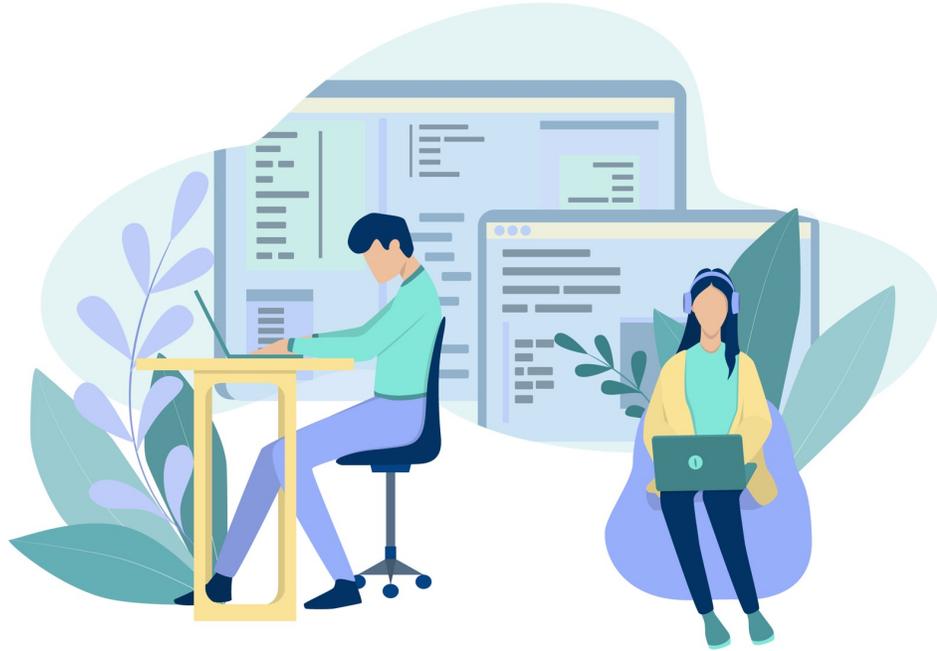




ANTONELLA GALIZIA
LAURA PAGANI

WEB DESIGN

**A WALK THROUGH WEB CONCEPTS
AND TECHNOLOGIES**



A methodological approach

A high-level list of steps

Way of thinking

Useful information

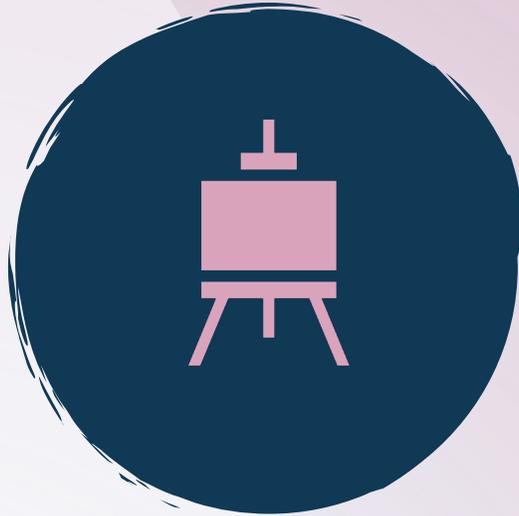
How to develop a web site

There are several steps: Assuming you already decided your topic and the aim of your site...



Collect the contents

Text, img, videos,
renders, logo,
icon, files



Design the concept

Draw it as you
prefer but start
drawing



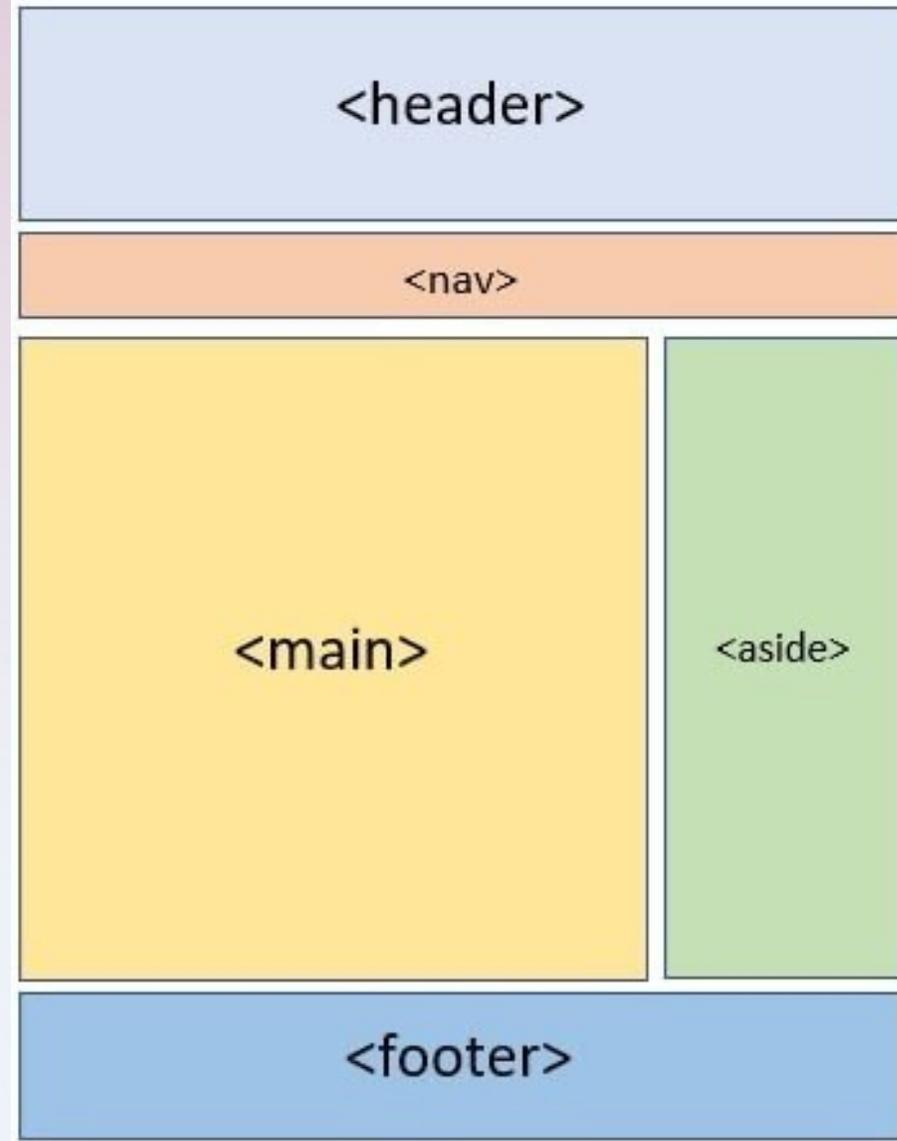
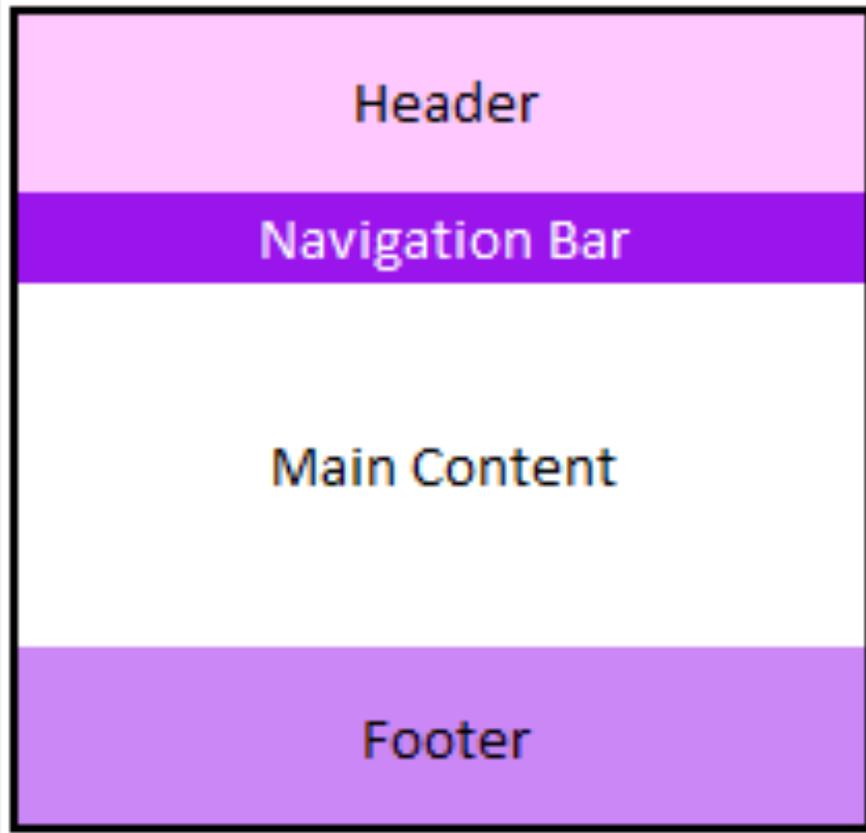
Implement the project

Be focused on
the concept and
built it

A strong emphasis on the design is mandatory! But remember also considerations about marketing...

