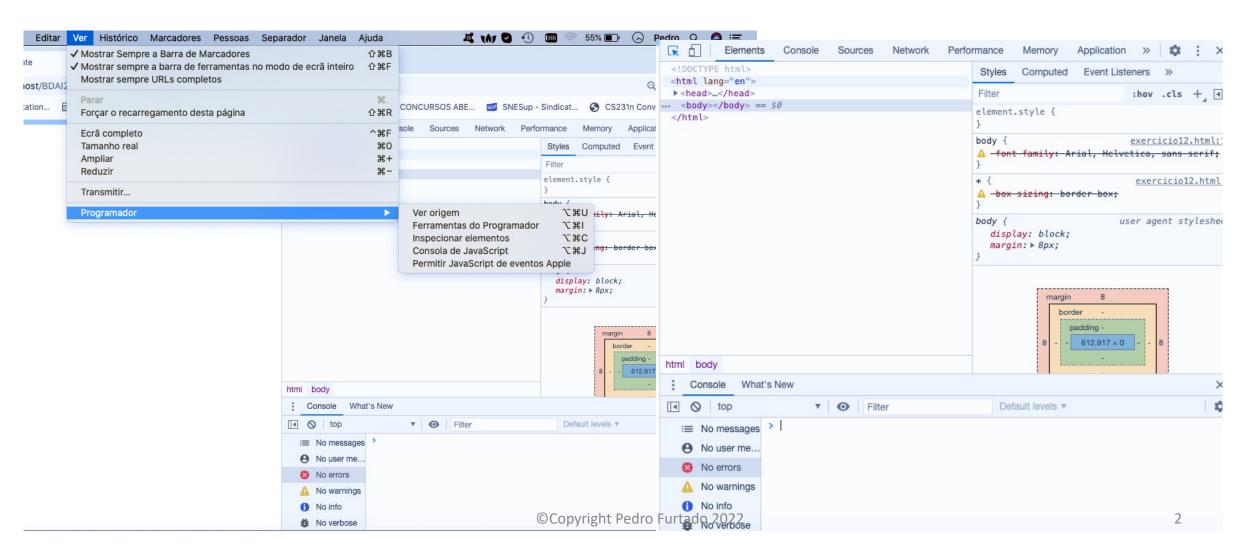
## HTML and CSS

Breve introdução

Objectivo: perceber apenas o que é e como funciona

# Como ver os erros da pagina HTML, Javascript, css, etc?



### Creating your Web Site

Technologies & Tools

- Markup Languages
  - HTML, DHTML, XML, XSLT, etc....
- Cascading Style Sheets (CSS)
- Scripting languages (code)
  - perl,javascript,php, etc....
- Web creation and editing software
  - Any basic text editor
  - Notepad, FrontPage, Coldfusion, Flash, Hotmetal, Site Builder, etc..

## Markup Languages - HTML

Derived from SGML (Standard Generalized Markup Language )

HyperText Markup Language

- Clear text, case insensitive
- Ignores white space
- Comprised of tags <tag>, <tag />
- Open tags and closed tags <tag>, </tag>

#### Opened tags

- <name attributes/>
- <hr/>, <br/>
- <img src="url" width='100px' height='60px'/>

#### Closed tags

- <name attributes> stuff </name>
- <b>text to be bolded</b>
- <h1>level 1 heading text</h1>

#### Comments

<!-- comment text -->

Document Structure

< HTML >

Header

Body

< / HTML>

**Basic Structure** 

```
<html>
   <head>
       <title> The title of your html page </title>
       <meta_tags/>
   </head>
   <body>
       <! - - your web page content and markup - ->
   </body>
</html>
```

header

<body>

Hello world

## Como "correr" isto, ou ver a pagina?

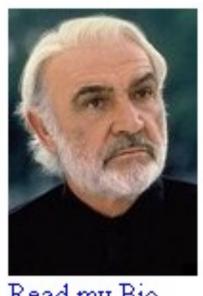
#### No browser

- Abrir a página directamente do ficheiro, só para ver o conteudo
  - Basta guardar o ficheiro com o html num ficheiro .html e tocar das vezes por cima dele ou,
  - Ir ao browser e abrir o ficheiro no browser
- Mostrar a página para acesso em qualquer sitio do mundo, estando ela alojada no seu computador
  - Correr o MAMP: isso corre tb o que se chama um webserver (Apache), que é uma aplicação que serve acessos de qualquer parte do mundo a paginas web alojadas num computador
  - Qualquer ficheiro .hmtl que você ponha numa directoria htdocs do local onde ficou o apache instalado no seu computador sera mostrada quando você puser no browser o nome desse ficheiro. Se o ficheiro for html1.html, será:

#### http://localhost/html1.html

• URL= universal resource locator: endereço como o exemplo aqui dado...

Mike Tyler PO Box 190387 Hungry Horse, Mt 59919



Read my Bio

```
Mike Tyler
PO Box 190387
Hungry Horse, Mt 59919
```

header

<body>

Mike Tyler PO Box 190387 Hungry Horse, Mt 59919

header

<body>

<b>Mike Tyler</b><br>PO Box 190387<br>Hungry Horse, Mt 59919<br>

```
header <br/> <body>
```

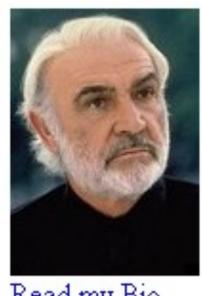
```
<font face="Arial,Times,Courier" color="red" size="3">
        <b>Mike Tyler</b>>
        PO Box 190387<br/>
        Hungry Horse, Mt 59919<br/>
        </font>
```

```
Hungry Horse, Mt 59919<br></font>
```

```
<img src='http://www.myserver.com/images/mike.jpg'/>
```

```
<a href='biopage.html'>Read my Bio</a>
```

