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# New ICT Technologies

## World Wide Web

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# The reasons behind the success of the Web

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- » Digitization of information
  - Any information encoded as a sequence of 0s and 1s
- » Spread of the Internet (since the 1970s)
  - Transport of information anywhere, in a very short time and at very low cost
- » Diffusion of PCs (since the 80s)
  - Access, storage and processing of information by anyone at very low cost)
- » "User friendly" interfaces



# World Wide Web (WWW)

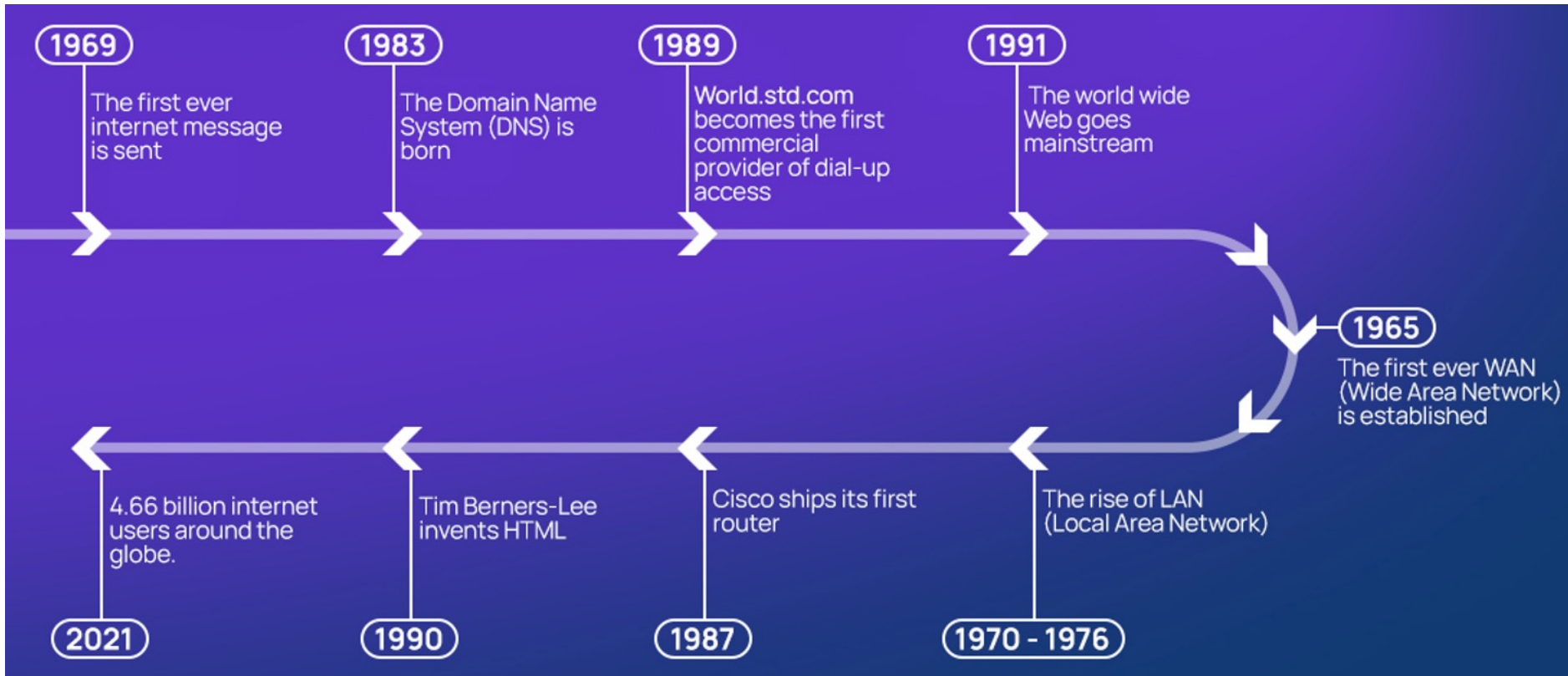
---

"I just had to take the hypertext idea and connect it to the TCP and DNS ideas and — ta-da!— the World Wide Web."

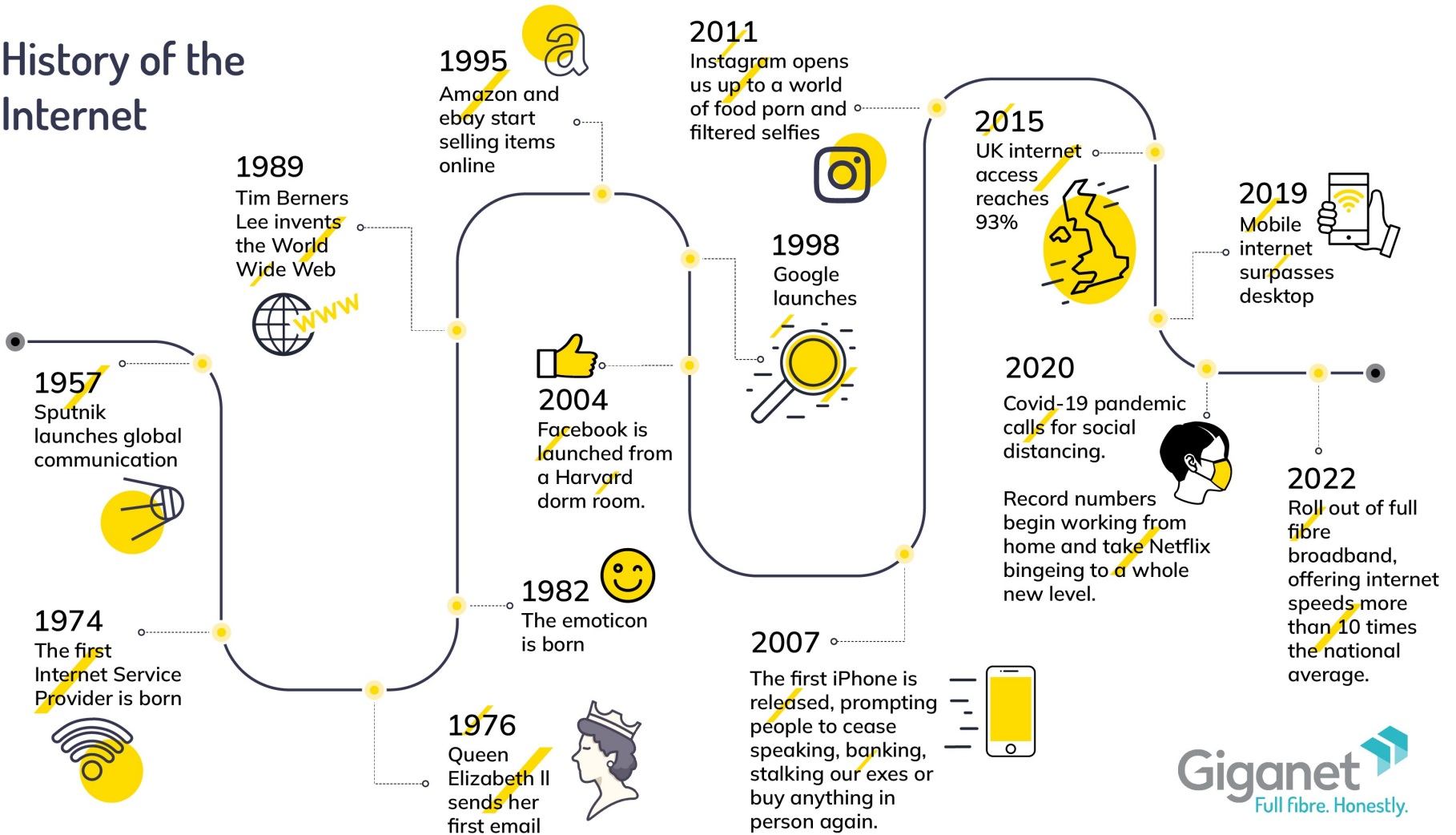


**Tim Berners-Lee (born 8 June ) is the inventor of the World Wide Web and director of the World Wide Web Consortium, which oversees its continued development**

# World Wide Web (WWW)



# History of the Internet



**Giganet**  
Full fibre. Honestly.

# World Wide Web (WWW)

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- » The World Wide Web (WWW or Web) is an information system that enables content sharing over the Internet through user-friendly ways meant to appeal to users beyond IT specialists and hobbyists.
- » It allows documents and other web resources to be accessed over the Internet according to specific rules of the Hypertext Transfer Protocol (HTTP)

