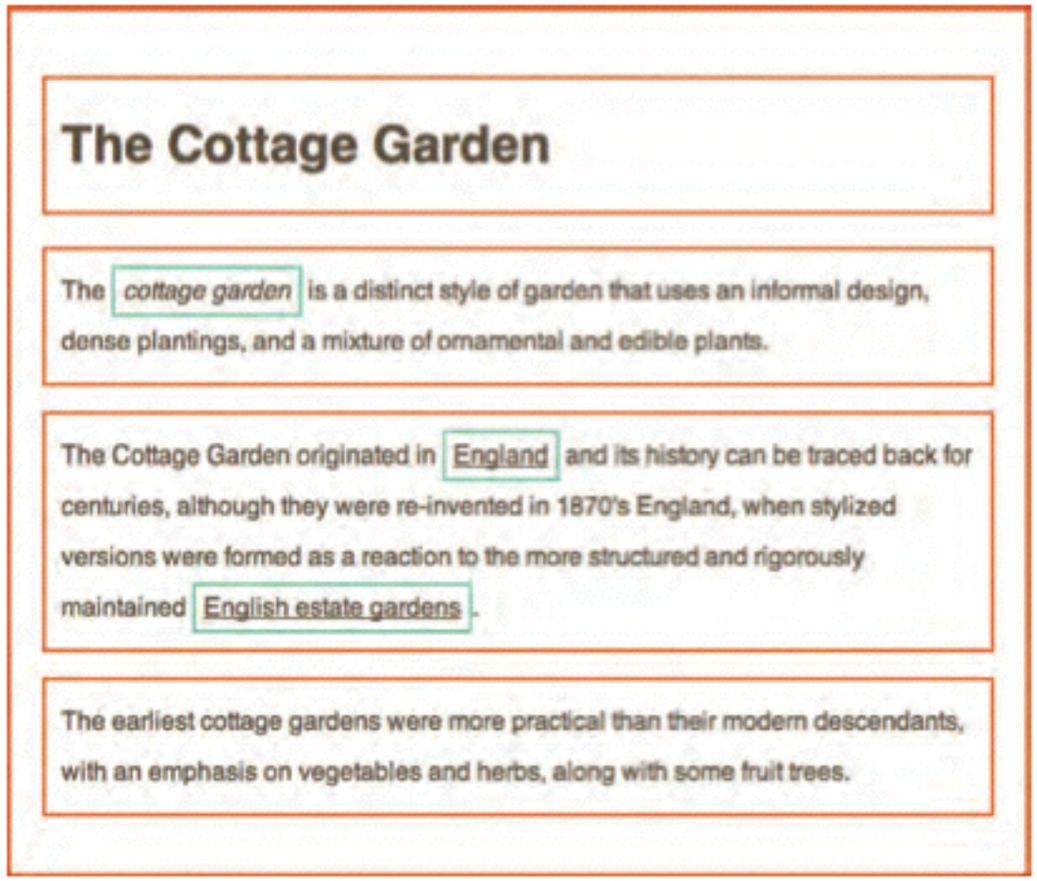
```
<!DOCTYPE html>
<html>
	<head>
	<title>Introducing CSS</title>
	<link href="css/example.css" type="text/css" rel="stylesheet" />
</head>
<body>
	<h1>From Garden to Plate</h1>
	<p>A <i>potager</i> is a French term for an ornamental vegetable or kitchen garden ... </p>
	<h2>What to Plant</h2>
	<p>Plants are chosen as much for their functionality as for their color and form ... </p>
</body>
</html>
```

example.css:

```
body {
	font-family: Arial, Verdana, sans-serif;
}
h1, h2 {
	color: #ee3e80;
}
p {
	color: #665544;
}
```

Esercizio: code-10/example.html

CSS allows you to create rules that control the way that each individual box (and the contents of that box) is presented.



In this example, block level elements are shown with red borders, and inline elements have green borders.

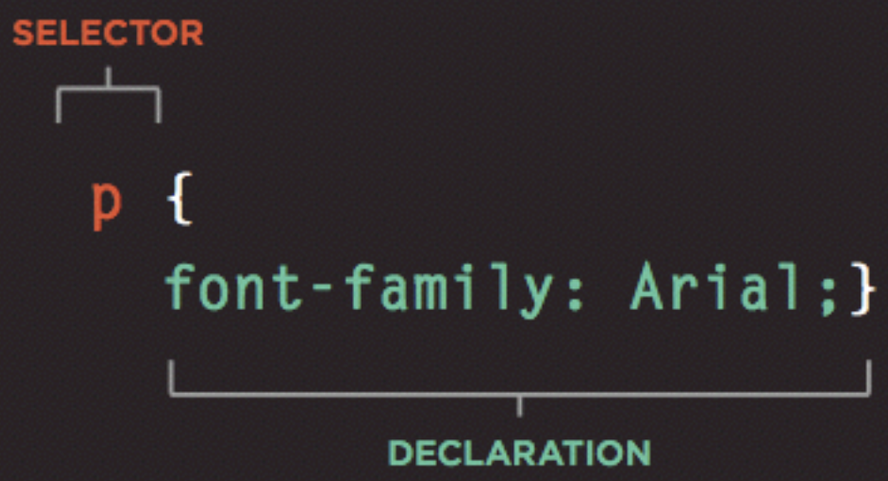
The `<body>` element creates the first box, then the `<h1>`, `<h2>`, `<p>`, `<i>`, and `<a>` elements each create their own boxes within it.

Using CSS, you could add a border around any of the boxes, specify its width and height, or add a background color. You could also control text inside a box — for example, its color, size, and the typeface used.

EXAMPLE STYLES

CSS ASSOCIATES STYLE RULES WITH HTML ELEMENTS

CSS works by associating rules with HTML elements. These rules govern how the content of specified elements should be displayed. A CSS rule contains two parts: a selector and a declaration.



CSS PROPERTIES AFFECT HOW ELEMENTS ARE DISPLAYED

CSS declarations sit inside curly brackets and each is made up of two parts: a property and a value, separated by a colon. You can specify several properties in one declaration, each separated by a semi-colon.

```
h1, h2, h3 {
            font-family: Arial;
            color: yellow;}
```

