

Universitatea Tehnică "Gheorghe Asachi" Iași

Facultatea de Electronica, Telecomunicatii si Tehnologia Informatiei



Atelier

Creație pagini web



conf. dr. ing. Radu Damian
sl. dr. ing. Daniel Mătășaru



Introducere

“I.Like.IT@ETTI.TUIASI.RO”

www.tuiasi.ro

1813

1860

1910

1937

1993

Definitii

- **Internet**

- O **retea** globala de comunicatii intre calculatoare **si alte dispozitive**, conectate intre ele prin intermediul protocolului TCP/IP
- Nu este o retea proprietara
- Nu este dedicata exclusiv WWW

- **World Wide Web**

- Sistem de informatii grafic, interactiv, proiectat pentru a functiona pe orice platforma fizica, care functioneaza prin Internet

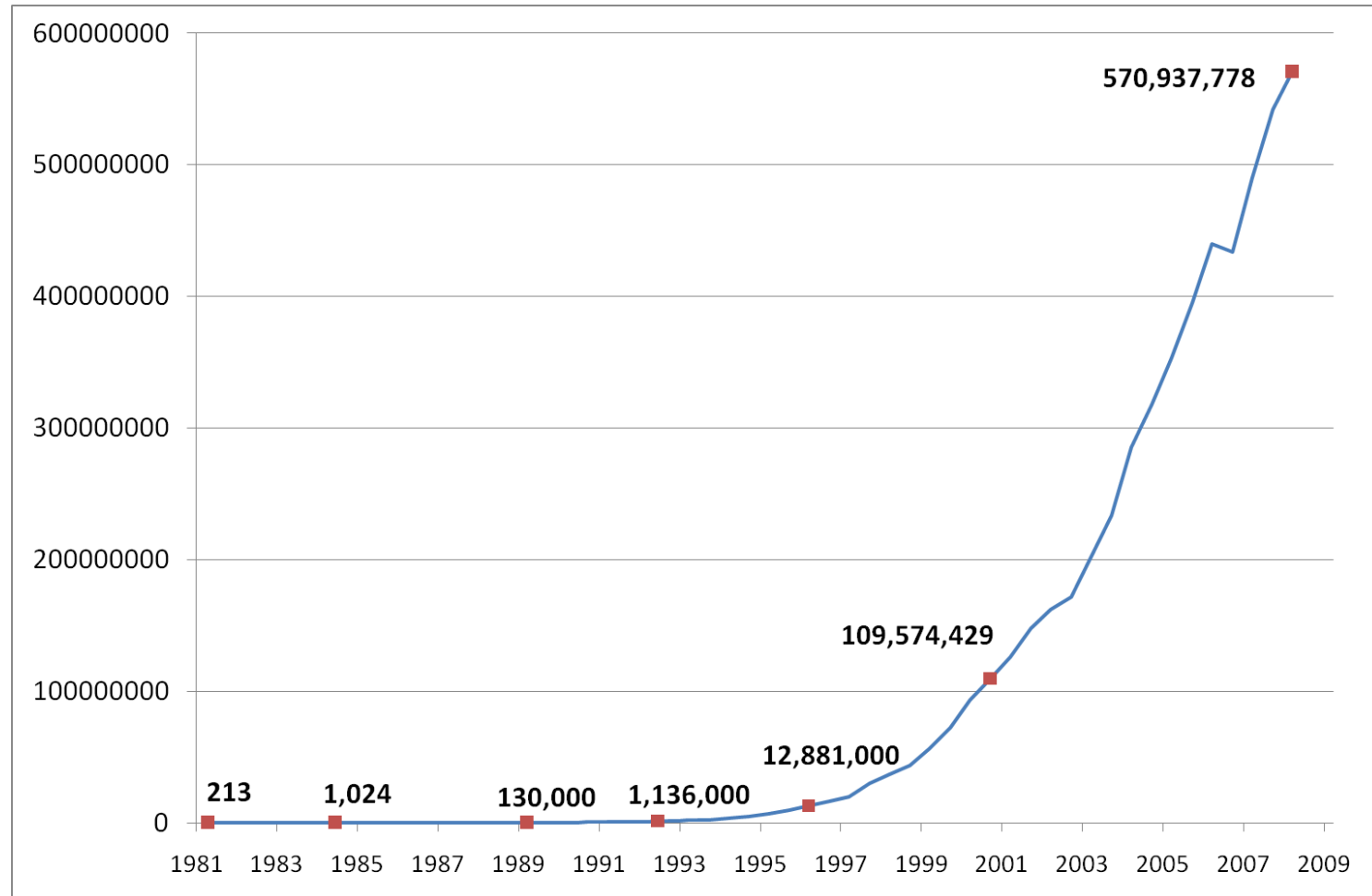
Istoric Internet

- ARPANET 1969
- Proiect experimental al US Department of Defense
- DARPA – Defense Advanced Research Projects Agency
- Conectarea cercetatorilor la resurse comune (supercalculatoare, baze de date)
- Raspandire mai intai in SUA apoi in intreaga lume (Romania 1993)
- TCP/IP – Transport Control Protocol / Internet Protocol
 - TCP/IP v4 – 1981,
 - TCP/IP v6 – 1998

Istoric WWW

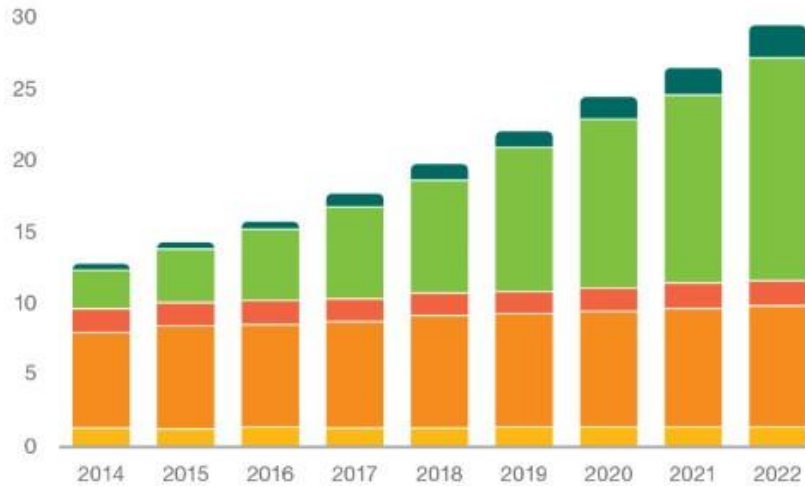
- 1980, CERN, Centre Europeen de Recherche Nucleaire,
- Tim Berners Lee
- Metoda de schimb facil de informatii intre cercetatori
- 1989 – propunere de standardizare pentru HTTP
- HTTP – Hyper Text Transfer Protocol
- 1993 – Mosaic, primul browser grafic, NCSA – National Center for Supercomputing Applications

Numar dispozitive conectate



Numar dispozitive conectate

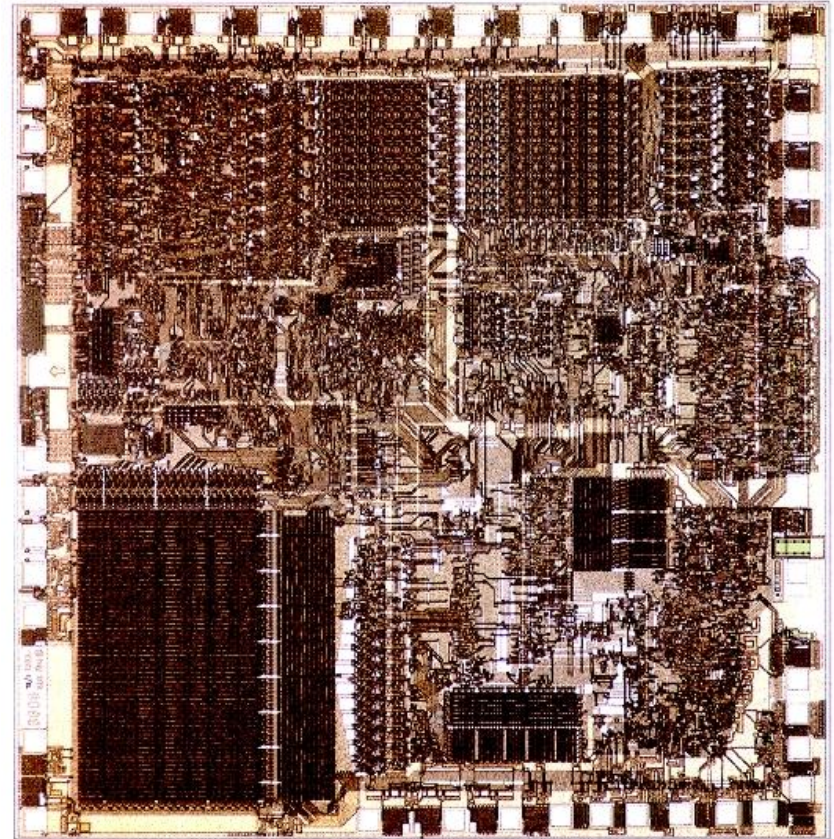
Connected devices (billions)



	2016	2022	CAGR
Wide-area IoT	0.4	2.1	30%
Short-range IoT	5.2	16	20%
PC/laptop/tablet	1.6	1.7	0%
Mobile phones	7.3	8.6	3%
Fixed phones	1.4	1.3	0%
	16 billion	29 billion	10%

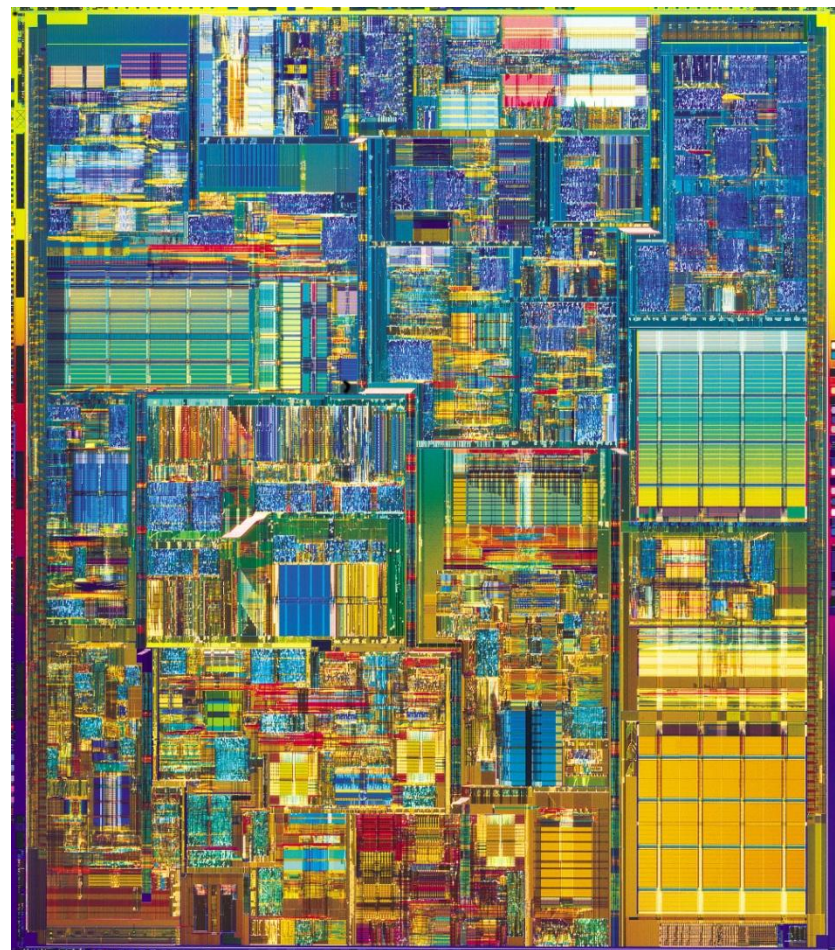
Impresionant?

- Intel® 8086
- 29.000 tranzistoare pe CPU
- 1978
- 1 MB date
- 4.7 MHz



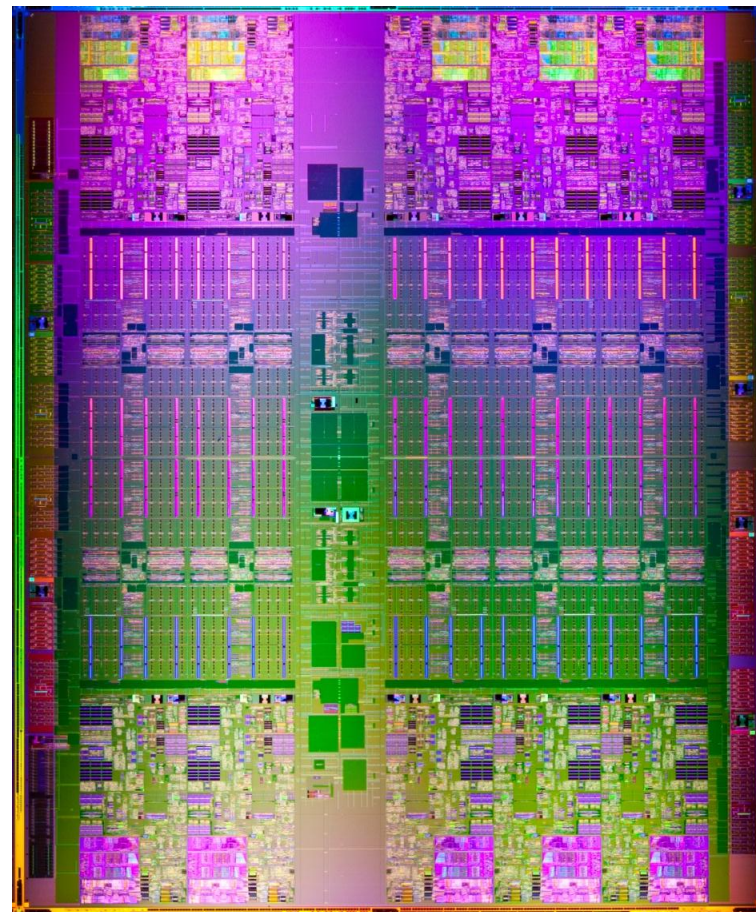
Impresionant?

- Intel® Itanium® processors (Tukwila)
- 2009
- 2 miliarde tranzistoare pe CPU
- 16 EB date (16 G GB)
- > 3 GHz



Impresionant?

- Intel® Xeon® Processor E7-8894 v4
- 2017
- 7.2 miliarde tranzistoare pe CPU
- 24 nuclee (48 fire de executie)
- Sisteme cu 8 microprocesoare (192/384)
- 2.2 GHz

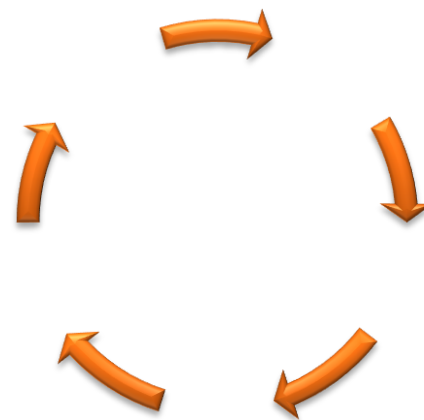


Concepte

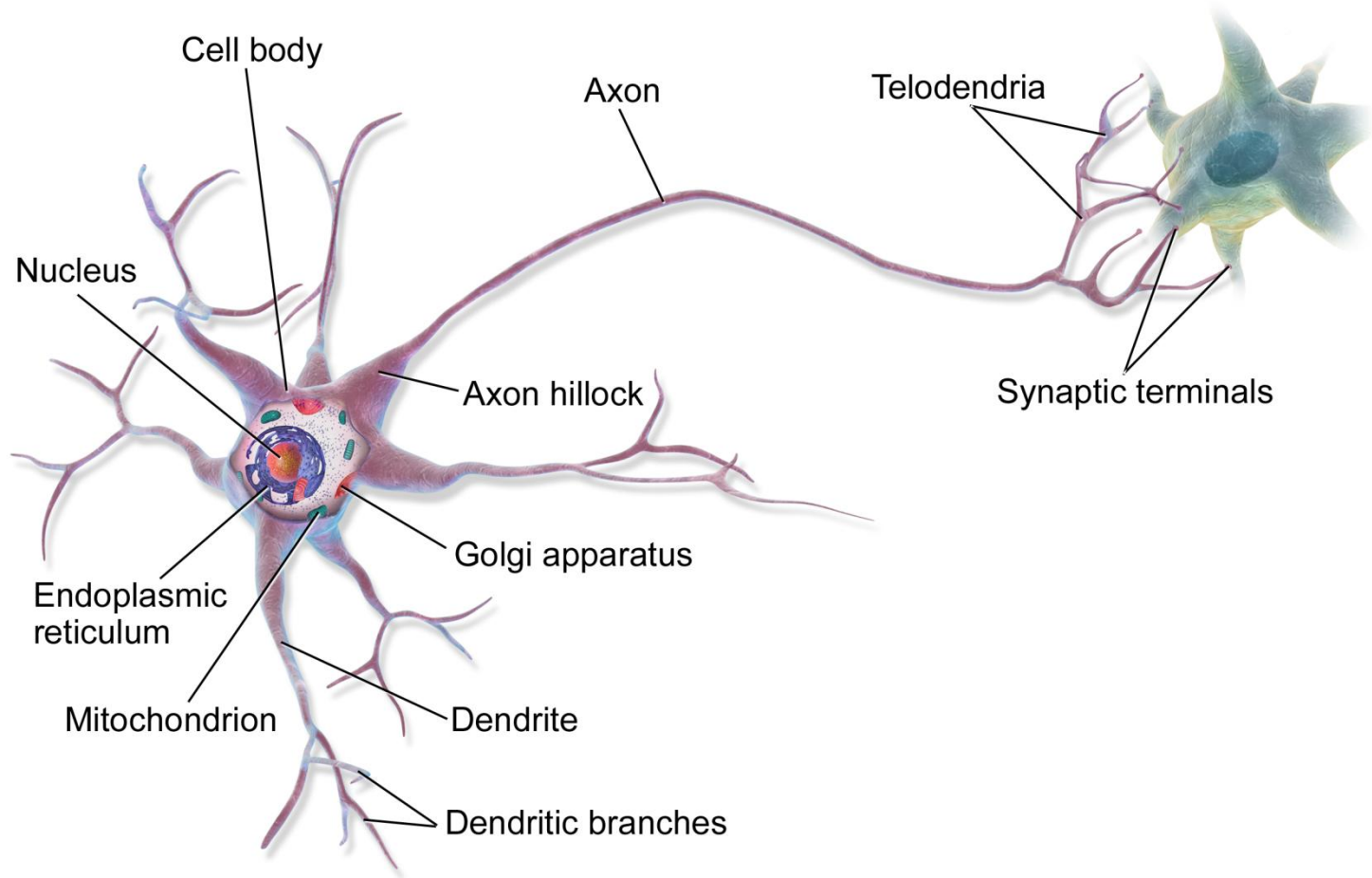
- Efectuare foarte rapida a unui numar **mic** de instructiuni, de **complexitate redusa**, repetate de un numar foarte mare de ori
- Programare: coborarea rationamentului la nivelul de **complexitate redusa**, cu obtinerea performantei prin structuri repetitive simple efectuate rapid.
- Operatii repetitive / date repetitive