Mike Tyler PO Box 190387 Hungry Horse, Mt 59919



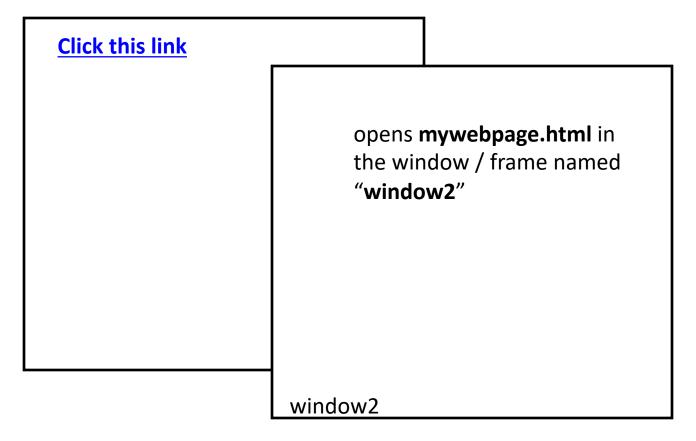
Read my Bio

**A**NCHORS (Hypertext Link)

<A href="url" >Displayed text </A>

Hypertext links

<a href="mywebpage.html" target="window2" >Click this link </a>



**A**NCHORS (Hypertext Link)

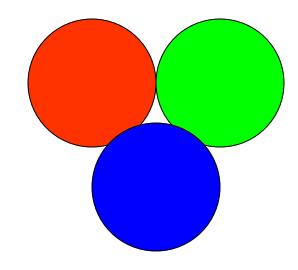
<A href="url" attributes>Displayed text </A>

#### <u>attributes</u>

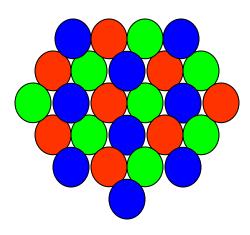
- NAME = "text"
- TITLE = "text"
- TARGET = "frame\_name|window\_name"

## HTML – Fundamentals Colors

Cathode Ray Tubes (CRT)
 All colours are obtained from RGB triples



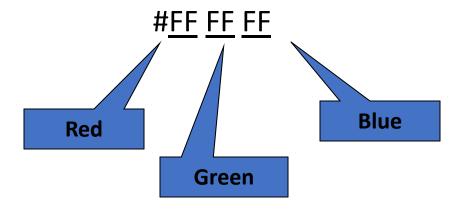
#### Screens are:



## HTML – Fundamentals Colors

color = "red" (Browser compatibility issues)
color = "#FF0000"
values vary from 00 to FF (hexadecimal)

0,1,2,3,4,5,6,7,8,9,a,b,c,d,e,f



## HTML – Fundamentals Headings

 Renders text as a heading, the rendering depending on the level of heading selected. Headings should be automatically spaced from the body text.

```
<h1>Heading 1 level text</h1>
<h2>Heading 2 level text</h2>
<h3>Heading 3 level text</h3>
<h4>Heading 4 level text</h4>
<h5>Heading 5 level text</h5>
<h6>Heading 6 level text</h6>
```

## HTML – Fundamentals Lists

#### **Unordered list**

```
applesapplesbananasgrapesstrawberries
```

#### **Ordered list**

```
    apples
    bananas
    grapes
    strawberries
```

## HTML – Fundamentals Lists

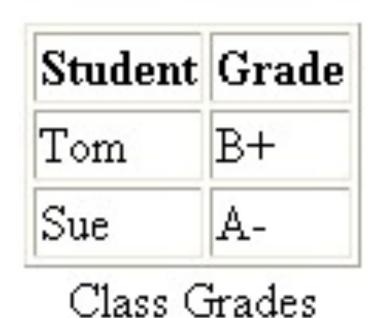
#### **Unordered list**

- apples
- bananas
- grapes
- strawberries

#### **Ordered list**

- II. apples
- III. bananas
- IV. grapes
- V. strawberries

## HTML – Fundamentals Tables



#### Tables

```
<TABLE>
 <CAPTION ALIGN="bottom">Class Grades</CAPTION>
 <TR>
       <TH>Student</TH>
       <TH>Grade</TH>
 </TR>
 <TR>
       <TD>Tom</TD>
       <TD>B+</TD>
 </TR>
 <TR>
       <TD>Sue</TD>
       <TD>A-</TD>
 </TR>
</TABLE>
```

## HTML – Fundamentals Tables

- BORDER=value
- ALIGN=*left*|*right*|*center*
- CELLSPACING=value
- CELLPADDING=value
- WIDTH=value | percent

#### Tables

```
<TABLE BORDER=1 WIDTH="50%" CELLPADDING="6" CELLSPACING="2" ALIGN="RIGHT">
  <CAPTION ALIGN="bottom">Class Grades</CAPTION>
  <TR>
        <TH>Student</TH>
        <TH>Grade</TH>
  </TR>
  <TR>
        <TD>Tom</TD>
        <TD>B+</TD>
  </TR>
  <TR>
        <TD>Sue</TD>
        <TD>A-</TD>
  </TR>
</TABLE>
```