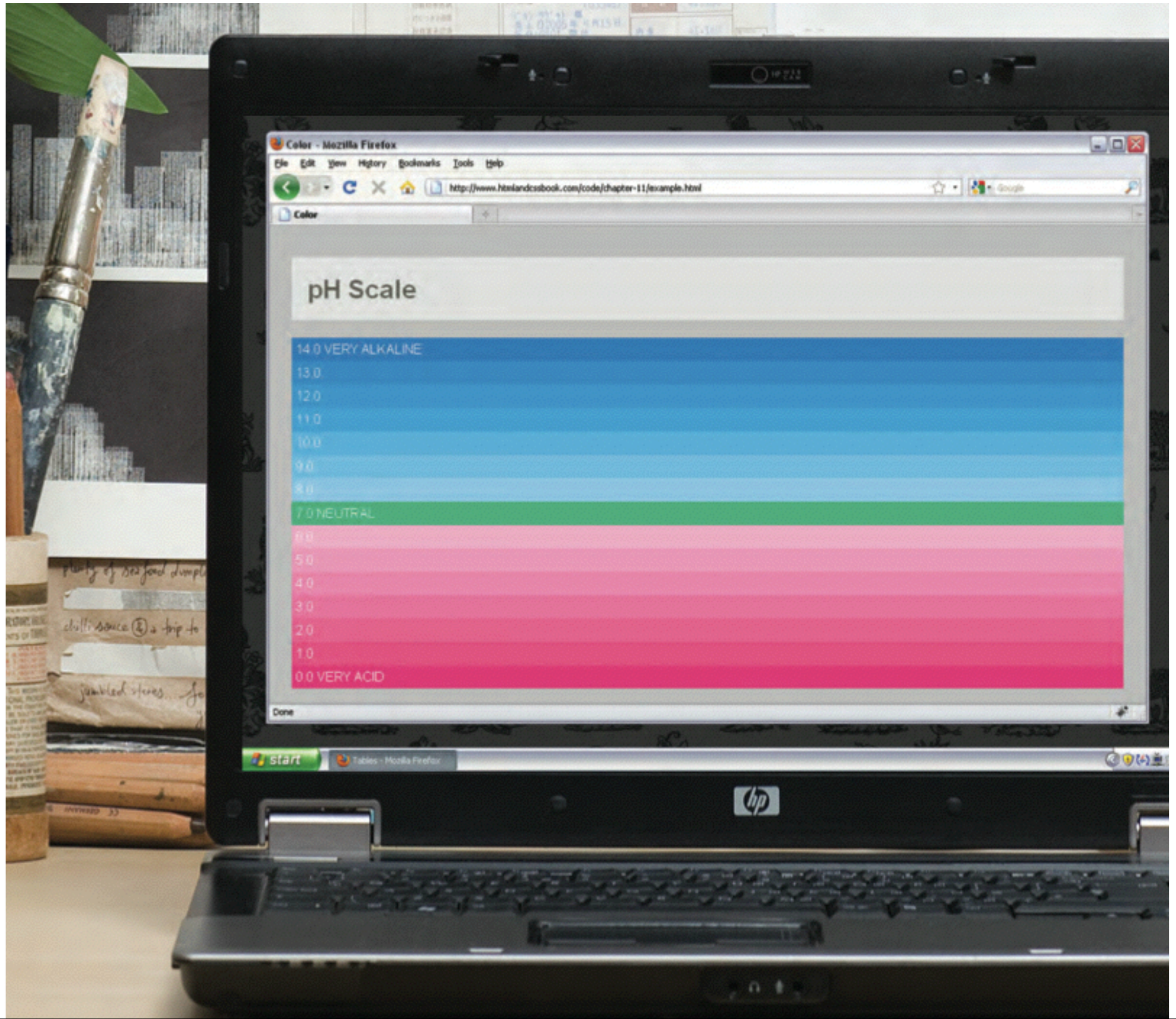
PROPERTY VALUE

UNIVERSAL SELECTOR	Applies to all elements in the document	`* {}` Targets all elements on the page
TYPE SELECTOR	Matches element names	`h1, h2, h3 {}` Targets the <h1>, <h2> and <h3> elements

CLASS SELECTOR	Matches an element whose `class` attribute has a value that matches the one specified after the period (or full stop) symbol	`.note {}`
		Targets any element whose `class` attribute has a value of `note`
		`p.note {}`
		Targets only <p> elements whose `class` attribute has a value of `note`

ID SELECTOR	Matches an element whose `id` attribute has a value that matches the one specified after the pound or hash symbol	`#introduction {}` Targets the element whose `id` attribute has a value of `introduction`
CHILD SELECTOR	Matches an element that is a direct child of another	`li>a {}` Targets any <a> elements that are children of an element (but not other <a> elements in the page)
DESCENDANT SELECTOR	Matches an element that is a descendent of another specified element (not just a direct child of that element)	`p a {}` Targets any <a> elements that sit inside a <p> element, even if there are other elements nested between them
ADJACENT SIBLING SELECTOR	Matches an element that is the next sibling of another	`h1+p {}` Targets the first <p> element after any <h1> element (but not other <p> elements)
GENERAL SIBLING SELECTOR	Matches an element that is a sibling of another, although it does not have to be the directly preceding element	`h1~p {}` If you had two <p> elements that are siblings of an <h1> element, this rule would apply to both

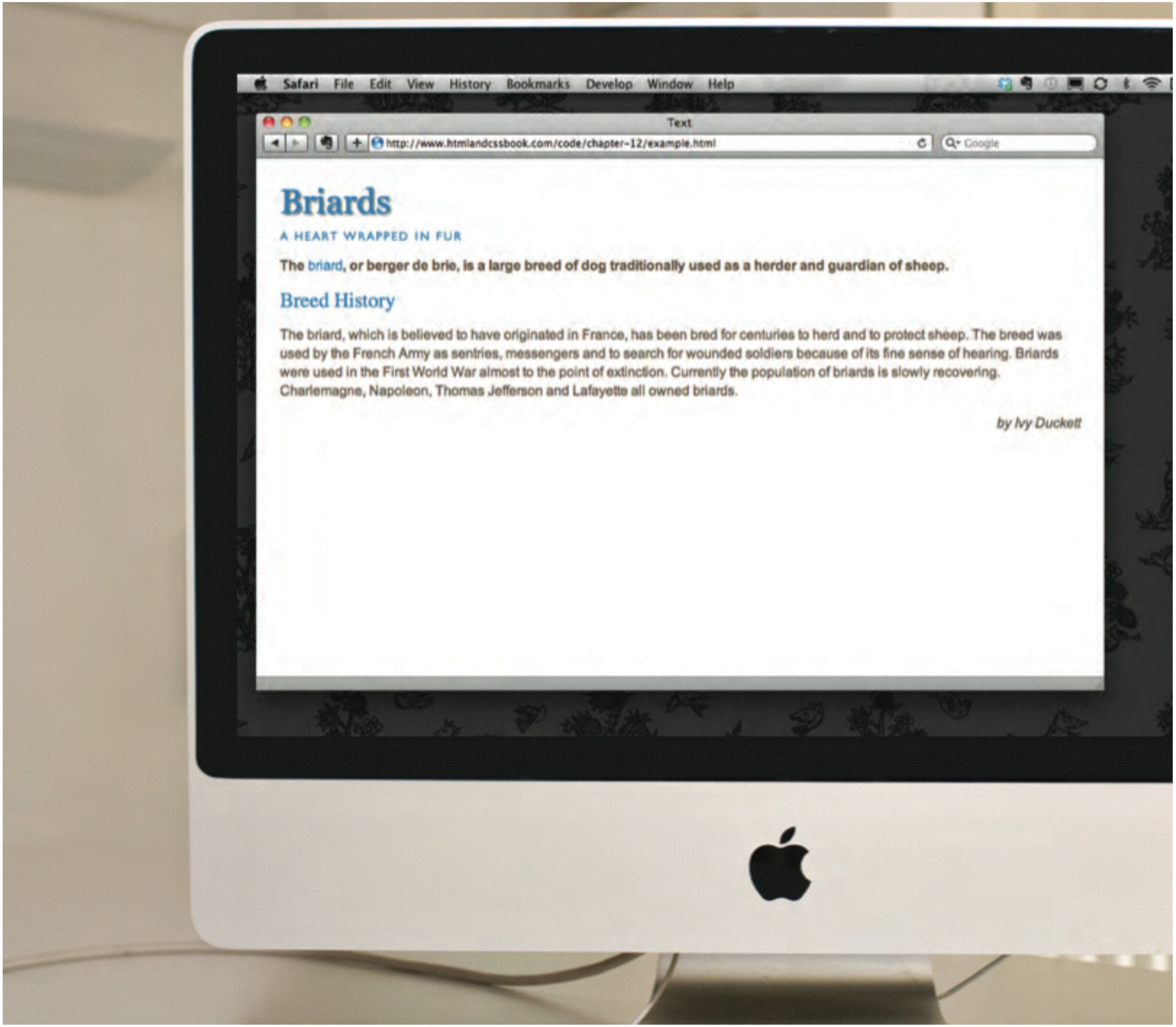
SELECTOR	MEANING	EXAMPLE
EXISTENCE	`[]` Matches a specific attribute (whatever its value)	`p[class]` Targets any <p> element with an attribute called `class`
EQUALITY	`[=]` Matches a specific attribute with a specific value	`p[class="dog"]` Targets any <p> element with an attribute called `class` whose value is `dog`
SPACE	`[~=]` Matches a specific attribute whose value appears in a space-separated list of words	`p[class~="dog"]` Targets any <p> element with an attribute called `class` whose value is a list of space-separated words, one of which is `dog`
PREFIX	`[^=]` Matches a specific attribute whose value begins with a specific string	`p[attr^"d"]` Targets any <p> element with an attribute whose value begins with the letter "d"
SUBSTRING	`[*=]` Matches a specific attribute whose value contains a specific substring	`p[attr*"do"]` Targets any <p> element with an attribute whose value contains the letters "do"
SUFFIX	`[$=]` Matches a specific attribute whose value ends with a specific string	`p[attr$"g"]` Targets any <p> element with an attribute whose value ends with the letter "g"