DA/NU

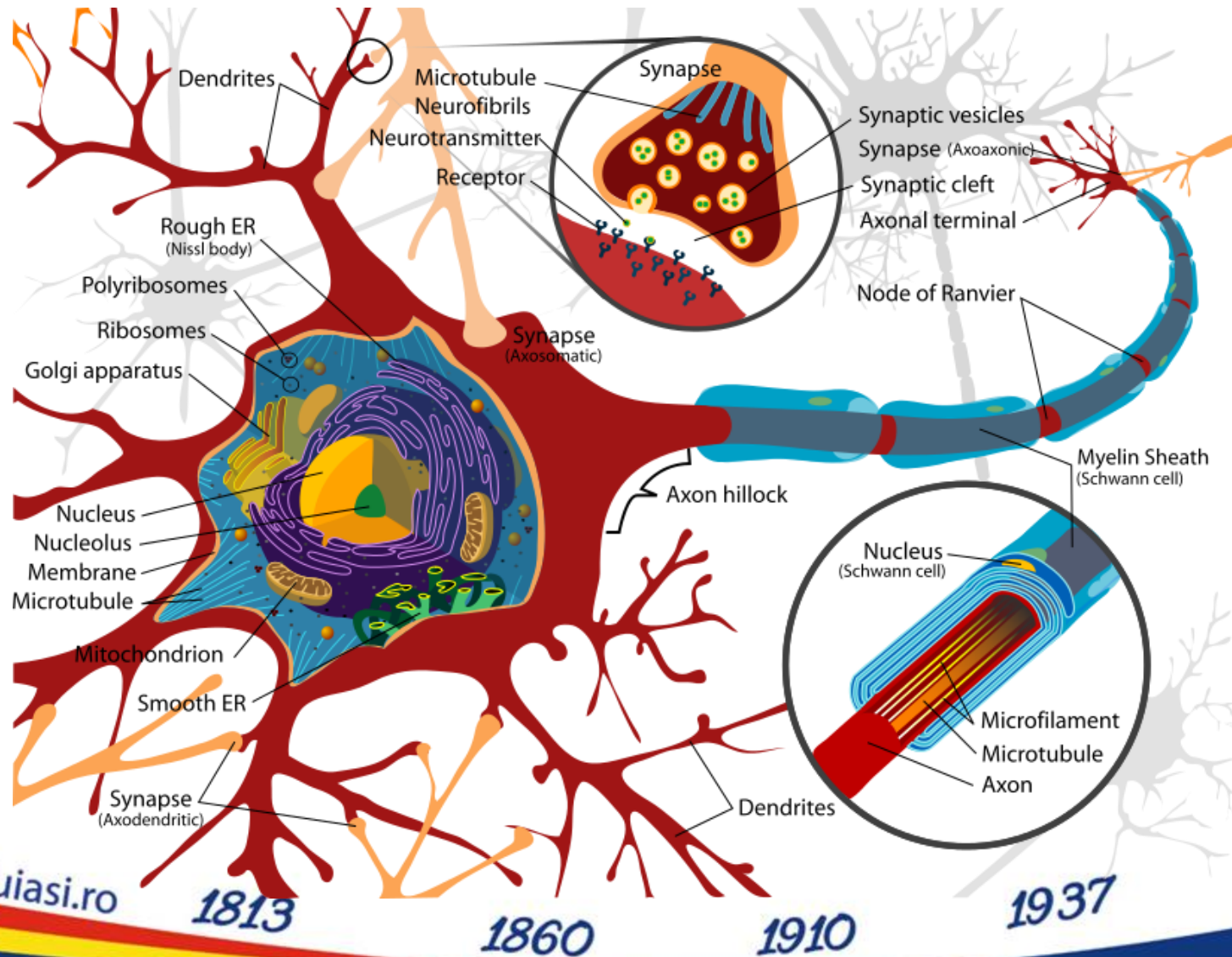
- Un programator n-a venit la servicii de **trei zile**.
- Colegii de servicii au venit la el acasă și-l găsesc pe acesta **chel**, dormind în cadă, ținând în mâini un șampon.
- Au luat șamponul și s-au apucat să citească instrucțiunile de folosire:
 - Clătiți părul cu apă.
 - Aplicați șamponul
 - Frecați
 - Așteptați două minute
 - Clătiți părul cu apă
 - **Repetați procedura.**



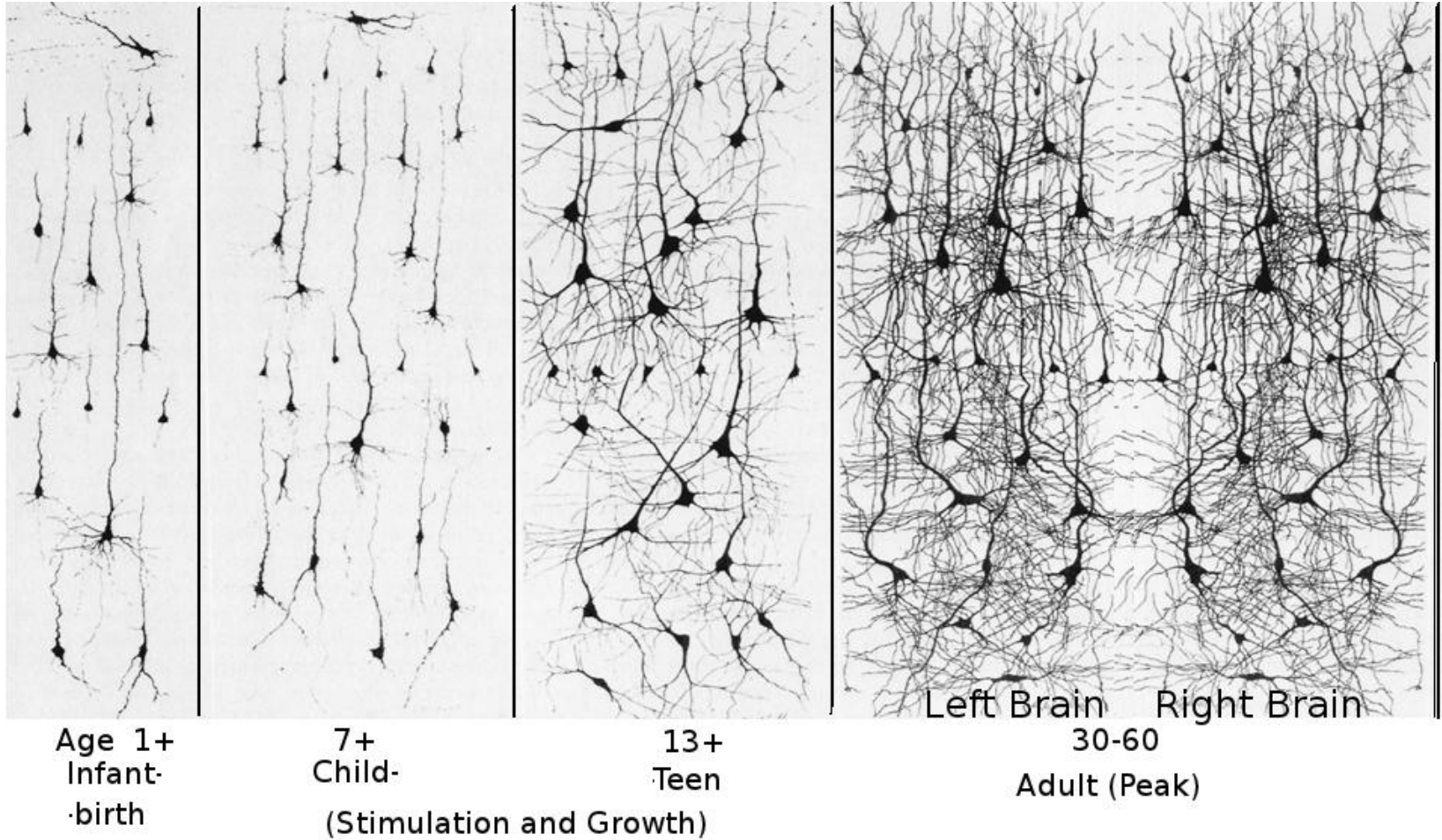
Scop curs 1



Scop curs 2

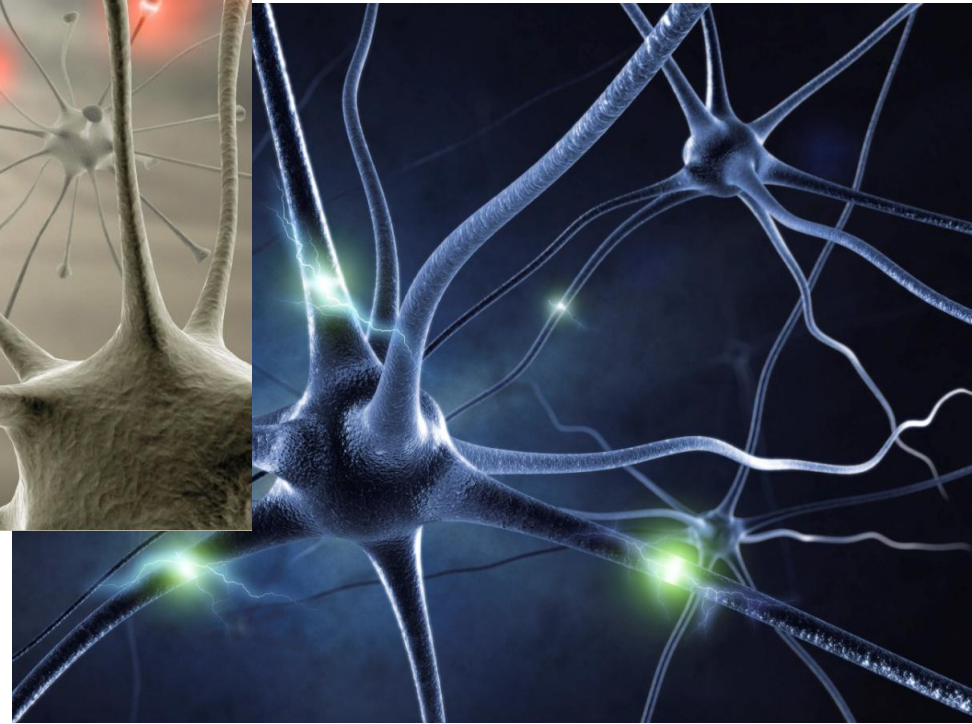


Scop curs 3

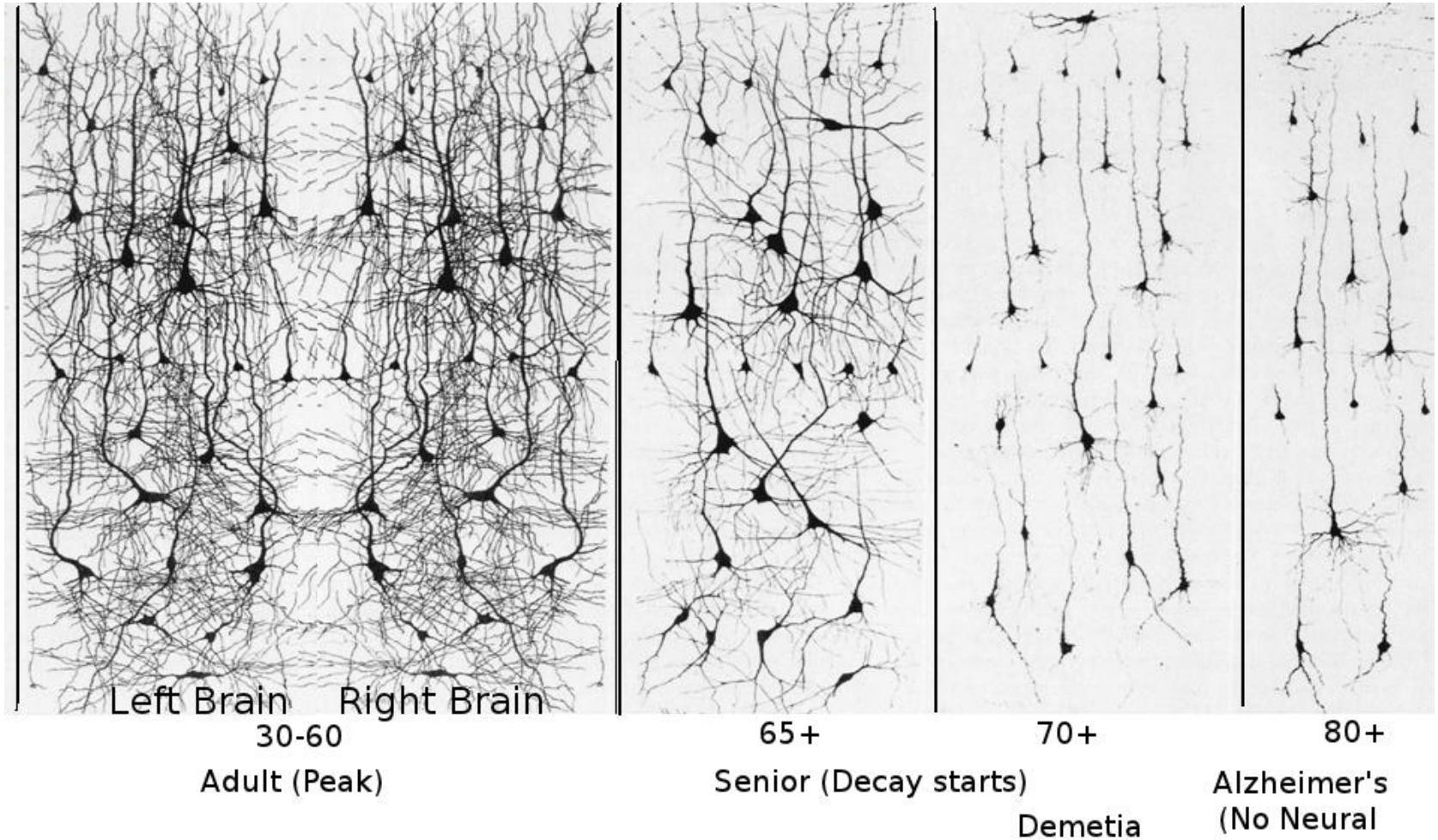


Scop curs 4

Sinapse
“inginerești”



Termen



HTML

- Hyper Text Markup Language
- bazat pe SGML - Standard Generalized Markup Language (ISO 8879:1986 SGML)
- Tim Berners Lee, 1989
- Mosaic – 1993
- HTML 2.0 – Noiembrie 1995
 - IETF – Internet Engineering Task Force -> 1996
- HTML 3.0 Draft 1995
- HTML 3.2
 - WWW Consortium <http://www.w3c.org> ->1996
- HTML 4.0 – 18.12.1997
- HTML 4.01 – 24.12.1999
- HTML 5.0 – octombrie 2014
 - HTML 5.2 – iulie 2019



HTML 5

- (**Increasing!**) Support in browsers
 - Certain future
- Features
 - **Web Workers**: background threads for processing.
 - **Video**: Video becomes as easy as embedding an image.
 - **Canvas**: allows a web developer to render graphics on the fly.
 - **Application caches**: Web pages will start storing more and more information locally on the visitor's computer.
 - **Geolocation**: Best known for use on mobile devices, geolocation is coming with HTML5.



