

Programming in Design

Lecture 03 – Introduction to CSS

Edirlei Soares de Lima

`<edirlei.lima@universidadeeuropeia.pt>`

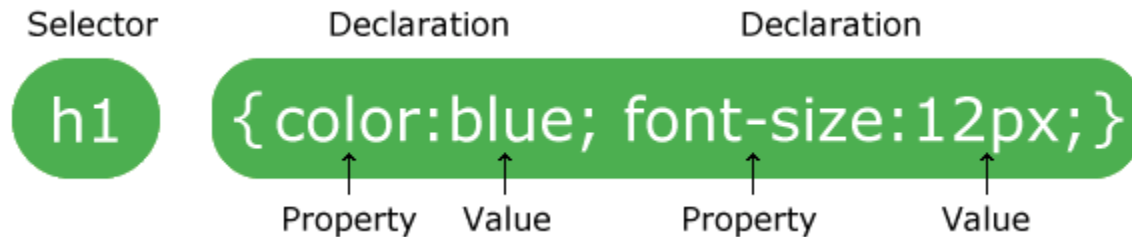


Introduction to HTML

- **What is CSS?**
 - Cascading Style Sheets;
 - CSS describes how HTML elements are to be displayed on screen;
 - Provides precise type and layout controls;
 - It can control the layout of multiple web pages all at once;
 - External stylesheets are stored in CSS files;
 - Same page, different CSS:
 - https://www.w3schools.com/css/demo_default.htm

CSS Syntax

- A CSS rule-set consists of a selector and a declaration block:



- The selector points to the HTML element you want to style;
- The declaration block contains one or more declarations separated by semicolons;
- Each declaration includes a CSS property name and a value, separated by a colon;
- A CSS declaration always ends with a semicolon, and declaration blocks are surrounded by curly braces.

CSS Syntax

- Example of CSS:

```
p {  
  color: red;  
  text-align: center;  
}  
  
a:link {  
  color: red;  
  background-color: yellow;  
}  
  
a:visited {  
  color: green;  
  background-color: cyan;  
}
```

CSS Syntax

- There are three ways of defining a style sheet:
 - **External CSS:** each page must include a reference to the external CSS file inside the <link> element (inside the head section).
 - **Internal CSS:** an internal CSS may be used if one single HTML page has a unique style. It is defined inside the <style> element (inside the head section).
 - **Inline CSS:** an inline style may be used to apply a unique style for a single element. It is defined in the style attribute of the HTML element.

CSS Syntax

- External CSS:

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

mystyle.css

```
<!DOCTYPE html>  
<html lang="en">  
  <head>  
    <title>Page Title</title>  
    <link rel="stylesheet" type="text/css" href="mystyle.css">  
  </head>  
  <body>  
    <h1>This is a heading</h1>  
    <p>This is a paragraph.</p>  
  </body>  
</html>
```

mypage.html

CSS Syntax

- Internal CSS:

mypage.html

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Page Title</title>
    <style>
      body {
        background-color: lightblue;
      }
      h1 {
        color: navy;
        margin-left: 20px;
      }
    </style>
  </head>
  <body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
  </body>
</html>
```

CSS Syntax

- Inline CSS:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>Page Title</title>
  </head>
  <body style="background-color: lightblue;">
    <h1 style="color: navy; margin-left: 20px;">This is a
    heading</h1>
    <p>This is a paragraph.</p>
  </body>
</html>
```

mypage.html

- Important: an inline style loses many of the advantages of a style sheet (by mixing content with presentation). Use this method sparingly.