Color - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://www.htmlandcssbook.com/code/chapter-11/example.html
Color
pH Scale
14.0 VERY ALKALINE
13.0
12.0
11.0
10.0
9.0
8.0
7.0 NEUTRAL
6.0
5.0
4.0
3.0
2.0
1.0
0.0 VERY ACID
Done
start
Tables - Mozilla Firefox

Example CSS colors

```
<!DOCTYPE html>
<html>
	<head>
		<title>Color</title>
		<style type="text/css">
			body {
				background-color: silver;
				color: white;
				padding: 20px;
				font-family: Arial, Verdana, sans-serif;}
			h1 {
				background-color: #ffffff;
				background-color: hsla(0,100%,100%,0.5);
				color: #64645A;
				padding: inherit;}
			p {
				padding: 5px;
				margin: 0px;}
			p.zero {
				background-color: rgb(238,62,128);}
			p.one {
				background-color: rgb(244,90,139);}
			p.two {
				background-color: rgb(243,106,152);}
			p.three {
				background-color: rgb(244,123,166);}
			p.four {
				background-color: rgb(245,140,178);}
			p.five {
				background-color: rgb(246,159,192);}
			p.six {
				background-color: rgb(245,176,204);}
			p.seven {
				background-color: rgb(0,187,136);}
			p.eight {
				background-color: rgb(140,202,242);}
			p.nine {
				background-color: rgb(114,193,240);}
			p.ten {
				background-color: rgb(84,182,237);}
			p.eleven {
				background-color: rgb(48,170,233);}
			p.twelve {
				background-color: rgb(0,160,230);}
			p.thirteen {
				background-color: rgb(0,149,226);}
			p.fourteen {
				background-color: rgb(0,136,221);}
		</style>
	</head>
	<body>
		<h1>pH Scale</h1>
		<p class="fourteen">14.0 VERY ALKALINE</p>
		<p class="thirteen">13.0</p>
		<p class="twelve">12.0</p>
		<p class="eleven">11.0</p>
		<p class="ten">10.0</p>
		<p class="nine">9.0</p>
		<p class="eight">8.0</p>
		<p class="seven">7.0 NEUTRAL</p>
		<p class="six">6.0</p>
		<p class="five">5.0</p>
		<p class="four">4.0</p>
		<p class="three">3.0</p>
		<p class="two">2.0</p>
		<p class="one">1.0</p>
		<p class="zero">0.0 VERY ACID</p>
	</body>
</html>
```

Esercizio: code-11/5-example.html


Safari File Edit View History Bookmarks Develop Window Help
Text
http://www.htmlandcssbook.com/code/chapter-12/example.html
Google
Briards
A HEART WRAPPED IN FUR
The briard, or berger de brie, is a large breed of dog traditionally used as a herder and guardian of sheep.
Breed History
The briard, which is believed to have originated in France, has been bred for centuries to herd and to protect sheep. The breed was used by the French Army as sentries, messengers and to search for wounded soldiers because of its fine sense of hearing. Briards were used in the First World War almost to the point of extinction. Currently the population of briards is slowly recovering. Charlemagne, Napoleon, Thomas Jefferson and Lafayette all owned briards.
by Ivy Duckett

CSS chapter-12/understanding-font-formats.html

```
@font-face {
  font-family: 'ChunkFiveRegular';
  src: url('fonts/chunkfive.eot');
  src: url('fonts/chunkfive.eot?#iefix')
       format('embedded-opentype'),
       url('fonts/chunkfive.woff') format('woff'),
       url('fonts/chunkfive.ttf')
       format('truetype'),
       url('fonts/chunkfive.svg#ChunkFiveRegular')
       format('svg');}
```

BROWSER	FORMAT			
	eot	woff	ttf / otf	svg
Chrome (all)				●
Chrome 6+		●	●	●
Firefox 3.5			●	
Firefox 3.6+		●	●	
IE 5 - 8	●			
IE 9+	●	●	◗	
Opera 10+			●	●
Safari 3.1+			●	●
iOS <4.2				●
iOS 4.2+			●	●

www.fontsquirrel.com
www.fontex.org
www.openfontlibrary.org

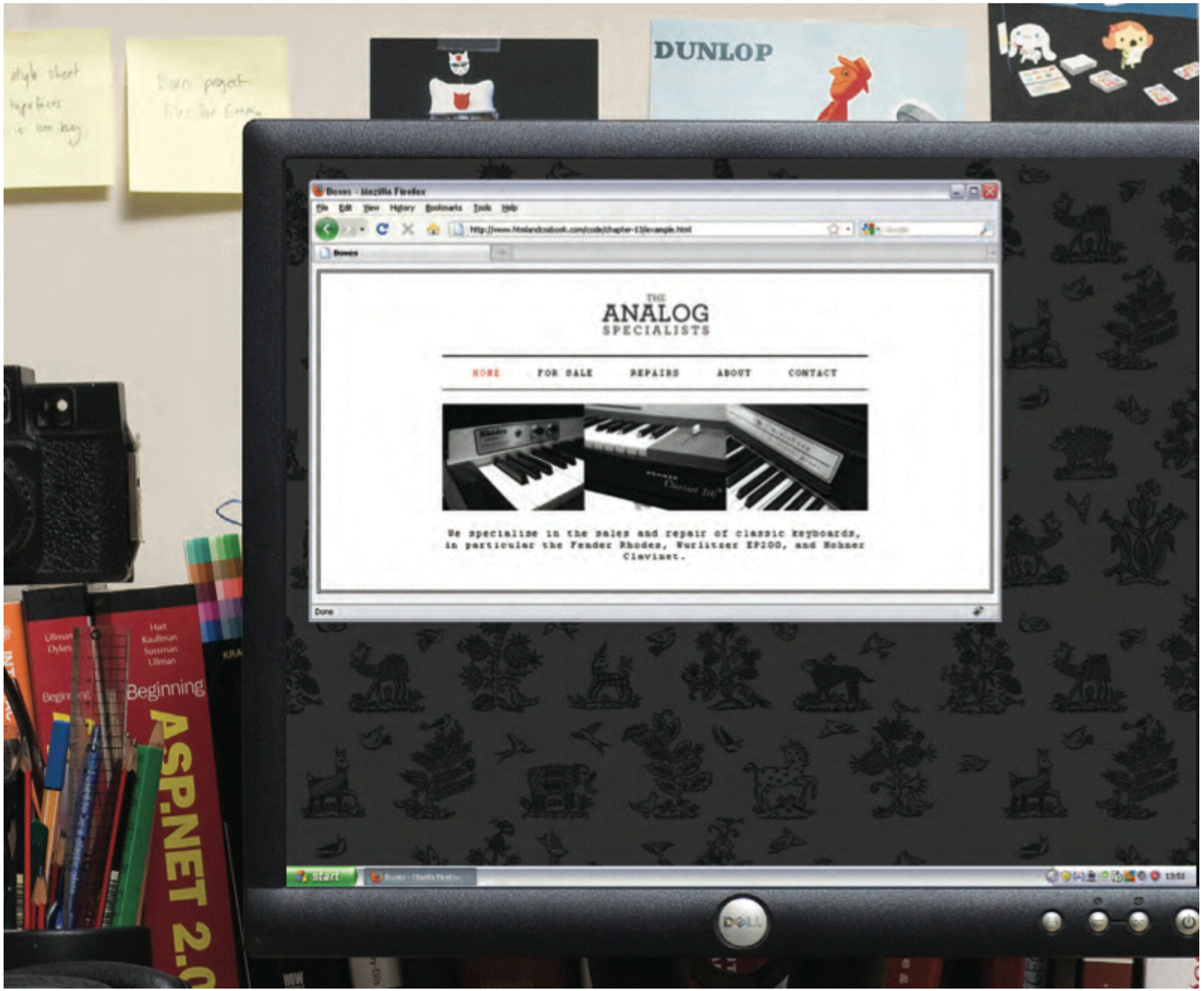
www.typekit.com
www.kernest.com
www.fontspring.com