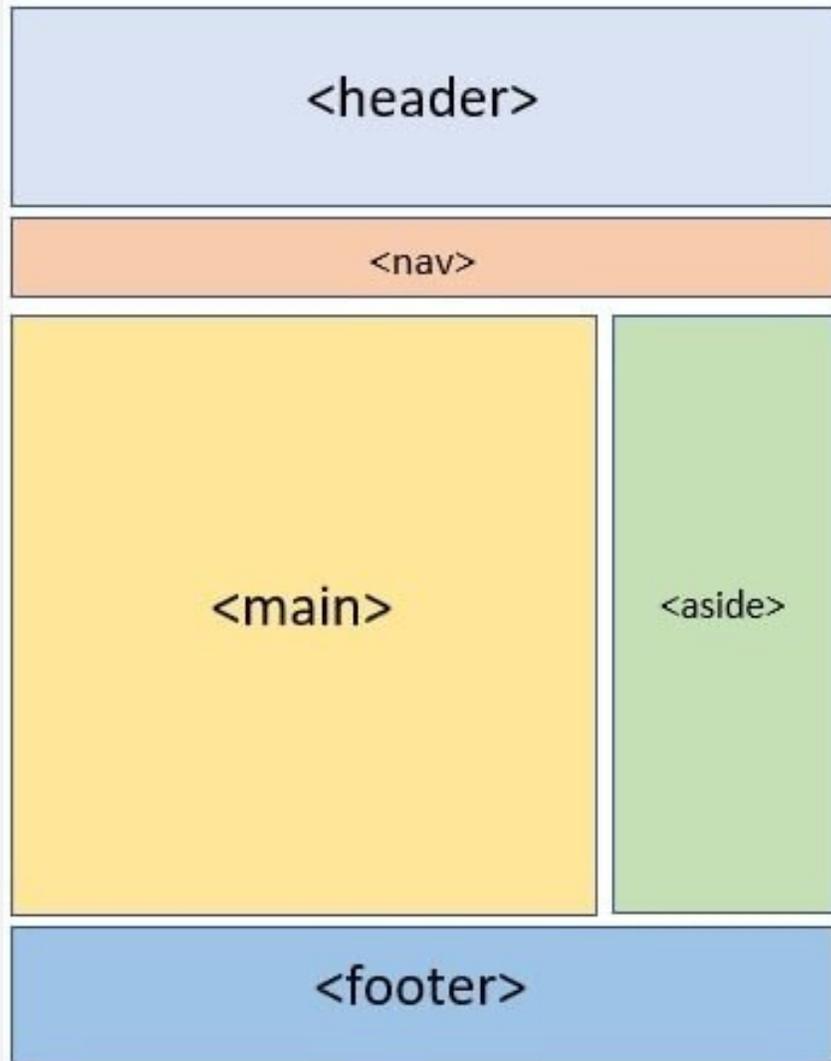
A web site

Understand a site structure



A web site

Understand a site structure



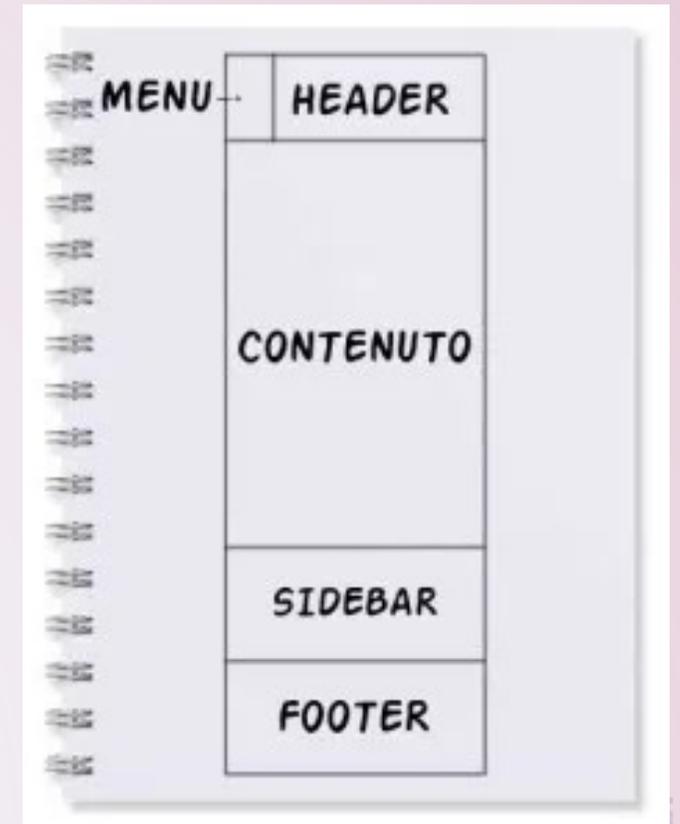
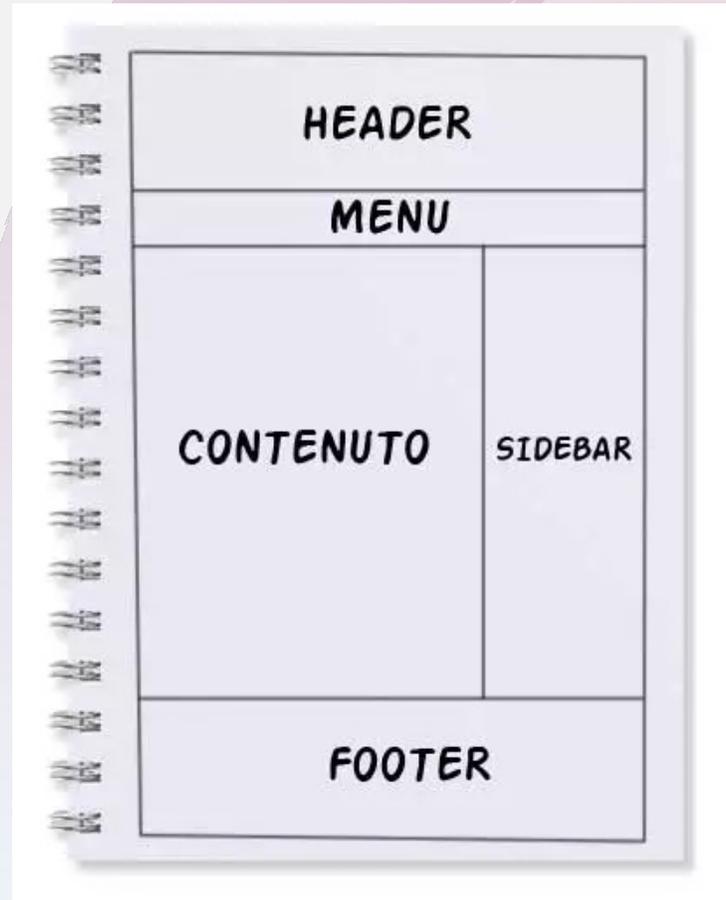
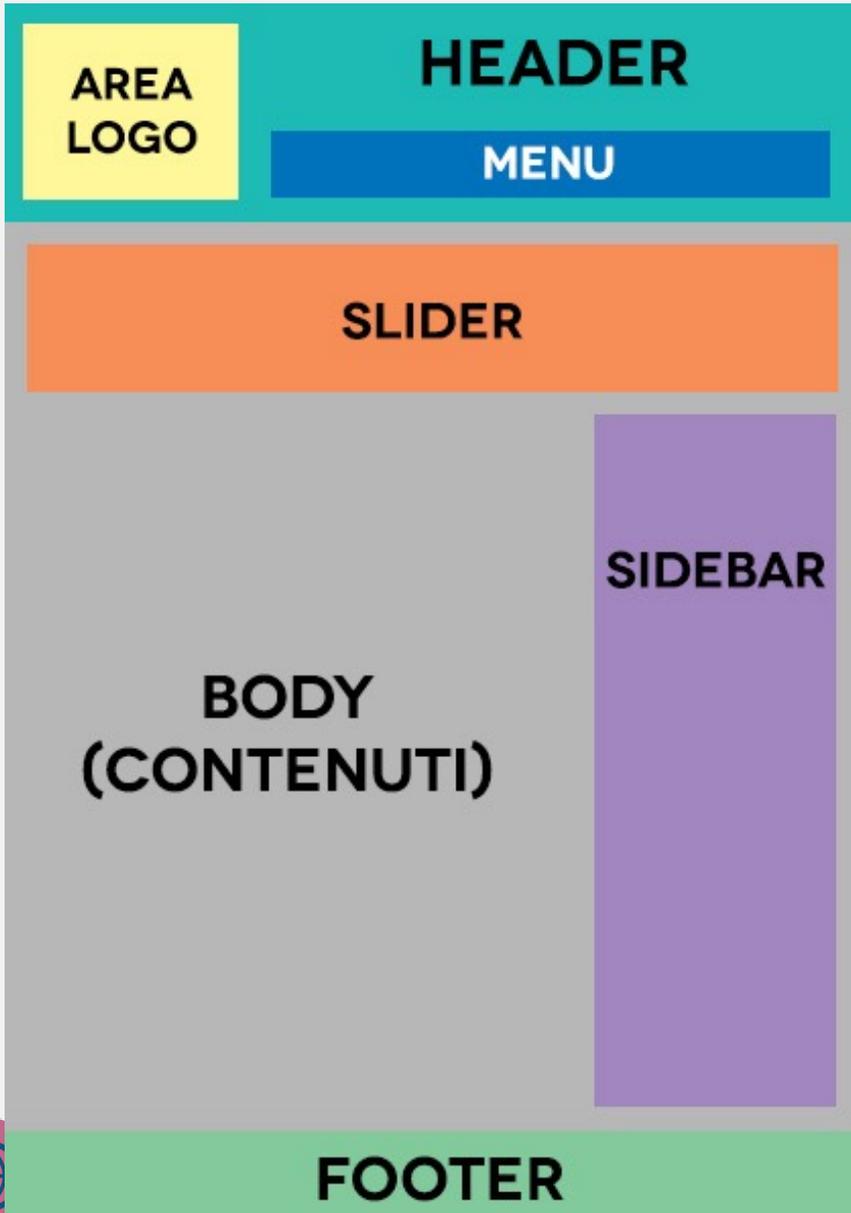
- Header - Intestazione
 - Contains distinctive elements such as the logo, the motto, ...
- Navigation bar - Menu
- Main Content or Body - Corpo
 - Contains all the contents, such as text, images and links displayed by the browser
- Side Bar - Barra laterale
 - Provides access to "special" contents
- Footer (& Socket) - Piè di pagina
 - Summarizes information as addresses, contact details, copyright, etc. for easier consultation of the site