# Ingredients of the Web

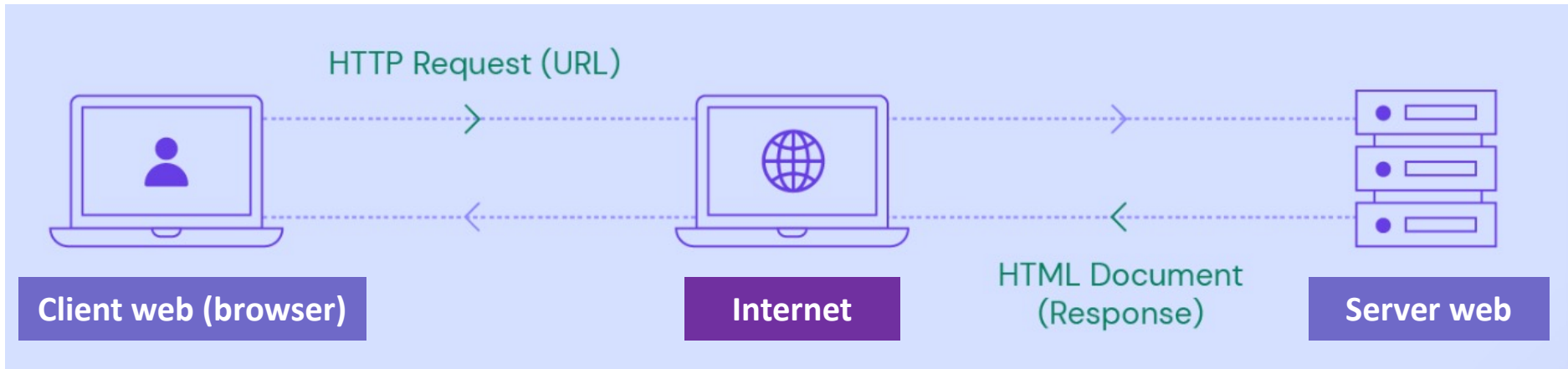
---

- » Communication and naming mechanisms of the Internet
  - TCP/IP Protocol Stack and DNS System
- » Client-server system
- » "Only" three new standards
  - URL: Resource Addressing System
  - HTML: Hypertext Markup Language
  - HTTP: Protocol for Resource Requests



# Request for a web resource

---





# HTTP protocol

---

» *HyperText Transmission Protocol (HTTP) is the protocol that allows the retrieval of Web resources*

**http://**

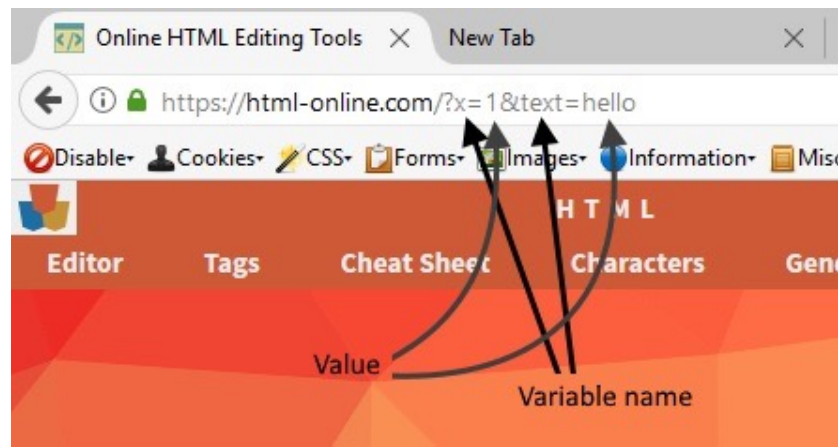
- » It is a request/reply application protocol
- » All web clients and web servers must support the HTTP protocol in order to exchange requests and responses.
  - For this reason, Web clients and servers are also called HTTP clients and HTTP servers

# HTTP protocol

---

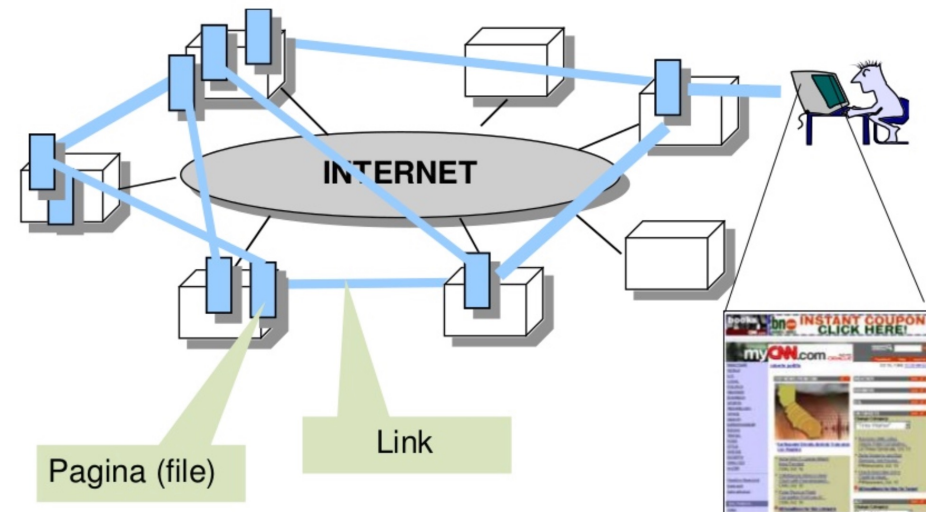
1. The browser prompts you to open a connection to the web server
2. If possible, the Web server accepts the connection from the client. Once the connection is opened, various text-based HTTP messages are exchanged between the browser and the Web server "to reach an agreement"
3. After that, the client asks for the first file which is typically the "container file"
4. Once the container file is obtained, the client checks if there are any "embedded objects" and requests them one at a time (there can be as many as 60-80 files of embedded objects)
5. When finished, there is closing the connection

# Universal Resource Locator (URL)



# Describe a web page

- » Server stores the source file
  - Describes the page to be displayed
- » The browser creates and displays the image
  - starting from the file that contains the description (source file)
  - can adapt the image to the characteristics of the monitor of the device used





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Didattica ▸ Corsi di Laurea



## DIDATTICA

### CORSI DI LAUREA

CORSI DI LAUREA ANNI  
PRECEDENTI

MASTER E CORSI DI  
FORMAZIONE

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## Corsi di Laurea

### Giurisprudenza

#### Giurisprudenza - Sede di Teramo

Accesso: libero  
Classe di Corso: LMG/01  
Tipo di Corso: Laurea a ciclo unico (5  
anni)

#### Giurisprudenza - Sede di Avezzano

Accesso: libero  
Classe di Corso: LMG/01  
Tipo di Corso: Laurea a ciclo unico (5  
anni)

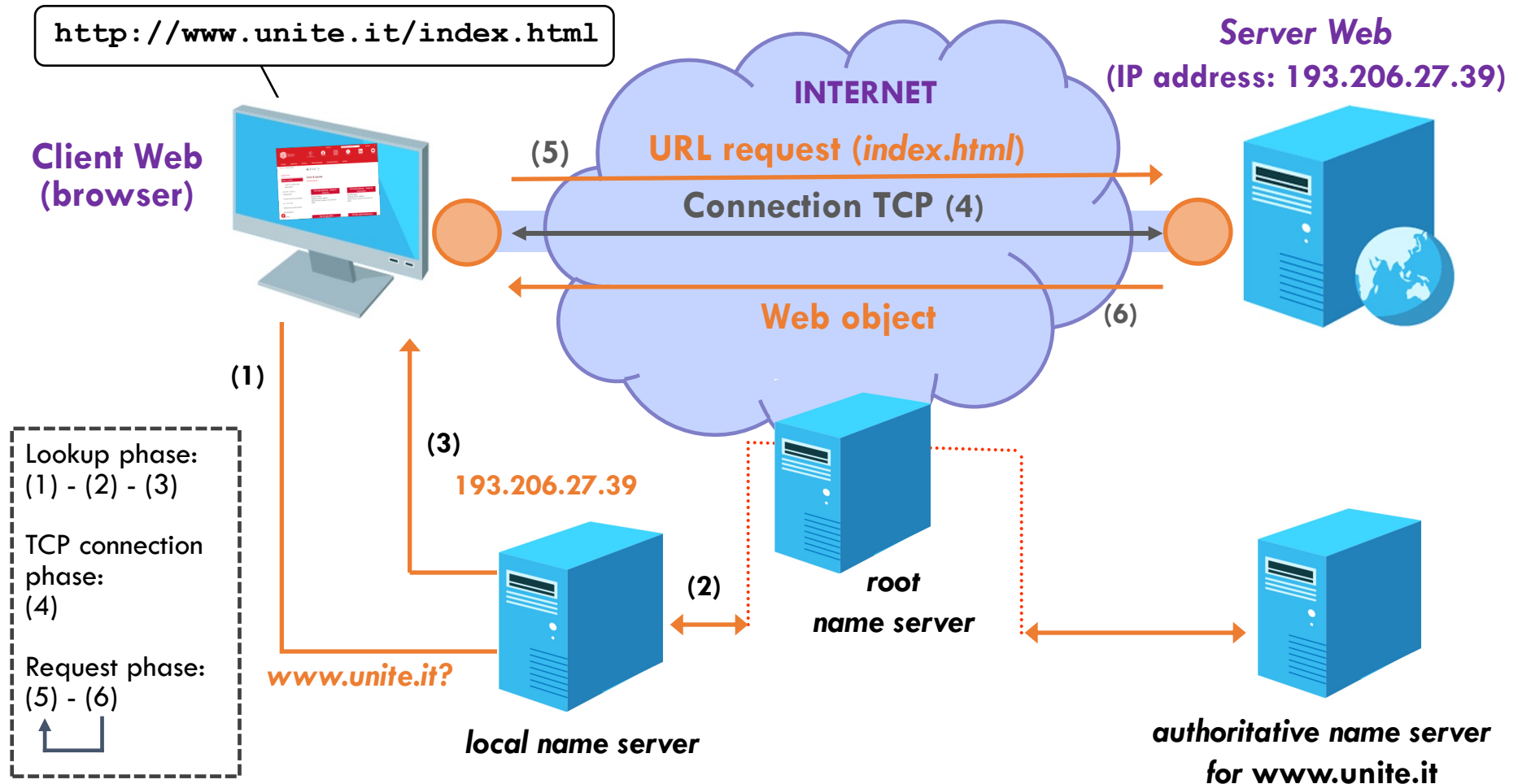


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# Requesting a Web Resource



*Hypothesis: Requesting an HTML page with no embedded objects*

# Markup language: HTML

---

- » Two " problems "
  - What I present
  - How I present it
- » On the web, text content and text presentation rules are placed in the same file
- » To allow the correct display of the information on any computer connected to the Internet, a new markup language has been defined for the formatting of pages
- » To this day, the markup language, HyperText Markup Language (HTML), remains the "language of the Web"

# HyperText Markup Language (HTML)

---

- » Describes the structure and layout of Web pages
- » Margins
- » Font
- » Paragraph style
- » Location of images, ...