## HTML – Fundamentals Tables

Student	Grade
Tom	B-
Sue	A+

**Class Grades** 

## Tabela de employees

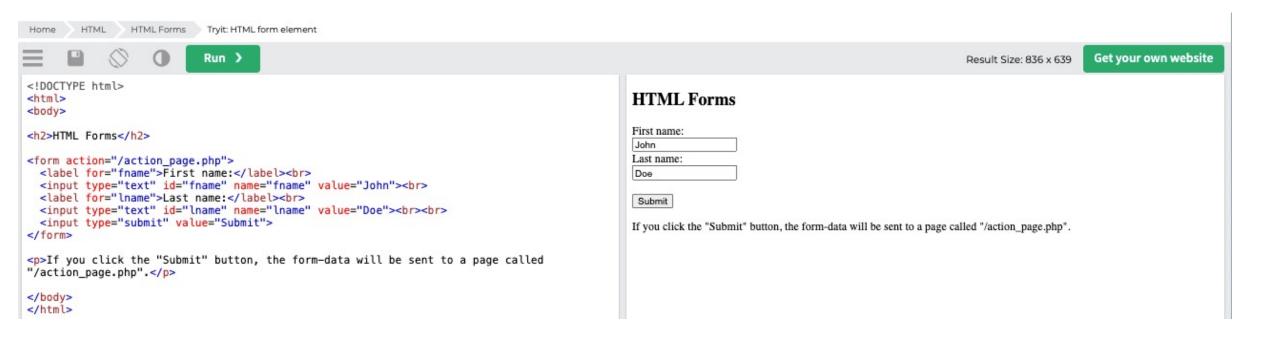
### **Employees**

Nome	Função	Departamento
Joao Sampaio	Presidente	Contabilidade
Augusto Reis	Encarregado	Investigação
Maria Dias	Analista	Investigação

```
<body>
<h2><b>Employees</b></h2>
 <!-- style="width:70%"> -->
Nome
 Função
 Departamento
Joao Sampaio
 Presidente
 Contabilidade
Augusto Reis
 Encarregado
 Investigação
Maria Dias
 Analista
 Investigação
</body>
```

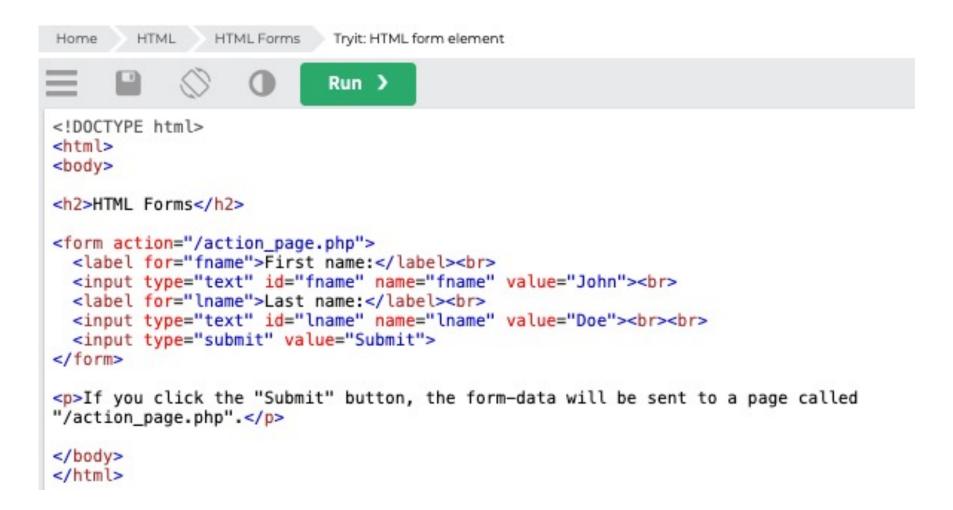
## Form

#### https://www.w3schools.com/html/html\_forms.asp



### Form

#### https://www.w3schools.com/html/html\_forms.asp



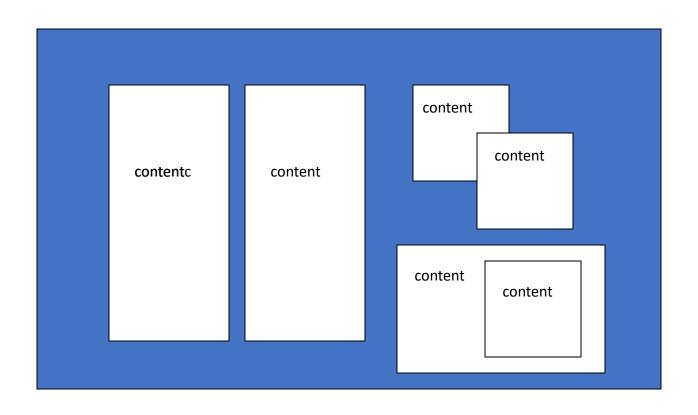
## Form

https://www.w3schools.com/html/html\_forms.asp

```
<!DOCTYPE html>
<html>
<body>
<h2>HTML Forms</h2>
<form action="/action_page.php">
 <label for="fname">First name:</label><br>
 <input type="text" id="fname" name="fname" value="John"><br>
 <label for="lname">Last name:</label><br>
 <input type="text" id="Iname" name="Iname" value="Doe"><br><br>
 <input type="submit" value="Submit">
</form>
If you click the "Submit" button, the form-data will be sent to a page called "/action_page.php".
</body>
</html>
```

# form

```
<!DOCTYPE html>
<html>
<body>
<h2>HTML Forms</h2>
<form action="/action_page.php">
 <label for="fname">First name:</label><br>
 <input type="text" id="fname" name="fname"
value="John"><br>
 <label for="lname">Last name:</label><br>
 <input type="text" id="Iname" name="Iname"
value="Doe"><br><br>
 <input type="submit" value="Submit">
</form>
If you click the "Submit" button, the form-data will be sent
to a page called "/action_page.php".
</body>
</html>
```



