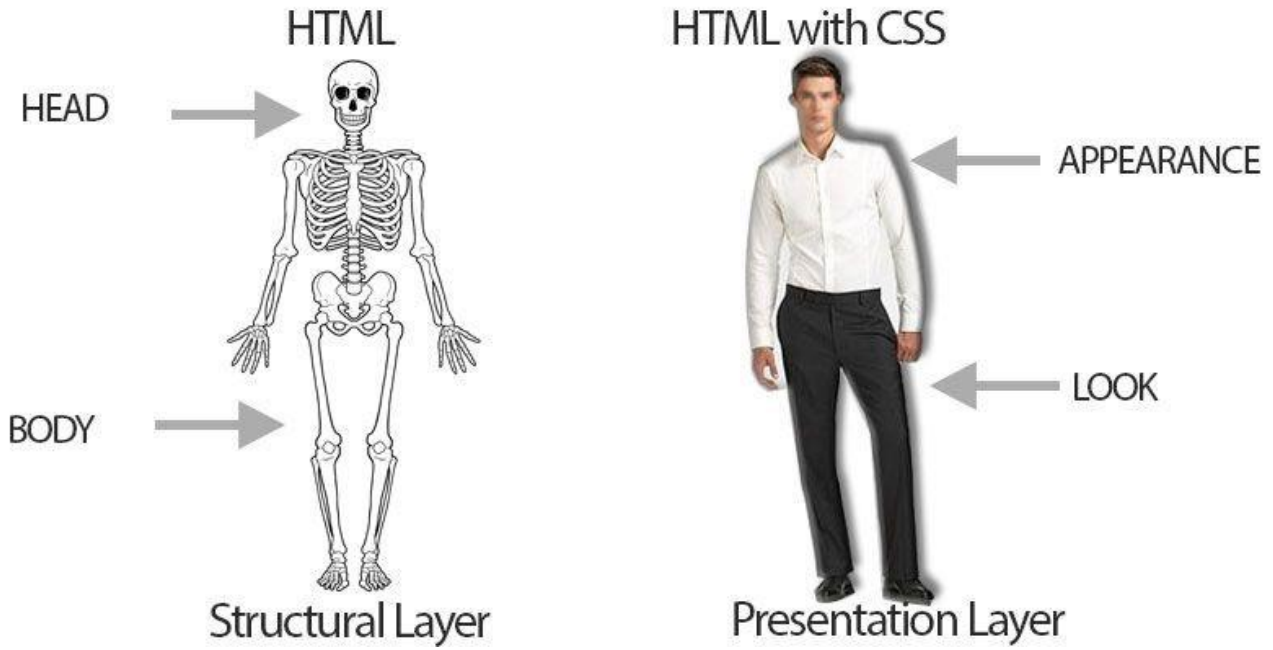
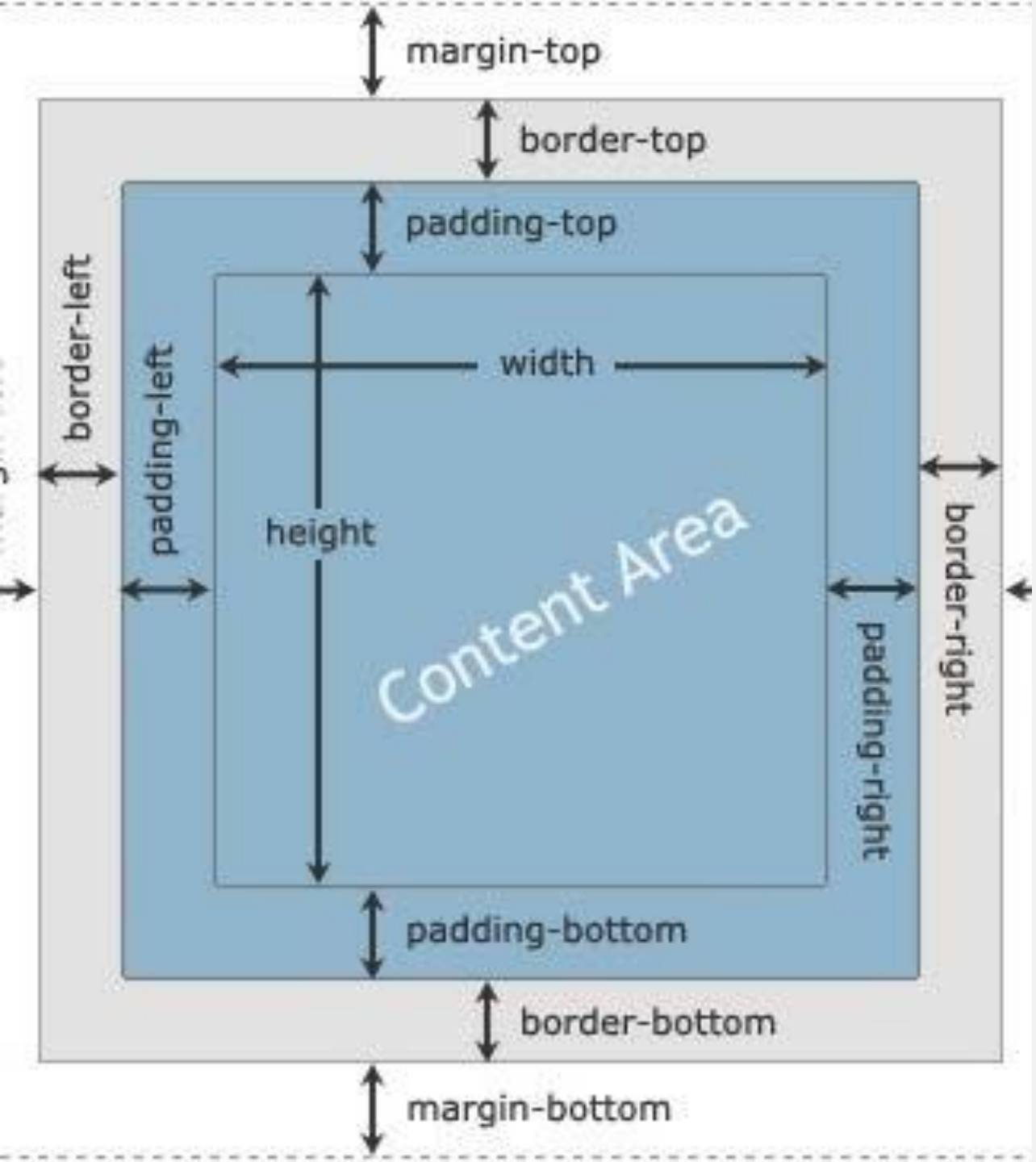
INTRODUCING CSS