## HTML Tutorial

### HTML HOME

- HTML Introduction
- HTML Editors
- HTML Basic
- HTML Elements
- HTML Attributes
- HTML Headings
- HTML Paragraphs
- HTML Styles
- HTML Formatting
- HTML Quotations
- HTML Comments
- HTML Colors
- HTML CSS
- HTML Links
- HTML Images
- HTML Tables
- HTML Lists
- HTML Blocks
- HTML Classes
- HTML Id
- HTML Iframes

# HTML Tutorial

[◀ Home](#)[Next ▶](#)

HTML is the standard markup language for Web pages.

With HTML you can create your own Website.

HTML is easy to learn - You will enjoy it!

## Examples in Every Chapter

This HTML tutorial contains hundreds of HTML examples.

With our online HTML editor, you can edit the HTML, and click on a button to view the result.

[https://www.w3schools.com/tags/ref\\_byfunc.asp](https://www.w3schools.com/tags/ref_byfunc.asp)

# HTML Instructions

---

- » The description of the contents of the hypertext is carried out by inserting within the text itself some instructions called *markups* or *tags* that produce the specified visualizations and actions
- » HTML statements are enclosed in angle brackets, in the form **<tag>**, and are terminated by a closing tag in the shape **</tag>**

```
<CENTER>  
  <B>  
    <FONT="Arial"> <FONT COLOR="#336633"> <FONT SIZE=+1>  
      Informazioni generali  
    </FONT> </FONT> </FONT>  
  </B>  
</CENTER>
```

# HTML formatting

---

- » Lines of source code do not match what is displayed
- » HTML code tells the browser how to produce the formatted page
  - based on the meaning of the tags
  - not to the appearance of the source code

# Well-structured form

---

- » Makes it easy
  - Comprehension
  - Maintenance
- » Tags for a paragraph of text
  - `<p> </p>`

# Spaces in Source Code

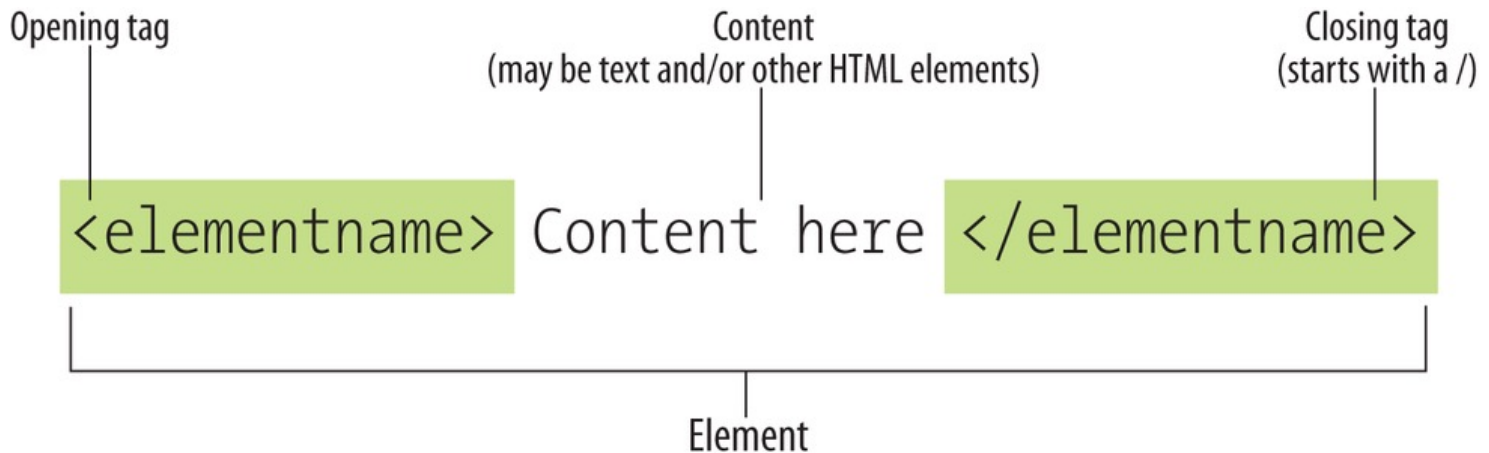
---

- » To facilitate readability
  - Spaces
  - Tabs
  - Wrap
- » Browser:
  - Transform sequences of multiple spaces into one before processing the HTML code
  - The only exception
    - » The text included in the `<pre>` tags and `</pre>` is always displayed as it appears in the source code

# Format with tags

---

- » Words or acronyms enclosed in angle brackets  
< >
- » They are used in pairs (opening and closing),  
e.g.: <title> </title>
- » Case-insensitive



<h1>Black Goose Bistro</h1>

# HTML Documents

---

- » All HTML documents must start with a document type declaration: `<!DOCTYPE html>`
- » The HTML document itself begins with `<html>` and ends with `</html>`
- » The visible part of the HTML document is between `<body>` and `</body>`

```
<!DOCTYPE html>
<html>
<body>

<h1>My First Heading</h1>

<p>My first paragraph.</p>

</body>
</html>
```

## My First Heading

My first paragraph.

- » The `<!DOCTYPE>` declaration represents the document type, and helps browsers to display web pages correctly
- » It must only appear once, at the top of the page (before any HTML tags).
- » The `<!DOCTYPE>` declaration is not case sensitive.
- » The `<!DOCTYPE>` declaration for HTML5 is:

```
<!DOCTYPE html>
```

# Basic HTML document structure

document type declaration

```
<!DOCTYPE html>
```

descriptive info

```
<html>
```

```
<head>
```

```
<meta charset="utf-8">
```

```
<title>Title here</title>
```

```
</head>
```

document info

Descriptive title (mandatory)