Example CSS text

```
<!DOCTYPE html>
<html>
    <head>
        <title>Text</title>

    </head>
    <body>
        <h1>Briards</h1>
        <h2>A Heart wrapped in fur</h2>
        <p class="intro">The <a class="breed"
href="http://en.wikipedia.org/wikiBriard">briard</a>, or
berger de brie, is a large breed of dog traditionally used
as a herder and guardian of sheep.</p>
        <h3>Breed History</h3>
        <p>The briard, which is believed to have
originated in France, has been bred for centuries to herd
and to protect sheep. The breed was used by the French
Army as sentries, messengers and to search for
wounded soldiers because of its fine sense of hearing.
Briards were used in the First World War almost to the
point of extinction. Currently the population of briards
is slowly recovering. Charlemagne, Napoleon, Thomas
Jefferson and Lafayette all owned briards.</p>
        <p class="credits">by Ivy Duckett</p>
    </body>
</html>
```

```
body {
    padding: 20px;}
h1, h2, h3, a {
    font-weight: normal;
    color: #0088dd;
    margin: 0px;}
h1 {
    font-family: Georgia, Times, serif;
    font-size: 250%;
    text-shadow: 2px 2px 3px #666666;
    padding-bottom: 10px;}
h2 {
    font-family: "Gill Sans", Arial, sans-serif;
    font-size: 90%;
    text-transform: uppercase;
    letter-spacing: 0.2em;}
h3 {
    font-size: 150%;}
p {
    font-family: Arial, Verdana, sans-serif;
    line-height: 1.4em;
    color: #665544;}
     p.intro:first-line {
    font-weight: bold;}
.credits {
    font-style: italic;
    text-align: right;}
a {
    text-decoration: none;}
 a:hover {
    text-decoration: underline;}
```

Esercizio: code-12/16-example.html


DUNLOP
Boxes - Mozilla Firefox
File Edit View History Bookmarks Tools Help
Boxes
THE
ANALOG
SPECIALISTS
HOME
FOR SALE
REPAIRS
ABOUT
CONTACT
We specialise in the sales and repair of classic keyboards,
in particular the Fender Rhodes, Wurlitzer EP200, and Hohner
Clavinet.
Done
Start
Hart
Kaufman
Sussman
Ullman
Beginning
ASP.NET 2.0

Every box has three available properties that can be adjusted to control its appearance:

1

BORDER

Every box has a border (even if it is not visible or is specified to be 0 pixels wide). The border separates the edge of one box from another.

2

MARGIN

Margins sit outside the edge of the border. You can set the width of a margin to create a gap between the borders of two adjacent boxes.

3

PADDING

Padding is the space between the border of a box and any content contained within it. Adding padding can increase the readability of its contents.

If you specify a width for a box, then the borders, margin, and padding are added to its width and height.

WITH
MARGIN & PADDING

Moog

Moog synthesisers were created by Dr. Robert Moog under the company name Moog Music. Popular models include the Moog Modular, Minimoog, Micromoog, Moog Rogue, and Moog Source.

ARP

ARP Instruments Inc. was set up by Alan Peralman, and was the main competitor for Moog during the 1970'x. Popular models include the Arp 2600 and the ARP Odyssey.

Sequential Circuits

Sequential Circuits Inc was founded by Dave Smith, and the company was pivotal in the creation of MIDI. Famous models include the Prophet 5, Prophet 600, and Pro-One.

WITHOUT
MARGIN & PADDING

Moog

Moog synthesisers were created by Dr. Robert Moog under the company name Moog Music. Popular models include the Moog Modular, Minimoog, Micromoog, Moog Rogue, and Moog Source.

ARP

ARP Instruments Inc. was set up by Alan Peralman, and was the main competitor for Moog during the 1970'x. Popular models include the Arp 2600 and the ARP Odyssey.

Sequential Circuits

Sequential Circuits Inc was founded by Dave Smith, and the company was pivotal in the creation of MIDI. Famous models include the Prophet 5, Prophet 600, and Pro-One.

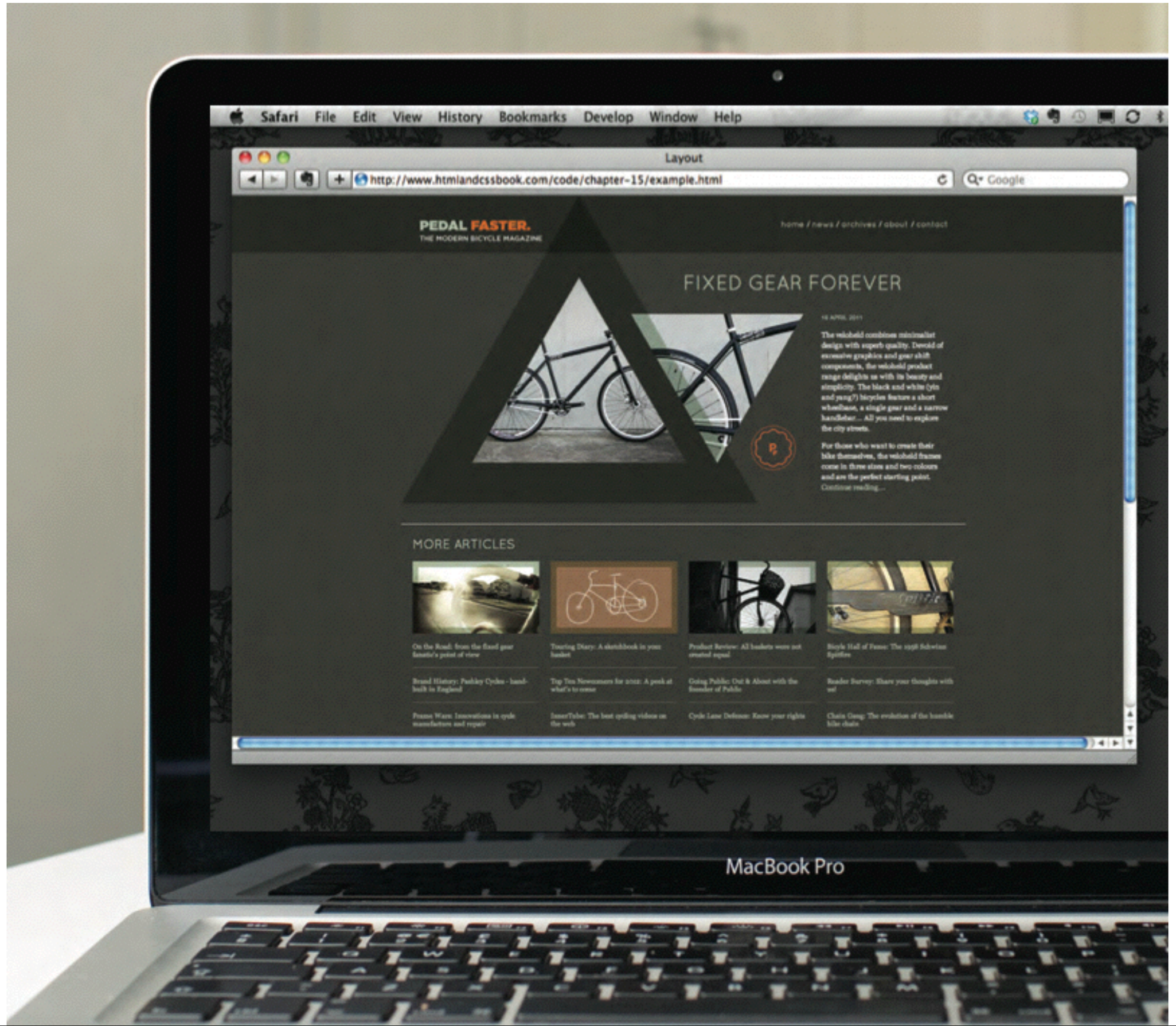
The `padding` and `margin` properties are very helpful in adding space between various items on the page.