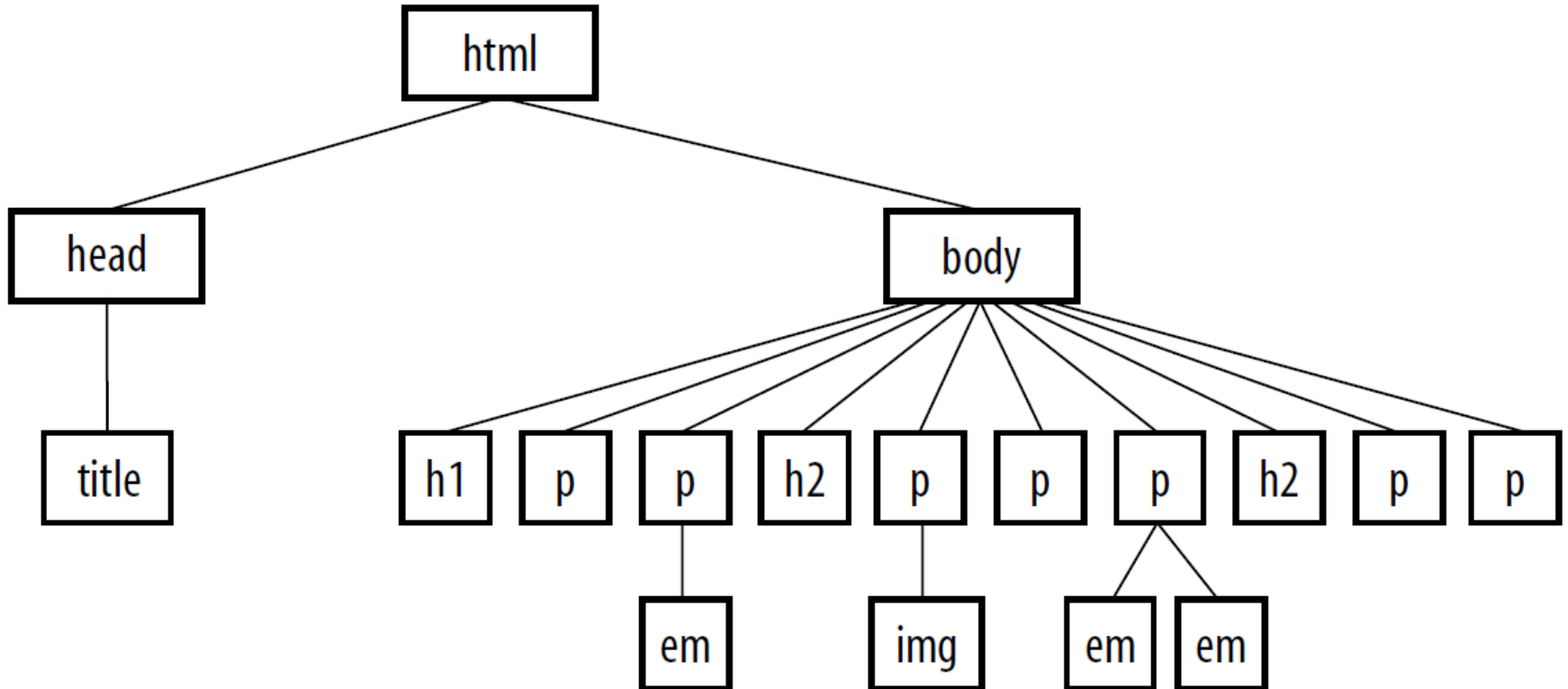
Key Concepts: Inheritance

- HTML documents have an implicit structure or hierarchy.
 - Example:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <title>My Page</title>
  </head>
  <body>
    <h1>Title 1</h1>
    <p>Paragraph 1 text.</p>
    <p>Paragraph 2 <em>text</em>.</p>
    <h2>Section 1</h2>
    <p><p>
    <p>Paragraph 3 text.</p>
    <p><em>Paragraph</em> 4 <em>text</em>.</p>
    <h2>Section 2</h2>
    <p>Paragraph 5 text.</p>
    <p>Paragraph 6 text.</p>
  </body>
</html>
```

Key Concepts: Inheritance

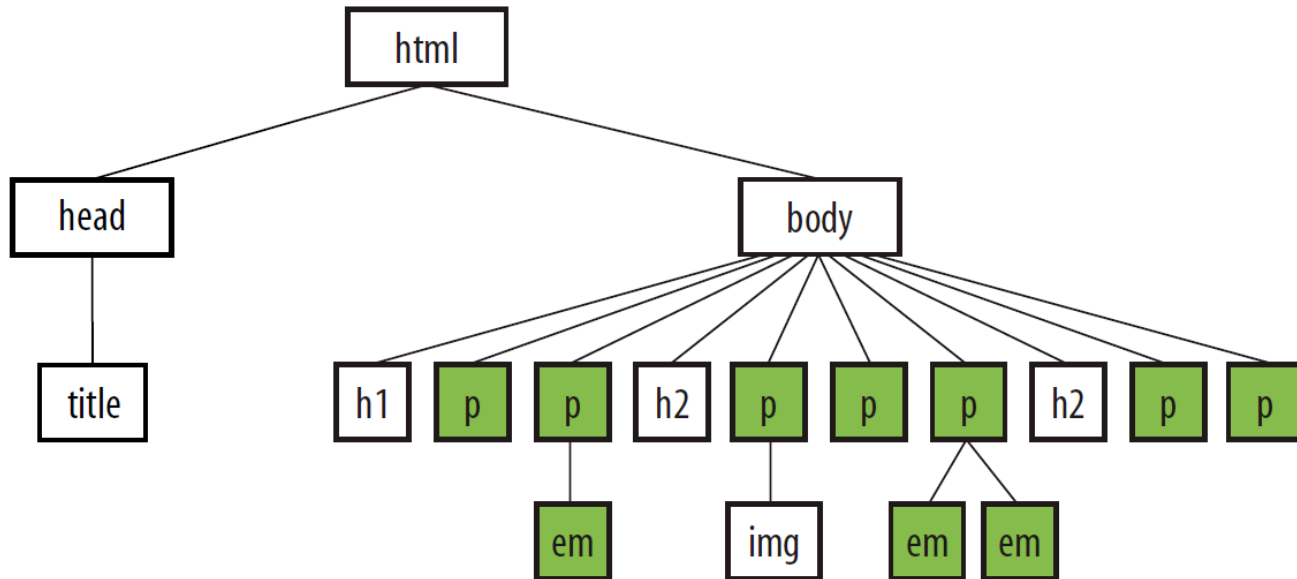
- HTML documents have an implicit structure or hierarchy.
 - Example:



Key Concepts: Inheritance

- HTML documents have an implicit structure or hierarchy.
 - Styled HTML elements pass down certain style properties to the elements they contain.

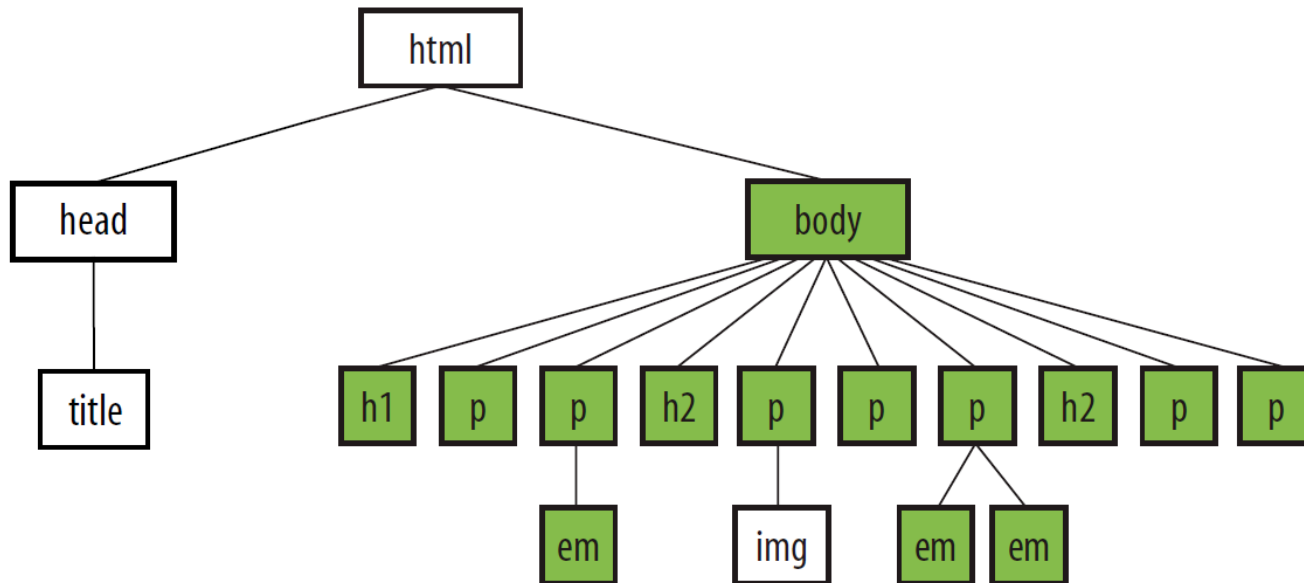
```
p {  
  font-size: small;  
  font-family: sans-serif;  
}
```



Key Concepts: Inheritance

- HTML documents have an implicit structure or hierarchy.
 - Styled HTML elements pass down certain style properties to the elements they contain.

```
body {  
  font-size: small;  
  font-family: sans-serif;  
}
```



Key Concepts: Box Model

- Every element on the page is represented as being contained in a rectangular box.
 - It is possible to change properties such as borders, margins, padding, position, and background.

```
h1 {  
  border: 1px solid blue;  
}  
h2 {  
  border: 1px solid blue;  
}  
p {  
  border: 1px solid blue;  
}  
em {  
  border: 1px solid blue;  
}  
img {  
  border: 1px solid blue;  
}
```

Title 1

Paragraph 1 text.

Paragraph 2 [text.](#)

Section 1



Paragraph 3 text.

Paragraph 4 [text.](#)

Section 2

Paragraph 5 text.

Paragraph 6 text.

Formatting Text

- The CSS font properties define the font family, boldness, size, and the style of a text.
- There are two types of font family names:
 - **Generic family:** a group of font families with a similar look (like "Serif" or "Monospace");
 - **Font family:** a specific font family (like "Times New Roman" or "Arial").

Generic family	Font family	Description
Serif	Times New Roman Georgia	Serif fonts have small lines at the ends on some characters
Sans-serif	Arial Verdana	"Sans" means without - these fonts do not have the lines at the ends of characters
Monospace	Courier New Lucida Console	All monospace characters have the same width

Font Family

- The font-family property usually holds several font names.
 - If the browser does not support the first font, it tries the next font, and so on.

```
h1 {  
  font-family: "Times New Roman", Times, serif;  
}  
  
p {  
  font-family: Arial, Helvetica, sans-serif;  
}
```

This is a heading

This is a paragraph.

- Commonly used font combinations:

https://www.w3schools.com/cssref/css_websafe_fonts.asp

Font Style

- The font-style property is mostly used to specify italic text. This property has three values:
 - normal: the text is shown normally;
 - italic: the text is shown in italics;
 - oblique: very similar to italic.