XHTML

- bazat pe **XML** - Extensible Markup Language
- XHTML 1.0 – Ianuarie 2000 o reformulare a HTML 4.01 cu mici corectii pentru concordanta cu regulile XML
- XHTML 1.1 – Mai 2001
- XHTML 2.0 Draft
 - 2008 – versiunea 9
 - lipsit de suport din partea browser-elor
 - nu mentine compatibilitatea in urma cu HTML
 - “expirat” (abandonat)
- XHTML 5.1 Draft
 - in paralel cu HTML 5.0

XML

```
<?xml version="1.0" encoding="UTF-8"?>
- <DataSet xsi:schemaLocation="http://www.bnr.ro/xsd nbrfxrates.xsd"
  - <Header>
    <Publisher>National Bank of Romania</Publisher>
    <PublishingDate>2017-03-17</PublishingDate>
    <MessageType>DR</MessageType>
  </Header>
  - <Body>
    <Subject>Reference rates</Subject>
    <OrigCurrency>RON</OrigCurrency>
    - <Cube date="2017-03-17">
      <Rate currency="AED">1.1542</Rate>
      <Rate currency="AUD">3.2609</Rate>
      <Rate currency="BGN">2.3342</Rate>
      <Rate currency="BRL">1.3600</Rate>
      <Rate currency="CAD">3.1807</Rate>
      <Rate currency="CHF">4.2598</Rate>
      <Rate currency="CNY">0.6140</Rate>
      <Rate currency="CZK">0.1690</Rate>
      <Rate currency="DKK">0.6141</Rate>
      <Rate currency="EGP">0.2335</Rate>
      <Rate currency="EUR">4.5654</Rate>
      <Rate currency="GBP">5.2515</Rate>
      <Rate currency="HKD">5.8158</Rate>
      <Rate currency="HUF" multiplier="100">1.4756</Rate>
      <Rate currency="INR">0.0648</Rate>
      <Rate currency="JPY" multiplier="100">3.7435</Rate>
      <Rate currency="KRW" multiplier="100">0.3752</Rate>
      <Rate currency="MDL">0.2152</Rate>
      <Rate currency="MXN">0.2207</Rate>
      <Rate currency="NOK">0.5016</Rate>
      <Rate currency="NZD">2.9760</Rate>
      <Rate currency="PLN">1.0622</Rate>
      <Rate currency="RSD">0.0368</Rate>
      <Rate currency="RUB">0.0733</Rate>
      <Rate currency="SEK">0.4820</Rate>
      <Rate currency="TRY">1.1718</Rate>
      <Rate currency="UAH">0.1576</Rate>
      <Rate currency="USD">4.2396</Rate>
      <Rate currency="VND">167.40</Rate>
```

HTML/XHTML vs XML

- XML
 - proiectat pentru a **descrie** datele
 - orientat spre **conținutul** datelor respective
 - o metoda de a transmite informațiile **independent** de platforma și hardware
- HTML/XHTML
 - proiectat pentru a **afisa** datele
 - orientat spre **forma** pe un ecran a datelor respective
 - o metoda de a **afisa uniform** datele indiferent de platforma și hardware
 - modern: HTML: structura logica a documentului, CSS: forma efectiva

HTML vs. CSS

- HTML
 - **structura** logica a documentului,
- CSS
 - **forma** efectiva
- HTML 5
 - Etichete HTML privitoare la **formă** (, color=“red”) au fost introduse in HTML 3.2 si declarate **depreciate** in HTML 4.01
 - dispar in HTML 5
 - Intercalarea intre elementele de structura a celor privitoare la formă in HTML duce la cresterea complexitatii documentului si creste inutil dimensiunea acestuia

~1930



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~1930

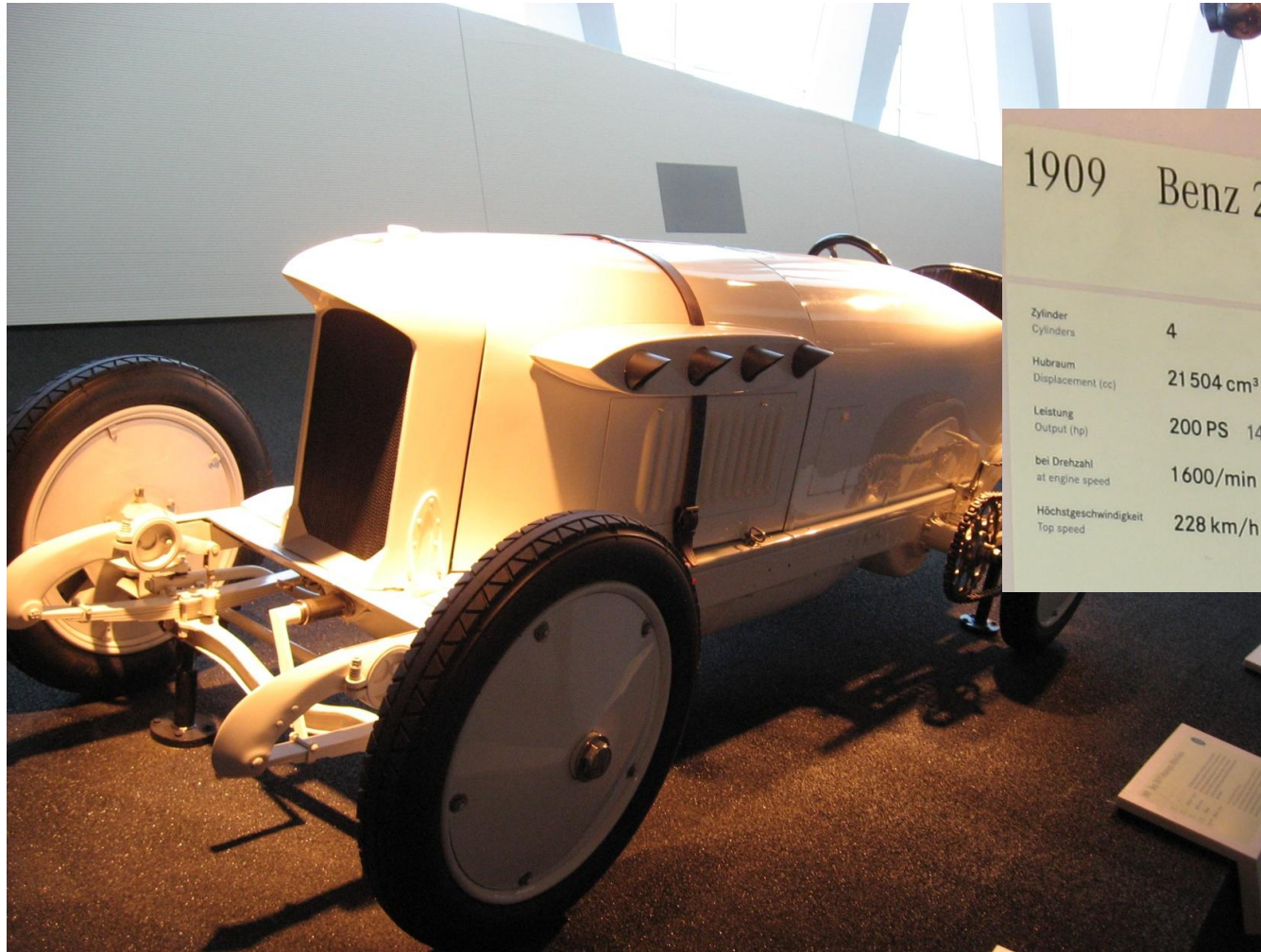


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1993

7

1909



1909 Benz 200 PS Rennwagen »Blitzen-Benz«	
Zylinder Cylinders	4
Hubraum Displacement (cc)	21 504 cm ³ 1 312 cu in
Leistung Output (hp)	200 PS 147 kW
bei Drehzahl at engine speed	1 600/min
Höchstgeschwindigkeit Top speed	228 km/h 142 mph

Der »Blitzen-Benz« ist 1909 der erste 200 km/h fährt. Seine größten Erfolge erzielt er mit dem 2000 cm³ Zylindermotor ausgestatteten Rekordwagen mit 228 km/h über die Sahara. Er ist damit das schnellste Fahrzeug der Welt.

Benz »Lightning Benz« 200 hp racing car
In 1909 the Lightning Benz was the fastest car in the world.

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1813

1860

1910

1937

1993

1930-1950



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1813

1860

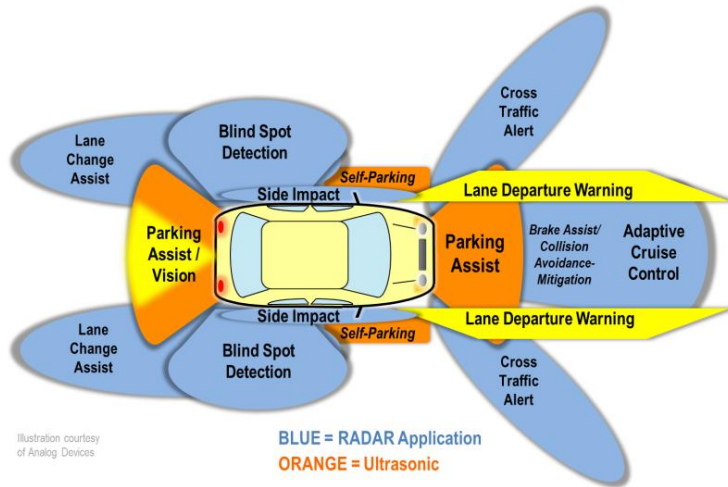
1910

1937

1993

Tehnologie

> 2010



< 1950



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1937

1993

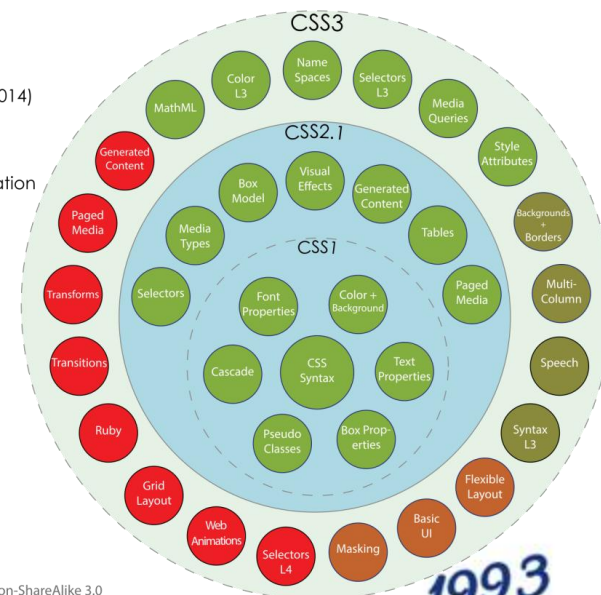
HTML/XHTML

- HTML 4.01 – 24.12.1999
- XHTML 1.1 – Mai 2001
- CSS 2.1 – 2004-2007

CSS3

Taxonomy & Status (October 2014)

- W3C Recommendation
- Candidate Recommendation
- Last Call
- Working Draft
- Obsolete or inactive



By Sergey Mavrody 2011-14 | CC Attribution-ShareAlike 3.0



<html>

Concepte HTML

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Principii HTML 1

- Un document HTML e un document **ASCII** (Notepad) care contine **etichete**, interpretat si afisat de browser (View Source)
- **Tags**: etichete, marcaje, **< >**
 - individuale: **<X/>**
 - ex: **
** (**
** - HTML)
 - pereche (container): **<X> Continut_oarecare</X>**
 - ex: **<p>Un paragraf</p>**
 - Eticheta **X** afecteaza cu sensul ei modul in care apare pe ecran **Continut_oarecare**
 - majoritatea etichetelor sunt pereche

Principii HTML 2

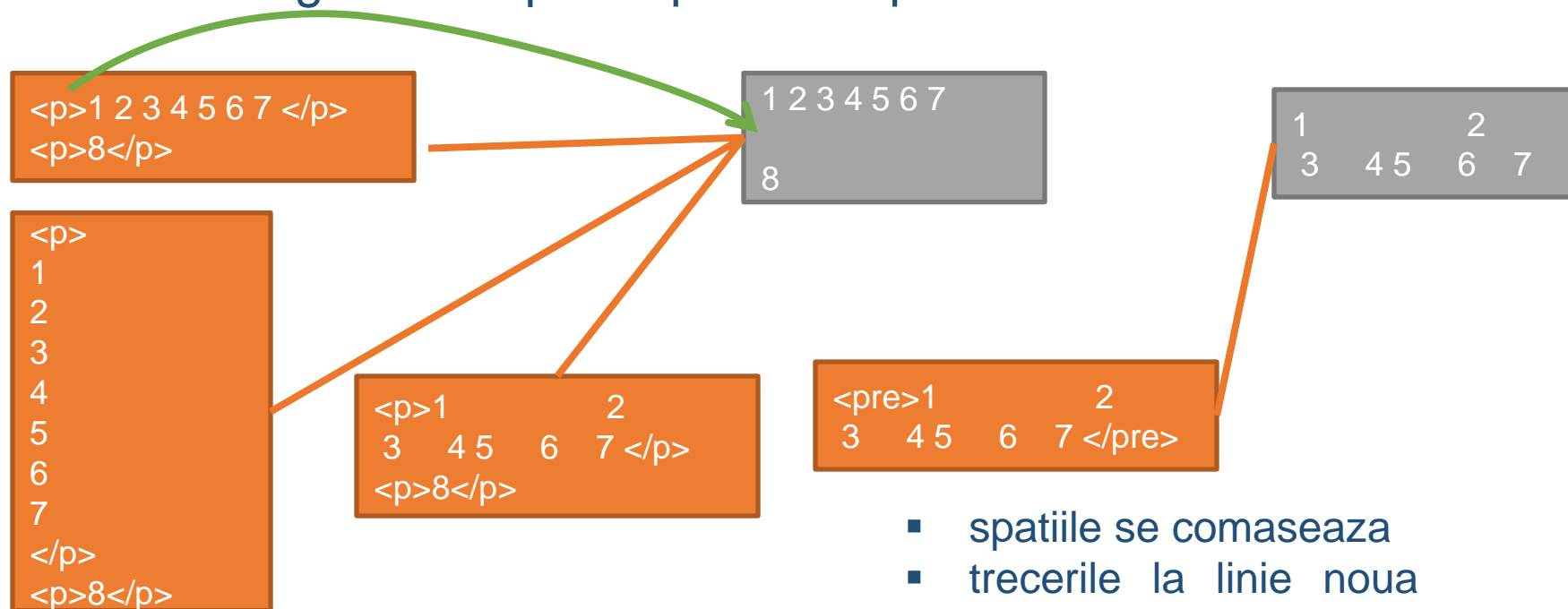
- Litere mari/mici (Case sensitivity):
 - HTML: indiferent - `<html>` = `<HTML>` = `<HtMl>`
 - XHTML: obligatoriu cu litere mici `<html>`
- Comentarii:
 - `<!-- -->`
 - fara “--” sau “>”

Attribute

- Optiuni ale etichetelor utilizate pentru detalierea efectului etichetei
- Apar in eticheta de inceput in cazul perechilor
 - `<p id="un_id" align="left">ceva </p>`
- Ca si etichetele sunt cuvinte cheie care trebuie respectate (XML permite definirea atributelor dar HTML si XHTML nu)

Principii HTML 3

- **Nu** recunoaste aranjarea documentului ASCII sursa
 - singura exceptie: `<pre>....</pre>`



- spatiile se comaseaza
- trecerile la linie noua (ENTER) devin spatii

Principii HTML 4

X
{
<x> Continut afectat de x</x>

Legal in
XHTML/HTML

x si atrib si val
{
<x atrib="val"> Continut afectat de x si atrib si val </x>

Legal in
XHTML/HTML

X
{
<x> Continut <y> Continut afectat de x si y</y> afectat de x</x>

Legal in
XHTML/HTML

X
{
<x> C. afectat de x <y> C. afectat de x si y </x> C. afectat de y</y>

Legal **numai** in
HTML
nerecomandat

Diferente majore HTML/XHTML

- Incluziunea etichetelor e obligatorie
 - `<X>....<Y>....</Y>.....</X>` 👍
 - `<X>....<Y>....</X>.....</Y>` 👎
- Etichetele trebuie inchise intotdeauna
 - `<p>....</p><p>.... </p>,
, <meta />` 👍
 - `<p>....<p>.... ,
, <meta >` 👎
- Etichetele trebuie scrise cu litere mici
 - `<p>,
, <frameset>` 👍
 - `<P>,
, <FrAmesET>` 👎
- Atributele trebuie scrise cu minuscule si valorile lor intre ghilimele
 - `<p align="left">, <table width="100">, ` 👍
 - `<p Align="left">, <table width=100>, ` 👎
- Toate informatiile trebuie sa apara in interiorul etichetei
`<html>... </html>`



Etichete HTML

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Structura unui document HTML

- 1 linie cu informatii despre document
- Documentul: inserat intre **<html>** si **</html>**
 - Antet
 - sectiune declarativa, in general fara efect vizual
 - **<head>** **</head>**
 - Cuprins
 - datele ce se afiseaza pe ecran
 - **<body>** **</body>**
 - **<frameset>** **</frameset>** (**inexistent** in HTML 5)

Prima linie in orice document HTML

- HTML 5
 - **<!DOCTYPE html>**
- HTML 4: Document Type Definition
 - HTML 4.0 Strict DTD
 - HTML 4.0 Transitional DTD
 - HTML 4.0 Frameset DTD
 - Elemente depreciate – elemente existente in standard dar “pe cale de disparitie” (nu este recomandata utilizarea lor)
 - Exemplu: `<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd"`

Document HTML minimal

```
<!DOCTYPE .....
```

```
<html>
```

```
<head>
```

```
....
```

```
</head>
```

```
<body>
```

```
....
```

```
</body>
```

```
</html>
```

<frameset> **inexistent**
in HTML 5

```
<!DOCTYPE .....
```

```
<html>
```

```
<head>
```

```
....
```

```
</head>
```

```
<frameset>
```

```
....
```

```
</frameset>
```

```
</html>
```

Sectiunea Antet

- **<head>...</head>**
- Atribute:
 - lang: limba documentului `<head lang="ro"> ...`
 - dir: directia de afisare a textului
 - RTL `<head dir="RTL">`
 - LTR: implicit
- Contine
 - Obligatoriu
 - TITLE: `<title>...</title>`
 - META: `<meta ... />`
 - Uzual
 - LINK: `<link ... />`
 - SCRIPT: `<script>...</script>`

Sectiunea Antet

- TITLE
 - **<title>...</title>**
 - in mod normal **NU** apare pe pagina
 - browser-ele afiseaza tipic titlul respectiv
 - Extrem de important pentru motoarele de cautare
 - Untitled document = ☹
- LINK
 - **<link ... />**
 - defineste fisierele suport ale documentului necesare pentru afisare corecta: css (stiluri), js (JavaScript)
 - `<link rel="stylesheet" type="text/css" href="ea.css" />`
 - `<link rel="icon" href="favicon.ico" type="image/x-icon" />`
- SCRIPT
 - **<script>...</script>**
 - introducerea “on-line” a script-urilor
 - ```
<script language="JavaScript1.2" type="text/javascript">
<!--
function MM_swapImgRestore() { //v3.0
 var i,x,a=document.MM_sr; for(i=0;a&i<a.length&&(x=a[i])&&x.oSrc;i++) x.src=x.oSrc;
}
//-->
</script>
```

## Sectiunea Antet

- **<meta ... />**
- Specificarea a diverse informatii despre document
- Attribute
  - name
    - defineste tipul informatiei
    - standard / nestandard
  - http-equiv
    - controlul protocolului HTTP
  - scheme
    - scheme standard
  - content
    - defineste continutul informatiei denumite anterior prin unul din cele trei attribute anterioare



## Sectiunea Antet - META

- `<meta name="Author" content="Radu Damian" />`
- `< meta http-equiv="Expires" content="Tue, 15 Oct 2019 14:25:27 GMT" />`
- `<meta scheme="ISBN" name="identifier" content="0-8230-2355-9" />`
- `<meta name="keywords" content="ceva1, ceva2, ceva3, Romania">`
- `<meta name="description" content="Pagina cu ceva-uri">`
- `<meta name="robots" content="index,follow" />`
- `<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />`
- `<meta http-equiv="Content-Type" content="text/html; charset=ISO-8859-5" />`
- `<meta http-equiv="Content-Type" content="image/jpeg" />`
- `<meta http-equiv="Content-Type" content="text/plain" />`

## Sectiunea Cuprins

- **<body>...</body>**
- Atribute specifice:
  - background: imagine fundal
    - <body background = “/images/ceva.jpg”>...
  - bgcolor: culoare uniforma de fundal
    - <body bgcolor=“white” > ...
  - text: culoarea textului
    - <body text= “red”>...
  - link, vlink, alink: culoare legaturi (general, vizitata, activa)
    - < body link=“red” alink=“fuchsia” vlink=“maroon”> ...