root element

```
<body>
```

```
Page content goes here.
```

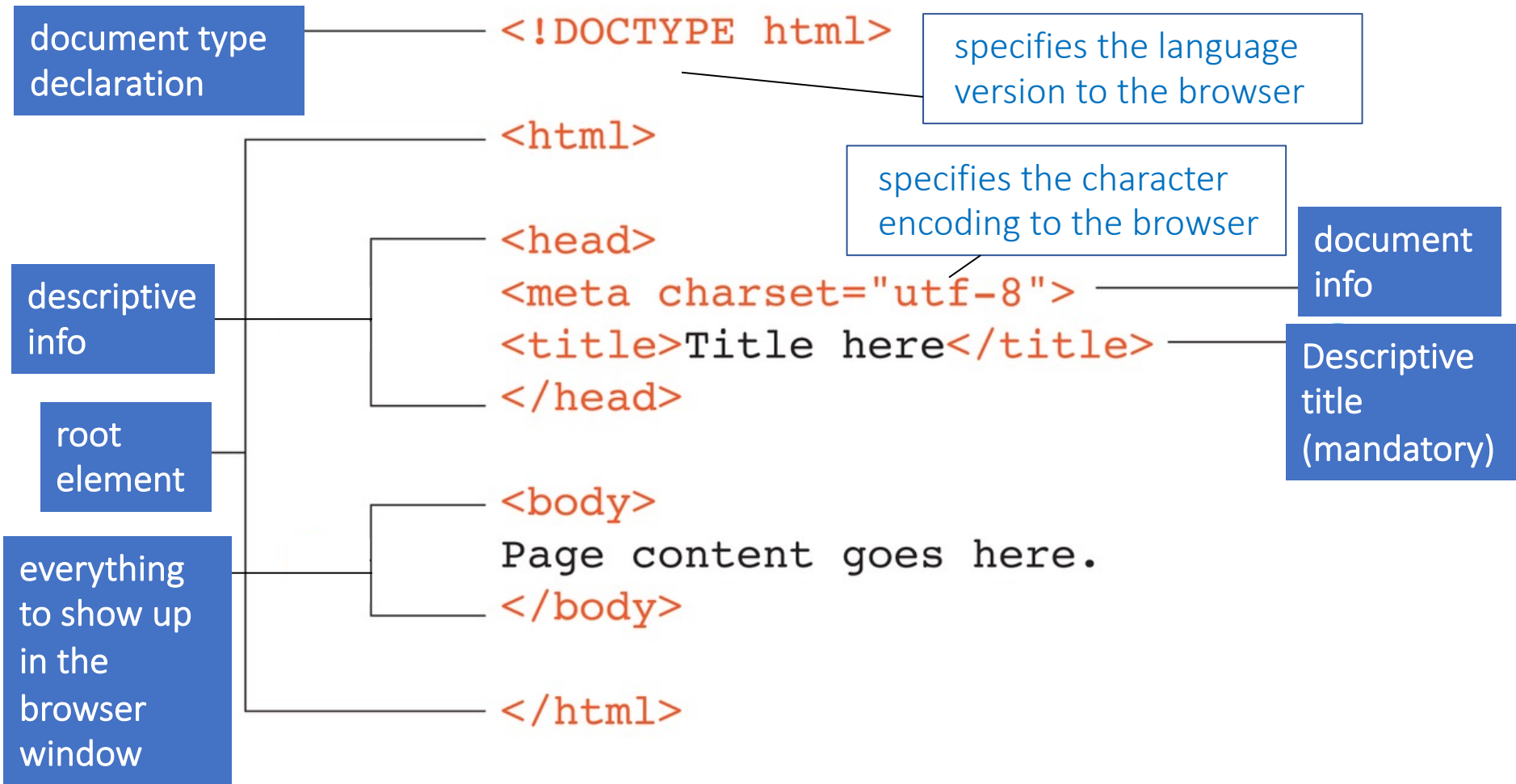
```
</body>
```

everything to show up in the browser window

```
</html>
```



# Basic HTML document structure



# Exercise: Adding basic structure

---

1. Create and open a new document, *index.html*
2. Start by adding the HTML5 DOCTYPE declaration: `<!DOCTYPE html>`
3. Put the entire document in an HTML root element by adding an `<html>` start tag at the very beginning and an `</html>` end tag at the end of the text.
4. Next, create the document head that contains the title for the page. Insert `<head>` and `</head>` tags before the content. Within the `head` element, add information about the character encoding `<meta charset="utf-8">`, and the title, “Black Goose Bistro”, surrounded by opening and closing `<title>` tags.
5. *The correct terminology is to say that the `title` element is **nested** within the `head` element.*
6. Finally, define the body of the document by wrapping the content in `<body>` and `</body>` tags. When you are done, the source document should look like this (the markup is shown in color to make it stand out):

# Exercise: Adding basic structure

---

```
<!DOCTYPE html>
<html>

<head>
<meta charset="utf-8">
<title>Black Goose Bistro</title>
</head>

<body>
Black Goose Bistro

The Restaurant
The Black Goose Bistro offers casual lunch and dinner fare in a hip atmosphere.

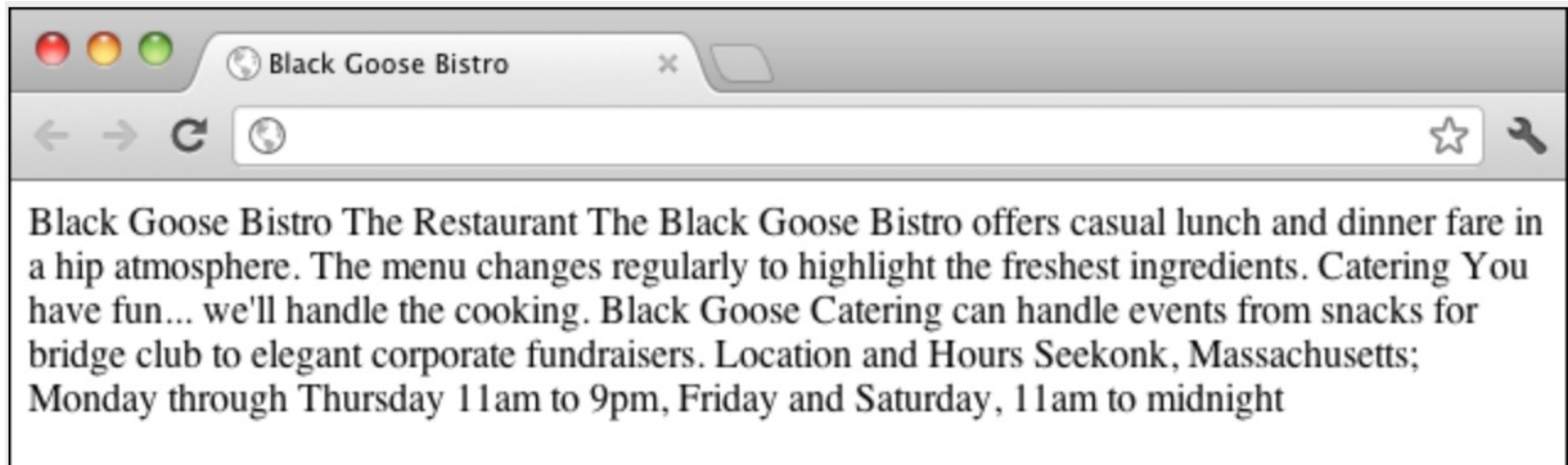
Catering
You have fun... we'll do the cooking. Black Goose catering can handle events from
Location and Hours Seekonk, Massachusetts; Monday through Thursday 11am to 9pm, F
</body>

</html>
```

# Exercise: Adding basic structure

---

7. Save the document in a directory of your filesystem. Open the file in the browser or hit “refresh” or “reload” if it is open already.



<https://www.oreilly.com/library/view/learning-web-design/9781449337513/ch04.html>

# HTML Headings

---

- » HTML headings are defined with the <h1> to <h6> tags
  - <h1> defines the most important heading
  - <h6> defines the least important heading

```
<!DOCTYPE html>
<html>
<body>

<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
<h3>This is heading 3</h3>
<h4>This is heading 4</h4>
<h5>This is heading 5</h5>
<h6>This is heading 6</h6>

<p><b>Tip:</b> Use h1 to h6 elements only for
headings. Do not use them just to make text bold or
big. Use other tags for that.</p>

</body>
</html>
```

**This is heading 1**

**This is heading 2**

**This is heading 3**

**This is heading 4**

**This is heading 5**

**This is heading 6**

**Tip:** Use h1 to h6 elements only for headings. Do not use them just to make text bold or big. Use other tags for that.

[https://www.w3schools.com/tags/tryit.asp?filename=tryhtml\\_headers](https://www.w3schools.com/tags/tryit.asp?filename=tryhtml_headers)

# Tag for bold

---

» Bold:    <b> </b>  
          <b> bold body </b>

```
<!DOCTYPE html>  
<html>  
<body>  
  
<h1>The b element</h1>  
  
<p>This is normal text - <b>and this is bold text</b>.</p>  
  
</body>  
</html>
```

## The b element

This is normal text - **and this is bold text.**

[https://www.w3schools.com/tags/tryit.asp?filename=tryhtml5\\_b](https://www.w3schools.com/tags/tryit.asp?filename=tryhtml5_b)

# Tags for italics

---

» Italic:    <i>    </i>  
          <i> body Italic </i>

```
<!DOCTYPE html>
<html>
<body>

<h1>The i element</h1>

<p>He named his car <i>The lightning</i>, because it
was very fast.</p>

</body>
</html>
```

## The i element

He named his car *The lightning*, because it was very fast.

[https://www.w3schools.com/tags/tryit.asp?filename=tryhtml5\\_i](https://www.w3schools.com/tags/tryit.asp?filename=tryhtml5_i)

# Multiple formatting

---

» Multiple formatting can be applied at the same time

```
<!DOCTYPE html>
<html>
<body>

<h1>The i and the b elements</h1>

<p>He named his <i>car</i> <i><b>The lightning</b>
</i>, because it was very <b>fast</b>.</p>

</body>
</html>
```

## The i and the b elements

He named his *car* ***The lightning***, because it was very **fast**.



# The order of the tags

---

» Tags must be nested correctly, e.g.:



`<i><b> text </b></i>`



`<i><b> text </i></b>`

# Single tags

---

» There are single tags that don't have closure

`<hr/>` Horizontal Separating Row

`<br/>` Line break

```
<!DOCTYPE html>
<html>
<body>

<h1>HTML</h1>
<p>HTML is a language for describing <br/>web pages.
</p>

<hr/>

<h1>CSS</h1>
<p>CSS defines how to display HTML elements.</p>

</body>
</html>
```

## HTML

HTML is a language for describing web pages.

---

## CSS

CSS defines how to display HTML elements.