```
p {  
  font-style: italic;  
}
```

This is a heading

This is a paragraph.

Font Size

- The font-size property sets the size of the text.
- The size can be specified in several ways:
 - At a specific size using one of the CSS length units:

```
p {  
  font-size: 1.5em;  
}
```

- As a percentage value, sized up or down from the element's default or inherited font size:

```
p {  
  font-size: 150%;  
}
```

Font Size

- The size can be specified in several ways:
 - Using one of the absolute keywords (xx-small, x-small, small, medium, large, x-large, xx-large):

```
p {  
  font-size: x-large;  
}
```

- Using a relative keyword (larger or smaller) to nudge the text larger or smaller than the surrounding text:

```
p {  
  font-size: larger;  
}
```

Font Size

- CSS provides a variety of units of measurement that fall into two broad categories:
 - Relative units: are based on the size of something else, such as the default text size or the size of the parent element. Examples:
 - em: a unit of measurement equal to the current font size;
 - ex: approximately the height of a lowercase “x” in the font;
 - vw: viewport width unit, equal to 1/100 of the browser window width;
 - Absolute units: have predefined meanings or real-world equivalents. Examples:
 - px: pixel, defined as an absolute measurement equal to 1/96 of an inch;
 - pt: points (1/72 inch);
 - cm: centimeters;
- Important: absolute units should be avoided for web page style sheets because they are not relevant on computer screens.

Font Weight

- The font-weight property specifies the weight (boldness) of a font:

```
p {  
  font-weight: bold;  
}
```

This is a heading

This is a paragraph.

Text Color

- The color property is used to set the color of the text. The color is specified by:
 - color name – e.g.: "red";
 - HEX value – e.g.: "#ff0000";
 - RGB value – e.g.: "rgb(255,0,0)";

```
p {  
  color: blue;  
}
```

This is a heading

```
p {  
  color: #0000ff;  
}
```

This is a paragraph.

```
p {  
  color: rgb(0, 0, 255);  
}
```

Background Color

- The background-color property is used to set the background color for HTML elements.

```
h1 {  
  color:white;  
  background-color:Tomato;  
}  
  
p {  
  color:white;  
  background-color:DodgerBlue;  
}
```

This is a heading.

This is a paragraph.

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)`, where the alpha parameter is a number between 0.0 (fully transparent) and 1.0 (not transparent at all).

```
h1 {  
  color:rgba(0, 0, 0, 0.1);  
  background-color:blanchedalmond;  
}
```

Playing with RGBa

Playing with RGBa

Playing with RGBa

```
h1 {color: rgba(0, 0, 0, 0.1);}
```

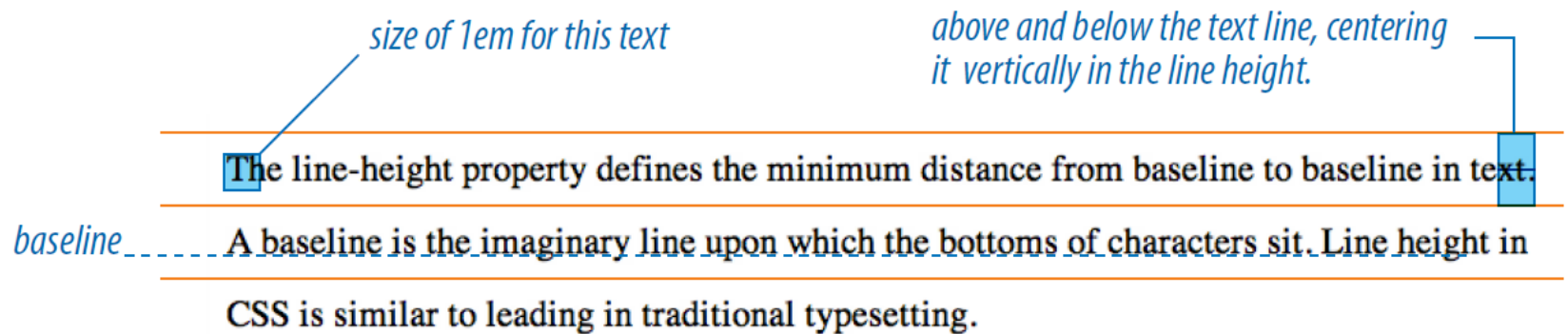
```
h1 {color: rgba(0, 0, 0, 0.5);}
```

```
h1 {color: rgba(0, 0, 0, 1);}
```

Line Height

- The line-height property is used to specify the space between lines.

```
p {  
  line-height: 2em;  
}  
  
p {  
  line-height: 200%;  
}
```



Indents

- The text-indent property is used to specify the indentation of the first line of a text:

```
p {  
  text-indent: 2em;  
}
```

```
p {  
  text-indent: 25%;  
}
```

2em



Paragraph 1. The text-indent property indents only the first line of text by a specified amount. You can specify a length measurement or a percentage value.

25%



Paragraph 2. The text-indent property indents only the first line of text by a specified amount. You can specify a length measurement or a percentage value.

Horizontal Alignment

- The text-align property is used to set the horizontal alignment of a text.

```
text-align: left;  
text-align: right;  
text-align: center;  
text-align: justify;
```

text-align: left

Paragraph 1. The text-align property controls the horizontal alignment of the text within an element. It does not affect the alignment of the element on the page. The resulting text behavior of the various values should be fairly intuitive.

text-align: right

Paragraph 2. The text-align property controls the horizontal alignment of the text within an element. It does not affect the alignment of the element on the page. The resulting text behavior of the various values should be fairly intuitive.

text-align: center

Paragraph 3. The text-align property controls the horizontal alignment of the text within an element. It does not affect the alignment of the element on the page. The resulting text behavior of the various values should be fairly intuitive.

text-align: justify

Paragraph 4. The text-align property controls the horizontal alignment of the text within an element. It does not affect the alignment of the element on the page. The resulting text behavior of the various values should be fairly intuitive.

Underlines and Other Decorations

- The text-decoration property is used to set or remove decorations from text.

```
text-decoration: none;  
text-decoration: underline;  
text-decoration: overline;  
text-decoration: line-through;  
text-decoration: blink;
```

I've got laser eyes.

text-decoration: underline

I've got laser eyes.

text-decoration: overline

~~I've got laser eyes.~~

text-decoration: line-through

- The value `text-decoration: none;` is often used to remove underlines from links:

```
a {  
  text-decoration: none;  
}
```

Underlines and Other Decorations

- The text-transform property is used to specify uppercase and lowercase letters in a text.

```
text-transform: none;  
text-transform: capitalize;  
text-transform: lowercase;  
text-transform: uppercase;
```

And I know what you're thinking.

text-transform: none (as was typed in)

And I Know What You'Re Thinking.

text-transform: capitalize

and i know what you're thinking.

text-transform: lowercase

AND I KNOW WHAT YOU'RE THINKING.

text-transform: uppercase

Letter Spacing & Word Spacing

- The letter-spacing property is used to specify the space between the characters in a text.
- The word-spacing property is used to specify the space between the words in a text.

```
p {  
  letter-spacing: 8px;  
}
```

```
p {  
  word-spacing: 1.5em;  
}
```

letter-spacing: 8px;

B l a c k G o o s e B i s t r o S u m m e r M e n u

word-spacing: 1.5em;

Black Goose Bistro Summer Menu

Text Shadow

- The text-shadow property adds shadow to text.