Footer and Header - common to all pages

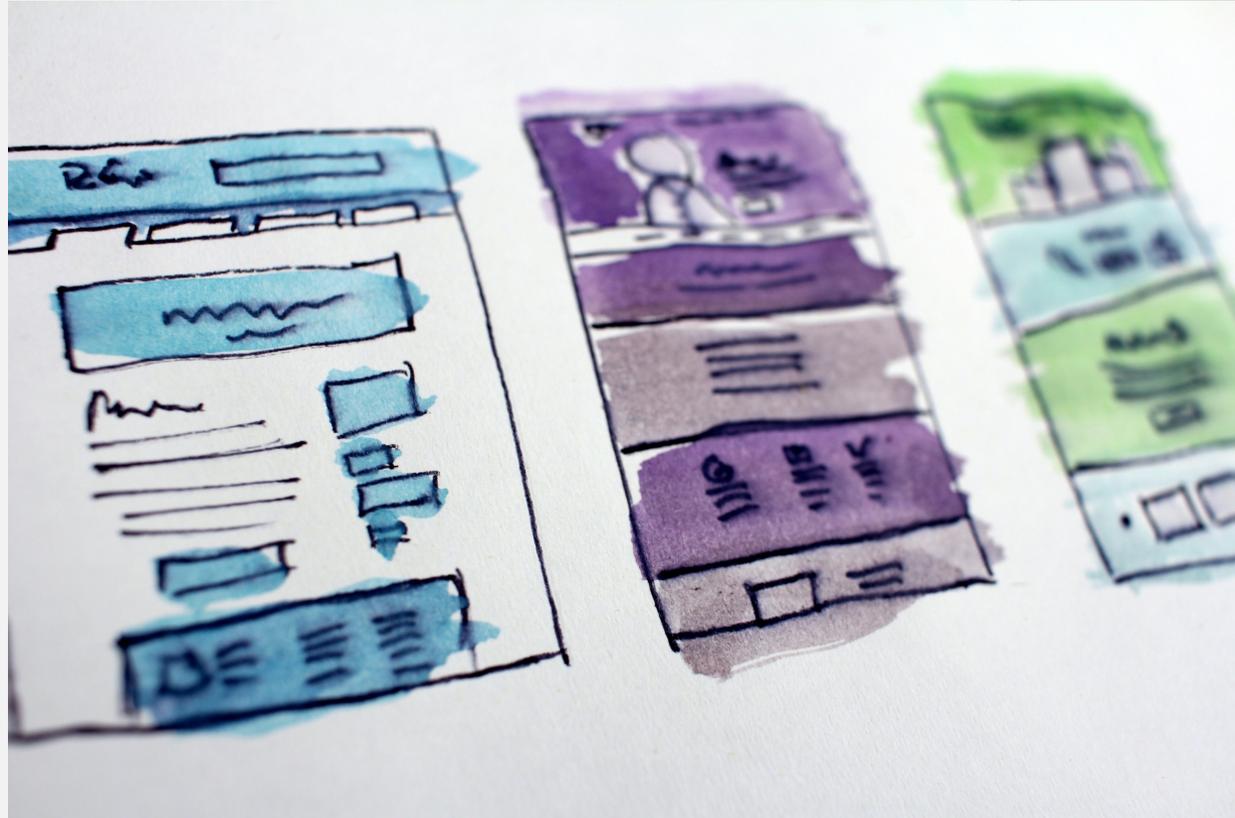


A web site



A web site

Collect and organize contents



- Which is the objective
- Define the pages
 - Menu
- Collect text and media
 - Whatever you prefer
 - Take care of copyrights
 - Just size and weight
- Design header and footer
 - Take care
- Design home page
- Select layout of other page