Example CSS boxes

```
<!DOCTYPE html>
<html>
    <head>
        <title>Boxes</title>
    </head>
    <body>
        <div id="page">
            <div id="logo">
                <img src="images/logo.gif" alt="The
Analog Specialists" />
            </div>
            <ul id="navigation">
                <li><a href="#" class="on">Home</
a></li>
                <li><a href="#">For Sale</a></li>
                <li><a href="#">Repairs</a></li>
                <li><a href="#">About</a></li>
                <li><a href="#">Contact</a></li>
            </ul>
            <p>
                <img src="images/keys.jpg"
alt="Fender Rhodes, Hohner Clavinet, and Wurlitzer
EP200" />
            </p>
            <p>
                We specialize in the sale and repair of
classic keyboards, in particular the Fender Rhodes,
Wurlitzer EP200, and Hohner Clavinet.
            </p>
        </div>
    </body>
</html>
```

```
body {
        font-size: 80%;
        font-family: "Courier New", Courier, monospace;
        letter-spacing: 0.15em;
        background-color: #efefef;}
    #page {
        max-width: 940px;
        min-width: 720px;
        margin: 10px auto 10px auto;
        padding: 20px;
        border: 4px double #000;
        background-color: #ffffff;}
    #logo {
        width: 150px;
        margin: 10px auto 25px auto;}
    ul {
        width: 570px;
        padding: 15px;
        margin: 0px auto 0px auto;
        border-top: 2px solid #000;
        border-bottom: 1px solid #000;
        text-align: center;}
li {
        display: inline;
        margin: 0px 3px;}
p {
        text-align: center;
        width: 600px;
        margin: 20px auto 20px auto;
        font-weight: normal;}
a {
        color: #000000;
        text-transform: uppercase;
        text-decoration: none;
        padding: 6px 18px 5px 18px;}
a:hover, a.on {
        color: #cc3333;
        background-color: #ffffff;}
```

Esercizio: code-13/16-example.html


Safari File Edit View History Bookmarks Develop Window Help
Layout
http://www.htmlandcssbook.com/code/chapter-15/example.html
Google
PEDAL FASTER.
THE MODERN BICYCLE MAGAZINE
home / news / archives / about / contact
FIXED GEAR FOREVER
The velobold combines minimalist design with superb quality. Devoid of excessive graphics and gear shift components, the velobold product range delights us with its beauty and simplicity. The black and white (yin and yang?) bicycles feature a short wheelbase, a single gear and a narrow handlebar... All you need to explore the city streets.
For those who want to create their bike themselves, the velobold frames come in three sizes and two colours and are the perfect starting point.
Continue reading...
MORE ARTICLES
On the Road: from the fixed gear fanatic's point of view
Touring Diary: A sketchbook in your basket
Product Review: All baskets were not created equal
Bicyle Hall of Fame: The 1936 Schwinn Spitfire
Brand History: Pashley Cycles - hand-built in England
Top Ten Newcomers for 2012: A peek at what's to come
Going Public: Out & About with the founder of Pelibo
Reader Survey: Share your thoughts with us!
Frame Wars: Innovations in cycle manufacture and repair
InnerTube: The best cycling videos on the web
Cycle Lane Defense: Know your rights
Chain Gang: The evolution of the humble bike chain
MacBook Pro

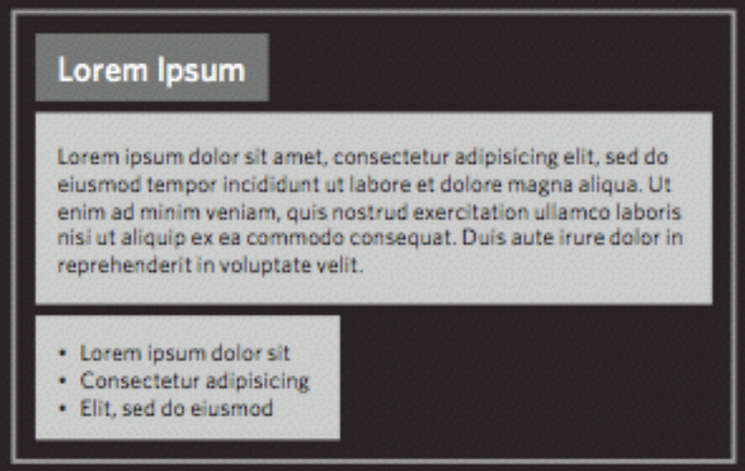
Example Layout

Esercizio: code-15/18-example.html

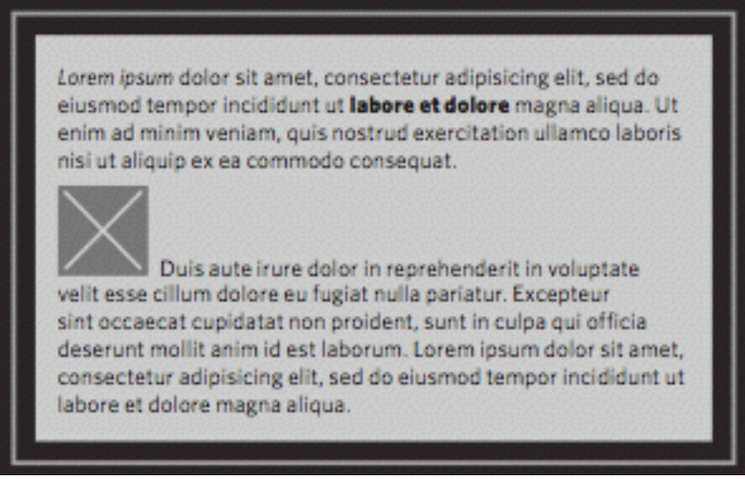
CSS treats each HTML element as if it is in its own box. This box will either be a **block-level** box or an **inline** box.

Block-level boxes start on a new line and act as the main building blocks of any layout, while inline boxes flow between surrounding text. You can control how much space each box takes up by setting the width of the boxes (and sometimes the height, too). To separate boxes, you can use borders, margins, padding, and background colors.

BLOCK-LEVEL ELEMENTS
START ON A NEW LINE
Examples include:
`<h1> <p> <ul> <li>`

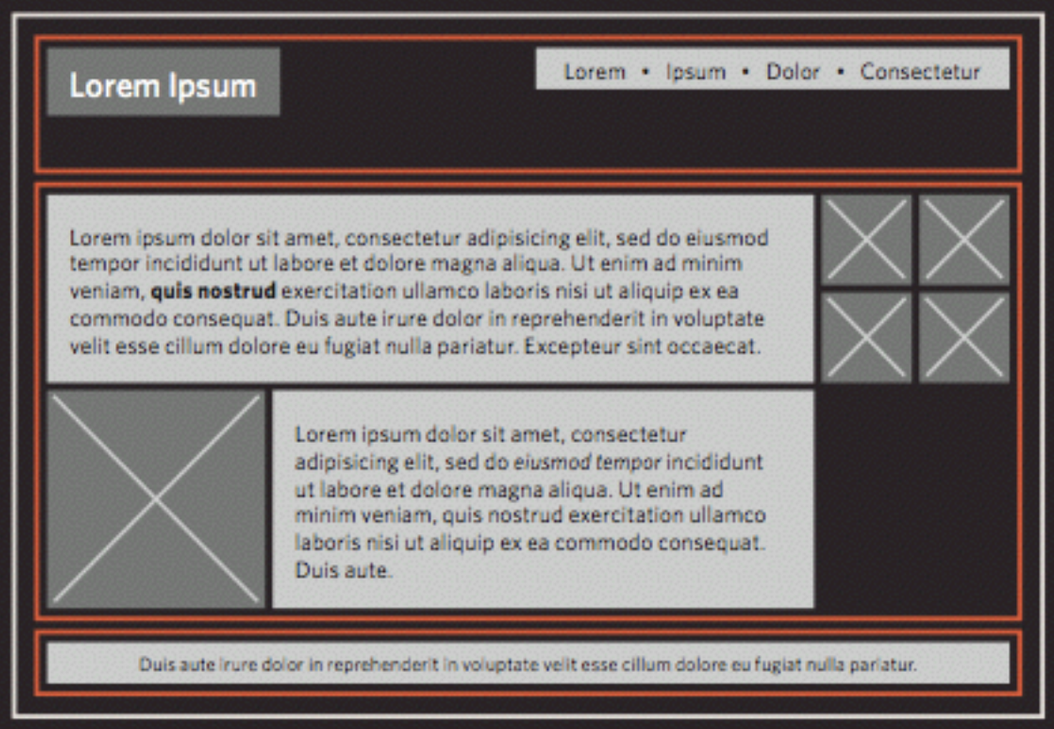


INLINE ELEMENTS
FLOW IN BETWEEN SURROUNDING TEXT
Examples include:
`<img> <b> <i>`



If one block-level element sits inside another block-level element then the outer box is known as the **containing** or **parent** element.