```
h1 {  
  color: darkgreen;  
  text-shadow: .2em .2em silver;  
}
```

The Jenville Show

text-shadow: .2em .2em silver

The Jenville Show

text-shadow: -.3em -.3em silver;

Text Shadow

- More text-shadow examples:

The Jenville Show

`text-shadow: .2em .2em .05 em silver`

The Jenville Show

`text-shadow: .2em .2em .15 em silver`

The Jenville Show

`text-shadow: .2em .2em .3 em silver`

Multiple shadows

The Jenville Show

`text-shadow: -.7em -.5em .2em silver,
.2em .2em .1em gray;`

Outer glow

The Jenville Show

`text-shadow: 0 0 .7em purple;`

Grouping Selectors

- Selectors can be grouped together in a comma-separated list so you can apply properties to several elements at once.

```
p, h1, h2 {  
  color: blue;  
  font-weight: bold;  
}
```


Class Selectors

- Class selectors can be used to define equal styles for elements with the same class name.
 - All HTML elements can have a class attribute;

```
<p class="myfirstclass">This is the first paragraph.</p>  
<p class="other">This is the second paragraph.</p>  
<p>This is the third paragraph.</p>
```

```
p {  
  color: green;  
}  
p.myfirstclass {  
  color: blue;  
  font-style: italic;  
}  
p.other {  
  color: red;  
  font-weight: bold;  
}
```

This is the first paragraph.

This is the second paragraph.

This is the third paragraph.

Pseudo-Class Selectors

- A pseudo-class is used to define a special state of an element. For example, it can be used to:
 - Define the style of an element when the mouse is over it;
 - Define the style of visited and unvisited links differently;
 - Define the style of an element when it gets focus;

Samples of my work:

- Pen and Ink Illustrations
- Paintings
- Collage

a:link

Samples of my work:

- Pen and Ink Illustrations
- Paintings
- Collage

a:focus
a:hover

Samples of my work:

- Pen and Ink Illustrations
- Paintings
- Collage

a:active

Samples of my work:

- Pen and Ink Illustrations
- Paintings
- Collage

a:visited

```
a {
  text-decoration: none;
}
a:link {
  color: maroon;
}
a:visited {
  color: gray;
}
a:focus {
  color: maroon;
  background-color: #ffd9d9;
}
a:hover {
  color: maroon;
  background-color: #ffd9d9;
}
a:active {
  color: red;
  background-color: #ffd9d9;
}
```

Other CSS Selectors

Selector	Example	Example description
.class	.intro	Selects all elements with class="intro"
#id	#firstname	Selects the element with id="firstname"
*	*	Selects all elements
element, element	div, p	Selects all <div> elements and all <p> elements
element element	div p	Selects all <p> elements inside <div> elements
element > element	div > p	Selects all <p> elements where the parent is a <div> element
element + element	div + p	Selects all <p> elements that are placed immediately after <div> elements
element1 ~ element2	p ~ ul	Selects every element that are preceded by a <p> element

More Selectors: https://www.w3schools.com/cssref/css_selectors.asp

Exercise 1

- Write the CSS code to decorate the summer menu of the Black Goose Bistro as illustrated in the image.
 - The HTML code for the webpage is available in the link bellow.
 - You are not allowed to change the HTML code. Everything must be done in the CSS code.

Black Goose Bistro • Summer Menu

Baker's Corner, Seekonk, Massachusetts

HOURS: MONDAY THROUGH THURSDAY: 11 to 9, FRIDAY AND SATURDAY: 11 to midnight

APPETIZERS

This season, we explore the spicy flavors of the southwest in our appetizer collection.

Black bean purses

Spicy black bean and a blend of mexican cheeses wrapped in sheets of phyllo and baked until golden. \$3.95

Southwestern napoleons with lump crab — *new item!*

Layers of light lump crab meat, bean and corn salsa, and our handmade flour tortillas. \$7.95

MAIN COURSES

Big, bold flavors are the name of the game this summer. Allow us to assist you with finding the perfect wine.

Jerk rotisserie chicken with fried plantains — *new item!*

Tender chicken slow-roasted on the rotisserie, flavored with spicy and fragrant jerk sauce and served with fried plantains and fresh mango. ***Very spicy.*** \$12.95

Shrimp sate kebabs with peanut sauce

Skewers of shrimp marinated in lemongrass, garlic, and fish sauce then grilled to perfection. Served with spicy peanut sauce and jasmine rice. \$12.95

Grilled skirt steak with mushroom fricasee

Flavorful skirt steak marinated in Asian flavors grilled as you like it*. Served over a blend of sauteed wild mushrooms with a side of blue cheese mashed potatoes. \$16.95

* We are required to warn you that undercooked food is a health risk.

HTML Code: <http://www.inf.puc-rio.br/~elima/webprog/menu.html>

Background Image

- The background-image property specifies an image to use as the background of an element.
 - By default, the image is repeated so it covers the entire element.

```
body {  
    background-image: url("images/background1.jpg");  
}
```

This is a heading.

This is a paragraph.

Background Image

- By default, the background-image property repeats an image both horizontally and vertically. However, some images must be repeated only horizontally or vertically.

```
body {  
  background-image: url("images/gradient_bg.png");  
  background-repeat: repeat-x;  
}
```

Repeated only horizontally:

This is a heading.

This is a paragraph.

Repeated horizontally and vertically:

This is a heading.

This is a paragraph.

Background Image

- The background-position property is used to specify the position of the background image.

```
body {  
  background-image: url("images/img_tree.png");  
  background-repeat: no-repeat;  
  background-position: right top;  
}
```

This is a heading.

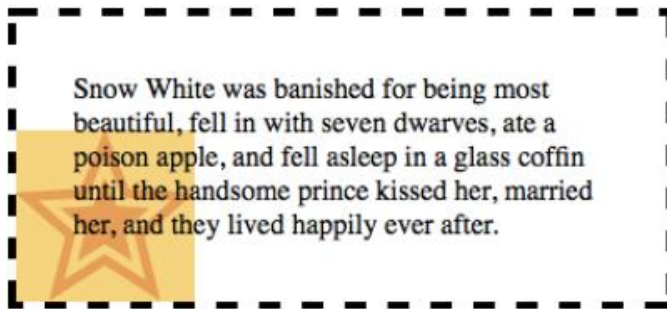
This is a paragraph.



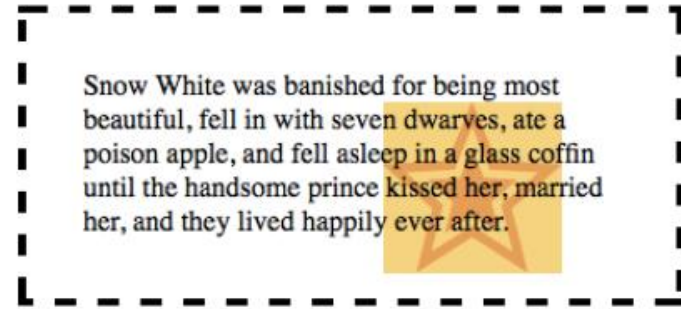
Background Image

- The background-position property also accepts length and percentage measurements.

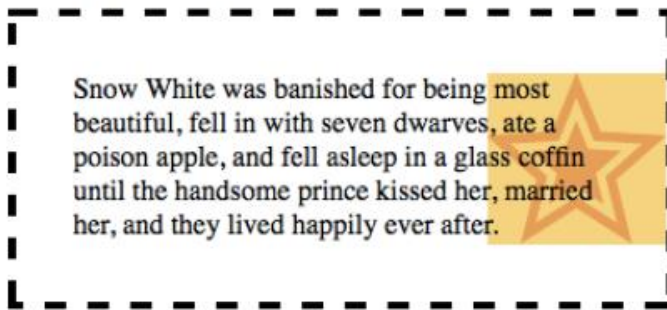
`background-position: left bottom;`



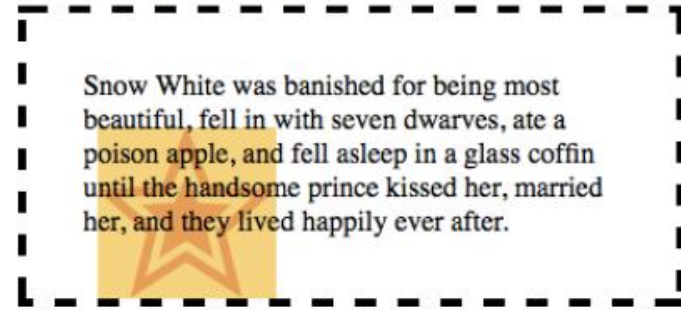
`background-position: 200px 50px;`



`background-position: right center;`



`background-position: 15% 100%;`



Background Image

- The background-attachment property specifies whether the background image should scroll or be fixed (will not scroll with the rest of the page).