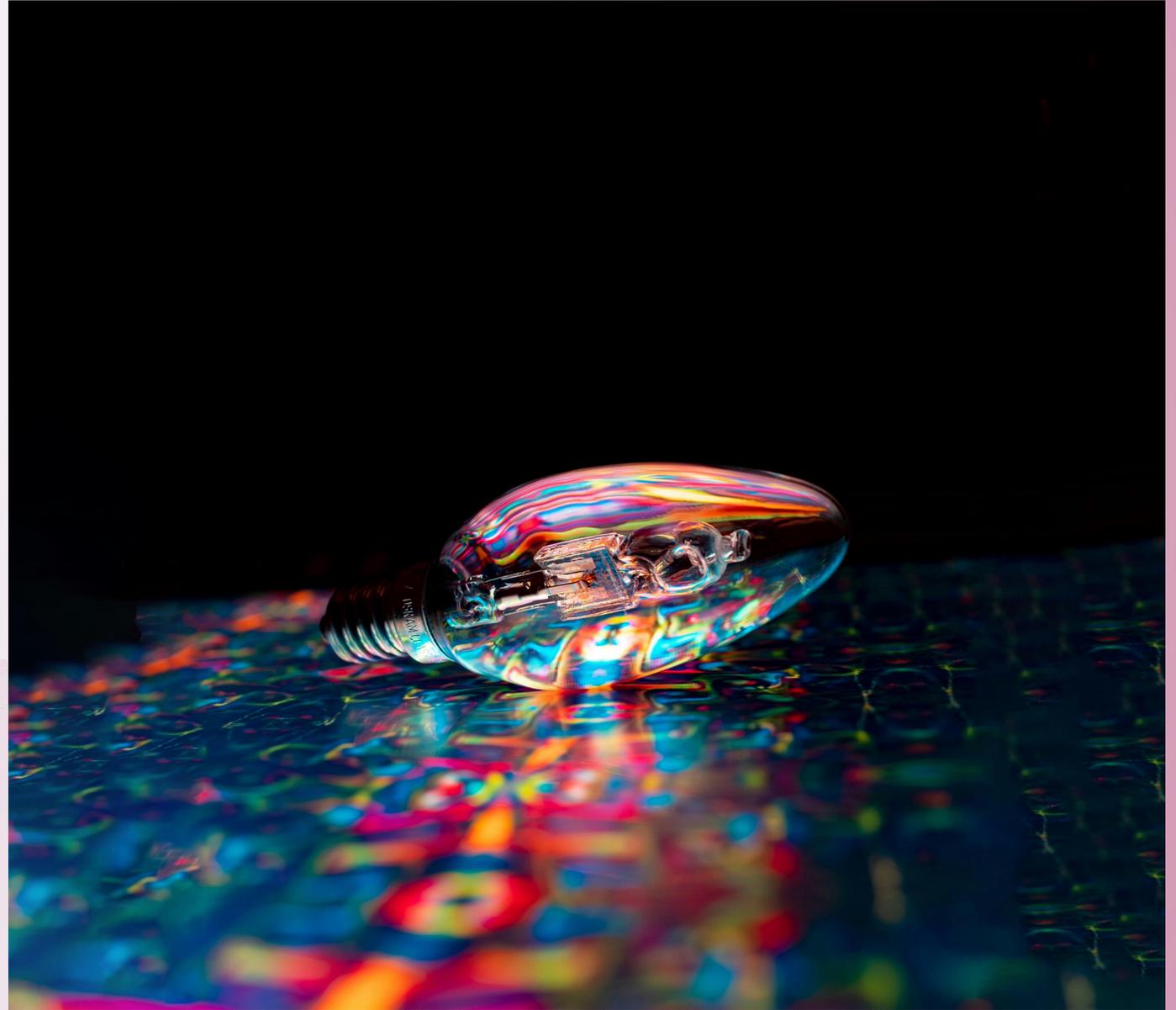


We gave more than a try

First steps with WordPress...

- install a WordPress instance;
- select and install a free theme;
- install plugin;
- develop pages...

Let's give some detail



What's widget...

Categories

Getting Started

Installing WordPress

Basic Usage

Basic Administration

Customizing

Maintenance

Security

Advanced Topics

Troubleshooting

WordPress Widgets

WordPress Widgets add content and features to your [Sidebars](#). Examples are the default widgets that come with WordPress; for Categories, Tag cloud, Search, etc. Plugins will often add their own widgets.

Widgets were originally designed to provide a simple and easy-to-use way of giving design and structure control of the WordPress Theme to the user, which is now available on properly "widgetized" WordPress Themes to include the header, footer, and elsewhere in the WordPress design and structure.

Widgets require no code experience or expertise. They can be added, removed, and rearranged on the **Theme Customizer** or **Appearance > Widgets** in the WordPress Administration Screens.

Some WordPress Widgets offer customization and options such as forms to fill out, includes or excludes of data and information, optional images, and other customization features.

The [Block-based Widgets Editor](#) explains how to use the updated Widgets experience with blocks.

Widgets vs. Plugins

On the surface, widgets and plugins appear to carry out similar functions. However, they have different roles to fulfill.

For example, a [WordPress plugin](#) usually introduces additional 'global' functionality to your website that's not available by default.

On the other hand, a widget lets you display additional content within various elements of your website (such as the header, WordPress sidebar, and footers). While they can add features, they often provide smaller, more focused additions, and are dragged and dropped into place.

T

Installing Widgets

Displaying Widgets

- Existing Widgets in Existing Widget Areas
- Widget Areas

Using Text Widgets

- Adding Code to the Text Widget

Using RSS Widgets

Resources

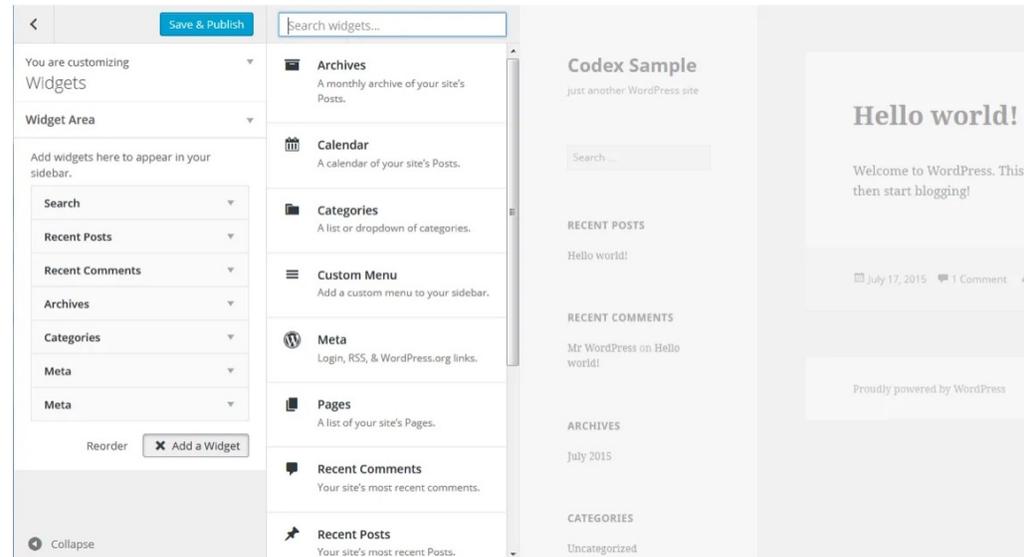


What's widget...

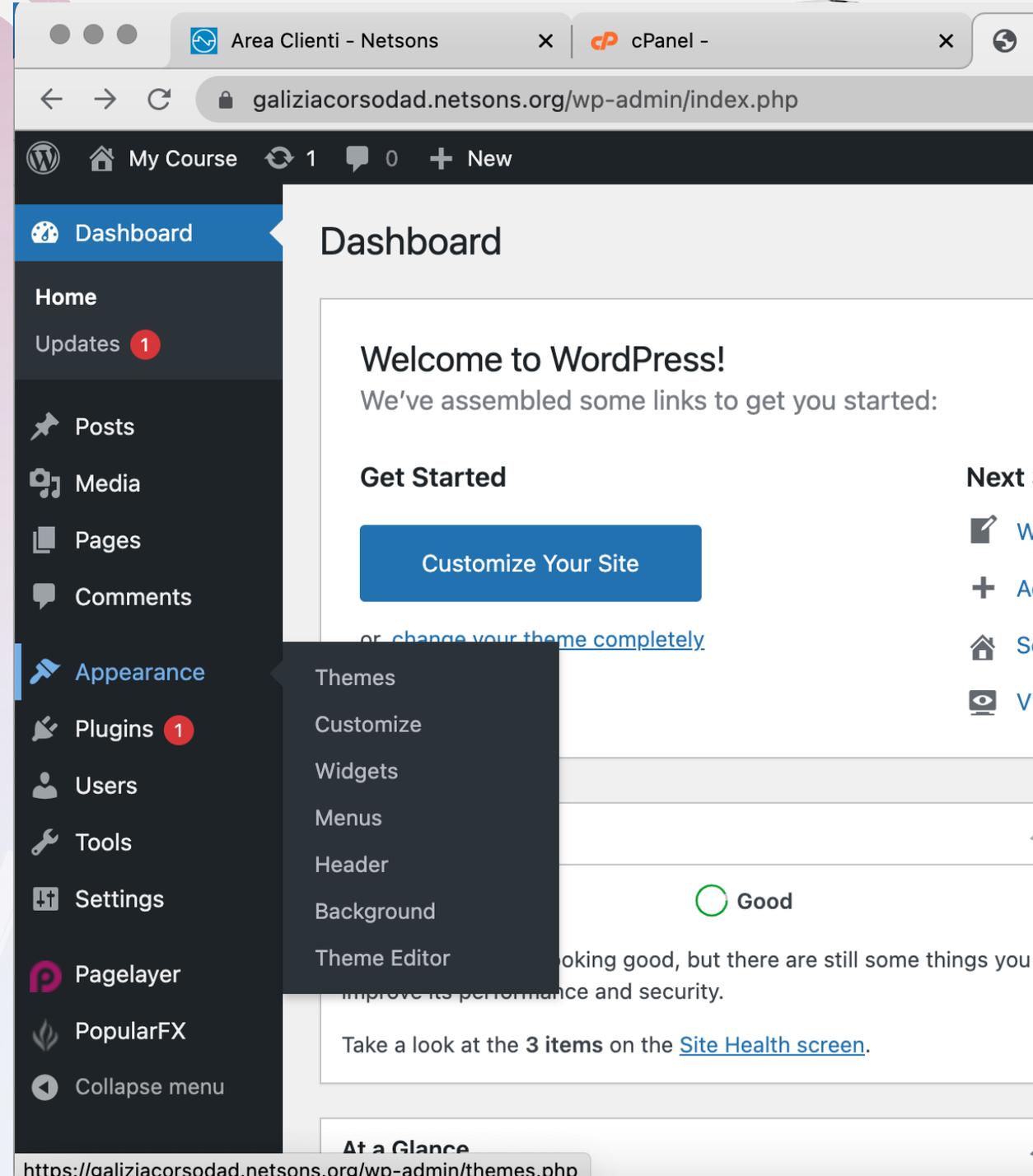
Existing Widgets in Existing Widget Areas

Before you can add a Widget you must verify that the Theme you're using supports Widgets (more specifically: [Widget Area](#)). You can do so by simply navigating to the Appearance menu and looking for a sub menu titled "Widgets".