## Sectiunea Cuprins

- Atribute generale:
  - lang
  - dir
  - id: nume individual al elementului
    - utilizat cu script-uri in general, modelul DOM
    - `<p id="un nume dupa care sa il gasesc la nevoie">...`
  - title: informatii despre element
    - tooltip in browser-e
    - `<p title = "ceva despre element">...`
  - class: apartenenta la o clasa cu caracteristici comune
    - utilizat in combinatie cu stiluri: CSS
    - `<p class="numele clasei ale carei caracteristici vizuale le folosesc">...`
  - Evenimente
    - specifice: onload, onunload
    - generale: onclick, ondblclick, onmousedown, onmouseup, onmouseover, onmousemove, onmouseout, onkeypress, onkeydown, onkeyup
    - `<body onload="preloadImages('images/about_f2.gif')">`



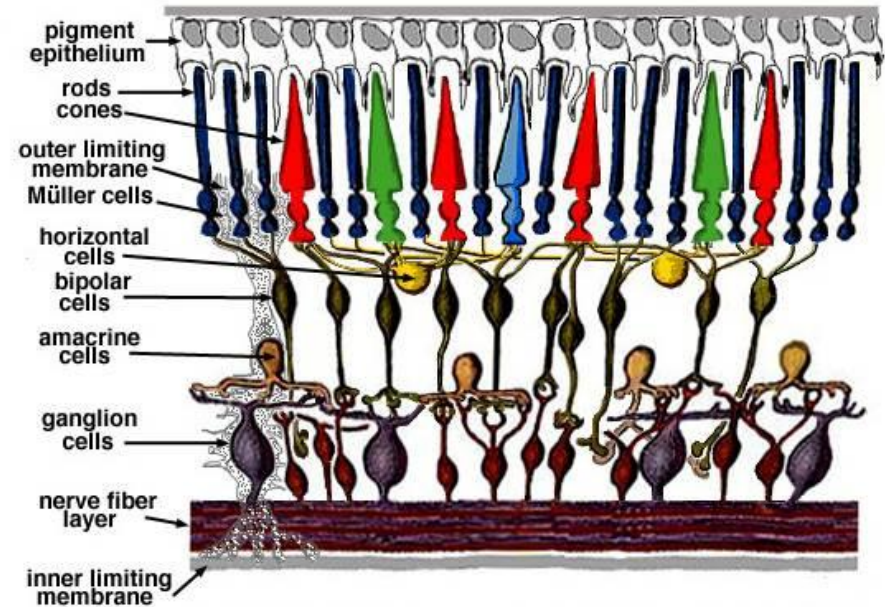
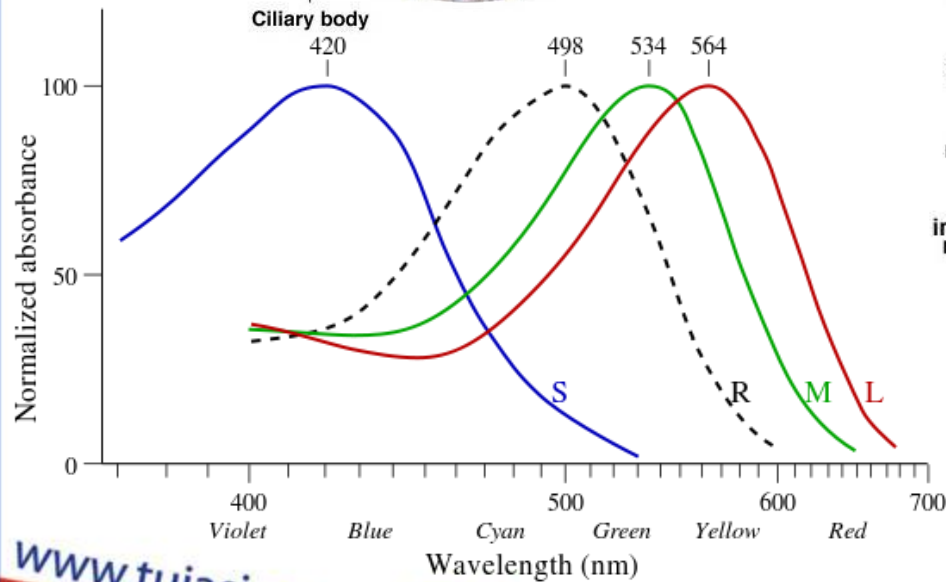
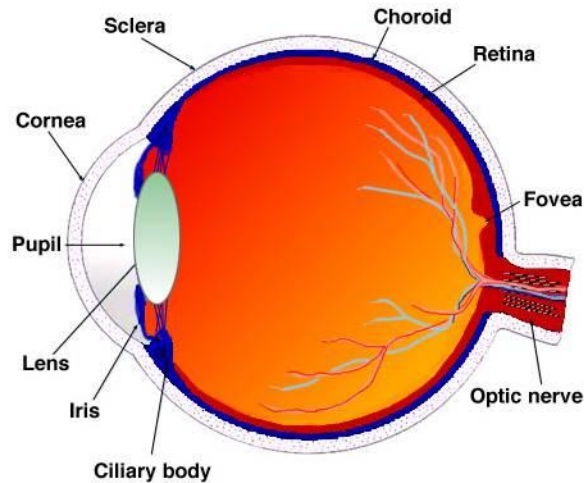
## Culori

- Specificarea culorii:
  - nume:
    - `<font color = “black”>...`
  - cod numeric - # Rosu (0-256=00-FF), Verde, Albastru
    - `<font color = “#FF0000”>...`

|                                                                                     |                     |
|-------------------------------------------------------------------------------------|---------------------|
|    | Black = "#000000"   |
|    | Silver = "#C0C0C0"  |
|    | Gray = "#808080"    |
|    | White = "#FFFFFF"   |
|   | Maroon = "#800000"  |
|  | Red = "#FF0000"     |
|  | Purple = "#800080"  |
|  | Fuchsia = "#FF00FF" |

|                                                                                       |                    |
|---------------------------------------------------------------------------------------|--------------------|
|    | Green = "#008000"  |
|    | Lime = "#00FF00"   |
|    | Olive = "#808000"  |
|    | Yellow = "#FFFF00" |
|   | Navy = "#000080"   |
|  | Blue = "#0000FF"   |
|  | Teal = "#008080"   |
|  | Aqua = "#00FFFF"   |

# Ochiul uman





# Exercitiu

**“I.Like.IT@ETTI.TUIASI.RO”**

[www.tuiasi.ro](http://www.tuiasi.ro)

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## Exercitiu 1

- Utilizati **Notepad ++** pentru a crea un document HTML minimal
  - `<!DOCTYPE html>`
  - `<html>`
  - `<head>`
  - `<body>`
- Introduceti in sectiunea antet etichete specifice
  - `<title>`
  - `<meta>`
- Vizualizati pagina creata in browser (Edge/Internet Explorer/ Chrome)



# Etichete HTML

`"I.Like.IT@ETTI.TUIASI.RO"`

[www.tuiasi.ro](http://www.tuiasi.ro)

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## Titluri in text (HEADINGS)

- foarte importante pentru motoarele de cautare
- 6 nivele (h1 ÷ h6)
- Atribute:
  - align: alinierea textului = left, center, right, justify
    - <h1 align = “center”>...

```
<h1>Titlu H1</h1>
<p>paragraf text normal</p>
<h2>Titlu H2</h2>
<p>paragraf text normal</p>
<h3>Titlu H3</h3>
<p>paragraf text normal</p>
<h4>Titlu H4</h4>
<p>paragraf text normal</p>
<h5>Titlu H5</h5>
<p>paragraf text normal</p>
<h6>Titlu H6</h6>
<p>paragraf text normal</p>
```

### Titlu H1

paragraf text normal

### Titlu H2

paragraf text normal

### Titlu H3

paragraf text normal

### Titlu H4

paragraf text normal

### Titlu H5

paragraf text normal

### Titlu H6

paragraf text normal

## Elemente de grupare

- utilizate pentru gruparea unor elemente in scopul aplicarii unei actiuni comune
- `<span>...</span>`
  - actiune “in-line” : grupul e tratat similar cu un caracter
- `<div>...</div>`
  - actiune “block-level” : grupul e tratat similar cu un paragraf
- nu ofera formatare proprie si nici attribute specifice
- **Esentiale** in cooperarea cu **CSS**
- Attribute:
  - id, class
  - align



## Elementul ADDRESS

- `<address>...</address>`
- specificarea posibilitatilor de contact ale autorilor
- de obicei reprezentat italic (inclinat)

```
< address >
Dave Raggett,
Arnaud Le Hors,
contact persons for the W3C HTML
Activity

$Date: 1999/12/24 23:37:50 $
</ address >
```

## Text structurat

- `<em>...</em>`: evidentiere
  - de obicei italic
- `<strong>...</strong>`: evidentiere suplimentara
  - de obicei bold (ingrosat)
- `<cite>...</cite>`: citat
- `<dfn>...</dfn>` : definitii
- `<code>...</code>` : programe
- `<samp>...</samp>` : rezultat al programelor
- `<kbd>...</kbd>` : introducere de la tastatura
- `<var>...</var>` : variabile
- `<abbr>...</abbr>` : abrevieri
- `<acronym>...</acronym>` : acronime
- `<b>...</b>`, `<i>...</i>` : depreciate in HTML 4, valide in HTML 5 dar de importanta redusa

*EM* `<em>`

**STRONG** `<strong>`

*CITE* `<cite>`

*DFN* `<dfn>`

CODE `<code>`

SAMP `<samp>`

KBD `<kbd>`

*VAR* `<var>`

ABBR `<abbr>`

ACRONYM `<acronym>`

## Text structurat

- Citate

- `<blockquote>...</blockquote>` : citat la nivel de bloc
  - de obicei reprezentat cu margine (indent)
- `<q>...</q>` : citat in-line
  - de obicei incadrat in ghilimele sau apostroafe
- Atribut: cite = “adresa la care se gaseste documentul citat”

- Indici/puteri

- `<sub>...</sub>` : indici
- `<sup>...</sup>` : puteri

### Paragraf Normal

They went in single file, running like hounds on a strong scent, and an eager light was in their eyes. Nearly due west the broad swath of the marching Orcs tramped its ugly slot; the sweet grass of Rohan had been bruised and blackened as they passed.

John said, “I saw Lucy at lunch, she told me ‘Mary wants you to get some ice cream on your way home.’ I think I will get some at Ben and Jerry’s, on Gloucester Road.”

H<sub>2</sub>O

10<sup>3</sup>

`<p>Paragraf Normal</p>`

`<blockquote cite="http://www.mycom.com/tolkien/twotowers.html">`

`<p>They went in single file, running like hounds on a strong scent, and an eager light was in their eyes. Nearly due west the broad swath of the marching Orcs tramped its ugly slot; the sweet grass of Rohan had been bruised and blackened as they passed.</p>`

`</blockquote>`

`<p>John said, <q lang="en-us">I saw Lucy at lunch, she told me <q lang="en-us">Mary wants you to get some ice cream on your way home.</q> I think I will get some at Ben and Jerry's, on Gloucester Road.</q></p>`

`<p>H<sub>2</sub>O</p>`

`<p>10<sup>3</sup></p>`

## Linii si paragrafe

- paragraf : **<p>...</p>**
  - attribute:
    - align = “left, center, right, justify”
- linie noua : **<br />**
  - attribute:
    - clear = “none, left, right, all”
  - evitarea aparitiei unei linii noi:
    - nonbreaking space: &nbsp; , &#160; , &#xA0;
- despartire in silabe:
  - Hard: &#45; , &#x2D
  - Soft: &shy; , &#173; , &#xAD;
- respectarea organizarii sursei: **<pre>...</pre>**

```
***** -----
| | -----
| image | --

| | -----
***** -----

```

```
***** -----
| | -----
| image | --

| | -----
***** -----

```



## Marcarea modificarilor

- inserare : `<ins>...</ins>`
  - uzual reprezentat subliniat
  - attribute (nonvizuale):
    - cite = “adresa eventualului document care explica corectia”
    - datetime = “data/timpul” la care a aparut modificarea
- eliminare : `<del>...</del>`
  - uzual reprezentat taiat
  - aceleasi attribute

`<p>O grupa poate avea <del>25</del> <ins>45</ins> studenti.</p>`

O grupa poate avea 25 45 studenti.

## Coduri 1

ASCII			HTML		
Dec	Hex	Symbol	Number	Name	Description
160	A0		&#160;	&nbsp;	non-breaking space
161	A1	¡	&#161;	&iexcl;	inverted exclamation mark
162	A2	¢	&#162;	&cent;	cent sign
163	A3	£	&#163;	&pound;	pound sign
164	A4	¤	&#164;	&curren;	currency sign
165	A5	¥	&#165;	&yen;	yen sign
166	A6		&#166;	&brvbar;	broken vertical bar
167	A7	§	&#167;	&sect;	section sign
168	A8	¨	&#168;	&uml;	spacing diaeresis - umlaut
169	A9	©	&#169;	&copy;	copyright sign
170	AA	ª	&#170;	&ordf;	feminine ordinal indicator
171	AB	«	&#171;	&laquo;	left double angle quotes
172	AC	¬	&#172;	&not;	not sign
173	AD	-	&#173;	&shy;	soft hyphen

## Coduri 2

ASCII			HTML		HTML
Dec	Hex	Symbol	Number	Name	Description
174	AE	®	&#174;	&reg;	registered trade mark sign
175	AF	–	&#175;	&macr;	spacing macron - overline
176	B0	°	&#176;	&deg;	degree sign
177	B1	±	&#177;	&plusmn;	plus-or-minus sign
178	B2	²	&#178;	&sup2;	superscript two - squared
179	B3	³	&#179;	&sup3;	superscript three - cubed
180	B4	´	&#180;	&acute;	acute accent - spacing acute
181	B5	μ	&#181;	&micro;	micro sign
182	B6	¶	&#182;	&para;	pilcrow sign - paragraph sign
183	B7	·	&#183;	&middot;	middle dot - Georgian comma
184	B8	¸	&#184;	&cedil;	spacing cedilla
185	B9	¹	&#185;	&sup1;	superscript one
186	BA	º	&#186;	&ordm;	masculine ordinal indicator
187	BB	»	&#187;	&raquo;	right double angle quotes

## Coduri 3

ASCII			HTML		HTML
Dec	Hex	Symbol	Number	Name	Description
188	BC	¼	&#188;	&frac14;	fraction one quarter
189	BD	½	&#189;	&frac12;	fraction one half
190	BE	¾	&#190;	&frac34;	fraction three quarters
191	BF	¿	&#191;	&iquest;	inverted question mark
34	22	“	&#34;	&quot;	double quotes
38	26	&	&#38;	&amp;	ampersand
60	3C	<	&#60;	&lt;	less than sign
63	3E	>	&#62;	&gt;	greater than sign





# Exercitiu

**“I.Like.IT@ETTI.TUIASI.RO”**

[www.tuiasi.ro](http://www.tuiasi.ro)

1813

1860

1910

1937

1993

## Exercitiu 2

- Utilizati **Notepad ++** pentru a continua documentul HTML creat la exercitiul 1
- Introduceți cel puțin 2 niveluri de titluri (de exemplu h1 și h2)
  - **<h1>**, **<h2>**
- Introduceți cel puțin 3 paragrafe
  - **<p>...</p>**
- Introduceți cel puțin trei elemente de structurare a textului
  - de exemplu: **<strong>**, **<em>**, **<code>**
- Introduceți cel puțin un caracter special (prin cod)
  - de exemplu ®
- Vizualizați pagina creată în browser (Edge/Internet Explorer/ Chrome)