```
body {  
    background-image: url("images/img_tree.png");  
    background-repeat: no-repeat;  
    background-position: right top;  
    background-attachment: fixed;  
}
```

```
body {  
    background-image: url("images/img_tree.png");  
    background-repeat: no-repeat;  
    background-position: right top;  
    background-attachment: scroll;  
}
```

Background Image

- In order to add multiple background images, a list separated by commas is used.
 - Additional background-related property values also go in comma-separated lists.

```
body {  
    background-image: url("images/img_tree.png"),  
                      url("images/gradient_bg.png");  
    background-repeat: no-repeat, repeat-x;  
    background-position: right top, left top;  
    background-attachment: fixed, scroll;  
}
```

This is a heading.

This is a paragraph.

This is a paragraph.

This is a paragraph.

This is a paragraph.

This is a paragraph.

This is a paragraph.

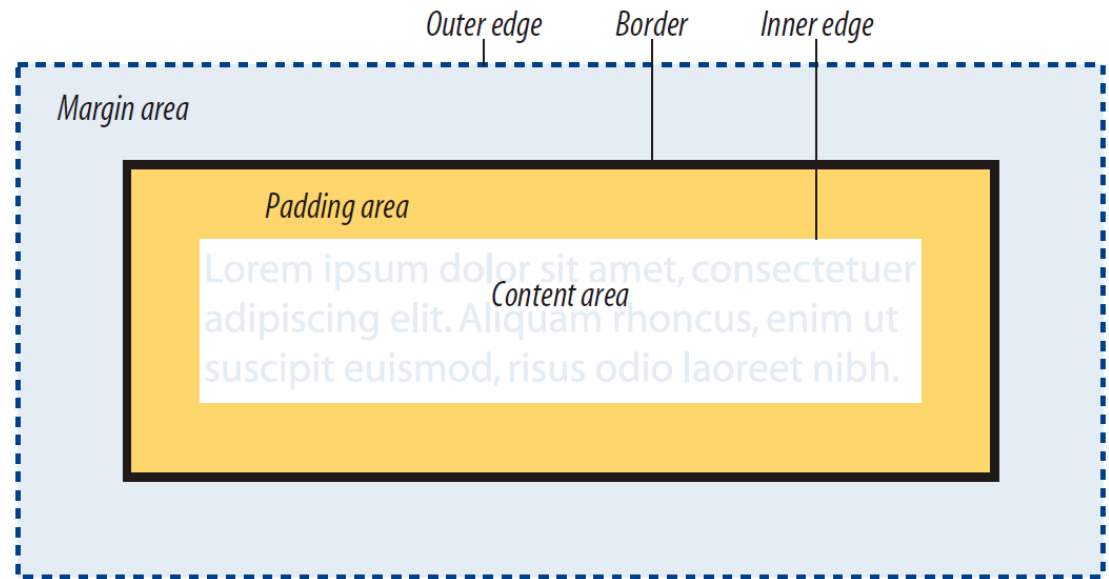
This is a paragraph.

This is a paragraph.



Box Model

- Every element in a document is represented by a rectangular element box.



- By default, the dimensions of a block element is calculated automatically by the browser

Border Style

- The border-style property specifies the type of border.
 - dotted: defines a dotted border
 - dashed: defines a dashed border
 - solid: defines a solid border
 - double: defines a double border
 - groove: defines a 3D grooved border.
 - ridge: defines a 3D ridged border.
 - inset: defines a 3D inset border.
 - outset: defines a 3D outset border.
 - none: defines no border
 - hidden - Defines a hidden border

```
p {  
  border-style: dotted;  
}
```

A dotted border.

A dashed border.

A solid border.

A double border.

A groove border.

A ridge border.

An inset border.

An outset border.

No border.

A hidden border.

A mixed border.

Border Width

- The border-width property specifies the width (thickness) of the four borders (border-top-width, border-right-width, border-bottom-width, border-left-width).
 - The width can be set as a specific size (in px, pt, cm, em, etc) or by using one of the three pre-defined values: thin, medium, or thick.

```
p.one {  
  border-style: solid;  
  border-width: thick;  
}  
  
p.two {  
  border-style: solid;  
  border-left-width: 1em;  
  border-top-width: thin;  
  border-bottom-width: thin;  
  border-right-width: thin;  
}
```

```
p.three {  
  border-style: solid;  
  border-width: thin thin thick thin;  
}
```

This is a paragraph of class one.

This is a paragraph of class two.

This is a paragraph of class three.

Border Color

- The border-color property is used to set the color of the four borders (border-top-color, border-right-color, border-bottom-color, border-left-color).

```
p.one {  
  border-style: solid;  
  border-width: thick;  
  border-color: red;  
}  
  
p.two {  
  border-style: solid;  
  border-left-width: 1em;  
  border-top-width: thin;  
  border-bottom-width: thin;  
  border-right-width: thin;  
  border-left-color: green;  
}
```

```
p.three {  
  border-style: solid;  
  border-width: thin thin thick thin;  
  border-color: red green blue grey;  
}
```

This is a paragraph of class one.

This is a paragraph of class two.

This is a paragraph of class three.

Rounded Borders

- The border-radius property is used to add rounded borders to an element.