DIV – separa conteudos na pagina

<div attributes> content </div>

#### attributes

- ID="name"
- STYLE = "style parameters re: CSS"

```
< DIV ID="fred"
  STYLE = "POSITION:absolute | relative;
                 VISIBILITY: visible: hidden;
                 Z-INDEX:number;
                 WIDTH:width in pixels;
                 HEIGHT:height in pixels;
                 TOP:pixels from top of page or block;
                 LEFT:pixels from left edge of page or block;
                 PADDING:margin in pixels;
                 other style attributes; " >
```

content

</DIV>

```
<div style="position:absolute; left:100px; top:100px; width:100px;
height:100px; background-color:#ffffff; ">
```

CASCADING STYLE SHEETS (CSS)

 Styles enable you to define a consistent 'look' for your documents by describing once how headings, paragraphs, quotes, etc. should be displayed.

Style sheet syntax is made up of three parts:

selector {property: value}
selector = element.class

H1 {text-align: center; color: blue}

CASCADING STYLE SHEETS (CSS)

```
H1 {text-align: center; color: blue}
A {color:green; font-familiy:arial,courier; font-weight:bold;}
td { align:center; background-color:grey; border-color:red;}
div {position:absolute; visibily:hidden; margin:10px }
font {color:navy; font-size:2pt; font-face:trebuchet; }
hr {color:#ff0000; width:80%; align:center; }
table {width:80%; align:center; border:2px; padding:5px; }
```

CASCADING STYLE SHEETS (CSS) <a href="mailto:Embedded">Embedded</a>

```
<head>
 <title> My Page Title </title>
 <style TYPE="text/css >
 <! - -
 element.class { property:value; }
 element.class { property:value; }
 - - >
 </style>
</head>
```

CASCADING STYLE SHEETS (CSS) Linked

Styles can be defined in a separate file

```
<font style="property:value; "> text </font>
<font class="fred"> text </font>

mystyles.css

<head>
<LINK REL="stylesheet" HREF="mystyles.css" TYPE="text/css">
</head>
```

CASCADING STYLE SHEETS (CSS)

```
/* Example style sheet file (note how this comment was created) */
BODY
         {background: #FFFFD8; margin-top: 20}
A:link
         {color: #400080; background: #FFFFD8}
H1
         {font-weight: bold; text-align: center; color: #006000; background: #FFFFD8; font-family: Gill
  Sans, Arial, sans-serif; }
font.caption {font-family: Gill Sans, Arial, sans-serif; font-style: italic; }
/* End of example style sheet file */
```

CASCADING STYLE SHEETS (CSS) <a href="Inline">Inline</a>

Styles can be placed within individual elements

<font style="color:red; font-face:ariel;" >

CASCADING STYLE SHEETS (CSS)

#### **Using IDs**

• IDs enable you to define a unique style which you can apply to a number of elements.

```
<STYLE>
<!--
#copyright {font-style:italic; font-size:smaller; }
-->
</STYLE>
```

Any textual content

# HTML – Fundamentals Images

<img src="images/pic1.jpg" width=75px, height=50px />

<img class="pics" src="images/pic1.jpg" />

img.pics { width:75px; height:50px; border-width:3px }

## Resources

http://www.w3schools.com/

- HTML Tutorials
   Learn HTML
   Learn XHTML
   Learn CSS
   Learn TCP/IP
- Browser Scripting
   Learn JavaScript
   Learn DHTML
   Learn VBScript
   Learn HTML DOM
   Learn WMLScript
- Server Scripting
   Learn SQL
   Learn ASP
   Learn ADO
   Learn PHP

 XML Tutorials Learn XML Learn XSL Learn XSLT Learn XSL-FO Learn XPath Learn XQuery Learn XLink Learn XPointer Learn DTD Learn Schema Learn XML DOM Learn XForms Learn SOAP Learn WSDL Learn RDF Learn RSS Learn WAP

- .NET (dotnet)

   .NET Microsoft

   .NET ASP
   .NET Mobile
- Multimedia

   Learn Media
   Learn SMIL
   Learn SVG
   Learn Flash
- Web Building
  Web Building
  Web W3C
  Web Browsers
  Web Quality
  Web Semantic
  Web Careers
  Web Hosting
  Web Certification

# Página vazia

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

# Exercicio1: Intro to css (exercicio1.html)



# Exercicio 2: coloured

```
<!DOCTYPE html>
<!DOCTYPE html>
<ht.ml>
                                         <html>
<head>
                                                                        <h1>My First CSS Example</h1>
                                         <head>
<style>
                                                                        This is a paragraph.
body {
  background-color: lightblue;
                                         </head>
                                                                        </body>
                                         <body>
                                                                        </html>
h1 {
  color: white;
                                         </body>
  text-align: center;
                                         </html>
p
                                                        My First CSS Example
  font-family: verdana;
  font-size: 20px;
</style>
                                     This is a paragraph.
</head>
<body>
<h1>My First CSS Example</h1>
This is a paragraph.
</body>
</html>
                                        ©Copyright Pedro Furtado 2022
```

# Exercicio3: Where to put the css

```
<!DOCTYPE html>
<html>
<head>
<link rel="stylesheet" href="mystyle.css">
</head>
<body>
<h1>This is a heading</h1>
This is a paragraph.
</body>
</html>
```

#### **My First CSS Example**

This is a paragraph.

```
body {
   background-color: lightblue;
}

h1 {
   color: navy;
   margin-left: 20px;
}
```