# Strong and others

---

```
<!DOCTYPE html>
<html>
<body>

<h1>Phrase elements</h1>

<em>Emphasized text</em><br>
<strong>Strong text</strong><br>
<code>A piece of computer code</code><br>
<samp>Sample output from a computer program</samp>
<br>
<kbd>Keyboard input</kbd><br>
<var>Variable</var>

</body>
</html>
```

## Phrase elements

*Emphasized text*

**Strong text**

A piece of computer code

Sample output from a computer program

Keyboard input

*Variable*

# Attributes in tags

---

- » They add additional directions to the tag
- » They are inside the angle brackets
  - E.g.: to align a text or image name

```
<!DOCTYPE html>
<html>
<body>

<h1>The img element</h1>



</body>
</html>
```

```
<!DOCTYPE html>
<html>
<body>

<h1>The img element</h1>



</body>
</html>
```

## The img element



## The img element



Smiley face

[https://www.w3schools.com/tags/tryit.asp?filename=tryhtml\\_image\\_test](https://www.w3schools.com/tags/tryit.asp?filename=tryhtml_image_test)

# Special characters

---

- » If our page contains a mathematical relationship such as
  - $0 < p > r$
- » The browser would interpret  $< p >$  as a tag
  - displaying text incorrectly

# Escape code

```
<!DOCTYPE html>
<html>
<body>

<h1>The escape code</h1>

Vediamo
degli

esempi <br><br>

Scorretto: <p>

Corretto: &lt; p &gt;<br><br>

<p><b>Lettere accentate</b>:</p>
&grave;<br>
&agrave;<br>
&eacute;<br>
&ntilde;<br>
&uuml;<br>

</body>
</html>
```

## The escape code

Vediamo degli esempi

Scorretto:

Corretto: < p >

**Lettere accentate:**

è  
à  
é  
ñ  
ü

Indicates Special Symbols

“&” followed by a specific code and a semicolon

<https://corsidia.com/materia/web-design/caratterispecialihtml>

# Colors

---

- » HTML colors are specified with predefined color names, or with RGB, HEX, HSL, RGBA, or HSLA values
- » Color Names
  - In HTML, a color can be specified by using a color name:



Tomato

Orange

DodgerBlue

MediumSeaGreen

Gray

SlateBlue

Violet

LightGray

# Colors

---

## » Background Color

- You can set the background color for HTML elements:

Hello World

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.

## Example

```
<h1 style="background-color: DodgerBlue;">Hello World</h1>  
<p style="background-color: Tomato;">Lorem ipsum...</p>
```

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_background](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_background)



# Colors

---

## » Text Color

- You can set the color of text:

Hello World

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.

## Example

```
<h1 style="color:Tomato;">Hello World</h1>  
<p style="color:DodgerBlue;">Lorem ipsum...</p>  
<p style="color:MediumSeaGreen;">Ut wisi enim...</p>
```

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_text](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_text)

# Colors

---

## » Border Color

- You can set the color of borders:

Hello World

Hello World

Hello World

### Example

```
<h1 style="border:2px solid Tomato;">Hello World</h1>  
<h1 style="border:2px solid DodgerBlue;">Hello World</h1>  
<h1 style="border:2px solid Violet;">Hello World</h1>
```

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_border](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_border)

# Color Values

---

- » In HTML, colors can also be specified using RGB values, HEX values, HSL values, RGBA values, and HSLA values
- » *(Example 1)* The following three <div> elements have their background color set with RGB, HEX, and HSL values

`rgb(255, 99, 71)`

`#ff6347`

`hsl(9, 100%, 64%)`

```
<h1 style="background-color:rgb(255, 99, 71);">...</h1>
```

```
<h1 style="background-color:#ff6347;">...</h1>
```

```
<h1 style="background-color:hsl(9, 100%, 64%);">...</h1>
```

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_values](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_values)

# Color Values

---

- » In HTML, colors can also be specified using RGB values, HEX values, HSL values, RGBA values, and HSLA values
- » (*Example 2*) The following two <div> elements have their background color set with RGBA and HSLA values, which add an Alpha channel to the color (here we have 50% transparency):

```
rgba(255, 99, 71, 0.5)
```

```
hsla(9, 100%, 64%, 0.5)
```

```
<h1 style="background-color:rgba(255, 99, 71, 0.5);">...</h1>
```

```
<h1 style="background-color:hsla(9, 100%, 64%, 0.5);">...</h1>
```

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_values](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_values)

# RGB and RGBA Colors

---

» An RGB color value represents RED, GREEN, and BLUE light sources

**`rgb(red, green, blue)`**

- Each parameter (red, green, and blue) defines the intensity of the color with a value between 0 and 255 →  $256 \times 256 \times 256 = 16777216$  possible colors!

`rgb(255, 0, 0)`

`rgb(0, 0, 255)`

`rgb(60, 179, 113)`

`rgb(238, 130, 238)`

`rgb(255, 165, 0)`

`rgb(106, 90, 205)`

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_rgb](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_rgb)

# RGB and RGBA Colors

---

» An RGB color value represents RED, GREEN, and BLUE light sources

**`rgb(red, green, blue)`**

- Each parameter (red, green, and blue) defines the intensity of the color with a value between 0 and 255 →  $256 \times 256 \times 256 = 16777216$  possible colors!

`rgb(60, 60, 60)`

`rgb(100, 100, 100)`

`rgb(140, 140, 140)`

`rgb(180, 180, 180)`

`rgb(200, 200, 200)`

`rgb(240, 240, 240)`

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_rgb](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_rgb)

# RGB and RGBA Colors

---

» RGBA color values are an extension of RGB color values with an Alpha channel - which specifies the opacity for a color.

**`rgba (red, green, blue, alpha)`**

`rgba (255, 99, 71, 0)`

`rgba (255, 99, 71, 0.2)`

`rgba (255, 99, 71, 0.4)`

`rgba (255, 99, 71, 0.6)`

`rgba (255, 99, 71, 0.8)`

`rgba (255, 99, 71, 1)`

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_rgba](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_rgba)

# HEX Colors

---

- » A hexadecimal color is specified with: #RRGGBB, where the RR (red), GG (green) and BB (blue) hexadecimal integers specify the components of the color

**#rrggbb**

- » Where rr (red), gg (green) and bb (blue) are hexadecimal values between 00 and ff (same as decimal 0-255)



#ff0000



#0000ff



#3cb371



#ee82ee



#ffa500



#6a5acd

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_hex](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_hex)



# HSL and HSLA Colors

---

» HSL stands for hue, saturation, and lightness

**`hsl(hue, saturation, lightness)`**

- Hue is a degree on the color wheel from 0 to 360. 0 is red, 120 is green, and 240 is blue.
- Saturation is a percentage value. 0% means a shade of gray, and 100% is the full color.
- Lightness is also a percentage value. 0% is black, and 100% is white.

`hsl(0, 100%, 50%)`

`hsl(240, 100%, 50%)`

`hsl(147, 50%, 47%)`

`hsl(300, 76%, 72%)`

`hsl(39, 100%, 50%)`

`hsl(248, 53%, 58%)`

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_hsl](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_hsl)

# HSL and HSLA Colors

---

» HSL stands for hue, saturation, and lightness

**`hsl(hue, saturation, lightness)`**

- Hue is a degree on the color wheel from 0 to 360. 0 is red, 120 is green, and 240 is blue.
- Saturation is a percentage value. 0% means a shade of gray, and 100% is the full color.
- Lightness is also a percentage value. 0% is black, and 100% is white.

`hsl(0, 0%, 20%)`

`hsl(0, 0%, 30%)`

`hsl(0, 0%, 40%)`

`hsl(0, 0%, 60%)`

`hsl(0, 0%, 70%)`

`hsl(0, 0%, 90%)`

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_hsl](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_hsl)

# HSL and HSLA Colors

---

» *Saturation* can be described as the intensity of a color.

- 100% is pure color, no shades of gray
- 50% is 50% gray, but you can still see the color
- 0% is completely gray; you can no longer see the color

`hsl(0, 100%, 50%)`

`hsl(0, 80%, 50%)`

`hsl(0, 60%, 50%)`

`hsl(0, 40%, 50%)`

`hsl(0, 20%, 50%)`

`hsl(0, 0%, 50%)`

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_hsl\\_saturation](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_hsl_saturation)

# HSL and HSLA Colors

---

» *Lightness* of a color can be described as how much light you want to give the color, where 0% means no light (black), 50% means 50% light (neither dark nor light), and 100% means full lightness (white).

`hsl(0, 100%, 0%)`

`hsl(0, 100%, 25%)`

`hsl(0, 100%, 50%)`

`hsl(0, 100%, 75%)`

`hsl(0, 100%, 90%)`

`hsl(0, 100%, 100%)`

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_hsl\\_lightness](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_hsl_lightness)

# HSL and HSLA Colors

---

- » HSLA color values are an extension of HSL color values, with an Alpha channel - which specifies the opacity for a color

**`hsla(hue, saturation, lightness, alpha)`**

- » The alpha parameter is a number between 0.0 (fully transparent) and 1.0 (not transparent at all)

`hsla(9, 100%, 64%, 0)`

`hsla(9, 100%, 64%, 0.2)`

`hsla(9, 100%, 64%, 0.4)`

`hsla(9, 100%, 64%, 0.6)`

`hsla(9, 100%, 64%, 0.8)`

`hsla(9, 100%, 64%, 1)`

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_color\\_hsla](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_color_hsla)

# Cascade Style Sheet (CSS)

---

- » Cascading Style Sheets (CSS) is used to format the layout of a webpage
- » CSS saves a lot of work. It can control the layout of multiple web pages all at once
- » Examples of managed elements:
  - color, font, size of text, spacing between elements
  - how elements are positioned and laid out
  - what background images or background colors are to be used
  - different displays for different devices and screen sizes
  - ....