```
p.one {  
  border-style: solid;  
  border-width: thick;  
  border-color: red;  
  border-radius: 1em;  
}  
  
p.two {  
  border-style: solid;  
  border-width: thick;  
  border-color: red;  
  border-top-left-radius: 1em;  
}
```

```
p.three {  
  border-style: solid;  
  border-width: thick;  
  border-color: red;  
  border-radius: 1em 0em 1em 0em;  
}
```

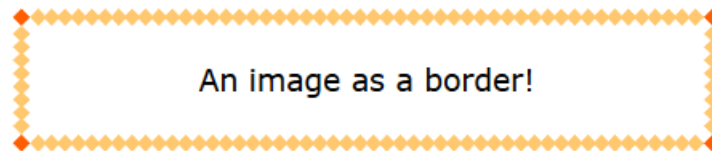
This is a paragraph of class one.

This is a paragraph of class two.

This is a paragraph of class three.

Border Images

- The border-image property can be used to set an image as the border of an element. The property has three parts:
 1. The image to use as the border;
 2. Where to slice the image;
 3. Whether the middle sections should be repeated or stretched;
- Example:
 - The image is sliced into nine sections. Corners are placed at the corners, and the middle sections are repeated or stretched as specify.

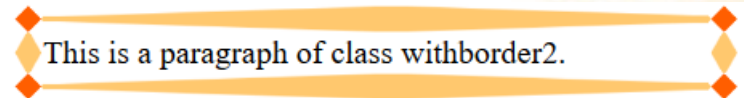
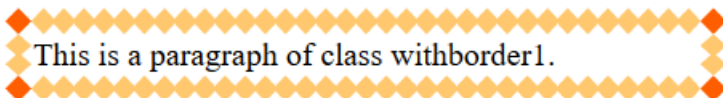


Border Images

- The border-radius property is used to add rounded borders to an element.

```
p.withborder1 {  
  border-style: solid;  
  border-width: 15px;  
  border-color: transparent;  
  border-image: url("images/border.png") 30 round;  
}
```

```
p.withborder2 {  
  border-style: solid;  
  border-width: 15px;  
  border-color: transparent;  
  border-image: url("images/border.png") 30 stretch;  
}
```



Width and Height

- The height and width properties are used to set the height and width of an element.

```
div.myclass {  
    height: 200px;  
    width: 50%;  
    background-color: powderblue;  
}
```

This element has a height of 200 pixels and a width of 50%

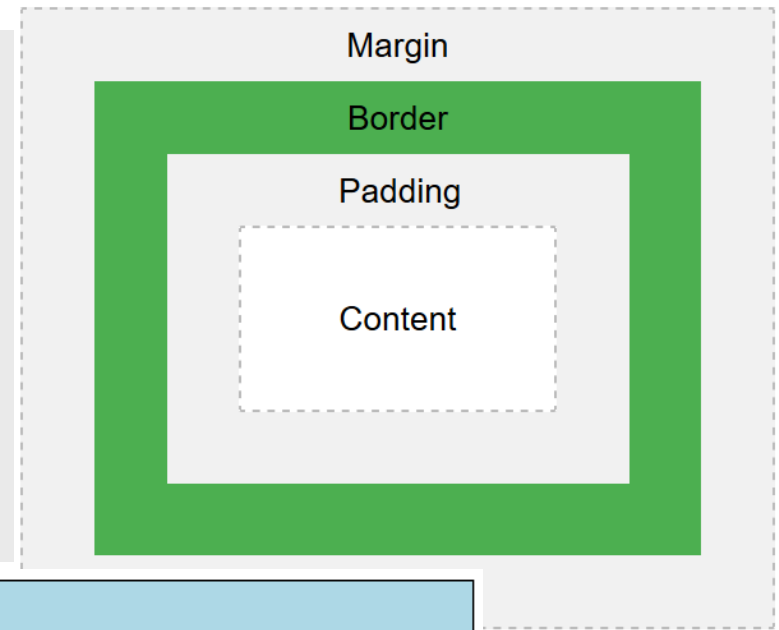


- The max-width and max-height properties are used to set the maximum width and height of an element.
- The min-width and min-height properties are used to set the minimum width and height of an element.

Padding

- The padding properties are used to generate space around an element's content, inside of any defined borders.

```
div.myclass {  
  border-style: solid;  
  border-width: 1px;  
  border-color: black;  
  background-color: lightblue;  
  padding-top: 50px;  
  padding-right: 30px;  
  padding-bottom: 50px;  
  padding-left: 80px;  
}
```

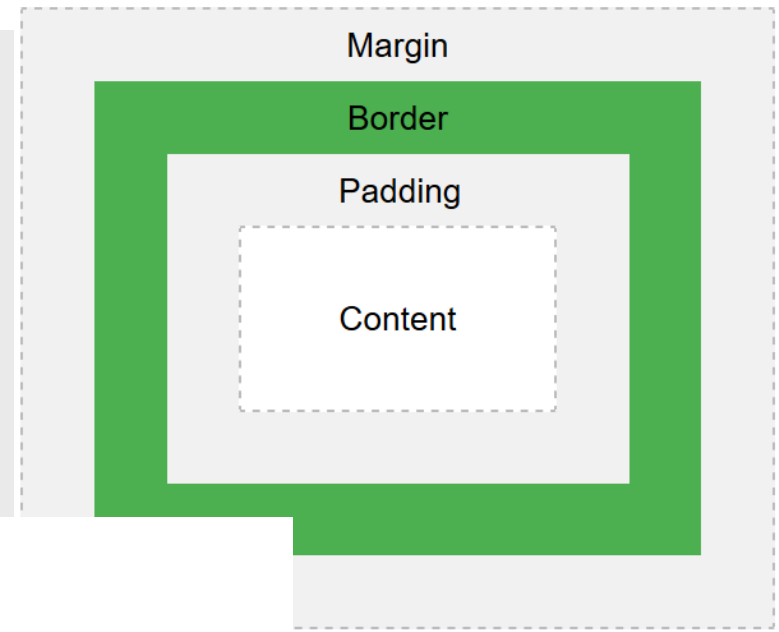


This div element has a top padding of 50px, a right padding of 30px, a bottom padding of 50px, and a left padding of 80px.

Margins

- The margin properties are used to create space around elements, outside of any defined borders.

```
div.myclass {  
  border-style: solid;  
  border-width: 1px;  
  border-color: black;  
  background-color: lightblue;  
  margin-top: 100px;  
  margin-bottom: 100px;  
  margin-right: 150px;  
  margin-left: 80px;  
}
```

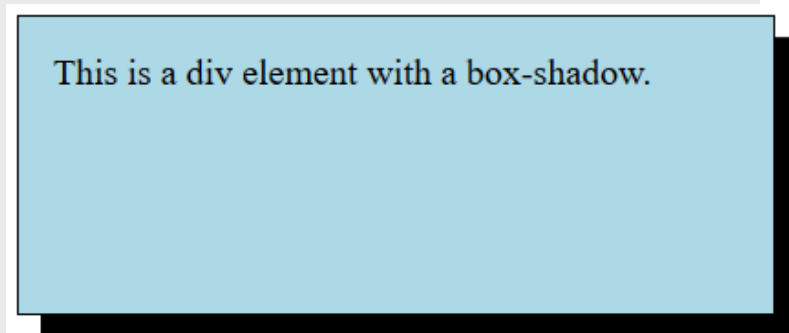


This div element has a top margin of 100px, a right margin of 150px, a bottom margin of 100px, and a left margin of 80px.

Box Shadow

- The box-shadow property applies shadow to elements.
 - In its simplest use, you only specify the horizontal shadow and the vertical shadow.