If your Theme supports Theme Customizer then you can use the following Steps. In Theme Customizer, the live preview of changes is available.



1. Go to **Appearance > Customize** in the WordPress Administration Screens.
2. Click the **Widget** menu in the Theme Customizer to access to the Widget Customize Screen.



A page builder

- A plugin or component to speed up the design and the development of pages with few expertise and minimal effort and time
 - Without a builder it could appear as a set of “text editor”, or saw how to move to HTML
 - A page builder can be considered as an advanced version of the visual editor but even more powerful
- It is based a **drag & drop** method: you to drag from a menu of items and reposition on the page (drop)
 - Items provide complex “web components” we don’t need to develop but simply use them (WIDGET!)
 - Items can be dropped wherever we desire – as we had planned in the design phase
- Page builders use components to build responsive page layouts inside a grid view
 - It is a WYSIWYG (*What You See Is What You Get*) (pronounced /'wiziwig/ "wiz-ee-wig")
 - The widgetized sidebar of WordPress theme is a great example for understanding the concept



A page builder

- Page builders provide similar structure and features to the page/post content area instead of sidebars or everything else
 - It is possible can either use existing components or create our own components to design pages with a page builder
 - It can be provided by a theme (as in our case) or be a standalone component (as Elementor)
- In short, a page builder is a perfect tool for designing websites fast, with quality design and without needing to know code
 - That's why I don't love... for the same reason you'll do 😊
- Advantages are evident (even more when developing a landing page)
- Drawbacks are different: limited degree of freedom for customization, quality, trustability, speed and SEO impacts, etc



A page builder



Add Element

Search by element name

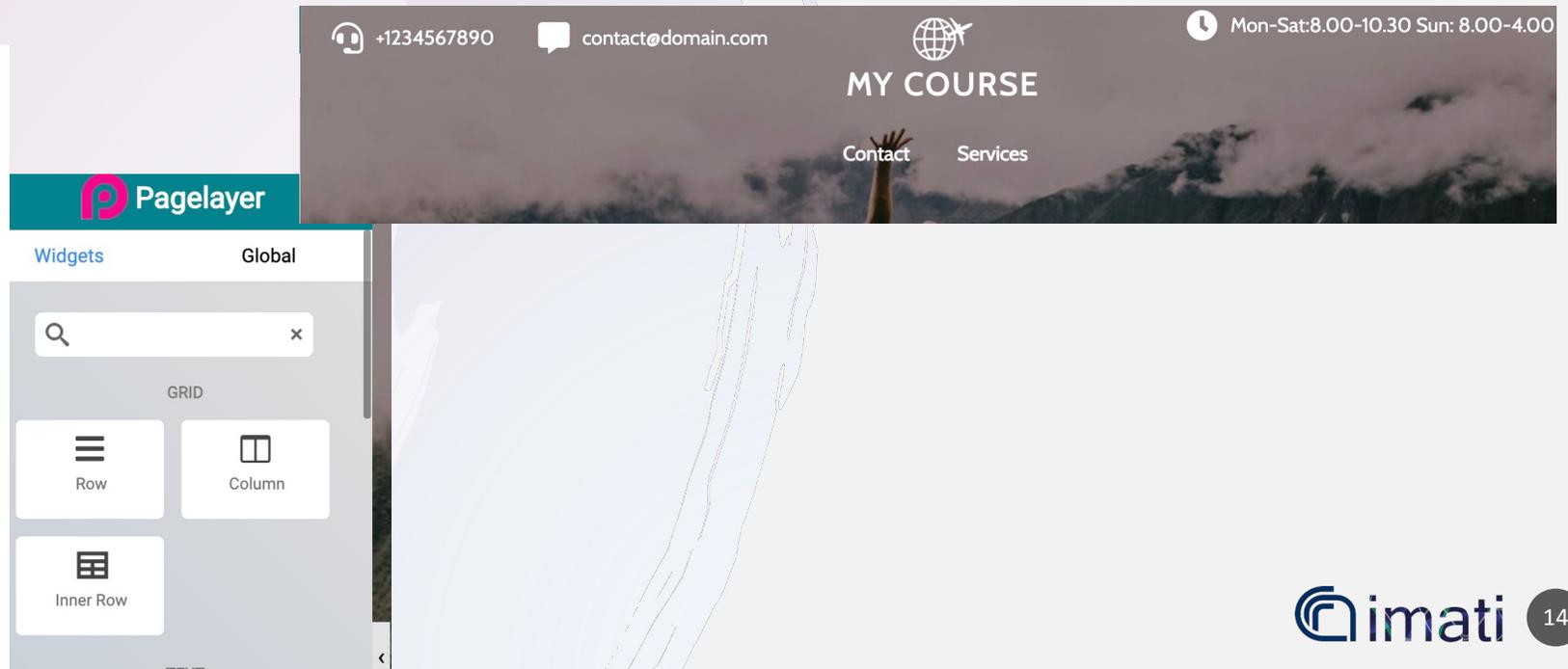
Show all Content Social Structure WordPress Widgets

Row Place content elements inside the row	Text Block A block of text with WYSIWYG editor	Separator Horizontal separator line	Separator with Text Horizontal separator line with heading
Message Box Notification box	Facebook Like Facebook like button	Tweetmeme Button Share on twitter button	Google+ Button Recommend on Google
Pinterest Pinterest button	FAQ Toggle element for Q&A block	Single Image Simple image with CSS animation	Image Gallery Responsive image gallery
Image Carousel Animated carousel with images	Tabs Tabbed content	Tour Vertical tabbed content	Accordion Collapsible content panels
Posts Slider Slider with WP Posts	Widgetised Sidebar Place widgetised sidebar	Button Eye catching button	Button 2 Eye catching button
Call to Action Button Catch visitors attention with CTA block	Call to Action Button 2 Catch visitors attention with CTA block	Video Player Embed YouTube/Vimeo player	Google Maps Map block

Divider	Empty Space	Image	HTML
Paragraph	Title	Youtube	

A page builder

- Generally content element called 'Row' to structure the layout of pages
- 'Columns' are provided as a sub component or setting in the row element
 - limit the ability to add content to only two levels
 - rows as first level elements, elements inside a row
 - it's rare us to create rows within rows, i.e. more than 2 levels
 - Pagelayer proposed the sections ... let's see



A page builder

PageLayer <https://pagelayer.com/docs>

Youtube <https://www.youtube.com/c/Pagelayer/playlists>

Elementor <https://elementor.com/getting-started/>

Youtube <https://www.youtube.com/c/Elementor/playlists>

Gutenberg <https://wordpress.org/plugins/gutenberg/>

Youtube: look for the more recent ones...



PLEASE NOTE

You can have many plugins installed BUT only a THEME!
According to the theme, you'll have a different editor for pages

Tools changes but the approach and the methodology is the same, don't be scared and select what you prefer or what is proposed by your theme



A walk through



A web site...

What actually is?
Focusing on the
«dark side»



The magic of
being online...

A roadmap to
publish a site:
domain, hosting...



How is built...

Technologies beyond
the front end



Let's give
a try!