[https://www.w3schools.com/html/html\\_css.asp](https://www.w3schools.com/html/html_css.asp)

# Using CSS

---

- » CSS can be added to HTML documents in 3 ways:
  - **Inline** - by using the style attribute inside HTML elements
  - **Internal** - by using a <style> element in the <head> section
  - **External** - by using a <link> element to link to an external CSS file

[https://www.w3schools.com/html/html\\_css.asp](https://www.w3schools.com/html/html_css.asp)

# Inline CSS

---

- » An inline CSS is used to apply a unique style to a single HTML element.
- » An inline CSS uses the style attribute of an HTML element.

```
<!DOCTYPE html>
<html>
<body>

<h1 style="color:blue;">A Blue Heading</h1>

<p style="color:red;">A red paragraph.</p>

</body>
</html>
```

## A Blue Heading

A red paragraph.

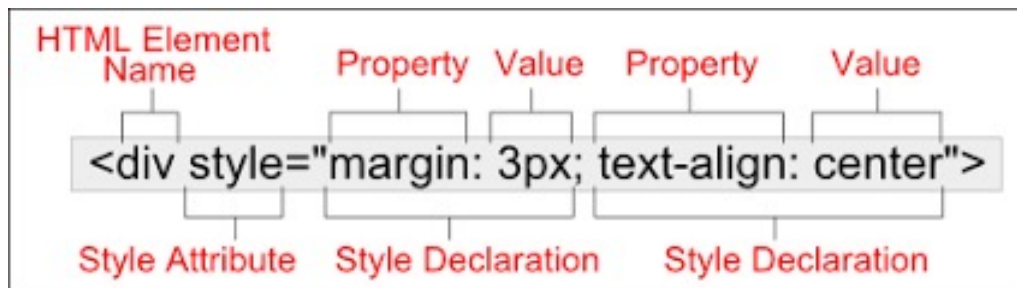
[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_css\\_inline](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_css_inline)



# Inline CSS: style attribute

---

- » The *style* attribute specifies an inline style for an element.
- » The *style* attribute will override any style set globally, e.g. styles specified in the `<style>` tag or in an external style sheet.
- » Several properties, e.g., color, dimension, position, ...



# Inline CSS: style attribute

---

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {color:red;}
p {color:blue;}
</style>
</head>
<body style="background-color : black; color :
white">

<h1>This is a heading</h1>
<p>This is a paragraph.</p>
<p style="color:black">Stile diverso solo per questa
occorrenza di p</p>
<p>Torniamo allo stile definito nell'header</p>

<h1 style="text-align : center; color : yellow; font-
family : arial"> Differente heading</h1>

Questo &grave; il body

</body>
</html>
```

**This is a heading**

This is a paragraph.

Torniamo allo stile definito nell'header

**Differente heading**

Questo è il body

# Internal CSS

---

- » An internal CSS is used to define a style for a single HTML page.
- » An internal CSS is defined in the <head> section of an HTML page, within a <style> element.

```
<!DOCTYPE html>
<html>
<head>
<style>
body {background-color: powderblue;}
h1   {color: blue;}
p    {color: red;}
</style>
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

**This is a heading**

This is a paragraph.

# External CSS

---

- » An external style sheet is used to define the style for many HTML pages.
- » To use an external style sheet, a link is added in the <head> section of each HTML page

```
<!DOCTYPE html>
<html>
<head>
  <link rel="stylesheet" href="styles.css">
</head>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

**This is a heading**

This is a paragraph.

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_css\\_external](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_css_external)

# External CSS

---

- » The external style sheet can be written in any text editor. The file must not contain any HTML code, and must be saved with a .css extension.
- » Here is what the "styles.css" file looks like:

"styles.css":

```
body {  
    background-color: powderblue;  
}  
h1 {  
    color: blue;  
}  
p {  
    color: red;  
}
```

# Lists

---

```
<!DOCTYPE html>
<html>
<body>

<h1>The ol and ul elements</h1>

<p>The ol element defines an ordered list:</p>
<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>

<p>The ul element defines an unordered list:</p>
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>

</body>
</html>
```

[https://www.w3schools.com/tags/tryit.asp?filename=tryhtml\\_list\\_test](https://www.w3schools.com/tags/tryit.asp?filename=tryhtml_list_test)

## The ol and ul elements

The ol element defines an ordered list:

1. Coffee
2. Tea
3. Milk

The ul element defines an unordered list:

- Coffee
- Tea
- Milk

# Ordered, unordered, nested lists

---

```
<!DOCTYPE html>
<html>
<body>

<h1>The ul element within an ol element</h1>

<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <ul>
    <li>Coffee</li>
    <li>Tea</li>
    <li>Milk</li>
  </ul>
  <li>Milk</li>
</ol>
```

## The ul element within an ol element

1. Coffee
2. Tea
  - Coffee
  - Tea
  - Milk
3. Milk

# Tables

---

```
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td {
  border: 1px solid black;
}
</style>
</head>
<body>

<h1>The table element</h1>

<table>
  <tr>
    <th>Month</th>
    <th>Savings</th>
  </tr>
  <tr>
    <td>January</td>
    <td>$100</td>
  </tr>
  <tr>
    <td>February</td>
    <td>$80</td>
  </tr>
</table>

</body>
</html>
```

## The table element

| Month    | Savings |
|----------|---------|
| January  | \$100   |
| February | \$80    |

[https://www.w3schools.com/tags/tryit.asp?filename=tryhtml\\_table\\_test](https://www.w3schools.com/tags/tryit.asp?filename=tryhtml_table_test)



# Div

---

- » The `<div>` element is used as a container for other HTML element
  - `<div>` is by default a block element, meaning that it takes all available width, and comes with line breaks before and after

```
<!DOCTYPE html>
<html>
<body>

<h1>Multiple DIV Elements</h1>

<div style="background-color:#FFF4A3;">
  <h2>London</h2>
  <p>London is the capital city of England.</p>
  <p>London has over 13 million inhabitants.</p>
</div>

<div style="background-color:#FFC0C7;">
  <h2>Oslo</h2>
  <p>Oslo is the capital city of Norway.</p>
  <p>Oslo has over 600.000 inhabitants.</p>
</div>

<div style="background-color:#D9EEE1;">
  <h2>Rome</h2>
  <p>Rome is the capital city of Italy.</p>
  <p>Rome has almost 3 million inhabitants.</p>
</div>

<p>CSS styles are added to make it easier to separate the
divs, and to make them more pretty:</p>

</body>
</html>
```

## Multiple DIV Elements

### London

London is the capital city of England.

London has over 13 million inhabitants.

### Oslo

Oslo is the capital city of Norway.

Oslo has over 600.000 inhabitants.

### Rome

Rome is the capital city of Italy.

Rome has almost 3 million inhabitants.

CSS styles are added to make it easier to separate the divs, and to make them more pretty:)

[https://www.w3schools.com/html/html\\_div.asp](https://www.w3schools.com/html/html_div.asp)

# Links → Hyperlinks

---

- » Links are found in nearly all web pages and allow users to click their way from page to page
- » Hyperlinks: you can click on a link and jump to another document
- » The most innovative instruction of HTML is the anchor delimited by the `<a>` tag, as this element allows you to transform normal text into multimedia hypertext.
- » An anchor can refer to a section of the same page or to any resource (textual, multimedia, executable) on the Web, denoted by a URL that must be inserted within the anchor tag



# Links: syntax

---

```
<a href="url">link text</a>
```

- » The most important attribute of the `<a>` element is the href attribute, which indicates the link's destination.
- » The link text is the part that will be visible to the reader