```
div.myclass {  
  border-style: solid;  
  border-width: 1px;  
  border-color: black;  
  background-color: lightblue;  
  width: 300px;  
  height: 100px;  
  padding: 15px;  
  box-shadow: 10px 10px;  
}
```

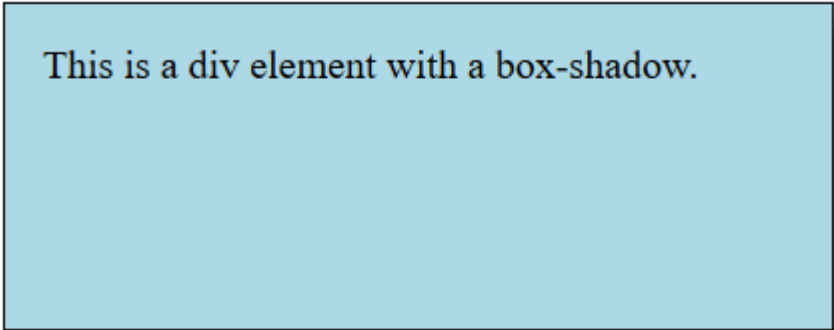


This is a div element with a box-shadow.

Box Shadow

- The box-shadow property applies shadow to elements.
 - Extra parameters: blur and color.

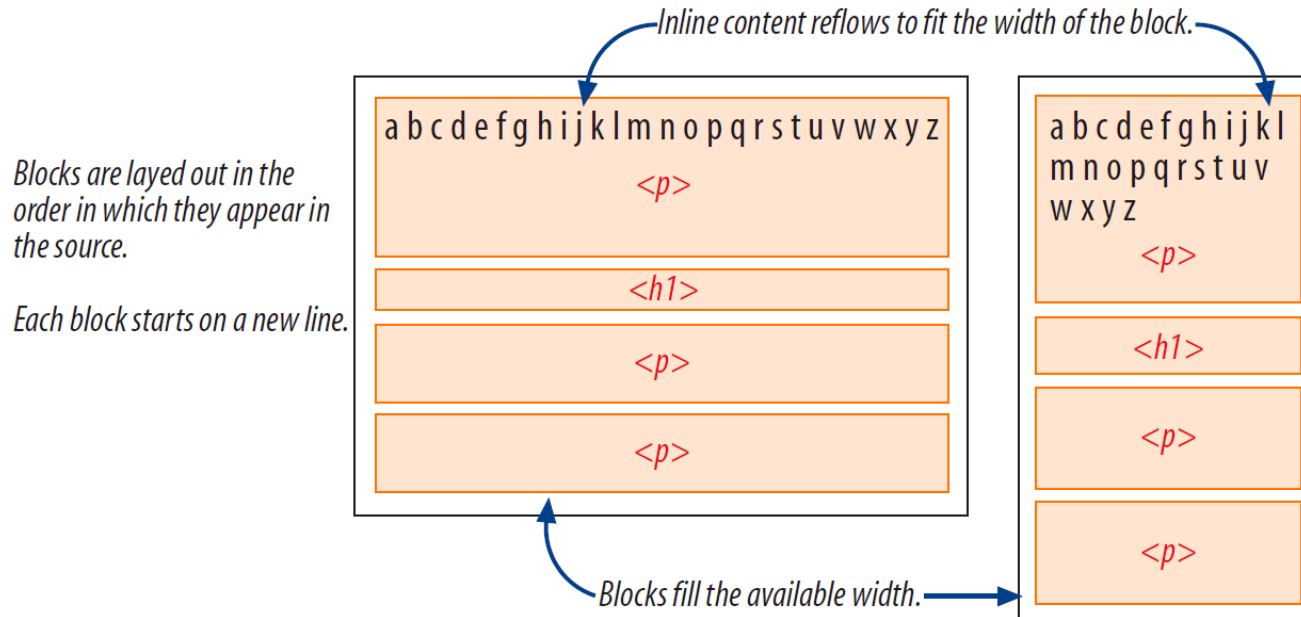
```
div.myclass {  
  border-style: solid;  
  border-width: 1px;  
  border-color: black;  
  background-color: lightblue;  
  width: 300px;  
  height: 100px;  
  padding: 15px;  
  box-shadow: 10px 10px 5px grey;  
}
```



This is a div element with a box-shadow.

Normal Flow

- In the CSS layout model, text elements are laid out from top to bottom in the order in which they appear in the source, and from left to right.



CSS Layout - Floating

- The float property moves an element as far as possible to the left or right, allowing the following content to wrap around it.
 - Floats are one of the primary tools of modern CSS-based web design, used to create multicolumn layouts, navigation toolbars, etc.

```
img.myimg {
  float: right;
  width: 170px;
  height: 170px;
  margin-left: 15px;
}
```

``
This is ... `</p>`

This is a heading.

This is a paragraph.

This is a text. This
is a text. This is a
text. This is a text.
This is a text. This
is a text. This is a
text. This is a text.
This is a text. This
is a text. This is a
text. This is a text.
This is a text. This
is a text. This is a
text. This is a text.



CSS Layout - Floating

- It is possible to float any HTML element, both inline and block-level.

```
span.disclaimer {  
  float: right;  
  margin: 10px;  
  width: 200px;  
  padding: 4px;  
  border-style: solid;  
  border-width: thin;  
  border-color: black;  
  background-color: red;  
  color: white;  
  text-align: center;  
}
```

```
<p><span class="disclaimer">This is  
a disclaimer</span>This is a... </p>
```

This is a heading.

This is a paragraph.

This is a text. This is
a text. This is a text.

This is a disclaimer

This is a text. This is
a text. This is a text. This is a text. This is a text. This is a
text. This is a text. This is a text. This is a text. This is a
text. This is a text. This is a text. This is a text. This is a
text. This is a text. This is a text. This is a text.

CSS Layout - Floating

- If an element is taller than the element containing it, and it is floated, it will "overflow" outside of its container:

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, nulla et dictum interdum...



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Phasellus imperdiet, nulla et dictum interdum...



```
img.myimg {  
  float: right;  
  width: 170px;  
  height: 170px;  
  margin-left: 15px;  
}
```

```
p.text {  
  border-style: solid;  
  border-width: thin;  
  border-color: black;  
  overflow: auto;  
}
```

```
<p class="text">This is ...</p>
```

CSS Layout - Positioning

- The position property specifies the type of positioning method used for an element (static, relative, fixed, absolute or sticky).
 - HTML elements are positioned static by default (following the normal flow of the page).
 - Relative positioning moves an element relative to its original spot in the flow. The original space in the document flow is preserved.

```
em {  
  position: relative;  
  top: 30px;  
  left: 60px;  
  background-color: fuchsia;  
}
```

This is a text. This is a text. This is a text. This is a text.
This is a text. This is a text. This is a text. This is a text. This is a text.
This is a text. This is a text. This is a text. This is a text. **This is a text.**
This is a text. This is a text. This is a text. This is a text. This is a text.

CSS Layout - Positioning

- The position property specifies the type of positioning method used for an element (static, relative, fixed, absolute or sticky).
 - An absolute positioned element is positioned relative to the nearest positioned ancestor and the space once occupied by the element is closed up.

```
em {  
  position: absolute;  
  top: 30px;  
  left: 60px;  
  background-color: fuchsia;  
}
```

This is a text. This is a text. This is a text. This is a text. This is a text.
This is a *This is a text.* a text. This is a text. This is a text. This is a text.
This is a text. This is a text. This is a text. This is a text. This is a text.
This is a text. This is a text. This is a text. This is a text.

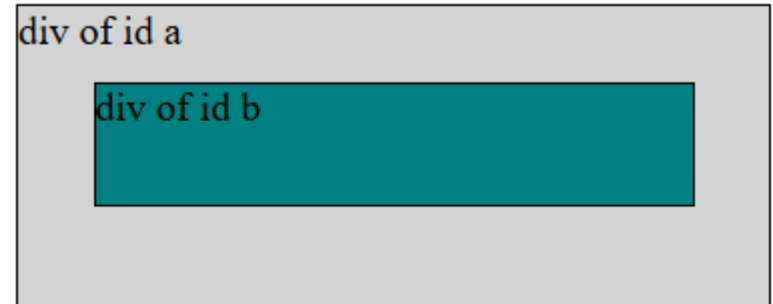
CSS Layout - Positioning

- The position property specifies the type of positioning method used for an element (static, relative, fixed, absolute or sticky).