# Etichete HTML

`"I.Like.IT@ETTI.TUIASI.RO"`

[www.tuiasi.ro](http://www.tuiasi.ro)

1813

1860

1910

1937

1993

## Liste neordonate/ordonate, elemente

- Liste neordonate <ul>...</ul>
- Liste ordonate <ol>...</ol>
- Element in lista <li>...</li>
- Attribute:
  - type = “tip lista”
    - UL tip lista : “disc, circle, square”
    - OL tip lista : “1, a, A, i, I”
  - start = “numarul de la care porneste lista” (OL)
  - value = “fortarea numarului curent” (LI)



## Liste neordonate

```

Primul element
Al doilea element
Al treilea element
Al patrulea element

```

- Primul element
- Al doilea element
- Al treilea element
- Al patrulea element

```
<ul type="circle">
Primul element
Al doilea element
Al treilea element
Al patrulea element

```

- Primul element
- Al doilea element
- Al treilea element
- Al patrulea element

## Liste ordonate

```

```

```
Primul element
```

```
Al doilea element
```

```
Al treilea element
```

```
Al patrulea element
```

```

```

1. Primul element
2. Al doilea element
3. Al treilea element
4. Al patrulea element

```
<ol type="i">
```

```
Primul element
```

```
Al doilea element
```

```
Al treilea element
```

```
Al patrulea element
```

```

```

- i. Primul element
- ii. Al doilea element
- iii. Al treilea element
- iv. Al patrulea element

## Liste ordonate

```
<ol type="A" start="5">
Primul element
Al doilea element
Al treilea element
Al patrulea element

```

- E. Primul element
- F. Al doilea element
- G. Al treilea element
- H. Al patrulea element

```
<ol type="I" start="5">
Primul element
Al doilea element
<li value="15">Al treilea element
Al patrulea element

```

- V. Primul element
- VI. Al doilea element
- XV. Al treilea element
- XVI. Al patrulea element

## Liste: Exemple

The screenshot displays the ETTI website interface. At the top left, there is a logo for ETTI (Etiologia Timpului) and a circular emblem. The main navigation bar includes links for **English** (with a UK flag) and **Romana** (with a Romanian flag). Below this, a dark blue menu bar contains **Main**, **Courses**, **Master**, **Staff**, **Research**, and **Students**. A secondary light blue bar lists **Radiocommunication Systems**, **Microwave IC**, and **Web Design**. A horizontal navigation bar below features **Start**, **Societati**, **Servicii**, **Informatii**, and **Contact**. Under the **Informatii** link, there are sub-links: [Informatii](#) | [Mediu](#) | [Link-uri](#) | [Lista paginilor](#). On the left, a vertical menu lists: **Start**, **Didactic**, **Master**, **Colectiv**, **Cercetare**, and **Studenti**. Below this menu is a row of category buttons: **industrie**, **software**, **suport**, **oferta**, and an empty button. On the right, a purple box contains the text **BUN VENIT**. Below it, a teal box lists links: **Societate**, [Prezentare](#), [Detalii financiare](#), **Contact**, and [Contact](#). To the right of this box, under the heading **Telefon/Fax**, are fields for **Telefon:**, **Fax:**, **Mobil (recomandat):**, and **Internet**. Below these are fields for **Web:**, **E-mail:**, and **IM:**.



## Liste de definitii

- Liste de definitii <dl>...</dl>
- Termenul definit <dt>...</dt>
- Definitia termenului anterior <dd>...</dd>
- Atributele standard: id, lang, title, style etc.
- Reprezentare vizuala: definitia e “indent-ata”

```
<dl>
<dt>Termen 1</dt>
<dd>Definitia 1</dd>
<dt>Termen 2</dt>
<dd>Definitia 2</dd>
<dt>Termen 3</dt>
<dd>Definitia 3</dd>
</dl>
```

**Termen 1**  
Definitia 1

**Termen 2**  
Definitia 2

**Termen 3**  
Definitia 3



# Exercitiu

**“I.Like.IT@ETTI.TUIASI.RO”**

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## Exercitiu 3

- Utilizati **Notepad ++** pentru a continua documentul HTML creat la exercitiul 2
- Introduceți cel puțin 2 liste **neordonate** (cu tipuri diferite)
  - **<ul>...</ul>**
- Introduceți cel puțin 2 liste **ordonate** (cu tipuri diferite)
  - **<ol>...</ol>**
- Încercați să introduceți o listă mixtă (un element **<li>...</li>** să conțină în interior o listă de alt tip)
- Vizualizați pagina creată în browser (Edge/Internet Explorer/ Chrome)



# Etichete HTML

`"I.Like.IT@ETTI.TUIASI.RO"`

[www.tuiasi.ro](http://www.tuiasi.ro)

1813

1860

1910

1937

1993





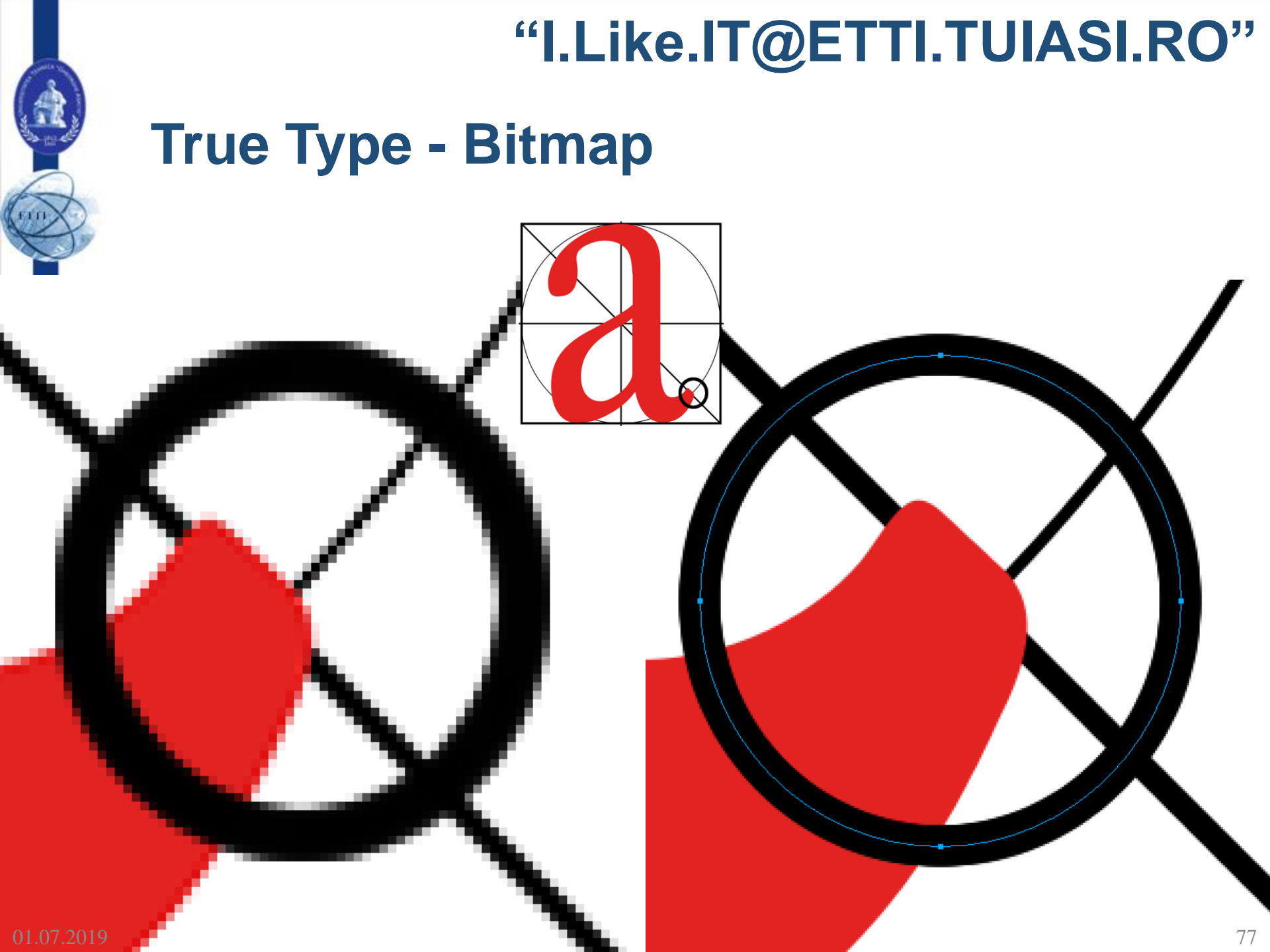
## Aliniere si fundal

- Culoare de fundal
  - valabil pentru body si td (celula de tabel)
  - atribut: bgcolor
    - `<td bgcolor="#232323">...</td>`
- Aliniere
  - valabil pentru toate elementele cu structura bloc
  - atribut align = “left | center | right | justify”
    - `<div align = “right”> ... , <p align = “left”>... , <table align = “center”> ... etc.`

## Font

- Definitie: Font = desenul (forma grafica) a caracterului
- Fonturi
  - Outline font (True type) = desen vectorial, curbe Bezier - scalarea pastreaza calitatea maxima
  - Bitmap font = harta de pixeli – scalarea duce la aparitia artifactelor

## True Type - Bitmap



## Font

- desen de caractere

F

Sans-serif

F

Serif

Generic	Familie	Descriere
Serif	Times New Roman Georgia	Apar mici linii la terminatia anumitor caractere
Sans-serif	Arial Verdana	Fara liniute la sfarsit de caracter
Monospace	Courier New Lucida Console	Latime constanta a caracterelor



## Web safe font

- Fonturi definite de CSS
  - sans-serif
  - serif
  - monospace
  - cursive
  - fantasy
- Fonturi safe Microsoft
  - Arial
  - Courier New
  - Georgia
  - Times New Roman
  - Verdana
  - Trebuchet MS
  - Lucida Sans

sans-serif

serif

monospace

**cursive**

*fantasy*

Arial

Courier New

Georgia

Times New Roman

Verdana

Trebuchet MS

Lucida Sans



## Font – elemente de stil

- `<tt>...</tt>` : masina de scris (latime fixa)
- `<i>...</i>` : italic (inclinat)
- `<b>...</b>` : bold (ingrosat)
- `<big>...</big>` : dimensiune ceva mai mare
- `<small>...</small>` : dimensiune ceva mai mica
- `<strike>...</strike>` : taiat : depreciat
- `<u>...</u>` : subliniat: depreciat

`<p>text normal, <b>bold</b>, <i>italic</i>,  
<b><i>bold italic</i></b>,<br/>  
<tt>teletype text</tt>, <big>big</big>,  
<small>small</small>, <br/>  
<strike>strike</strike>,  
<u>underline</u>.</p>`

text normal, **bold**, *italic*, ***bold italic***,  
teletype text, **big**, small,  
~~strike~~, underline.



## FONT si BASEFONT

- `<font>...</font>`, `<basefont />`
- contine modificatori al desenului de caracter
- attribute:
  - size : dimensiunea
    - absolut  $1 \div 7$
    - relativ  $-4 \div +4$  (fata de cea implicita, 3, sau cea indicata cu basefont)
  - color = “culoare”
  - face: desenul de caractere de folosit, in ordinea preferintei
    - fonturile ale caror nume contin spatii (Times New Roman) se scriu intre ghilimele
    - e recomandabil ca macar pe ultima pozitie sa apara unul din fonturile web-safe CSS



## FONT si BASEFONT

- Exemple
  - `<basefont size="2">`
  - `<font color="red">text rosu</font>`
  - `<font size="+1">echiv. cu big</font>`
  - `<font size="-1">echiv. cu small</font>`
  - `<font face="Arial,'Times New Roman', sans-serif">un text</font>`
    - se utilizeaza Arial
    - daca Arial nu exista se utilizeaza Times New Roman
    - daca nici Times New Roman nu exista se utilizeaza sans-serif
    - daca nici sans-serif nu exista se utilizeaza fontul implicit in browser





## FONT si BASEFONT

```
<p>size=1
size=2
size=3
size=4

size=5
size=6
size=7</p>
```

size=1 size=2 size=3 size=4

size=5 size=6 size=7

```
<p>size=-4
size=-3
size=-2
size=-1
size=+1

size=+2
size=+3
size=+4</p>
```

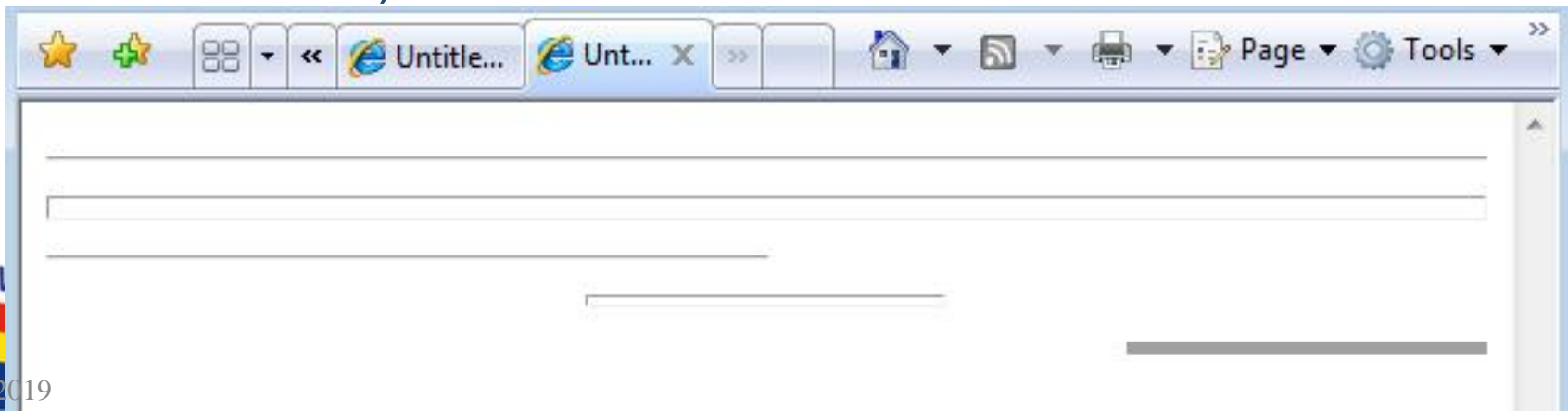
size=-4 size=-3 size=-2 size=-1 size=+1

size=+2 size=+3 size=+4

## Linii orizontale

- `<hr/>`
- attribute:
  - align = “left | center | right”
  - noshade = “noshade”
  - size: inaltimea in pixeli
  - width: latimea (implicit 100%)

```
<hr />
<hr size="10" />
<hr align="left" width="50%" />
<hr align="center" width="25%" size="5"
/>
<hr align="right" width="25%"
noshade="noshade" size="5" />
```



## TABLE

- **<table>...</table>**
- defineste o zona in care alte date vor fi asezate sub forma de tabel (linii si coloane rectangulare)
- attribute:
  - summary = “text de descriere”
  - align = “left | center | right”
  - width = “latime in pixeli sau procente”
    - width = “50”
    - width = “75%”
  - border = “latimea liniilor despartitoare in pixeli”
  - altele: id, class, title, bgcolor etc.