# CSS Color Names In CSS, a color can be specified by using a color name: Tomato Orange DodgerBlue MediumSeaGreen

SlateBlue

Gray

Violet

LightGray

# 4R: colours

```
<!DOCTYPF html>
<html>
   <body>
      <h1 style="background-color:Tomato;">Tomato</h1>
      <h1 style="background-color:Orange;">Orange</h1>
      <h1 style="background-color:DodgerBlue;">DodgerBlue</h1>
      <h1 style="background-color:MediumSeaGreen;">MediumSeaGreen</h1>
      <h1 style="background-color:Gray;">Gray</h1>
      <h1 style="background-color:SlateBlue;">SlateBlue</h1>
                                                                      Tomato
      <h1 style="background-color:Violet;">Violet</h1>
                                                                      Orange
      <h1 style="background-color:LightGray;">LightGray</h1>
                                                                      DodgerBlue
   </body>
                                                                      MediumSeaGreen
</html>
                                                                      Grav
                                                                      SlateBlue
                                                                      Violet
                                                                      LightGray
```

# Material adicional

#### Hello World

Lorem ipsum dolor sit amet, consectetuer 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.

## 6R: Borders

```
<!DOCTYPE html>
<html>
       <body>
              <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>
       </body>
</html>
          Hello World
          Hello World
          Hello World
```

## 7R: cores numericas

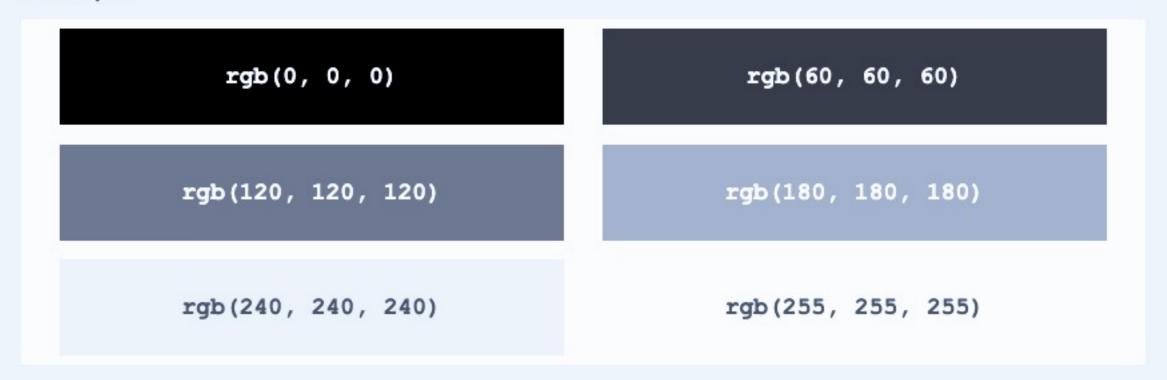
```
<!DOCTYPE html>
<html>
        <body>
                <h1 style="background-color:rgb(255, 0, 0);">rgb(255, 0, 0)</h1>
                <h1 style="background-color:rgb(0, 0, 255);">rgb(0, 0, 255)</h1>
                <h1 style="background-color:rgb(60, 179, 113);">rgb(60, 179, 113)</h1>
                <h1 style="background-color:rgb(238, 130, 238);">rgb(238, 130, 238)</h1>
                <h1 style="background-color:rgb(255, 165, 0);">rgb(255, 165, 0)</h1>
                <h1 style="background-color:rgb(106, 90, 205);">rgb(106, 90, 205)</h1>
                In HTML, you can specify colors using RGB values.
        </body>
                                                              rgb(255, 0, 0)
</html>
                                                              rgb(60, 179, 113)
                                                              rgb(238, 130, 238)
                                                              rgb(255, 165, 0)
                                                              rgb(106, 90, 205)
                                                                                                 61
                                          ©Copyright Pedro Furtado 2022
                                                              In HTML, you can specify colors using RGB values.
```

## Exercicio 8: cores em valores Hex

```
<!DOCTYPF html>
<html>
       <body>
              <h1 style="background-color:#ff0000;">#ff0000</h1>
              <h1 style="background-color:#0000ff;">#0000ff</h1>
              <h1 style="background-color:#3cb371;">#3cb371</h1>
              <h1 style="background-color:#ee82ee;">#ee82ee</h1>
              <h1 style="background-color:#ffa500;">#ffa500</h1>
              <h1 style="background-color:#6a5acd;">#6a5acd</h1>
              In HTML, you can specify colors using Hex values.
       </body>
</html>
                                              #3cb371
                                              #ee82ee
                                              #ffa500
                                              #6a5acd
```

Shades of gray are often defined using equal values for all the 3 light sources:

### Example



About Services Clients Contact

#### **Auto Sidebar**

This sidebar is as tall as its content (the links), and is always shown.

Scroll down the page to see the result.

Some text to enable scrolling.. Lorem ipsum dolor sit amet, illum definitiones no quo, maluisset concludaturque et eum, altera fabulas ut quo. Atqui causae gloriatur ius te, id agam omnis evertitur eum. Affert laboramus repudiandae nec et. Inciderint efficiantur his ad. Eum no molestiae voluptatibus.