Practical
development
and tutorial



Exam

To obtain the credit
of the course, a test
on all topics



Knowledge

HTML, CSS,
JavaScript, mySQL
/ PostgreSQL



IDE Integrated
Development Environment

Brackets,
Sublime, Atom,
Adobe
Dreamweaver



Client FTP

fileZilla, WinSCP
e Cyberduck



How to develop a web site from scratch

What we need to know:
mandatory (basic) skills
and tools

How to develop a web site from scratch

HTML (Hyper Text Markup Language)

- Basic structure that makes semantic content for the web browser
- Sequential tags (with an opening and a closing) and structurally a keyword enclosed in angle brackets

Scripting Language

- HTML and CSS are not interactive. To create a dynamic web page we need languages like JavaScript and jQuery
- Server-side languages like PHP, Python, and Ruby may also be needed over time

CSS (Cascading Style Sheets)

- Style language used to “decorate” the HTML markup of a web page
- Without CSS, a web page would appear as a large white page with unordered text and images

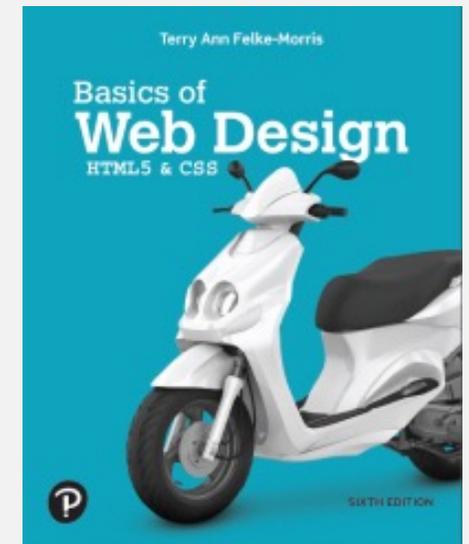
Database Management

- To store, manage and access data of a website a database is needed
- DB management system: MySQL, MongoDB and PostgreSQL - server side

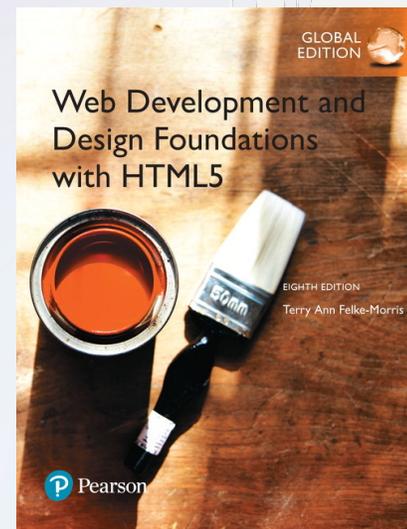


HTML

- HTML: The set of markup symbols or codes placed in a file intended for display on a Web browser page
- The World Wide Web Consortium (W3C) sets the standards for HTML and its related languages
- Useful links
 - W3C standards, <http://w3c.org>
 - W3C validator, <https://validator.w3.org>
 - W3C school, <https://www.w3schools.com/html>



<https://webdevbasics.net>



<https://www.webdevfoundations.net>

HTML

- **Tags and Attributes**

- Tags and attributes are the basis of HTML; they work together but with different functions



- **What Are HTML Tags?**

- Tags are used to **mark up the start of an HTML element** and they are usually enclosed in angle brackets. An example of a tag is: `<h1>`
- Most tags must be opened `<h1>` and closed `</h1>` in order to function and has contents.
- Some HTML elements have no content (like the `
` element), they are called empty elements and do not have an end tag

- **What are HTML Attributes?**

- Attributes contain **additional pieces of information**. Attributes take the form of an opening tag and additional info is **placed inside**.
- An example of an attribute is: ``
- In this instance, the image source (src) and the alt text (alt) are attributes of the `` tag.



HTML



- **Golden Rules To Remember**

- The vast majority of tags must be **opened** (<tag>) and **closed** (</tag>) with the element information such as
- When using multiple tags, they must be closed in the order they were opened. For example: </p>
- Tags are **lowercase**

```
<html>  
  
  <head>  
    <title>This Is Your Title </title>  
  </head>  
  
  <body>  
    <h1>This Is Your Header </h1>  
    <p>This is your paragraph. </p>  
  </body>  
  
</html>
```

they were opened. For

er or guidelines ([w3c validator](#))

- **Creating Your First**

- A text clean white background
- <!DOCTYPE html> — This tag tells the browser what version of HTML the page is written in
- <html> — This tag signs the beginning of the HTML document
- <head> — This is where you put the title and other meta-information
- <body> — This is where you put the content of the page

an HTML Page

es and other computer programs



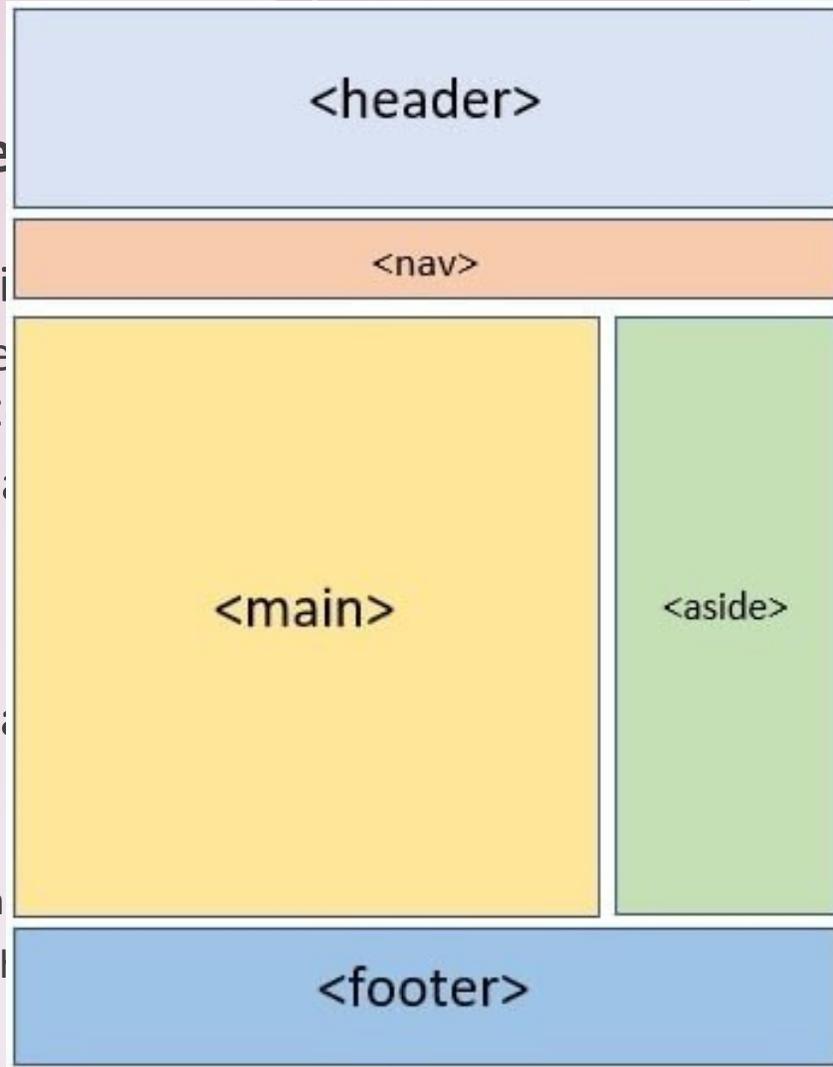
HTML

- **Golden Rules To Remember**

- The vast majority of tags are used as a title or text restriction
- When using multiple tags, always use the most restrictive tag first. Example: ``
- Tags are **lowercase**, and are case sensitive

- **Creating Your First HTML Page**

- A text **clean white page** with a **background color** and **font color**
 - `<!DOCTYPE html>` — This tag signals the browser that the document is an HTML document
 - `<html>` — This tag signals the browser that the document is an HTML document
 - `<head>` — This is where a page's metadata is placed
 - `<body>` — This is where the page's content is placed



closed (`</tag>`) with the element information

order in which they were opened. For example, ``

check all browser or guidelines ([w3c validator](#))

Construction of an HTML Page

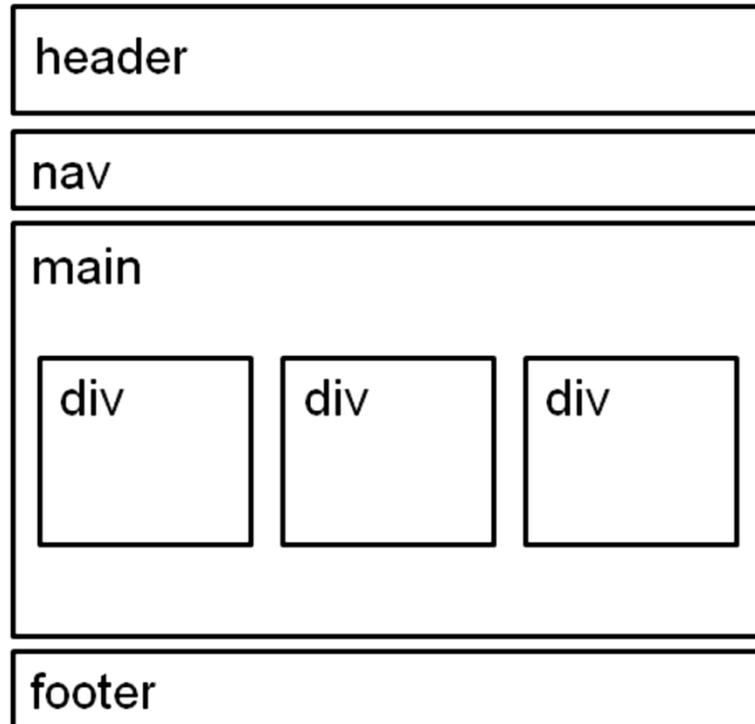
Page

code

for search engines and other computer programs

HTML 5 has **semantic** tags: article, header, nav, aside, footer,...