It is common to group a number of elements together inside a `<div>` (or other block-level) element. For example, you might group together all of the elements that form the header of a site (such as the logo and the main navigation). The `<div>` element that contains this group of elements is then referred to as the **containing** element.



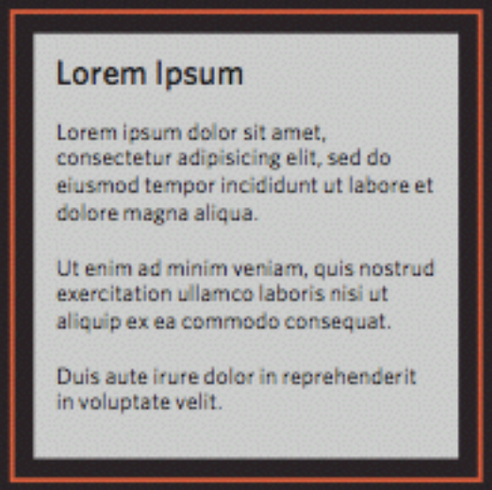
A box may be nested inside several other block-level elements. The containing element is always the **direct parent** of that element.

The orange lines in this diagram represent `<div>` elements. The header (containing the logo and navigation) are in one `<div>` element, the main content of the page is in another, and the footer is in a third. The `<body>` element is the containing element for these three `<div>` elements. The second `<div>` element is the containing element for two paragraphs of Latin text and images (represented by crossed squares).

CSS has the following positioning schemes that allow you to control the layout of a page: normal flow, relative positioning, and absolute positioning. You specify the positioning scheme using the `position` property in CSS. You can also float elements using the `float` property.

NORMAL FLOW

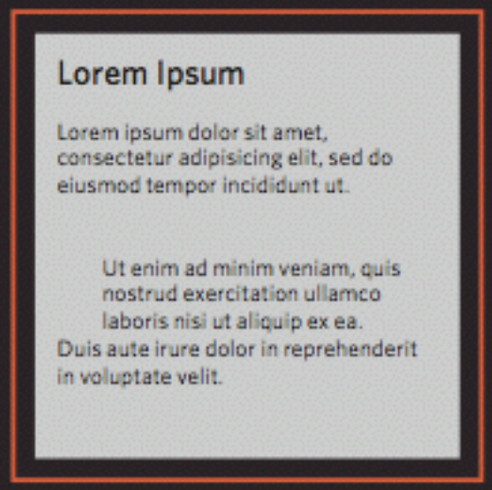
Every block-level element appears on a new line, causing each item to appear lower down the page than the previous one. Even if you specify the width of the boxes and there is space for two elements to sit side-by-side, they will not appear next to each other. This is the default behavior (unless you tell the browser to do something else).



The paragraphs appear one after the other, vertically down the page.

RELATIVE POSITIONING

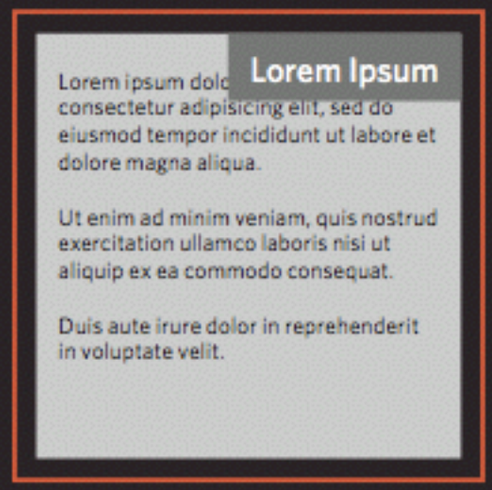
This moves an element from the position it would be in normal flow, shifting it to the top, right, bottom, or left of where it would have been placed. This does not affect the position of surrounding elements; they stay in the position they would be in in normal flow.



The second paragraph has been pushed down and right from where it would otherwise have been in normal flow.

ABSOLUTE POSITIONING

This positions the element in relation to its containing element. It is taken out of normal flow, meaning that it does not affect the position of any surrounding elements (as they simply ignore the space it would have taken up). Absolutely positioned elements move as users scroll up and down the page.



The heading is positioned to the top right, and the paragraphs start at the top of the screen (as if the heading were not there).

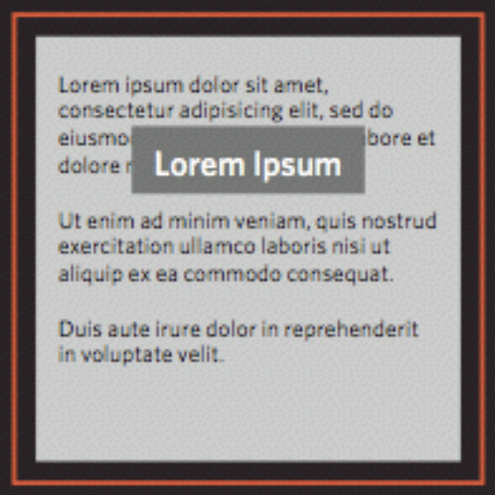
To indicate where a box should be positioned, you may also need to use box offset properties to tell the browser how far from the top or bottom and left or right it should be placed. (You will meet these when we introduce the positioning schemes on the following pages.)

FIXED POSITIONING

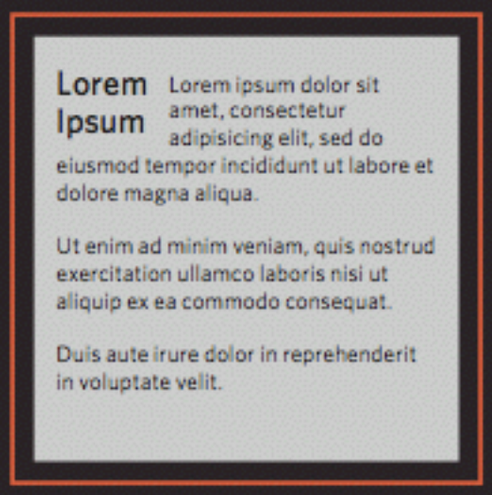
This is a form of absolute positioning that positions the element in relation to the browser window, as opposed to the containing element. Elements with fixed positioning do not affect the position of surrounding elements and they do not move when the user scrolls up or down the page.

FLOATING ELEMENTS

Floating an element allows you to take that element out of normal flow and position it to the far left or right of a containing box. The floated element becomes a block-level element around which other content can flow.



The heading has been placed in the center of the page and 25% from the top of the screen. (The rest appears in normal flow.)



The heading has been floated to the left, allowing the paragraphs of text to flow around it.

When you move any element from normal flow, boxes can overlap. The `z-index` property allows you to control which box appears on top.

Different visitors to your site will have different sized screens that show different amounts of information, so your design needs to be able to work on a range of different sized screens.