```
<!DOCTYPE html>
<html>
<body>

<h1>HTML Links</h1>

<p><a href="https://www.w3schools.com/">Visit
W3Schools.com!</a></p>

</body>
</html>
```

## HTML Links

[Visit W3Schools.com!](https://www.w3schools.com/)

The text [Visit W3Schools.com!](https://www.w3schools.com/) is displayed differently and is a symbolic link that can be clicked on with the mouse.

[https://www.w3schools.com/html/tryit.asp?filename=tryhtml\\_links\\_w3schools](https://www.w3schools.com/html/tryit.asp?filename=tryhtml_links_w3schools)

# <a> allows hypermediality on a geographical scale with consequences ...

---

Disruptive consequences

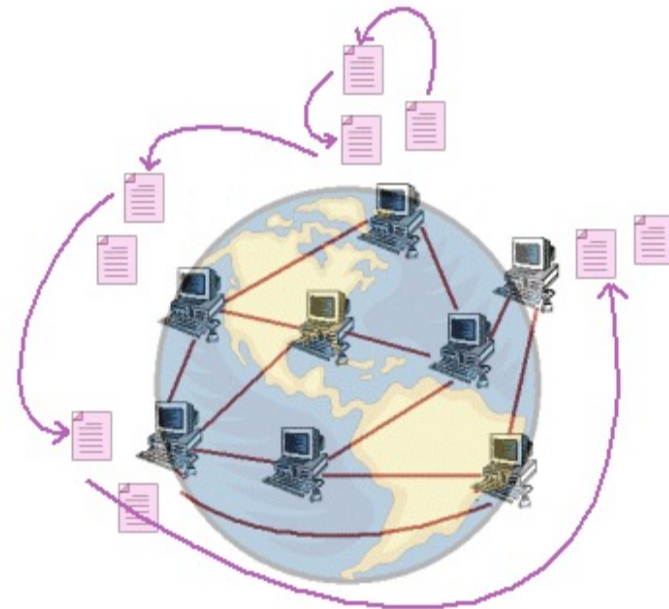
from a historical and

Social: information does not

It is more organized into rigid hierarchical schemes (e.g., catalogs

librarians, classifications), but

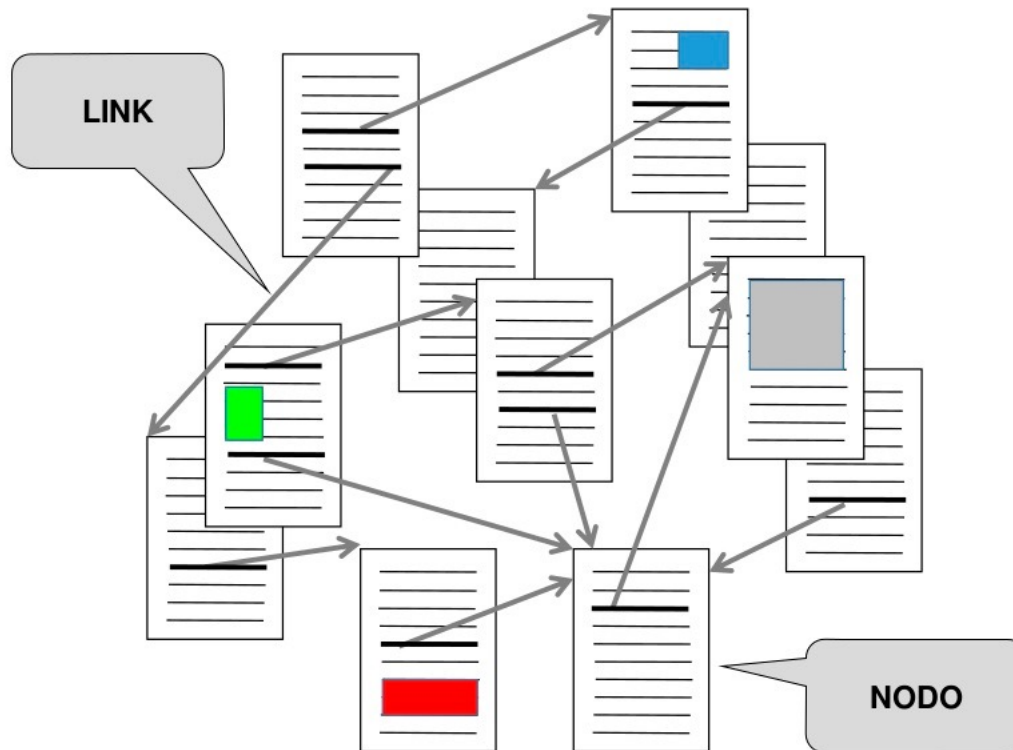
It can be accessed via a "link" created by people, companies, organizations...



Each link inserted between one web page and another determines  
A new way of accessing information

# Hypertext

---



# Hypertext

---

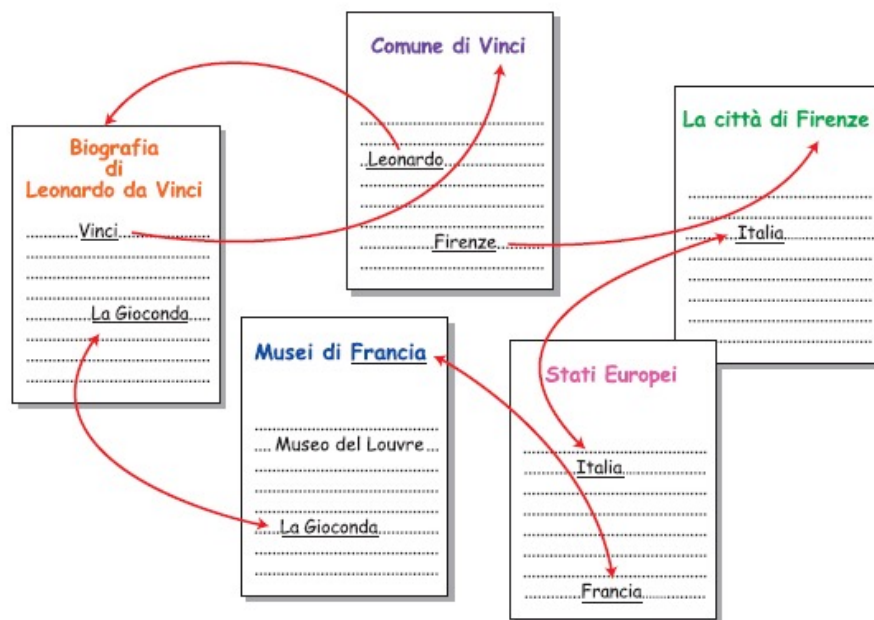
» Documents with non-sequential organization

– non-linear documents

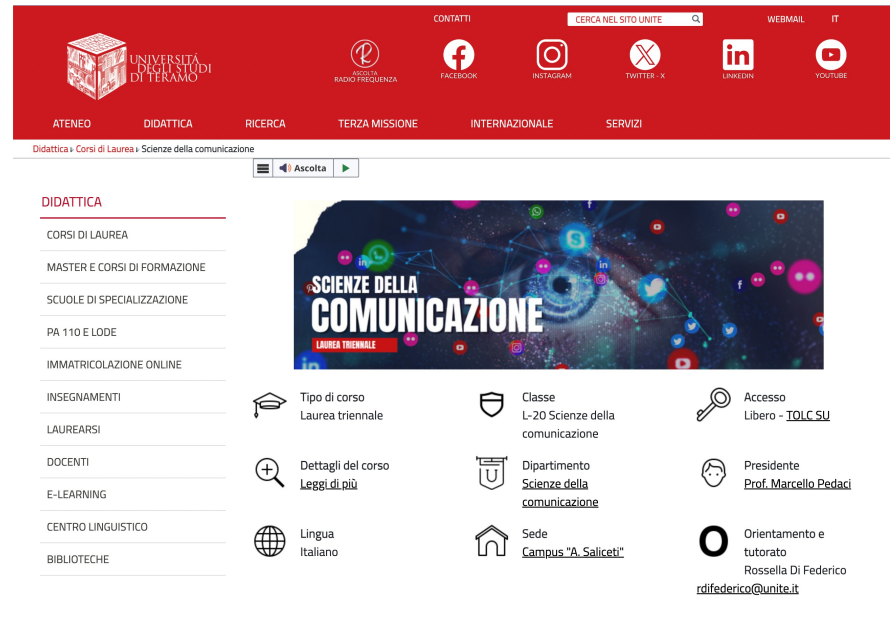
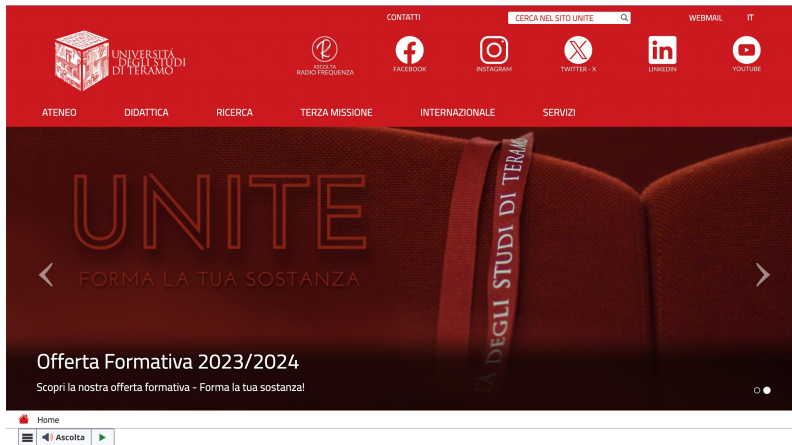
» Link

– allows you to

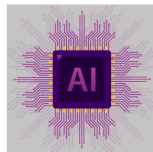
"connect" the parts of  
a hypertext



# Typical web resource



## PRIMO PIANO

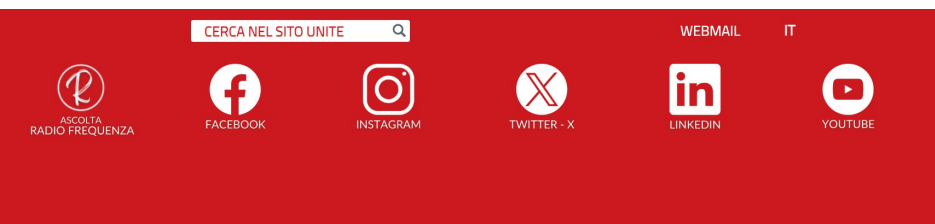


Tutte le news

<https://www.unite.it/>

<https://www.unite.it/UniTE/Didattica/Corsi di studio/Scienze della comunicazione 23 24>

# Typical web resource



uridico-politico-comunicativo e quello agro-

urea garantisce un valido perfezionamento della governance.

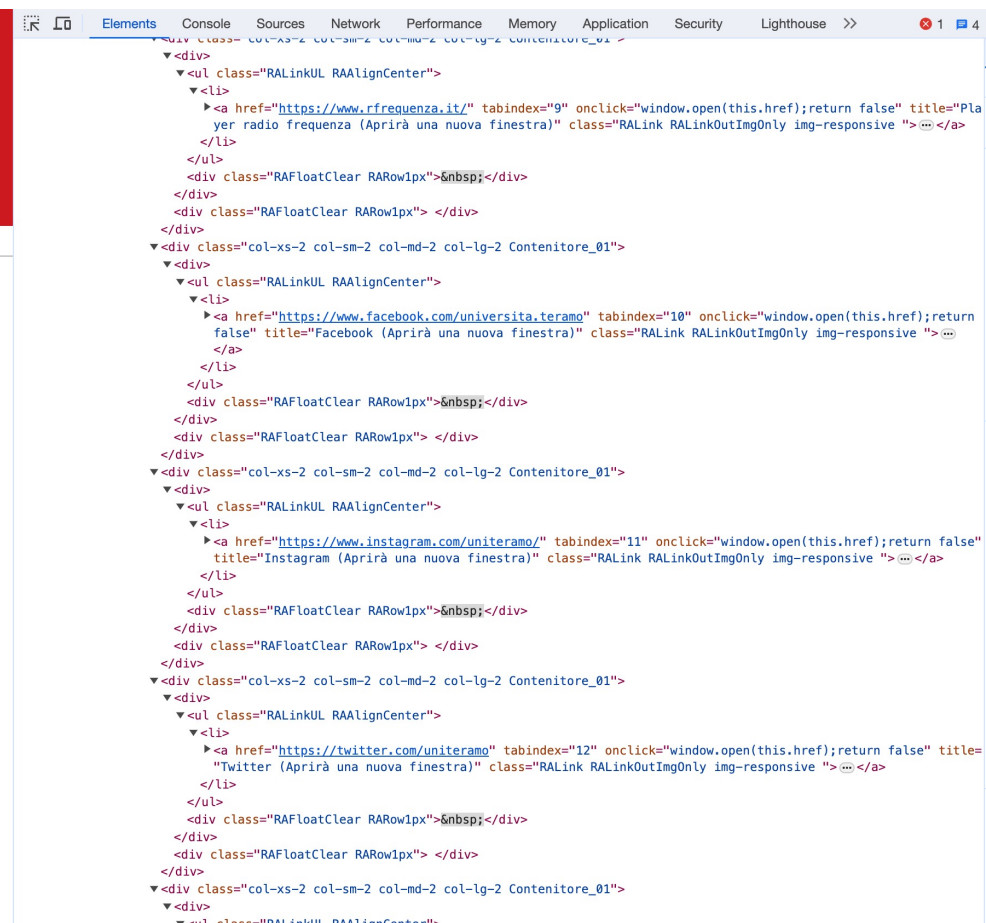
con i centri di eccellenza degli Stati Uniti, i ministeriali per la mobilità studentesca e

alizzati piattaforme e-learning e laboratori

prudenza, Scienze politiche, Scienze della vo e la radio di Ateneo.



La sede del rettorato dell'Università degli Studi di Teramo





# L'Università degli Studi di Teramo

L'Università degli Studi di Teramo conta 5 Dipartimenti, 24 Corsi di laurea, 19 Master, 7 Scuole di Specializzazione. Due i centri di eccellenza: quello giuridico-politico-comunicativo e quello agro-bio-veterinario. Dai saperi di questi punti di forza, sono nati, in raccordo con il mondo del lavoro, segmenti formativi innovativi.

La ricerca ha ottenuto risultati concreti che hanno permesso di costruire una rete di relazioni strettissime in campo scientifico. La formazione *post laurea* garantisce un valido perfezionamento degli studi in diverse aree: da quella delle



La sede del rettorato dell'Università degli Studi di Teramo