Some text to enable scrolling.. Lorem ipsum dolor sit amet, illum definitiones no quo, maluisset concludaturque et eum, altera fabulas ut quo. Atqui causae gloriatur ius te, id agam omnis evertitur eum. Affert laboramus repudiandae nec et. Inciderint efficiantur his ad. Eum no molestiae voluptatibus.

```
<body>
<div class="sidenay">
 <a href="#about">About</a>
 <a href="#services">Services</a>
 <a href="#clients">Clients</a>
 <a href="#contact">Contact</a>
</div>
<div class="main">
 <h2>Auto Sidebar</h2>
 This sidebar is as tall as its content (the links), and is
always shown.
 Scroll down the page to see the result.
 Some text to enable scrolling.. Lorem ipsum dolor sit
amet, illum definitiones no quo, maluisset concludaturque et
eum, altera fabulas ut quo. Atqui causae gloriatur ius te, id
agam omnis evertitur eum. Affert laboramus repudiandae nec
et. Inciderint efficiantur his ad. Eum no molestiae
voluptatibus.
REPETE O ULTIMO ... 4 vezes
</div>
```

About Services Clients Contact

#### **Auto Sidebar**

This sidebar is as tall as its content (the links), and is always shown.

Scroll down the page to see the result.

Some text to enable scrolling.. Lorem ipsum dolor sit amet, illum definitiones no quo, maluisset concludaturque et eum, altera fabulas ut quo. Atqui causae gloriatur ius te, id agam omnis evertitur eum. Affert laboramus repudiandae nec et. Inciderint efficiantur his ad. Eum no molestiae voluptatibus.

Some text to enable scrolling.. Lorem ipsum dolor sit amet, illum definitiones no quo, maluisset concludaturque et eum, altera fabulas ut quo. Atqui causae gloriatur ius te, id agam omnis evertitur eum. Affert laboramus repudiandae nec et. Inciderint efficiantur his ad. Eum no molestiae voluptatibus.

```
width: 130px;
 position: fixed;
 z-index: 1:
top: 20px;
 left: 10px;
 background: #eee;
 overflow-x: hidden;
 padding: 8px 0;
.sidenav a {
 padding: 6px 8px 6px 16px;
text-decoration: none;
font-size: 25px;
 color: #2196F3;
 display: block;
.sidenav a:hover {
 color: #064579:
```

.sidenav {

```
.main {
```

margin-left: 140px; /\* Same width as the sidebar + left position in px \*/ font-size: 28px; /\* Increased text to enable scrolling \*/ padding: 0px 10px;

# Exercicio 17: sidebar preto e fixo

```
body {
font-family: "Lato", sans-serif;
.sidenav {
 height: 100%;
 width: 200px;
 position: fixed;
 z-index: 1;
 top: 0;
 left: 0;
 background-color: #111;
 overflow-x: hidden;
 padding-top: 20px;
.sidenav a {
 padding: 6px 6px 6px 32p
 text-decoration: none;
 font-size: 25px;
 color: #818181;
 display: block;
```

About Services Clients Contact

#### Sidenav Example

This sidenav is always shown.

```
.main {
  margin-left: 200px; /* Same as the width of the sidenav */
}

@media screen and (max-height: 450px) {
  .sidenav {padding-top: 15px;}
  .sidenav a {font-size: 18px;}
}
```

# Run URLs

https://www.w3schools.com/howto/default.asp

# Webpage Layout and Website Design

- Technical definitions:
  - A webpage is a single HTML document
  - A website is a collection of related webpages
- Designing a good website requires more than just putting together a few pages

# Examples

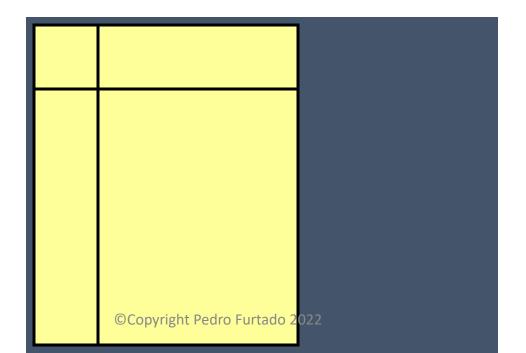
- www.projectpuffin.org
- www.pmlodge.com
- www.uintafishing.com
- www.uncommonadv.com

# Web Page Layout

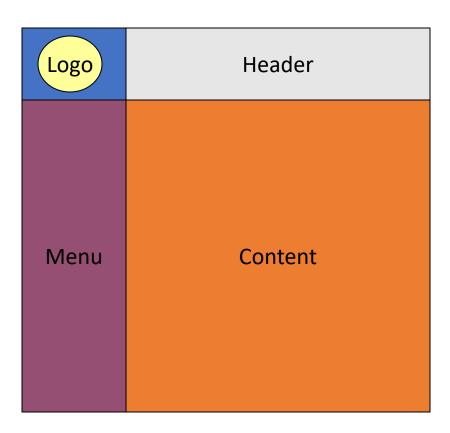
- Layout of web pages is very important
- Poor layout makes for -
  - Difficult navigation
  - Hard to locate information on page
  - Visually unappealing

# Tables, tables!

- Use tables to lay out your pages!
- Make the table borders invisible
- A 2x2 table works well



# Areas of a Web Page



## A 2 x 2 Layout



Project Description

Background Information

Research Stations

The Puffin Burrow

The Seabird Center

Suggested Readings

Education Programs Project

Staff All About

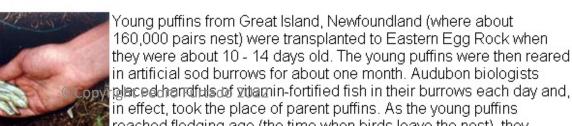
# Project Puffin What is Project Puffin?

The National Audubon Society started Project Puffin in 1973 in an effort to learn how to restore puffins to historic nesting islands in the Gulf of Maine. At that time, literally all the puffin eggs in Maine were in two baskets - Matinicus Rock and Machias Seal Island. Although puffins are not an endangered species (they are abundant in Newfoundland, Iceland, and Britain), they are rare in Maine. The two surviving colonies were very vulnerable to a disaster such as an oil spill, or accidental establishment of predators such as rats or mink.