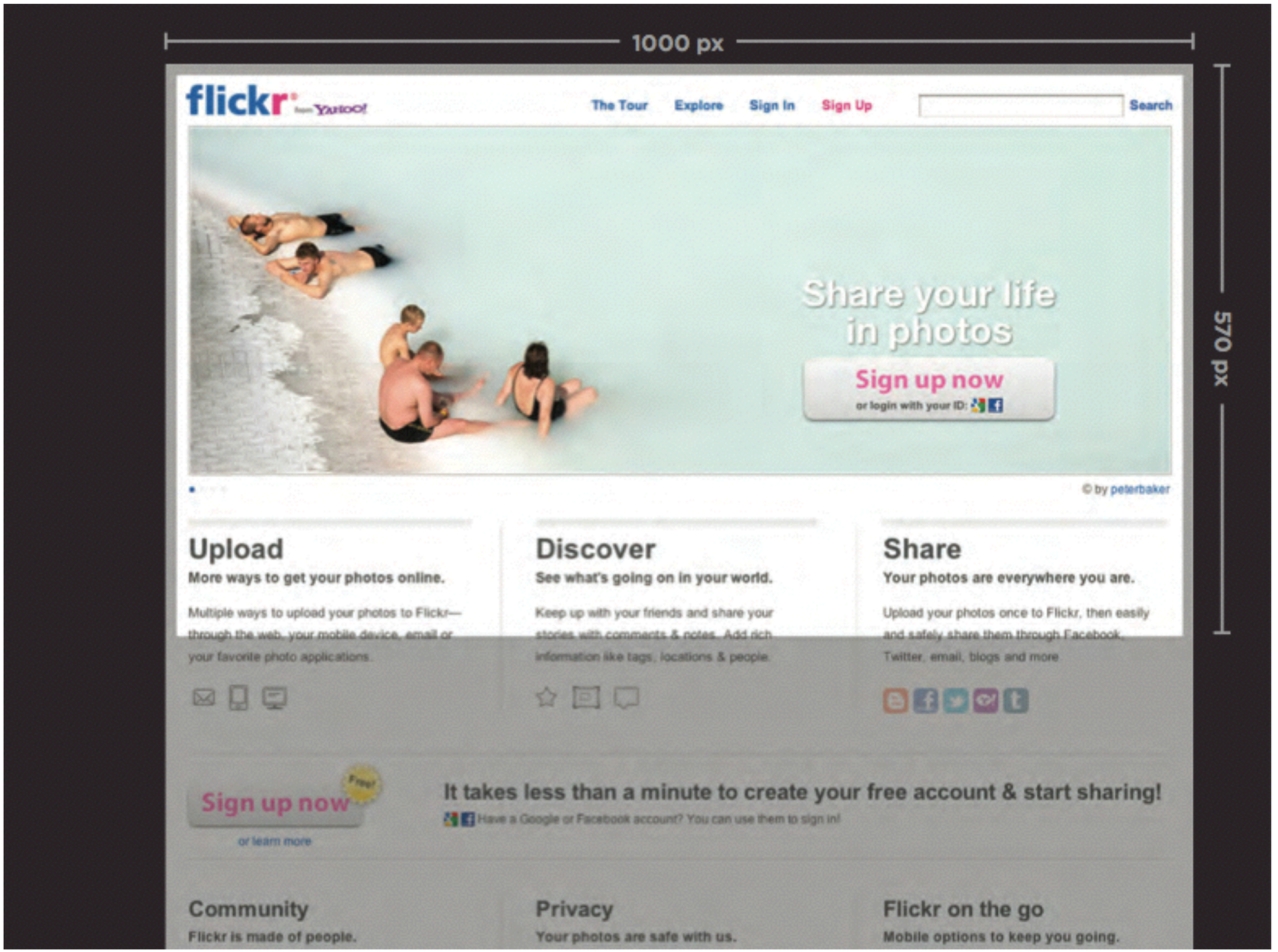
iPhone 4
Size: 3.5 inches
Resolution: 960 x 640 pixels

iPad 2
Size: 9.7 inches
Resolution: 1024 x 768 pixels

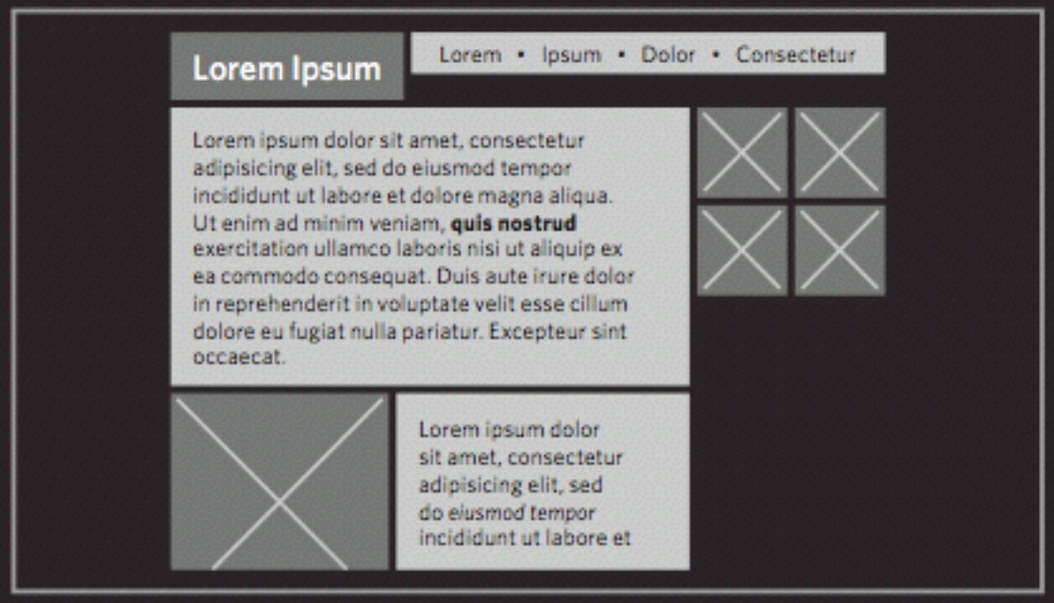
Resolution refers to the number of dots a screen shows per inch. Some devices have a higher resolution than desktop computers and most operating systems allow users to adjust the resolution of their screens.

13" MacBook
Size: 13.3 inches
Resolution: 1280 x 800 pixels

27" iMac
Size: 27 inches
Resolution: 2560 x 1440 pixels


1000 px
570 px
flickr from Yahoo!
The Tour
Explore
Sign In
Sign Up
Search
Share your life in photos
Sign up now
or login with your ID:
© by peterbaker
Upload
More ways to get your photos online.
Multiple ways to upload your photos to Flickr—through the web, your mobile device, email or your favorite photo applications.
Discover
See what's going on in your world.
Keep up with your friends and share your stories with comments & notes. Add rich information like tags, locations & people.
Share
Your photos are everywhere you are.
Upload your photos once to Flickr, then easily and safely share them through Facebook, Twitter, email, blogs and more.
Sign up now
Free!
or learn more
It takes less than a minute to create your free account & start sharing!
Have a Google or Facebook account? You can use them to sign in!
Community
Flickr is made of people.
Privacy
Your photos are safe with us.
Flickr on the go
Mobile options to keep you going.

Fixed width layout designs do not change size as the user increases or decreases the size of their browser window. Measurements tend to be given in pixels.

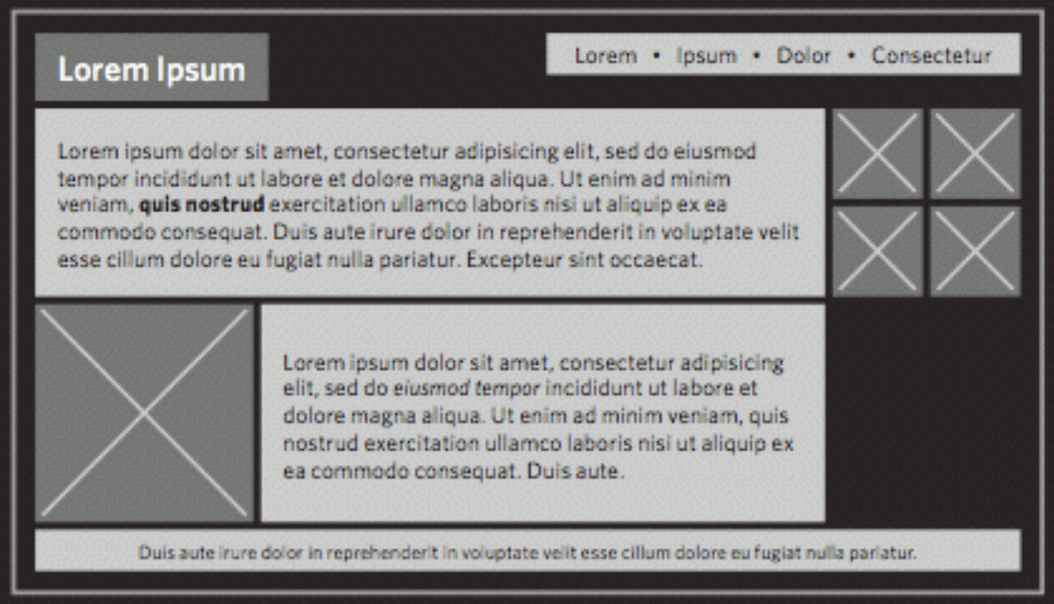


ADVANTAGES

- Pixel values are accurate at controlling size and positioning of elements.
- The designer has far greater control over the appearance and position of items on the page than with liquid layouts.
- You can control the lengths of lines of text regardless of the size of the user's window.
- The size of an image will always remain the same relative to the rest of the page.