```
div#a {  
  position: relative;  
  height: 120px;  
  width: 300px;  
  border: 1px solid;  
  background-color: lightgrey;  
}
```

```
div#b {  
  position: absolute;  
  top: 30px;  
  right: 30px;  
  bottom: 40px;  
  left: 30px;  
  border: 1px solid;  
  background-color: teal;  
}
```

```
<div id="a">div of id a  
  <div id="b">div of id b</div>  
</div>
```



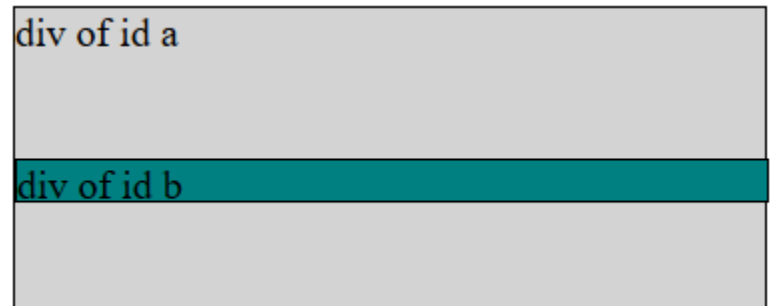
CSS Layout - Positioning

- The position property specifies the type of positioning method used for an element (static, relative, fixed, absolute or sticky).

```
div#a {  
  position: relative;  
  height: 120px;  
  width: 300px;  
  border: 1px solid;  
  background-color: lightgrey;  
}
```

```
div#b {  
  position: absolute;  
  top: 50%;  
  left: 0%;  
  height: 1em;  
  width: 100%;  
  border: 1px solid;  
  background-color: teal;  
}
```

```
<div id="a">div of id a  
  <div id="b">div of id b</div>  
</div>
```



CSS Layout - Positioning

- The position property specifies the type of positioning method used for an element (static, relative, fixed, absolute or sticky).
 - An element with fixed position is positioned relative to the viewport, which means it always stays in the same place even if the page is scrolled.

```
div.fixed {  
  position: fixed;  
  top: 0;  
  left: 0;  
  width: 100%;  
  border: 1px solid;  
  background-color: teal;  
  text-align: center;  
}
```

This is a fixed div.

This is a text.

This is a text.

CSS Layout - Positioning

- Overlapping elements:

```
div.container {  
  position: relative;  
}  
div.topleft {  
  position: absolute;  
  top: 8px;  
  left: 16px;  
}  
img {  
  width: 100%;  
  height: auto;  
  opacity: 0.3;  
}
```



```
<div class="container">  
    
  <div class="topleft">My overlapping text!</div>  
</div>
```


CSS – Extra Topics

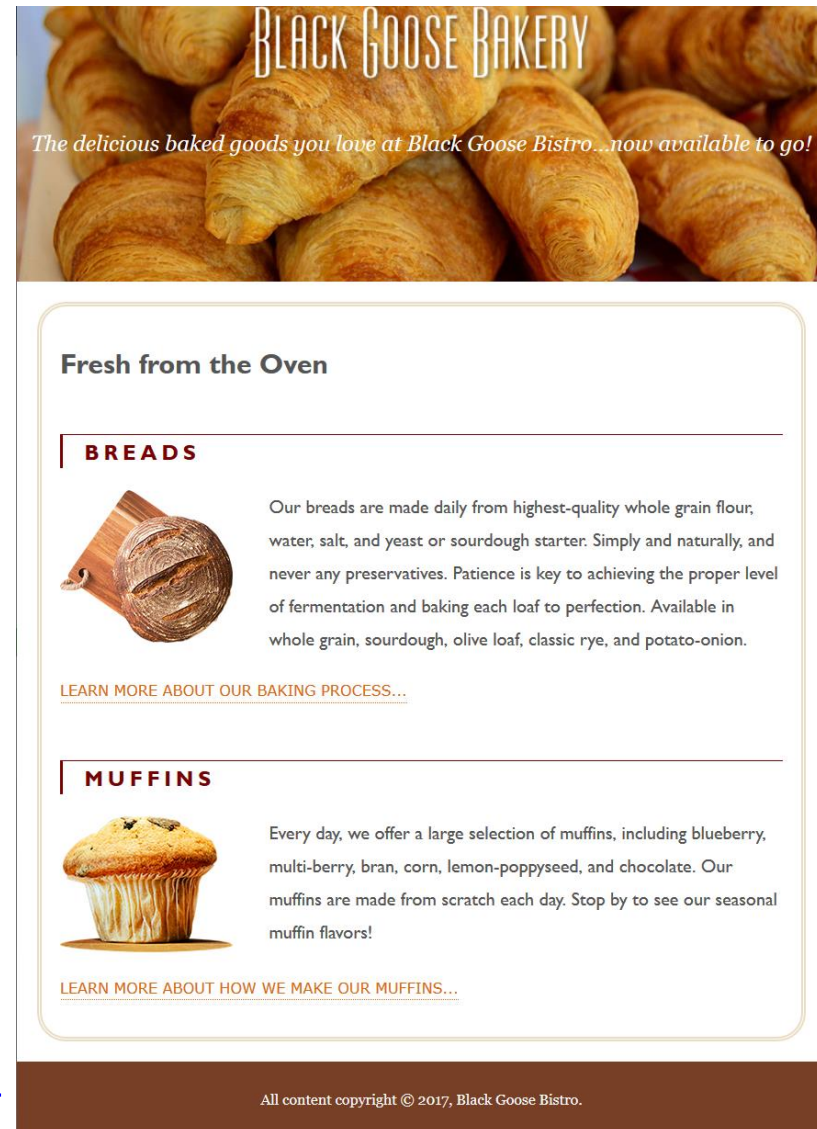
- CSS Gradients:
 - https://www.w3schools.com/css/css3_gradients.asp
- Web Fonts:
 - https://www.w3schools.com/css/css3_fonts.asp
- CSS Transitions and Animations
 - https://www.w3schools.com/css/css3_transitions.asp
 - https://www.w3schools.com/css/css3_animations.asp



Exercise 2

- Write the CSS code to improve the Black Goose Bakery website. It must look like the page illustrated in the image.
 - The HTML/CSS code and images for the webpage are available in the link bellow.
 - You are not allowed to change the HTML code. Everything must be done in the CSS code.

<http://www.inf.puc-rio.br/~elima/webprog/bakery.zip>



Further Reading

- Robbins, J. N. (2018). **Learning web design: A beginner's guide to HTML, CSS, JavaScript, and web graphics** (5th ed.), O'Reilly Media. ISBN: 978-1491960202.
 - Chapter 11: Cascading Style Sheets Orientation
 - Chapter 12: Formatting Text
 - Chapter 13: Colors and Backgrounds
 - Chapter 14: Thinking Inside the Box
 - Chapter 15: Floating and Positioning
 - Chapter 17: Transitions, Transforms, and Animation