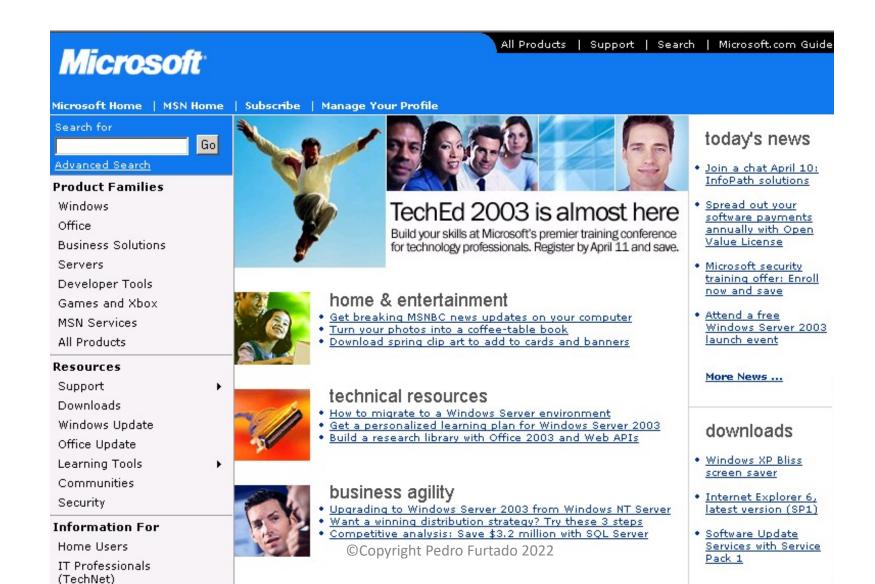




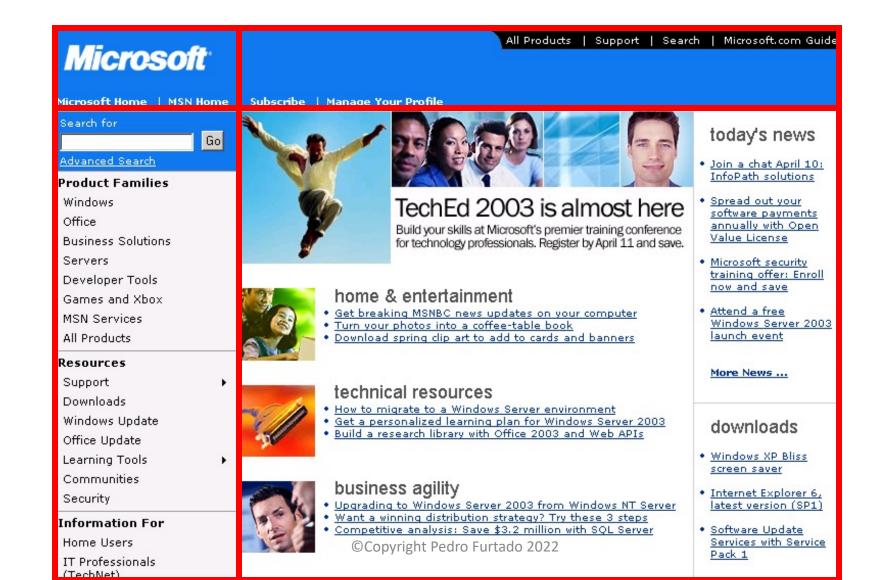
# Other Designs

- <a href="https://www.adobe.com">www.adobe.com</a> (menu on right)
- <a href="https://www.uintafishing.com">www.uintafishing.com</a> (many columns)