DISADVANTAGES

- You can end up with big gaps around the edge of a page.
- If the user's screen is a much higher resolution than the designer's screen, the page can look smaller and text can be harder to read.
- If a user increases font sizes, text might not fit into the allotted spaces.
- The design works best on devices that have a site or resolution similar to that of desktop or laptop computers.
- The page will often take up more vertical space than a liquid layout with the same content.



Liquid layout designs stretch and contract as the user increases or decreases the size of their browser window. They tend to use percentages.

ADVANTAGES

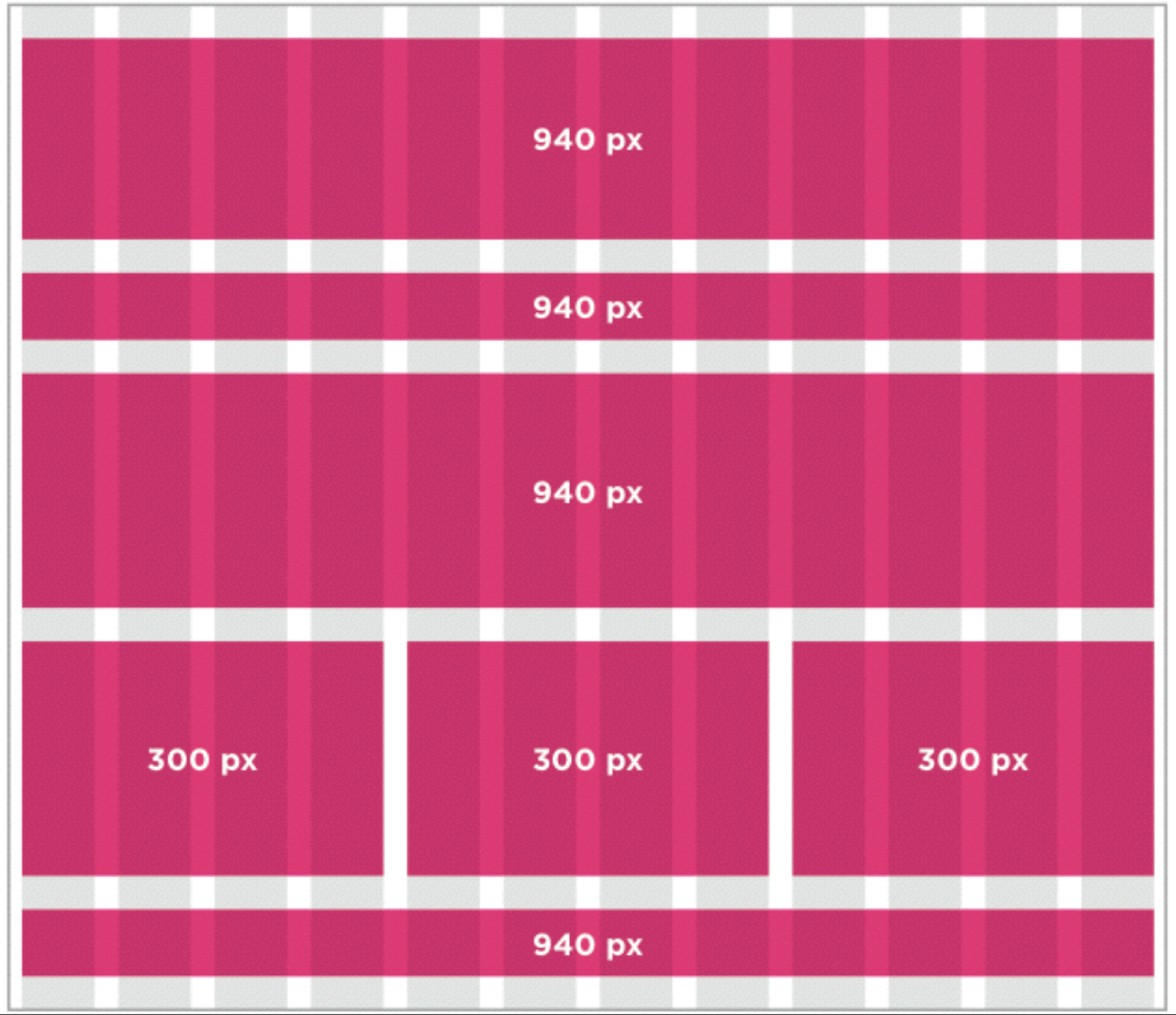
- Pages expand to fill the entire browser window so there are no spaces around the page on a large screen.
- If the user has a small window, the page can contract to fit it without the user having to scroll to the side.
- The design is tolerant of users setting font sizes larger than the designer intended (because the page can stretch).

DISADVANTAGES

- If you do not control the width of sections of the page then the design can look very different than you intended, with unexpected gaps around certain elements or items squashed together.
- If the user has a wide window, lines of text can become very long, which makes them harder to read.
- If the user has a very narrow window, words may be squashed and you can end up with few words on each line.
- If a fixed width item (such as an image) is in a box that is too small to hold it (because the user has made the window smaller) the image can overflow over the text.

Because liquid layouts can stretch the entire width of the browser, resulting in long lines of text that are hard to read, some liquid layouts only let part of the page expand and contract. Other parts of the page have minimum and maximum widths.

Below you can see a sample layout of a page just like the fixed width page example. On the next page, we will recreate this using the 960.gs stylesheet. Instead of writing our own CSS to control layout, we will need to add classes to the HTML indicating how wide each section should be.




Safari File Edit View History Bookmarks Develop Window Help
Images
http://www.htmlandcssbook.com/code/chapter-16/example.html
Google
Galerie Botanique
Here is a selection of antique botanical prints held in our collection.
Helianthus
Passiflora
Nyctocalos
MacBook Pro

Example Images

```
<!DOCTYPE html>
<html>
	<head>
		<title>Images</title>
	</head>
	<body>
		<div class="wrapper">
			<div class="header">
				<img src="images/title.gif" alt="Galerie Botanique" width="456"
height="122" />
				<p>Here is a selection of antique botanical prints held in our
collection.</p>
			</div>
			<div class="entry">
				<figure>
					<img src="images/print-01.jpg" alt="Helianthus" />
					<figcaption>Helianthus</figcaption>
				</figure>
			</div>
			<div class="entry">
				<figure>
					<img src="images/print-02.jpg" alt="Passiflora" />
					<figcaption>Passiflora</figcaption>
				</figure>
			</div>
			[...]
		</body>
</html>
```

```
body {
		color: #665544;
		background-color: #d4d0c6;
		background-image: url("images/backdrop.gif");
		font-family: Georgia, "Times New Roman", serif;
		text-align: center;}
	.wrapper {
		width: 720px;
		margin: 0px auto;}
	.header {
		margin: 40px 0px 20px 0px;}
	.entry {
		width: 220px;
		float: left;
		margin: 10px;
		height: 198px;
		background-image: url("images/shadow.png");
		background-repeat: no-repeat;
		background-position: bottom;}
	figure {
		display: block;
		width: 202px;
		height: 170px;
		background-color: #e7e3d8;
		padding: 9px;
		text-align: left;}
	figure img {
		width: 200px;
		height: 150px;
		border: 1px solid #d6d6d6;}
	figcaption {
		background-image: url("images/icon.png");
		padding-left: 20px;
		background-repeat: no-repeat;}
```

Esercizio: code-16/13-example.html