## TABLE

- in lipsa indicatiilor relative la dimensionare (width si altele) browser-ul decide dimensiunea tabelului **numai** in functie de datele continute
  - pentru aceasta trebuie sa astepte primirea **tuturor** datelor din tabel
- `<table>` **nu are efect vizual** de sine statator
  - e folosit doar in calitate de container pentru **linii**, care vor contine **celule**, care vor contine efectiv **datele**
- este preferat pentru realizarea impartirii paginii in zone fata de `<frame>... </frame>`
  - `<frame>` dispare in HTML5
  - CSS e conceput pentru a inlocui aceasta utilizare a tabelelor

## CAPTION

- `<caption>...</caption>`
- definește titlul tabelului
- poate apare numai:
  - imediat după definirea tabelului `<table>`
  - o singură etichetă pentru fiecare tabel
- attribute:
  - `align = "top | bottom | left | right"`



## Grupuri de linii

- `<thead>...</thead>` : antetul tabelului
- `<tfoot>...</tfoot>` : subsolul tabelului
- `<tbody>...</tbody>` : corpul tabelului
- `<tbody>` poate aparea de mai multe ori definind gruparea datelor
- `<thead>` si `<tfoot>` pot aparea o singura data, imediat dupa `<table>` si eventual `<caption>`
- toate grupurile trebuie sa contina macar o singura linie (`<tr>`)
- **scopul** este de a ajuta browser-ul sa afiseze si sa imprime corespunzator tabelele mari
  - suportul browser-elor este **deficitar**

## Grupuri de linii

```
<table>
<caption> </caption>
<thead>
 <tr> ...header information...
</thead>
<tfoot>
 <tr> ...footer information...
</tfoot>
<tbody>
 <tr> ...first row of block one data...
 <tr> ...second row of block one data...
</tbody>
<tbody>
 <tr> ...first row of block two data...
 <tr> ...second row of block two data...
</tbody>
</table>
```

## Grupuri de coloane

- `<colgroup>...</colgroup>` definește un grup de coloane
- `<col />` definește o coloană individuală
- definesc numărul de coloane și dimensionarea acestora în avans
- **scopul** este de a permite afișarea **incrementală**
- suport limitat în browser-e
- attribute:
  - `span` = “numărul de coloane”, implicit 1
  - `width` = “lățime”
  - `align` = “left | center | right | justify | char”
  - `char` = “caracterul la care se face alinierea”, (‘.’ sau ‘,’)
  - `charoff` = “poziționarea caracterului special”

## Grupuri de coloane

- Latimea coloanelor (si a celulelor)
  - pixeli : width = “50”
  - procentaj : width = “50%”
  - relativ : width = “nr \*”
    - col 1: width = “\*”; col2: width = “2\*”; col3: width = “3\*”
    - browser-ul calculeaza cat va reprezenta “\*” si multiplica corespunzator latimile celorlalte coloane
  - “0\*” : minimul necesar pentru reprezentarea datelor

## Grupuri de coloane

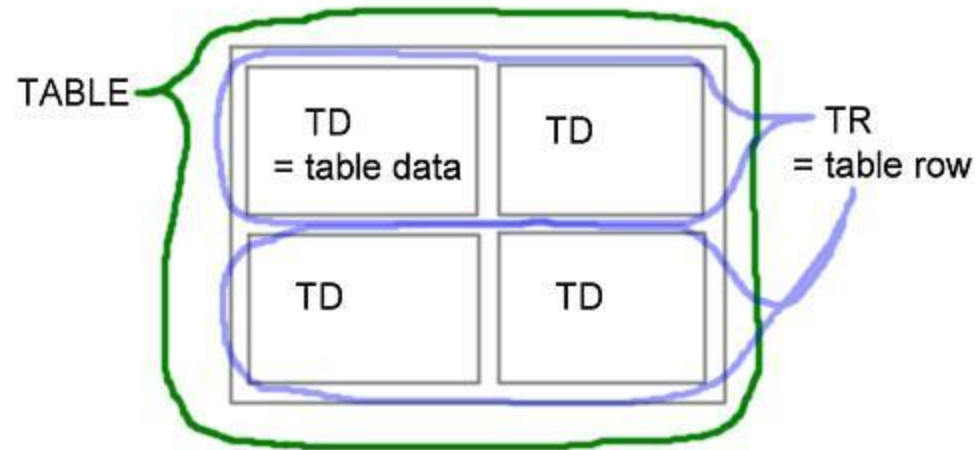
```
<table>
<colgroup>
 <col width="30">
</colgroup>
<colgroup>
 <col width="30">
 <col width="0*">
 <col width="2*">
</colgroup>
<colgroup align="center">
 <col width="1*">
 <col width="3*" align="char"
char=":"> </colgroup>
<thead>
 <tr><td>rows...
</table>
```

- se alocă mai întâi 30 px pentru prima și a doua coloană
- apoi minimul necesar pentru coloană 3
- dimensiunea rămasă se împarte la 6 ( $2^*+1^*+3^*$ ) pentru a afla valoarea elementară "\*"
- se calculează lăţimile corespunzătoare ale coloanelor



## Linii

- **<tr>...</tr>** (“table row”)
- defineste o linie in tabel
- fara efect vizual, este un container **necesar si obligatoriu** pentru celulele tabelului
- attribute:
  - bgcolor = “culoare”
  - align = “left | center | right | justify | char”
  - valign = “top | middle | bottom | baseline”
    - alinierea pe verticala a datelor in celule
    - implicit: “middle”
  - altele: id, class, title, style etc



## Celule

- **<td>...</td>** (“table data”)
  - **<th>...</th>** (“table header”) – bold si align = “center”
- defineste o celula, care va contine **datele** efective
- attribute:
  - **rowspan** = “numar”
    - implicit: 1
    - numarul de linii pe care se intinde celula (“merge cells” pe verticala)
  - **colspan** = “numar”
    - implicit: 1
    - numarul de coloane pe care se intinde celula (“merge cells” pe orizontala)

## Rowspan si colspan


colspan = “2”

rowspan = “2”  
colspan = “2”

rowspan = “3”

## Celule

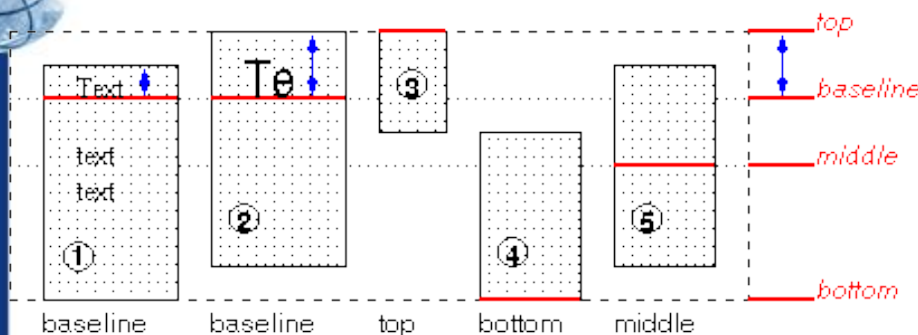
- attribute:
  - align = “left | center | right | justify | char”
  - char = “character”, implicit: “.”
  - valign = “top | middle | bottom | baseline”
  - nowrap = “nowrap”
  - width = “latime”, height = “inaltime”
  - informatii despre celula – suport limitat
    - headers = “nume (id = ...) separate de spatiu”
    - scope = “row | col | rowgroup | colgroup”
    - abbr = “text scurt”
  - altele: id, class, title, bgcolor , style etc.

## Chenare

- se aplica ca atribut la <table>...</table>
- attribute:
  - frame = “void | above | below | hside | lhs | rhs | vside | box | border”; pentru **exterior**
    - void = fara; box, border = toate
    - above/below/lhs/rhs = o singura linie
    - hside/vside = 2 linii (orizontale/verticale)
  - rules = “none | groups | rows | cols | all”; pentru **interior**
    - none = fara; all = toate
    - rows/cols = numai intre linii/coloane
    - groups = intre grupurile de linii/coloane
  - border = “latime in pixeli”
    - border = “0” echiv. cu frames = “void” rules = “none”
    - border = “orice inafara de 0” echiv. cu frames = “border” rules = “all”



## Aliniere verticala



```
<table border="1">
<tr valign="aliniere">
<td>rand 1</td>
<td>rand 1
rand 2</td>
<td>rand 1
rand 2
rand 3</td>
<td>rand 1
rand 2
rand 3
rand 4</td>
</tr>
</table>
```

aliniere	effect			
top	rand 1	rand 1 rand 2	rand 1 rand 2 rand 3	rand 1 rand 2 rand 3 rand 4
middle	rand 1	rand 1 rand 2	rand 1 rand 2 rand 3	rand 1 rand 2 rand 3 rand 4
bottom	rand 1	rand 1 rand 2	rand 1 rand 2 rand 3	rand 1 rand 2 rand 3 rand 4
baseline	rand 1	rand 1 rand 2	rand 1 rand 2 rand 3	rand 1 rand 2 rand 3 rand 4

## Aliniere orizontala

- align = “char” nu este implementat de nici un browser actual
- align = “justify” nu este respectat de Internet Explorer

```
<table border="1"><tr>
<td width="150" align="left">0.1
10000
0.00005
linie_cu_text
mai_lung care_se desparte pe_trei_randuri</td>
<td width="150" align="right">_.,_</td>
<td width="150" align="center">_.,_</td>
<td width="150" align="justify">_.,_</td>
<td width="150" align="char" char=".">_.,_</td>
</tr></table>
```

0.1 10000 0.00005 linie_cu_text mai_lung care_se desparte pe_trei_randuri	0.1 10000 0.00005 linie_cu_text mai_lung care_se desparte pe_trei_randuri	0.1 10000 0.00005 linie_cu_text mai_lung care_se desparte pe_trei_randuri	0.1 10000 0.00005 linie_cu_text mai_lung care_se desparte pe_trei_randuri	0.1 10000 0.00005 linie_cu_text mai_lung care_se desparte pe_trei_randuri
------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------

## Spatierea celulelor

- se aplica ca attribute la `<table>...</table>`
- attribute:
  - `cellspacing` = “lungime”
    - lungime = pixeli
  - `cellpadding` = “lungime”
    - lungime = pixeli sau %

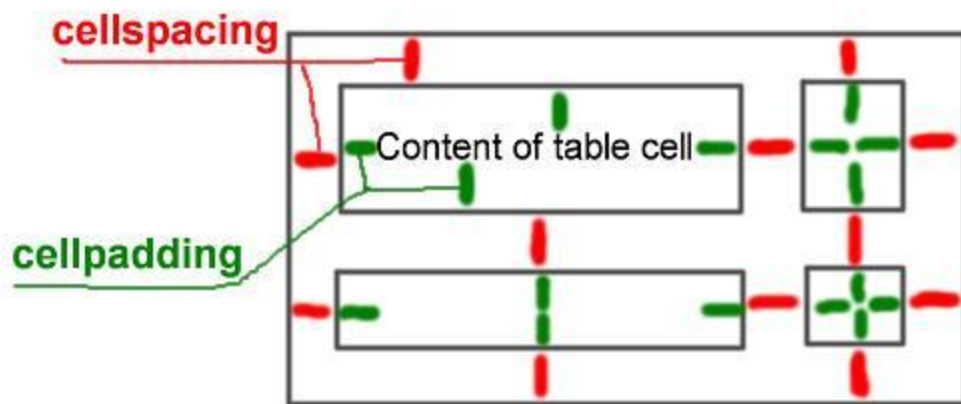
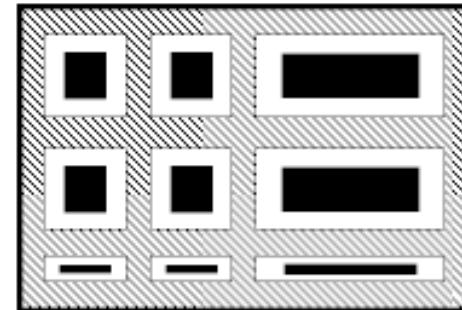



Table border 



Cellspacing 

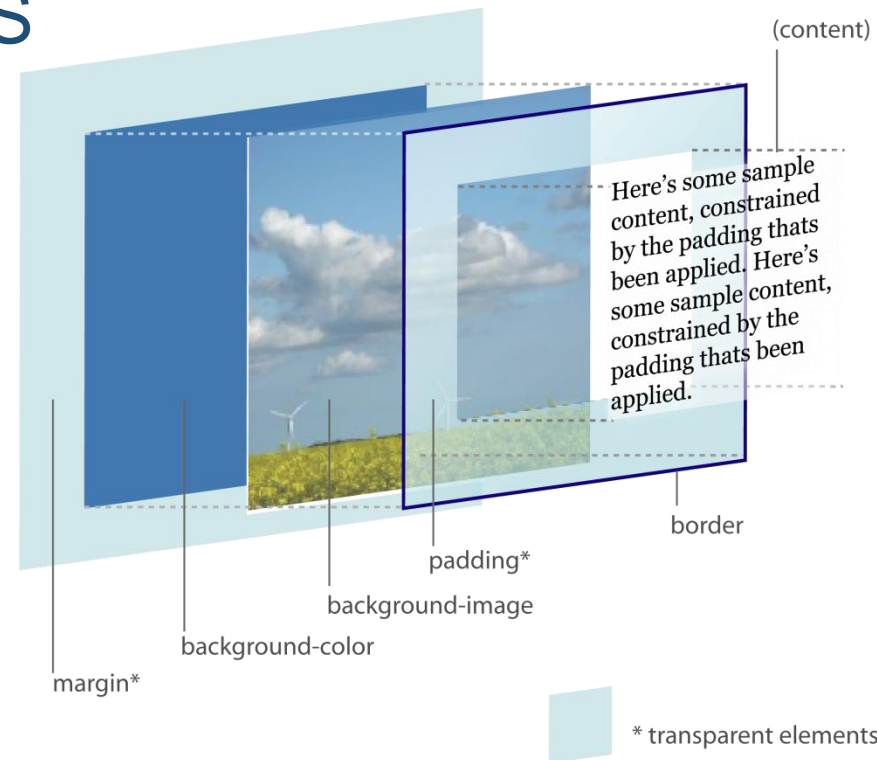
Cellpadding 

Cell content 

## Afisarea celulelor

- pentru suprapuneri complexe
- similar cu modelul CSS
  - margin ~ cellspacing
  - padding ~ cellpadding

THE CSS BOX MODEL HIERARCHY





# Exercitiu

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## Exercitiu 4

- Utilizati **Notepad ++** pentru a continua documentul HTML creat la exercitiul 3
- Introduceți un **tabel**
  - **<table>...</table>**
- Introduceți cel puțin 4 linii **in interiorul tabelului**
  - **<tr>...</tr>**
- Introduceți celule in interiorul fiecărei linii (pot fi in numar egal si inegal intre linii)
  - **<td>...</td>**
- Introduceți date (text) in interiorul liniilor si exersati activarea chenarului pentru tabel
- Vizualizati pagina creata in browser (Edge/Internet Explorer/ Chrome)



# Etichete HTML

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## Link-uri si ancore

- **<a>...</a>**
- poate fi folosita pentru a realiza o legatura intre doua resurse, legatura care are doua capete:
  - **punct de plecare** spre un alt document la activarea cu mouse, tastatura, vocal, etc. (**A ca link**)
    - ex: <https://www.w3.org/TR/html52/links.html> activeaza in browser documentul de la adresa (URI) indicata
  - **punct destinatie** in interiorul unui document, caz in care constituie tinta pentru alte trimiteri (**A ca ancora**)
    - ex: <https://www.w3.org/TR/html52/links.html#links-introduction> activeaza acelasi document, dar cu pozitionare in dreptul zonei identificata de ancora “**#links-introduction**”

## A

- attribute:

- name = “text”: numele de identificare la definire de ancora
- href = “URI”: adresa tinte la utilizarea ca link
- target = “\_blank | \_self | \_parent | \_top”: modalitatea de deschidere a paginii:
  - \_blank: o noua fereastră (cu pastrarea paginii anterioare)
  - \_self, \_parent, \_top: la utilizarea frameset, specificarea modalitatii de afisare in pagina curenta: in acelasi frame, in frame-ul parinte sau ca pagina independenta, inlocuind orice alt frame existent
- type = “text MIME caracterizand tipul documentului tinta”
  - ex: “text/html”, “text/css”, “application/pdf”, “image/gif”, etc. pentru a permite interpretarea corecta de catre browser a tinte. Implicit este “text/html”
- altele: id, class, title, etc.

## A

- utilizarea tipica:

- **A ca link:**

- `<a href="https://www.google.com">Dati click aici pentru a ajunge la Google</a>`
    - are efect vizual: Dati click aici pentru a ajunge la Google (afisare diferentiata, tipic albastru subliniat si cu activarea unui cursor diferit pentru mouse la survolare)

- **A ca ancora:**

- `<a name="cap_1">Aici incepe capitolul 1</a>`
    - fara efect vizual dar cu definire interna a unei tinte pentru alte link-uri de tipul: `http://document.html#cap1`

- **A ca link si ancora simultan :**

- `<a href="alt document" name="ancora in documentul curent">`



## A – indicarea resursei de accesat

- **absolut**: prin indicarea URL complet.
  - `<a href="https://www.google.com">...</a>`
  - obligatoriu cu specificarea protocolului (e.g. “**https://**”) altfel interpretarea este facuta relativ.
    - exemplu **pozitiv**: daca in documentul de la adresa <http://www.etti.tuiasi.ro/doc/ceva.html> exista un link: `<a href="https://www.google.com">...</a>` va exista o trimitere spre server-ul Google
    - exemplu **negativ**: daca in documentul de la adresa <http://www.etti.tuiasi.ro/doc/ceva.html> exista un link: `<a href="www.google.com">...</a>` va exista o trimitere spre <http://www.etti.tuiasi.ro/doc/www.google.com> ?

## A – indicarea resursei de accesat

- **relativ**: la o cale indicata de (se verifica in ordine)
  - eticheta BASE, in sectiunea HEAD: <base href=“http://www.etc.tuiasi.ro”>
  - indicata de server in protocolul utilizat (HTTP in acest caz)
  - adresa documentului curent (cazul cel mai frecvent si recomandat)
    - exemplu 1: daca in documentul de la adresa <http://www.etti.tuiasi.ro/ceva.html> exista un link: <a href=“[/images/poza.gif](#)”>...</a> va exista o trimitere spre documentul [http://www.etti.tuiasi.ro/ images/poza.gif](http://www.etti.tuiasi.ro/images/poza.gif)
    - exemplu 2: daca in documentul de la adresa <http://www.etti.tuiasi.ro/doc/ceva.html> exista un link: <a href=“[../images/poza.gif](#)”>...</a> va exista o trimitere spre documentul [http://www.etti.tuiasi.ro/ images/poza.gif](http://www.etti.tuiasi.ro/images/poza.gif)

## Imagini

- **<img ... />**
- attribute:
  - **src** = “URI”: adresa imaginii care trebuie introduse
  - **alt** = “text”: descriere alternativa, de multe ori afisat ca tool-tip in browser-ele vizuale, si ca inlocuitor al imaginii in browser-ele tip text
  - **longdesc** = “URI”: adresa unui alt document cu explicatii detaliate: suport minimal in browser-e
  - **altele**: ismap, usemap (pentru utilizarea ca zona activa), name, id etc.