```
▶<dl style="width:480px" class="RAImmagine img-responsive RAFloatRight RAIMGSpacerLeft">⋮</dl>
```

```
▼<div class="RAParCell RAAlignJustify">
```

```
▼<p>
```

```
"L'Università degli Studi di Teramo conta "
```

```
<strong>5 Dipartimenti</strong>
```

```
", "
```

```
<strong>24 Corsi di laurea</strong>
```

```
", "
```

```
<strong>19&nbsp;Master</strong>
```

```
", "
```

```
<strong>7&nbsp;Scuole di Specializzazione.</strong>
```

```
" Due i centri di eccellenza: quello giuridico-politico-comunicativo e quello agro-bio-veterinario. Dai saperi di questi punti di forza, sono nati, in raccordo con il mondo del lavoro, segmenti formativi innovativi."
```

```
</p>
```

```
<p>&nbsp;</p>
```

```
▼<p>
```

```
"La ricerca ha ottenuto risultati concreti che hanno permesso di costruire una rete di relazioni strettissime in campo scientifico. La formazione "
```

```
<em>post laurea</em>
```

```
" garantisce un valido perfezionamento degli studi in diverse aree: da quella delle professioni legali a quelle economiche, sociali, della comunicazione, del management, della sanità animale e della governance."
```

```
</p>
```



PRESENTAZIONE DEI BANDI

**ERASMUS+ STUDIO**

A.A. 2024/2025

**ERASMUS+ FOR TRAINEESHIP**

A.A. 2023/2024



## Presentazione bandi Erasmus+

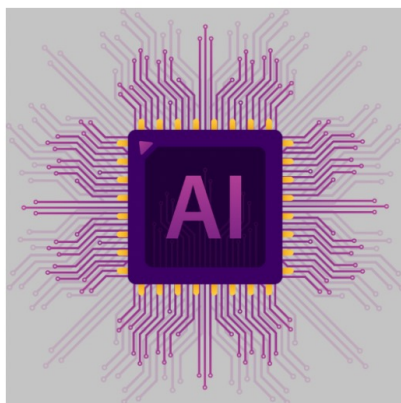
Bando Erasmus+ Studio

a.a. 2024/2025

12 febbraio 2024

Ore 10.00 - Sala delle Lauree -

Polo "G. D'Annunzio"



## Ciclo di seminari "La sfida dell'Intelligenza Artificiale nei settori della comunicazione"

Dipartimento di Scienze della comunicazione

gennaio - maggio 2024

Il lunedì ore 17.00/19.00

Piattaforma GoogleMeet

```
-.RALink:link, .RALink:visited { style_0.css?v=6:76
  background-color: transparent;
  outline: none !important;
  color: #CC181F;
  font-size: 18px;
}
a { bootstrap.min.css:5
  color: #337ab7;
  text-decoration: none;
}
a { bootstrap.min.css:5
  background-color: transparent;
}
* { bootstrap.min.css:5
  -webkit-box-sizing: border-box;
  -moz-box-sizing: border-box;
  box-sizing: border-box;
}
a:-webkit-any-link { user agent stylesheet
  color: -webkit-link;
  cursor: pointer;
  text-decoration: underline;
}
Inherited from div.col-xs-12.col-sm-12.co...
#NewsHome .row > [class*='col-'], #InfoUtili .row > [class*='col-'] { style_0.css?v=6:12172
  color: white;
  display: flex;
  flex-direction: column;
  margin-bottom: 30px;
}
```

```
<div class="col-xs-12 col-sm-12 col-md-12 col-lg-12"> flex
  <div class="RAElencoCanali RAEC02 elem_2 row_even RAEC2 ateneo">
    <a title="Ciclo di seminari &quot;La sfida dell'Intelligenza Artificiale nei settori della comunicazione&quot;"
      href="https://www.unite.it/UniTE/Home/Dipartimento di Scienze della comunic...ri La sfida dell Intelligenza Artif
        iciale nei settori della comunicazione " tabindex="0">
      
    </a>
```

# Exercises

---

## HTML Quiz

< Previous

Next >

You can test your HTML skills with W3Schools' Quiz.

### The Test

The test contains 40 questions and there is no time limit.

The test is not official, it's just a nice way to see how much you know, or don't know, about HTML.

### Count Your Score

You will get 1 point for each correct answer. At the end of the Quiz, your total score will be displayed. Maximum score is 40 points.

### Start the Quiz

Good luck!

Start the HTML Quiz >

[https://www.w3schools.com/html/html\\_quiz.asp](https://www.w3schools.com/html/html_quiz.asp)

# First steps towards creating a web page:

---

## 1. Download a free code editor

- Sublime Text
- Visual Studio code
- Notepad ++
- See more examples here: <https://www.tecnobabele.com/i-9-migliori-editor-di-codice-gratuiti-per-scrivere-la-tua-prima-app/2020-10-23/>

## 2. Create a index.html file

- Copy the content from one of the examples in these slides
- Open it with your favorite browser and view it

# Textbooks and references

---

- » Fluency, Conoscere e usare l'informatica, Lawrence Snyder, Alessandro Amoroso, Paerson (6/ed. or 7/ed.)
  - Capitoli: Definire l'Information Technology, Il funzionamento delle reti, Introduzione a HTML5, Trovare informazioni sul Web
- » <https://www.w3schools.com/>
  - Tutorials: HTML, CSS
  - Approfondimento: Learning Web App Development, Semmy Purewal, 2014, O'Reilly Media