HTML5 Structural Elements



header Element

```
<header></header>
```

Contains the web page
document's headings

nav Element

```
<nav></nav>
```

Contains web page
document's main navigation

main Element

```
<main></main>
```

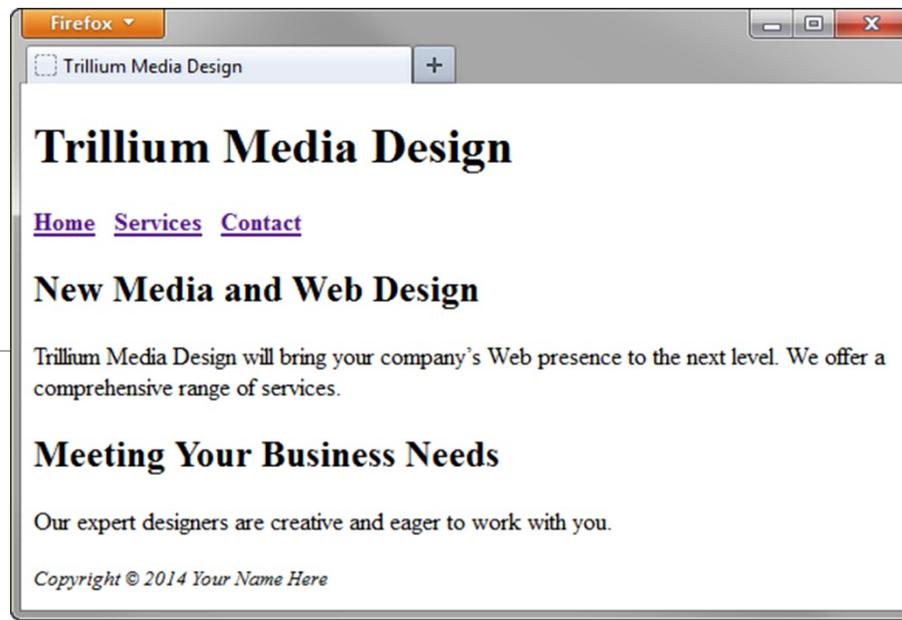
Contains the web page
document's main content

footer Element

```
<footer></footer>
```

Contains the web page
document's footer

HTML5 Structural Elements



<body>

<header> *document headings go here* </header>

<nav> *main navigation goes here* </nav>

<main> *main content goes here* </main>

<footer> *document footer information goes here* </footer>

</body>

HTML



- **Further Tags**

- Inside the <head> tag, there is one tag that is always included:
- <title> - the page name appearing on the top of the browser window or tab
- <meta> - information about the document: character encoding, name (page context), description

Describe metadata within an HTML document:

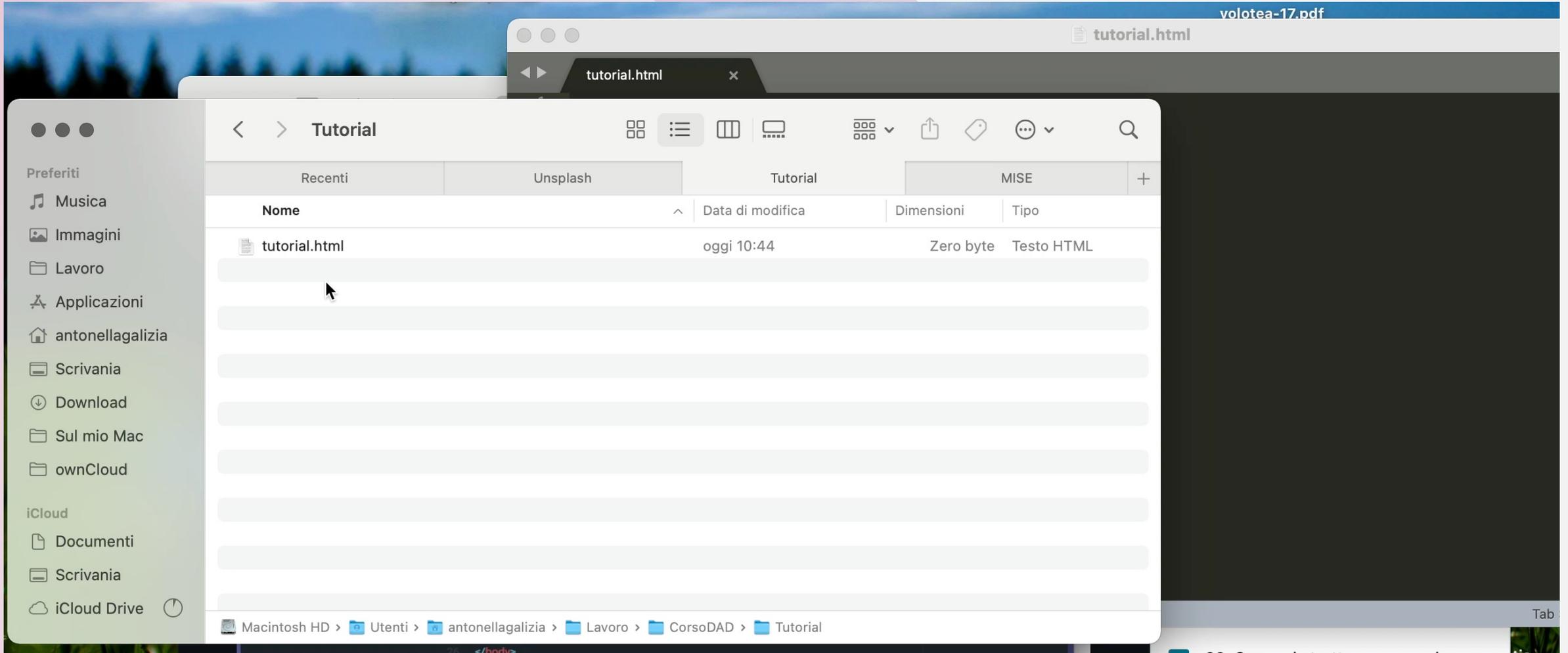
```
<head>
  <meta charset="UTF-8">
  <meta name="description" content="Free Web tutorials">
  <meta name="keywords" content="HTML, CSS, JavaScript">
  <meta name="author" content="John Doe">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
</head>
```

- **Adding Content**

- The HTML <body> tag - content for human eyes
- Text, images, tables, forms and everything else that we see on the internet each day



HTML



HTML

- The best source to explore is w3c school site <https://www.w3schools.com>
- In the next slides, we provide most of the tags mentioned in the video

The screenshot shows the w3schools.com homepage for HTML. The navigation bar includes 'Tutorials', 'Exercises', 'Certificates', 'Services', and a search bar. Below the navigation bar, there are buttons for 'Learn HTML', 'Video Tutorial', 'HTML Reference', and 'Get Certified'. A central box titled 'HTML Example:' contains a code snippet for a basic HTML document with a heading and a paragraph, and a 'Try it Yourself' button.

The screenshot shows the 'HTML Basic Examples' page on w3schools.com. The navigation bar is similar to the previous slide. A sidebar on the left lists various HTML topics, with 'HTML Basic' highlighted. The main content area features a 'HTML Basic Examples' heading, a 'Previous' button, and a 'Next' button. Below the heading, there is a paragraph explaining that the chapter will show basic HTML examples and that users don't need to know all tags yet. A section titled 'HTML Documents' explains that all HTML documents must start with a document type declaration and that the visible part is between the body tags. An 'Example' section shows a code snippet for a basic HTML document with a heading.