## Obiecte

- **<object> ...</object>**
- mai general, pentru incluziunea diferitelor tipuri de obiecte
- in particular se poate folosi pentru a afisa imagini:
  - ``
  - `<object data="poza_pasaport.gif" type="image/gif">Poza de pasaport</object>`
- permite oferirea de indicatii suplimentare browser-ului si eventual initializarea obiectului cu eticheta `param>`

## Obiecte

- cea mai raspandita utilizare, introducerea continutului multimedia, in special filme sau aplicatii Flash.
- exemplu:

```
<object classid="clsid:d27cdb6e-ae6d-11cf-96b8-444553540000"
codebase="http://fpdownload.macromedia.com/pub/shockwave/cabs/flash/swflash.cab#v
ersion=8,0,0,0" width="224" height="99" id="sigla" align="middle">
<param name="allowScriptAccess" value="sameDomain" />
<param name="movie" value="sigla.swf" /><param name="quality" value="high"
/><param name="bgcolor" value="#585d4b" /><embed src="sigla.swf" quality="high"
bgcolor="#585d4b" width="224" height="99" name="sigla" align="middle"
allowScriptAccess="sameDomain" type="application/x-shockwave-flash"
pluginspage="http://www.macromedia.com/go/getflashplayer" />
</object>
```





## Media

- HTML 5 imbunatateste semnificativ (cu suport din partea browser-elor) capacitatea de a afisa date multimedia fara aplicatii externe
  - **<audio>...</audio>**
    - MP3, Wav, Ogg
  - **<video>...</video>**
    - MP4, WebM, Ogg

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



# Exercitiu

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## Exercitiu 5

- Utilizati **Notepad ++** pentru a continua documentul HTML creat la exercitiul 4
- Obtineti o imagine de pe Internet (orice site, right click, save image as) si apoi introduceti-o in document
  - **<img ... />**
    - utilizati referinta locala spre fisierul imagine
      - src="poza.jpg" **nu** src="D:\dir\poza.jpg"
- Vizualizati pagina creata in browser (Edge/Internet Explorer/ Chrome)

## Exercitiu 6

- Utilizati **Notepad ++** pentru a crea un **al doilea** document HTML minimal, eventual utilizati copy/paste pentru a prelua linii din primul document
- Introduceti in **al doilea** document un link la **primul** document
  - **<a>...</a>**
  - utilizati referinta locala spre al doilea document
    - href=“doc2.html” **nu** href=“D:\dir\doc2.html”
- Exersati legatura intre cele doua pagini in browser (Edge/Internet Explorer/ Chrome)



# Etichete HTML

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## Forme in HTML

- necesare pentru ca utilizatorul sa poate trimite date server-ului
- **<form>...</form>**
- Attribute specifice:
  - action: adresa documentului care preia datele
    - `<form action="<?php echo $_SERVER['PHP_SELF'];?>">`
    - `<form action="actiuni/fisier2.html">`
  - method: modalitatea de transmitere a datelor: post sau get
    - `<form method="post" action= ... >`

## Metode de transmitere

- **post** datele sunt transmise in bloc
- **get** datele sunt atasate adresei documentului de procesare : **results.php?prob=81&an=2009**
- **get** trebuie folosit numai cand datele sunt “idempotente”,
  - nu cauzeaza efecte colaterale
  - nu modifica starea server-ului (baze date, etc)
- se poate simula realizarea unei forme (**get**) prin scrierea corespunzatoare a link-urilor

## Elemente de interactiune cu utilizatorul

- in interiorul etichetei `<form>...</form>`
  - input
  - select/option
  - textarea
  - button
- **toate** elementele vor avea un nume
  - atribut: `name=""`
  - numele va fi intalnit in uri-ul generat prin get, sau in numele variabilei trimisa prin post
- trimiterea datelor se face prin intermediul unui buton cu tipul **`type="submit"`**

## INPUT

- `<input .../>`
- Attribute:
  - type: text | password | checkbox | radio | submit | reset | file | hidden | image | button
  - name: numele variabilei
  - value: valoarea trimisa server-ului la selectie (valoarea initiala in anumite cazuri)
  - checked/src/size/maxlength in functie de tip

## Example

```
<input name="textfield" type="text" value="ceva" />
```

```
<input name="Ok" type="submit" value="Trimite" />
```

```
<label><input name="check" type="checkbox" value="5" checked />check1</label>
```

```
<label><input name="RG1" type="radio" value="a" checked="checked" />but1</label>
```

```
<label><input name="RG1" type="radio" value="b" />but2</label>
```

```
<input name="hid" type="hidden" value="6" />
```



The screenshot shows a web form with a light blue background. It contains a text input field with the value "ceva", a submit button labeled "Trimite", a checked checkbox labeled "check1", and two radio buttons labeled "but1" and "but2".



## TEXTAREA/SELECT

```
<textarea name="textarea" cols="20" rows="5">Un text
initial</textarea>


```

```
<select name="select." size="3">
 <option value="1" selected="selected">opt1</option>
 <option value="2">opt2</option>
 <option value="3">opt3</option>
</select>


```

```
<select name="select...">
 <option value="1" selected="selected">opt1</option>
 <option value="2">opt2</option>
 <option value="3">opt3</option>
</select>
```

Un text initial

opt1  
opt2  
opt3

opt1 ▼

## BUTTON

- introdus pentru a oferi posibilitatea introducerii de continut mai complex (text formatat,imagini) in interiorul butoanelor de pe forma

```
<button type="button" onClick="do ();">Click Here</button>
```

```
<button type="submit" value="infoOnly">Request Info</button>
```

```
<button type="reset">Clear</button>
```

```
<button type="submit" id="sender" value="infoOnly">Request
Info
</button>
```

```
<button type="submit" id="sender" value="infoOnly"><p>Request</p><p><i>Info</i></p></button>
```

Click Here

Request Info ←

→ Clear

Request  
Info  
←

Request  
*Info*  
←

## Exemplu – forma

- Mic magazin online
- Formular de comanda cu procesarea comenzii

```
<html>
<head>
<title>Magazin online XXX SRL</title>
</head>
<body>
<h1>Magazin online XXX SRL</h1>
<h2>Realizati comanda</h2>
<form action="rezultat.html" method="post">
<table border="0">
<tr bgcolor="#cccccc"><td width="150">Produs</td><td width="15">Cantitate</td></tr>
<tr><td>Carti</td><td align="center"><input type="text" name="carti_cant" size="3" maxlength="3" /></td></tr>
<tr><td>Caiete</td><td align="center"><input type="text" name="caiete_cant" size="3" maxlength="3" /></td></tr>
<tr><td>Penare</td><td align="center"><input type="text" name="penare_cant" size="3" maxlength="3" /></td></tr>
<tr><td colspan="2" align="center"><input type="submit" value="Trimite" /></td></tr>
</table>
</form>
</body>
</html>
```

**Magazin online XXX SRL**

**Realizati comanda**

Produs	Cantitate
Carti	<input type="text" value="1"/>
Caiete	<input type="text" value="2"/>
Penare	<input type="text" value="3"/>

## Exemplu – raspuns static

- fisier html
- fisierele HTML sunt doar “servite” de server
- in aparenta a existat o procesare, real **nu**

```
<html>
<head>
<title>Magazin online XXX SRL</title>
</head>
<body>
<h1>Magazin online XXX SRL</h1>
<h2>Rezultate comanda</h2>
<p>Comanda receptionata</p>
</body>
</html>
```

### **Magazin online XXX SRL**

#### **Rezultate comanda**

Comanda receptionata



# Bibliografie HTML

`"I.Like.IT@ETTI.TUIASI.RO"`

[www.tuiasi.ro](http://www.tuiasi.ro)

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## Bibliografie HTML

- World Wide Web Consortium (W3C), HTML 5.2 Recommendation
  - <https://www.w3.org/TR/html52/index.html>
- W3Schools Online Web Tutorials
  - <https://www.w3schools.com/html/>
- HTML - manual interactiv on-line (lb. romana)
  - <http://profs.info.uaic.ro/~val/htmllearn.html>



## CONCLUSIONS

A.  
B.  
C.

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## Concepte generale Web Design

- Steve Krug: “**Don't Make Me Think**”
- Utilizatorii scaneaza pagina, nu o citesc
- Informatia trebuie redusa la minimul necesar in majoritatea locurilor
- “Daca ceva e greu de utilizat, mai bine nu o utilizez”
- Utilizatorii au comportament de **rechin**
- Originalitatea nu e intotdeauna recomandata

## Test – F Shape Reading Pattern

- Obisnuinta utilizatorilor de a urmari anumite zone de pe ecran





## Microsoft



The screenshot shows the Microsoft homepage as it appeared in 2008. The layout includes a top navigation bar with links to Windows, Office, All Products, Buy Now, Downloads & Trials, Partner & Customer Solutions, Security & Updates, Training & Events, Support, and About Microsoft. A large central banner promotes "5 ways to speed up your computer" with a link to "Keep your PC running in top form". To the right, there are sections for the "Microsoft Download Center" and "Free security downloads & more". A news ticker at the bottom displays the headline "New Technology Fights Child Porn by Tracking Its 'PhotoDNA'". The left sidebar contains a "Highlights" section with links to "Latest releases", "Using your computer", "For Business", "For IT Professionals", and "For Developers". Below this, there is a promotion for "Windows Small Business Server 2008" with the tagline "Access Your Data From Anywhere". The right sidebar features "Popular Downloads" (Internet Explorer 8, Windows 7 Upgrade Advisor, Windows Vista Service Pack 2), "Top Searches" (Windows 7, Service Pack, Office Templates), and "Frequent Destinations" (Microsoft Store, Download Center, Microsoft Update).

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↓  
Your destination for trials, updates, & service packs

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**Frequent Destinations**

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Windows Small Business Server 2008  
Access Your Data From Anywhere



## Intel



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- Efficiently manage energy expense by scaling power consumption to workload, enabled by Intel® Intelligent Power Technology
- Next generation Intel® Virtualization Technology enables best-in-class virtualization performance, superb scalability, enhanced flexibility, and simplified server management
- Intel® Data Center Manager (Intel® DCM) software development kit provides power and thermal monitoring and management for servers, racks, and groups of servers in data centers. Management Console Vendors (ISVs) and System Integrators (SIs) can integrate Intel® DCM into their console or command-line applications and provide high-value power management features to IT organizations.

**Live online seminar**

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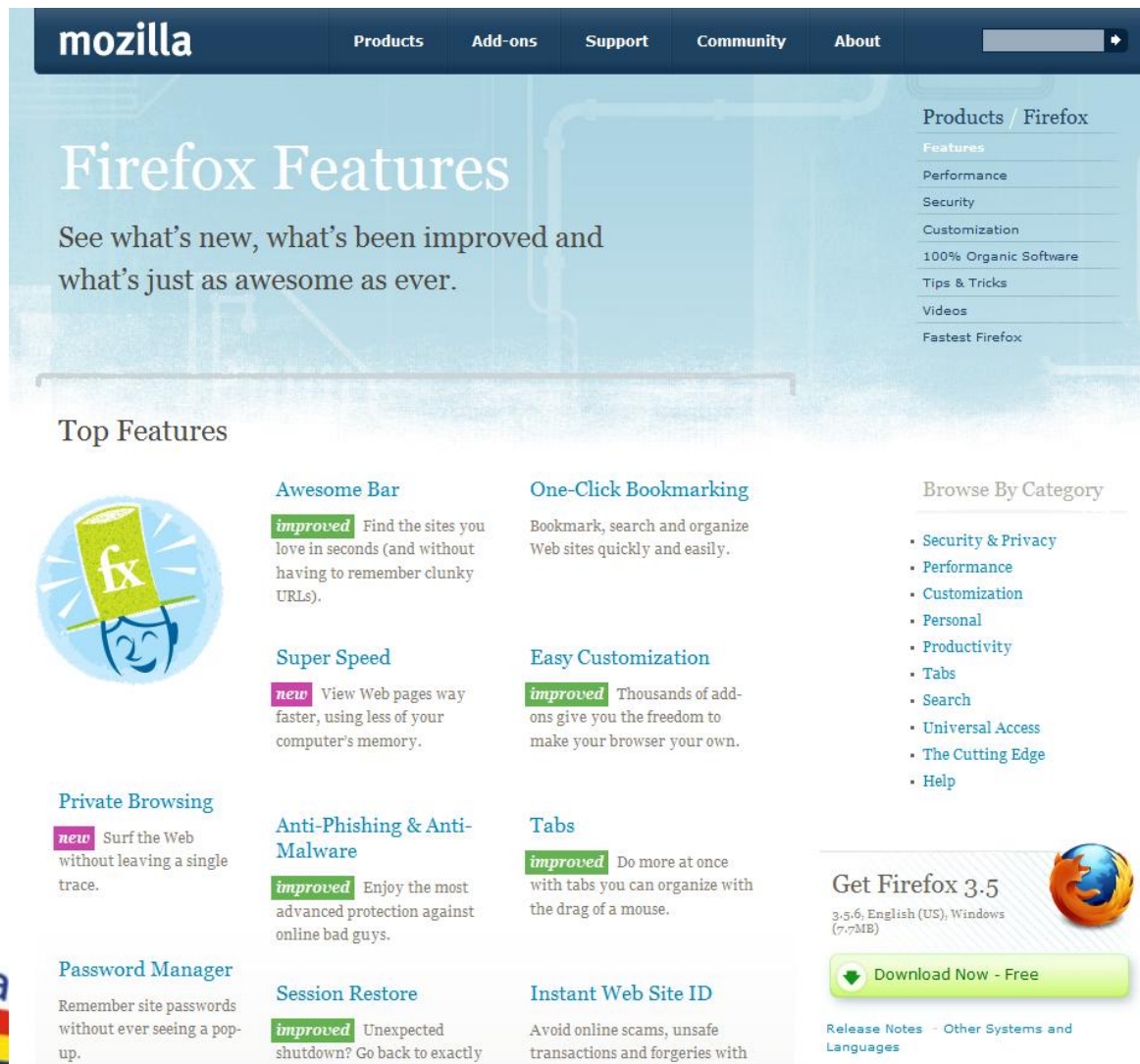
**Virtualization ROI**

Use this tool to see the potential ROI for using virtualization in your data center.

[ROI calculator](#)

**Large-scale enterprise computing and server consolidation**

## Mozilla




The screenshot shows the Mozilla website's 'Firefox Features' page. The header includes the Mozilla logo and navigation links: Products, Add-ons, Support, Community, and About. The main heading is 'Firefox Features' with the subtext 'See what's new, what's been improved and what's just as awesome as ever.' A sidebar on the right lists categories: Features, Performance, Security, Customization, 100% Organic Software, Tips & Tricks, Videos, and Fastest Firefox. The main content area is titled 'Top Features' and lists several features with icons and descriptions:

- Awesome Bar**: **improved** Find the sites you love in seconds (and without having to remember clunky URLs).
- One-Click Bookmarking**: Bookmark, search and organize Web sites quickly and easily.
- Super Speed**: **new** View Web pages way faster, using less of your computer's memory.
- Easy Customization**: **improved** Thousands of add-ons give you the freedom to make your browser your own.
- Private Browsing**: **new** Surf the Web without leaving a single trace.
- Anti-Phishing & Anti-Malware**: **improved** Enjoy the most advanced protection against online bad guys.
- Tabs**: **improved** Do more at once with tabs you can organize with the drag of a mouse.
- Password Manager**: Remember site passwords without ever seeing a pop-up.
- Session Restore**: **improved** Unexpected shutdown? Go back to exactly
- Instant Web Site ID**: Avoid online scams, unsafe transactions and forgeries with

On the right, under 'Browse By Category', there is a list of categories: Security & Privacy, Performance, Customization, Personal, Productivity, Tabs, Search, Universal Access, The Cutting Edge, and Help. At the bottom right, there is a section for 'Get Firefox 3.5' with a download button and links for Release Notes, Other Systems and Languages.

## Wikipedia



**WIKIPEDIA**  
The Free Encyclopedia

navigation

- Main page
- Contents
- Featured content
- Current events
- Random article

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Go Search

interaction


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languages

- Afrikaans
- Alemannisch
- العربية
- Aragonés
- Azərbaycan
- বাংলা
- Беларуская (тарашкевіца)
- Boarisch
- Bosanski
- Brezhoneg
- Български
- Беларуская
- Беларуская (тарашкевіца)
- Boarisch
- Bosanski
- Brezhoneg
- Български

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Please read:

A personal appeal from Wikipedia founder Jimmy Wales

### HTML

From Wikipedia, the free encyclopedia



*For the use of HTML on Wikipedia, see [Help:HTML in wikitext](#).*

**HTML**, which stands for **Hyper Text Markup Language**, is the predominant [markup language](#) for [web pages](#). It provides a means to create [structured documents](#) by denoting structural [semantics](#) for text such as headings, paragraphs, lists etc as well as for links, quotes, and other items. It allows [images](#) and [objects](#) to be embedded and can be used to create [interactive forms](#). It is written in the form of [HTML elements](#) consisting of "tags" surrounded by [angle brackets](#) within the web page content. It can include or can load [scripts](#) in languages such as [JavaScript](#) which affect the behavior of HTML processors like [Web browsers](#); and [Cascading Style Sheets \(CSS\)](#) to define the appearance and layout of text and other material. The [W3C](#), maintainer of both HTML and CSS standards, encourages the use of CSS over explicit presentational markup.<sup>[1]</sup>