### Table within a table



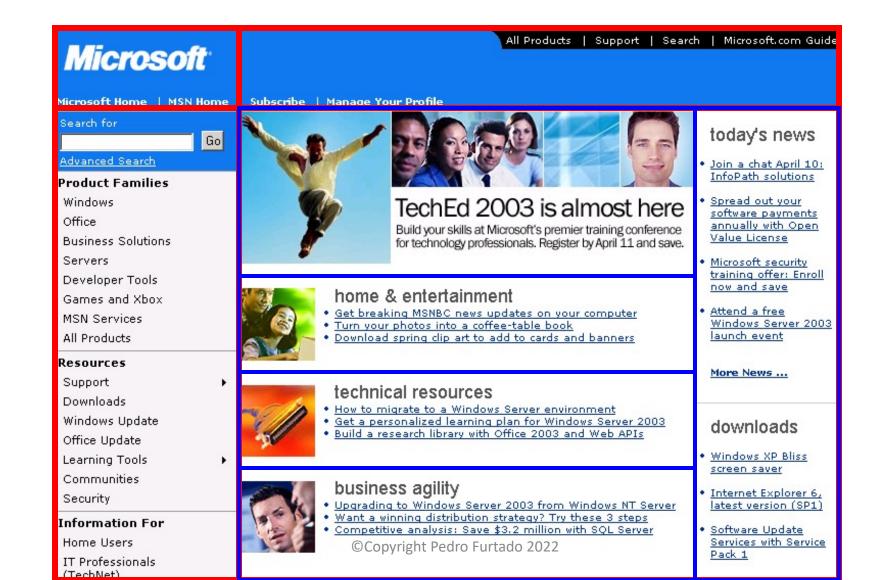
## The outer table



## The inner table



### The inner table



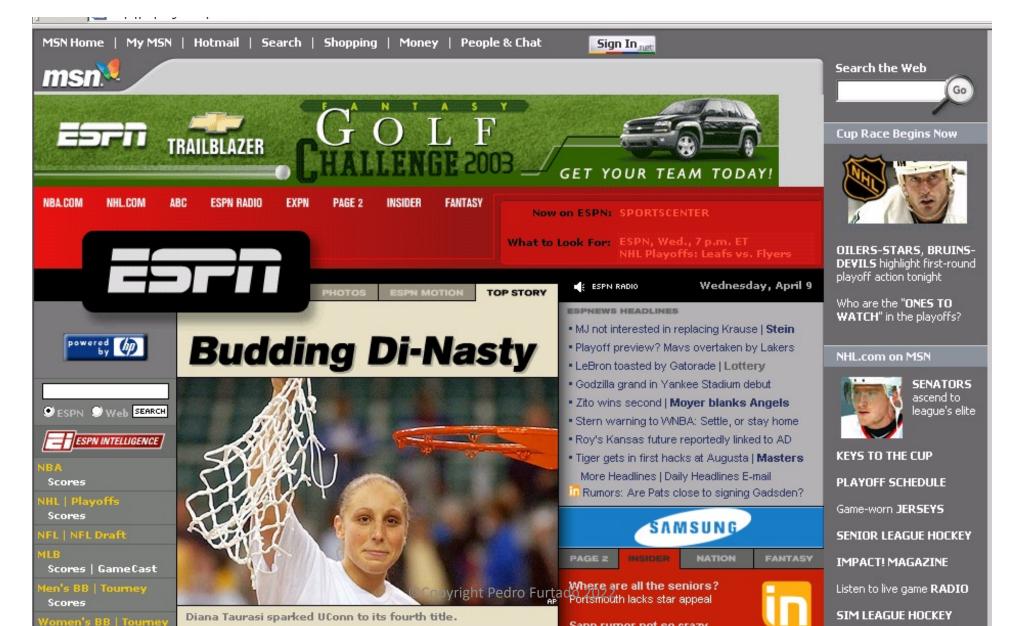
#### Centered with three columns

STATUS TO GOAL: \$679.5 Million

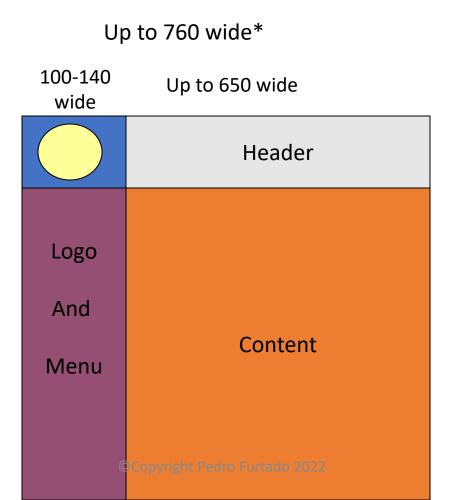


UNIVERSITY

### Really complicated design!



### Dimensions in a 2x2 table



#### Different Resolutions

http://www.dreamink.com/design6.shtml

# Splash Page

- The index.html file is called the "Splash Page"
- It is the key page—the first page visitors usually see
- Must be visually attractive, informative, and easy to navigate
- Examples:
  - www.projectpuffin.org
  - www.pmlodge.com
  - www.uncommonadv.com
  - www.rainforestandreef.org

# Organizing Information

- Decide what info goes on each page
  - Friends page
  - Family page
  - Personal page
  - Hobbies page

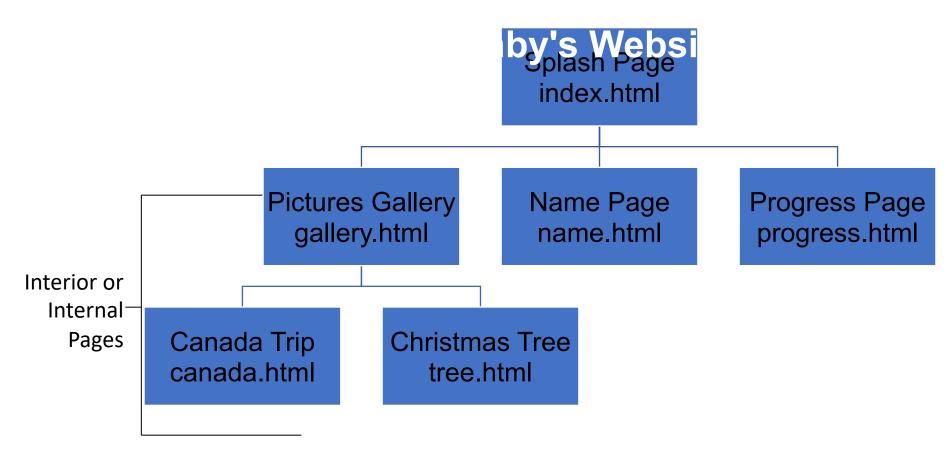
#### Good Web Communication

- Be Concise
- Limit choices use a hierarchical structure
  - A hierarchy is a structured organization where some pages are at a higher level than others
  - Hierarchy results in a site map with multiple levels

## Site Map

- A site map is designed to show the connections between pages
- A graphical site map uses lines to connect linked pages

# Site Map



## Design Theme

- Choose a common layout for your website. The Splash Page will probably differ but interior pages should be the same
- Use tables to control placement throughout

## Consistency in Design

- Use the same font throughout!
- Use consistent graphics in website do not use ultra modern on one page and calligraphy on another
- Use color scheme that is consistent

## Where to get help on design

- Web Pages for more info
  - http://info.med.yale.edu/caim/manual/contents.html
- Good places for Graphics
  - www.clipart.com
  - http://free-clip-art.com/
- Fonts
  - http://www.1001freefonts.com/fontfiles/main.htm