Heading Element

```
<h1>Heading Level 1</h1>
```

```
<h2>Heading Level 2</h2>
```

```
<h3>Heading Level 3</h3>
```

```
<h4>Heading Level 4</h4>
```

```
<h5>Heading Level 5</h5>
```

```
<h6>Heading Level 6</h6>
```

Heading Level 1

Heading Level 2

Heading Level 3

Heading Level 4

Heading Level 5

Heading Level 6

Paragraph Element

Paragraph element

`<p> ...paragraph goes here... </p>`

- Groups sentences and sections of text together.
- Block Display – Configures empty space above and below

Line Break Element

Line Break element

- Stand-alone, or void tag

...text goes here **
**
This starts on a new line....

- Causes the next element or text to display on a new line

Blockquote Element

Blockquote element

- Indents a block of text for special emphasis

<blockquote>

...text goes here...

</blockquote>

- Block Display – Configures empty space above and below

Phrase Elements

Indicate the context and meaning of the text

Element	Example	Usage
<code></code>	bold text	Text that has no extra importance but is styled in bold font by usage and convention
<code></code>	emphasized text	Causes text to be emphasized in relation to other text; usually displayed in italics
<code><i></code>	italicized text	Text that has no extra importance but is styled in italics by usage and convention
<code><mark></code>	mark text	Text that is highlighted in order to be easily referenced (HTML5 only)
<code><small></code>	small text	Legal disclaimers and notices (“fine print”) displayed in small font-size
<code></code>	strong text	Strong importance; causes text to stand out from surrounding text; usually displayed in bold
<code><sub></code>	_{sub} text	Displays a subscript as small text below the baseline
<code><sup></code>	^{sup} text	Displays a superscript as small text above the baseline

HTML Lists

Unordered List

Ordered List

Description List

formerly called a definition list

Unordered List

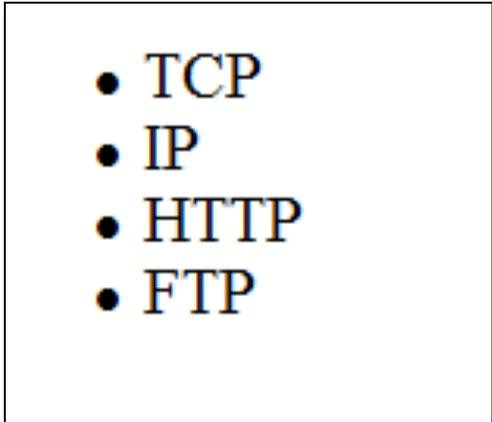
Displays a bullet, or list marker, before each entry in the list.

``

Contains the unordered list

``

Contains an item in the list

- 
- TCP
 - IP
 - HTTP
 - FTP

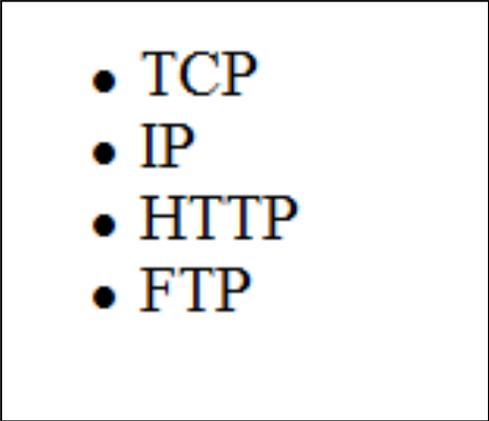
Unordered List Example

TCP

IP

HTTP

FTP

- 
- TCP
 - IP
 - HTTP
 - FTP

Ordered List

Displays a numbering or lettering system to itemize the information contained in the list

``

Contains the ordered list

- `type` attribute determines numbering scheme of list, default is numerals

``

Contains an item in the list

Ordered List Example

```
<ol>  
  <li>Apply to school</li>  
  <li>Register for course</li>  
  <li>Pay tuition</li>  
  <li>Attend course</li>  
</ol>
```

1. Apply to school
2. Register for course
3. Pay tuition
4. Attend course

Description List

Useful to display a list of terms and descriptions or a list of FAQ and answers

- `<dl>`
Contains the description list
- `<dt>`
Contains a term/phrase/sentence
Configures empty space above and below the text
- `<dd>`
Contains a description of the term/phrase/sentence
 - Indents the text
 - Configures empty space above and below the text

Description List Example

<dl>

<dt>IP</dt>

<dd>Internet Protocol</dd>

<dt>TCP</dt>

<dd>Transmission Control Protocol</dd>

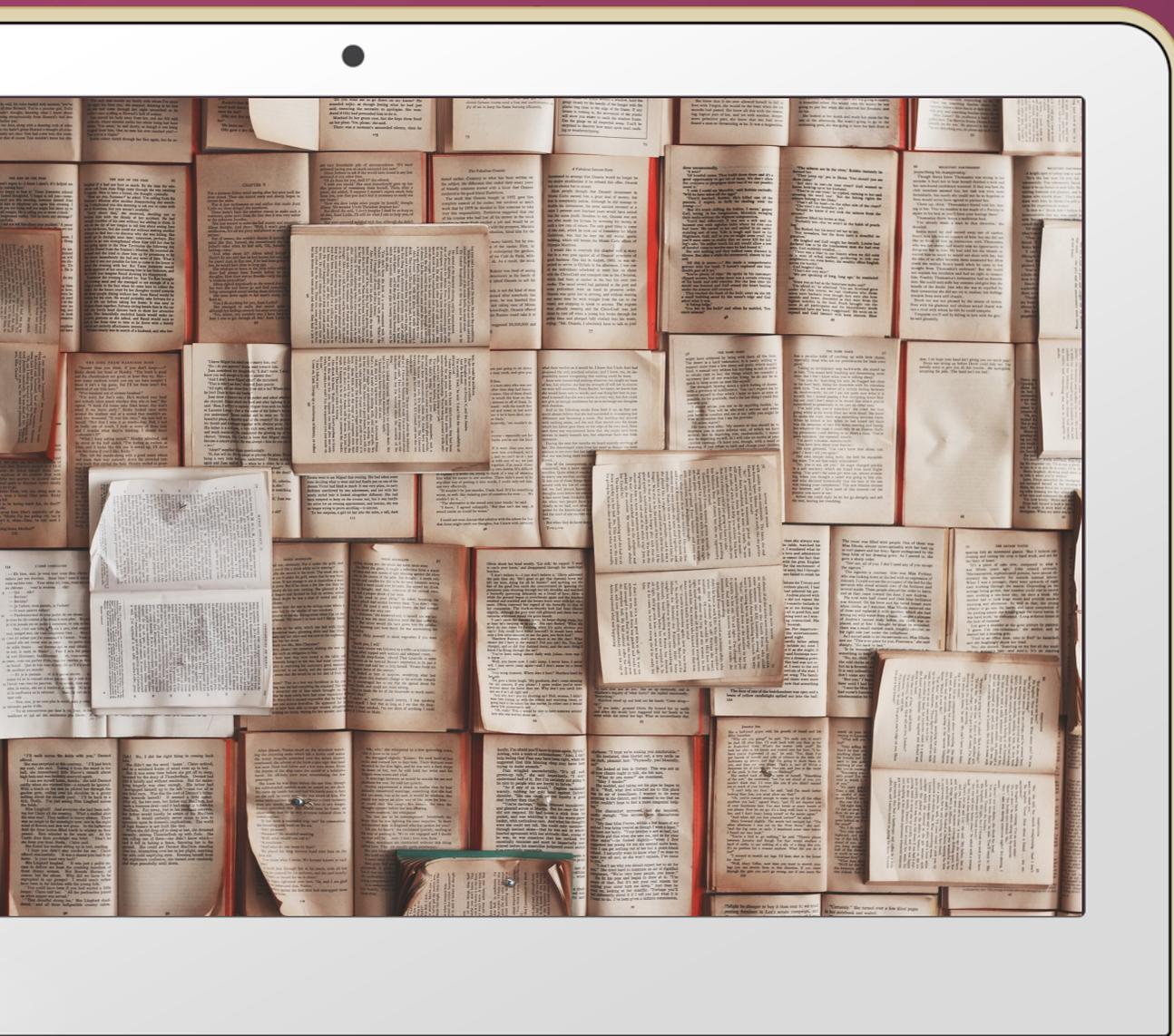
</dl>

IP

Internet Protocol

TCP

Transmission Control Protocol



A different (?) kind of study

High practical and interactive

A way of thinking

A methodological approach

GRAZIE

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laura.pagani@edu.unige.it

You find us on Teams chat