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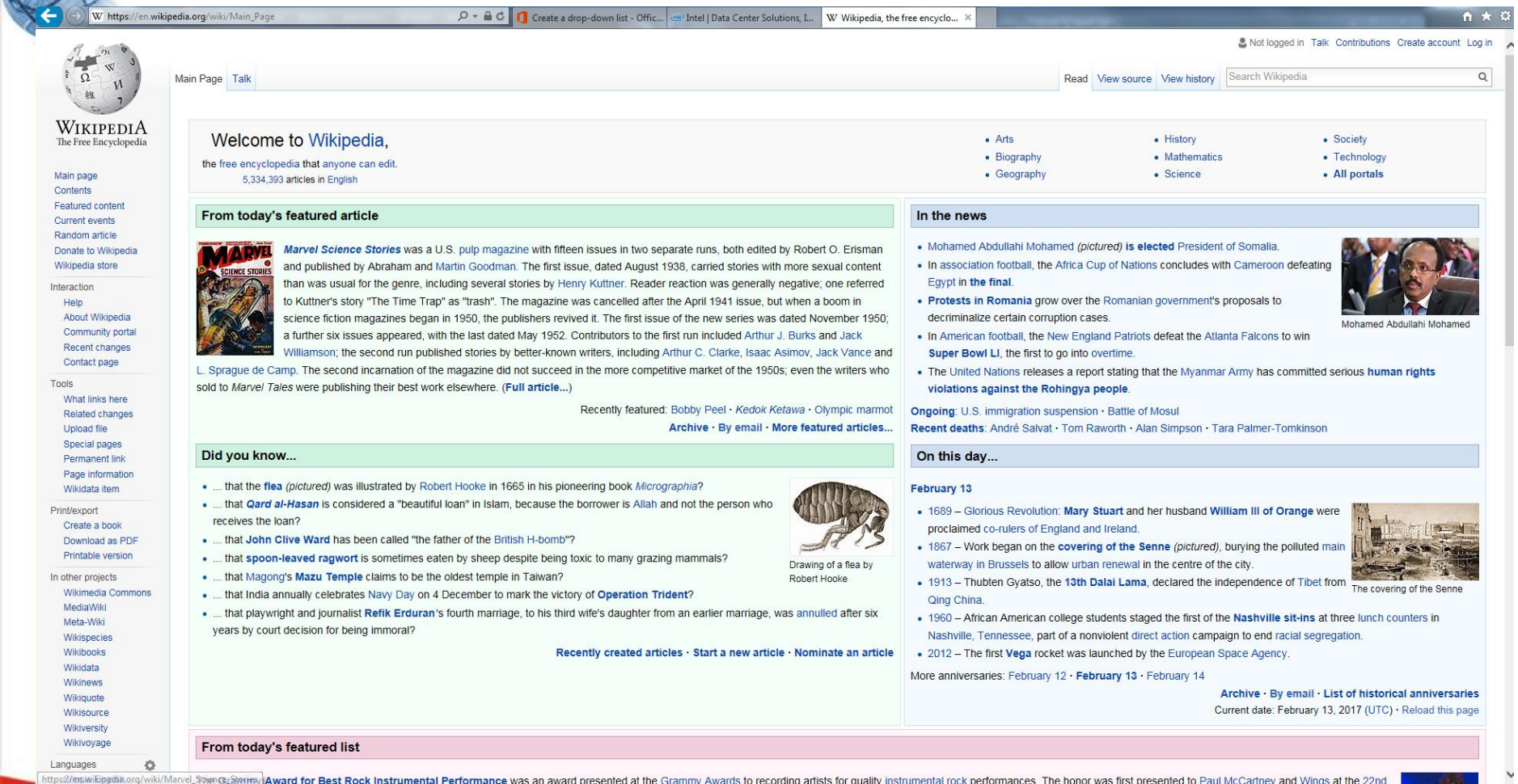
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**HTML**  
(HyperText Markup Language)

<b>Filename extension</b>	.html, .htm
<b>Internet media type</b>	text/html
<b>Type code</b>	TEXT
<b>Uniform Type Identifier</b>	public.html
<b>Developed by</b>	World Wide Web Consortium & WHATWG
<b>Type of format</b>	Markup language
<b>Extended from</b>	SGML
<b>Extended to</b>	XHTML
<b>Standard(s)</b>	ISO/IEC 15445 W3C HTML 4.01  W3C HTML 5  (draft)



## Wikipedia 2017



Wikipedia, the free encyclopedia

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Welcome to Wikipedia,  
the free encyclopedia that anyone can edit.  
5,334,393 articles in English

From today's featured article

**Marvel Science Stories** was a U.S. pulp magazine with fifteen issues in two separate runs, both edited by Robert O. Erisman and published by Abraham and Martin Goodman. The first issue, dated August 1938, carried stories with more sexual content than was usual for the genre, including several stories by Henry Kuttner. Reader reaction was generally negative; one referred to Kuttner's story "The Time Trap" as "trash". The magazine was cancelled after the April 1941 issue, but when a boom in science fiction magazines began in 1950, the publishers revived it. The first issue of the new series was dated November 1950; a further six issues appeared, with the last dated May 1952. Contributors to the first run included Arthur J. Burks and Jack Williamson; the second run published stories by better-known writers, including Arthur C. Clarke, Isaac Asimov, Jack Vance and L. Sprague de Camp. The second incarnation of the magazine did not succeed in the more competitive market of the 1950s; even the writers who sold to *Marvel Tales* were publishing their best work elsewhere. (Full article...)

Recently featured: Bobby Peel · Kedok Ketawa · Olympic marmot  
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Did you know...

- ... that the **flea** (pictured) was illustrated by Robert Hooke in 1665 in his pioneering book *Micrographia*?
- ... that **Qard al-Hasan** is considered a "beautiful loan" in Islam, because the borrower is Allah and not the person who receives the loan?
- ... that **John Clive Ward** has been called "the father of the British H-bomb"?
- ... that **spoon-leaved ragwort** is sometimes eaten by sheep despite being toxic to many grazing mammals?
- ... that Magong's **Mazu Temple** claims to be the oldest temple in Taiwan?
- ... that India annually celebrates Navy Day on 4 December to mark the victory of **Operation Trident**?
- ... that playwright and journalist **Refik Erduran**'s fourth marriage, to his third wife's daughter from an earlier marriage, was annulled after six years by court decision for being immoral?

Drawing of a flea by Robert Hooke

Recently created articles · Start a new article · Nominate an article

From today's featured list

**Award for Best Rock Instrumental Performance** was an award presented at the Grammy Awards to recording artists for quality instrumental rock performances. The honor was first presented to Paul McCartney and Wings at the 22nd

In the news

- Mohamed Abdullahi Mohamed (pictured) is elected President of Somalia.
- In association football, the Africa Cup of Nations concludes with Cameroon defeating Egypt in the final.
- Protests in Romania grow over the Romanian government's proposals to decriminalize certain corruption cases.
- In American football, the New England Patriots defeat the Atlanta Falcons to win **Super Bowl LI**, the first to go into overtime.
- The United Nations releases a report stating that the Myanmar Army has committed serious human rights violations against the Rohingya people.

Ongoing: U.S. immigration suspension · Battle of Mosul  
Recent deaths: André Salvat · Tom Raworth · Alan Simpson · Tara Palmer-Tomkinson

On this day...

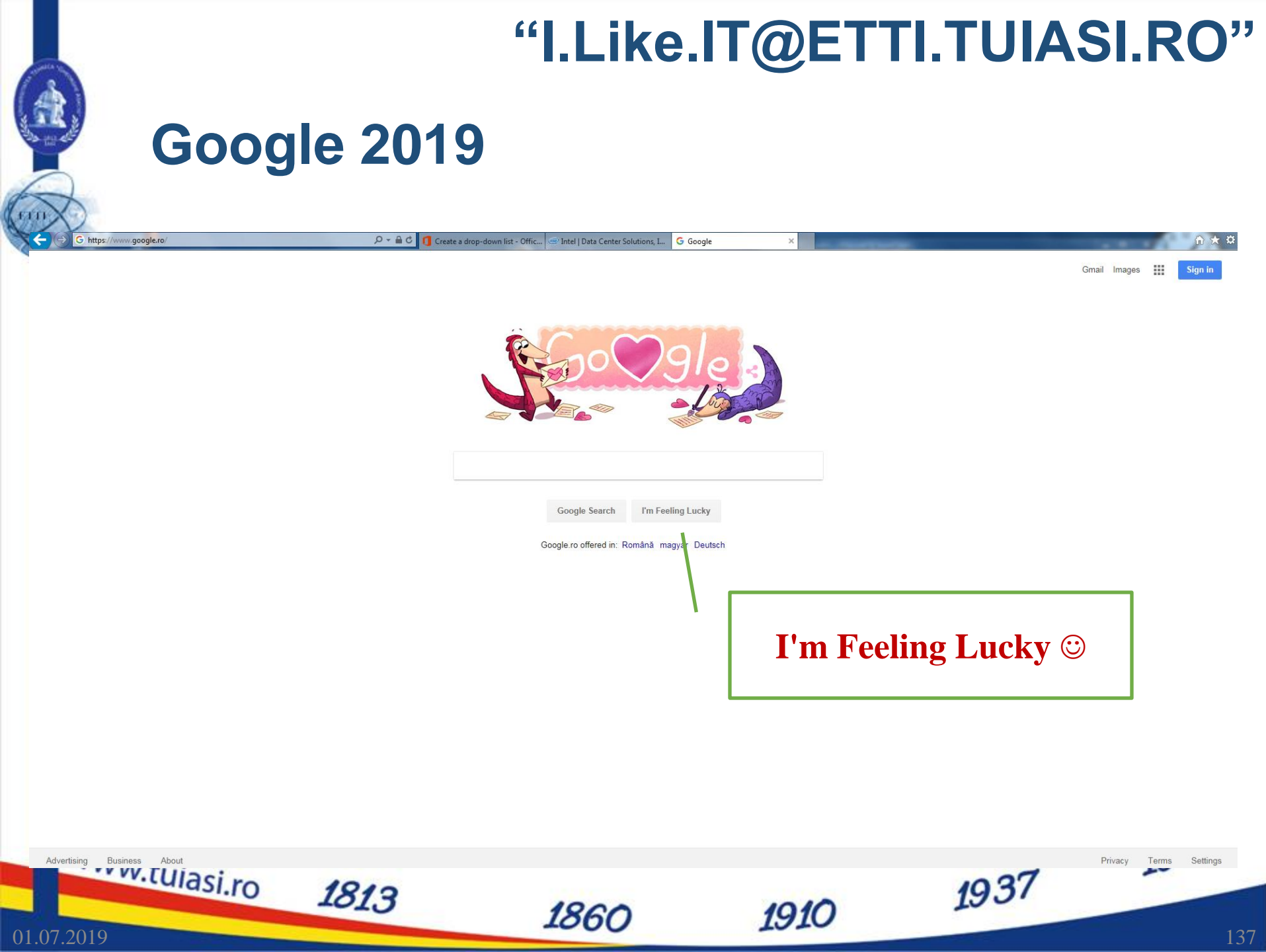
February 13

- 1689 – Glorious Revolution: **Mary Stuart** and her husband **William III of Orange** were proclaimed co-rulers of England and Ireland.
- 1867 – Work began on the **covering of the Senne** (pictured), burying the polluted main waterway in Brussels to allow urban renewal in the centre of the city.
- 1913 – Thubten Gyatso, the **13th Dalai Lama**, declared the independence of Tibet from Qing China.
- 1960 – African American college students staged the first of the **Nashville sit-ins** at three lunch counters in Nashville, Tennessee, part of a nonviolent direct action campaign to end racial segregation.
- 2012 – The first **Vega** rocket was launched by the European Space Agency.

More anniversaries: February 12 · **February 13** · February 14  
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Current date: February 13, 2017 (UTC) · Reload this page

# “I.Like.IT@ETTI.TUIASI.RO”

## Google 2019





# “I.Like.IT@ETTI.TUIASI.RO”

## Intel 2017

The screenshot displays the Intel website's homepage. The top navigation bar includes links for Products, Learn & Develop, and Support, along with the Intel logo, language selection (USA (English)), and a Sign In button. The main banner features a photograph of Tom Brady sitting on a bed with a dog, with the text "BRADY EVERYDAY #SB51 AD" and "Intel® 360 Replay Technology can make anything look epic. Even Tom Brady." Below this is a "Check it out" button. A secondary navigation bar contains icons and labels for Support, Product Specs, See Products, Processor Comparison, and Download Center. The bottom section shows a promotional image of Tom Brady holding a football, with the text "BRADY NEVER LOOKED BETTER" overlaid.

www.tuiasi.ro

1813

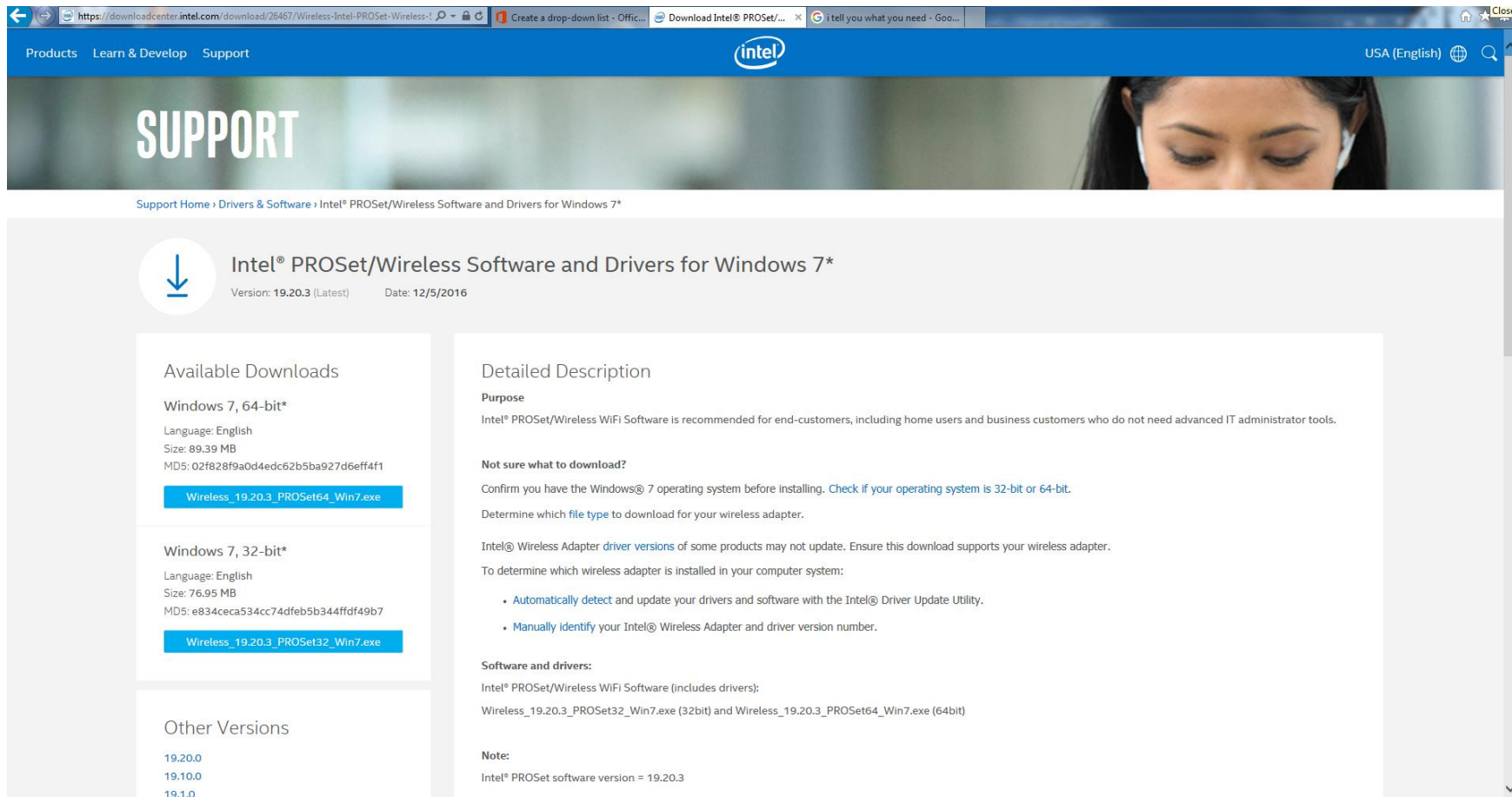
1860

1910

1937

1993

## Intel



The screenshot shows the Intel website's support page for Windows 7. The browser address bar shows the URL: <https://downloadcenter.intel.com/download/26467/Wireless-Intel-PROSet-Wireless-1>. The page header includes navigation links: Products, Learn & Develop, Support, and the Intel logo. The main heading is "SUPPORT". Below it, the breadcrumb trail reads: Support Home > Drivers & Software > Intel® PROSet/Wireless Software and Drivers for Windows 7\*.

The main content area features a download icon and the title "Intel® PROSet/Wireless Software and Drivers for Windows 7\*". Below the title, it specifies "Version: 19.20.3 (Latest)" and "Date: 12/5/2016".

**Available Downloads**

**Windows 7, 64-bit\***

Language: English  
Size: 89.39 MB  
MD5: 02f828f9a0d4edc62b5ba927d6eff4f1

[Wireless\\_19.20.3\\_PROSet64\\_Win7.exe](#)

**Windows 7, 32-bit\***

Language: English  
Size: 76.95 MB  
MD5: e834ceca534cc74dfeb5b344ffdf49b7

[Wireless\\_19.20.3\\_PROSet32\\_Win7.exe](#)

**Other Versions**

19.20.0  
19.10.0  
19.1.0

**Detailed Description**

**Purpose**  
Intel® PROSet/Wireless WiFi Software is recommended for end-customers, including home users and business customers who do not need advanced IT administrator tools.

**Not sure what to download?**  
Confirm you have the Windows® 7 operating system before installing. Check if your operating system is 32-bit or 64-bit.  
Determine which file type to download for your wireless adapter.

Intel® Wireless Adapter [driver versions](#) of some products may not update. Ensure this download supports your wireless adapter.  
To determine which wireless adapter is installed in your computer system:

- Automatically detect and update your drivers and software with the Intel® Driver Update Utility.
- Manually identify your Intel® Wireless Adapter and driver version number.

**Software and drivers:**  
Intel® PROSet/Wireless WiFi Software (includes drivers):  
Wireless\_19.20.3\_PROSet32\_Win7.exe (32bit) and Wireless\_19.20.3\_PROSet64\_Win7.exe (64bit)

**Note:**  
Intel® PROSet software version = 19.20.3

## Design 2017

- Dispozitive
  - Mobile
  - Ecran mic
- Nu pentru lucrurile importante
  - Retur la F-Shape
- “I know better what you need, please don’t think”
  - I’m feeling lucky

## Regula nr. 1

# Don't Make Me Think



# Intrebari

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[www.tuiasi.ro](http://www.tuiasi.ro)

1813

1860

1910

1937

1993



## Contact

- Laboratorul de microunde si optoelectronica
- <http://rf-opto.etti.tuiasi.ro>
- [rdamian@etti.tuiasi.ro](mailto:rdamian@etti.tuiasi.ro)