- **Definition**
- **Basic Syntax**
- **How it works?**
- **Selectors**
- **Properties**
- **Layout**

DEFINITION

- CSS stands for Cascading Style Sheets.
- With CSS, “your appearance” is totally transformed to a different look which means it gets more nicer, great-looking.
- We have built our pure HTML and we might thought that it looks a little bit boring. However, we can improve it thanks to CSS.
- Controls layout of web pages with the change of text,color,…it allows you to create rules that specify how the content of elements should appear.





CSS BOX MODEL

- The diagram shows how the border, padding, margin CSS properties laid out on the web pages.
- These boxes interact with each other and have their own content area whose element is displayed in each rectangular box.

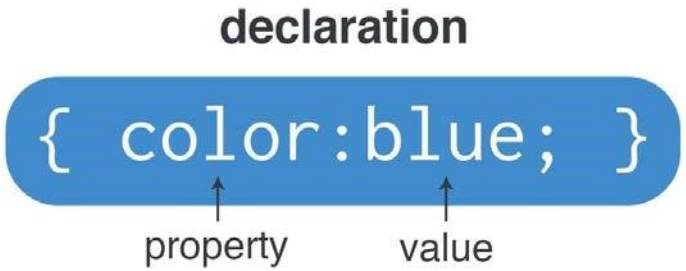
BASIC SYNTAX

Content:

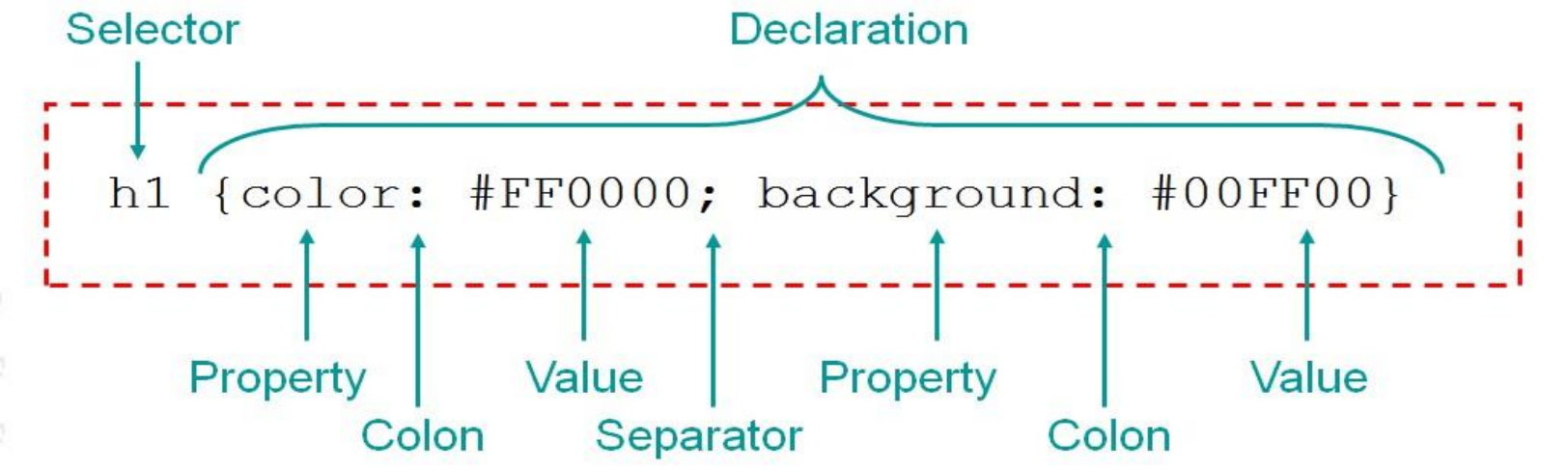
1) Definition.
2) How to write a CSS syntax.
3) Example.

DEFINITION

- In a basic level, CSS consists of two building blocks:
- -Properties: It indicates the stylistic features(e.g. font, width, background color) which you want to change.
- -Value: Each specified property is given a value, which indicates how you want to change those stylistic features (e.g. what you want to change the font, width or background color to).



HOW TO WRITE A BASIC SYNTAX



EXAMPLE

- Without CSS:

css.html

```
<!DOCTYPE html>
<html>
<head>

<!--CSS code
<style>
body {
    background-color: lightblue;
}

h1 {
    color: white;
    text-align: center;
}

p {
    font-family: verdana;
    font-size: 20px;
}
</style>
-->

</head>

<body>  <!-- Background color: lightblue. -->

<h1>CSS Example</h1>    <!-- Color: white, Text-align: center.  -->
<p>This is a paragraph.</p>     <!-- Font-family: verdana, Font-size: 20px. -->

</body>
</html>
```

EXAMPLE

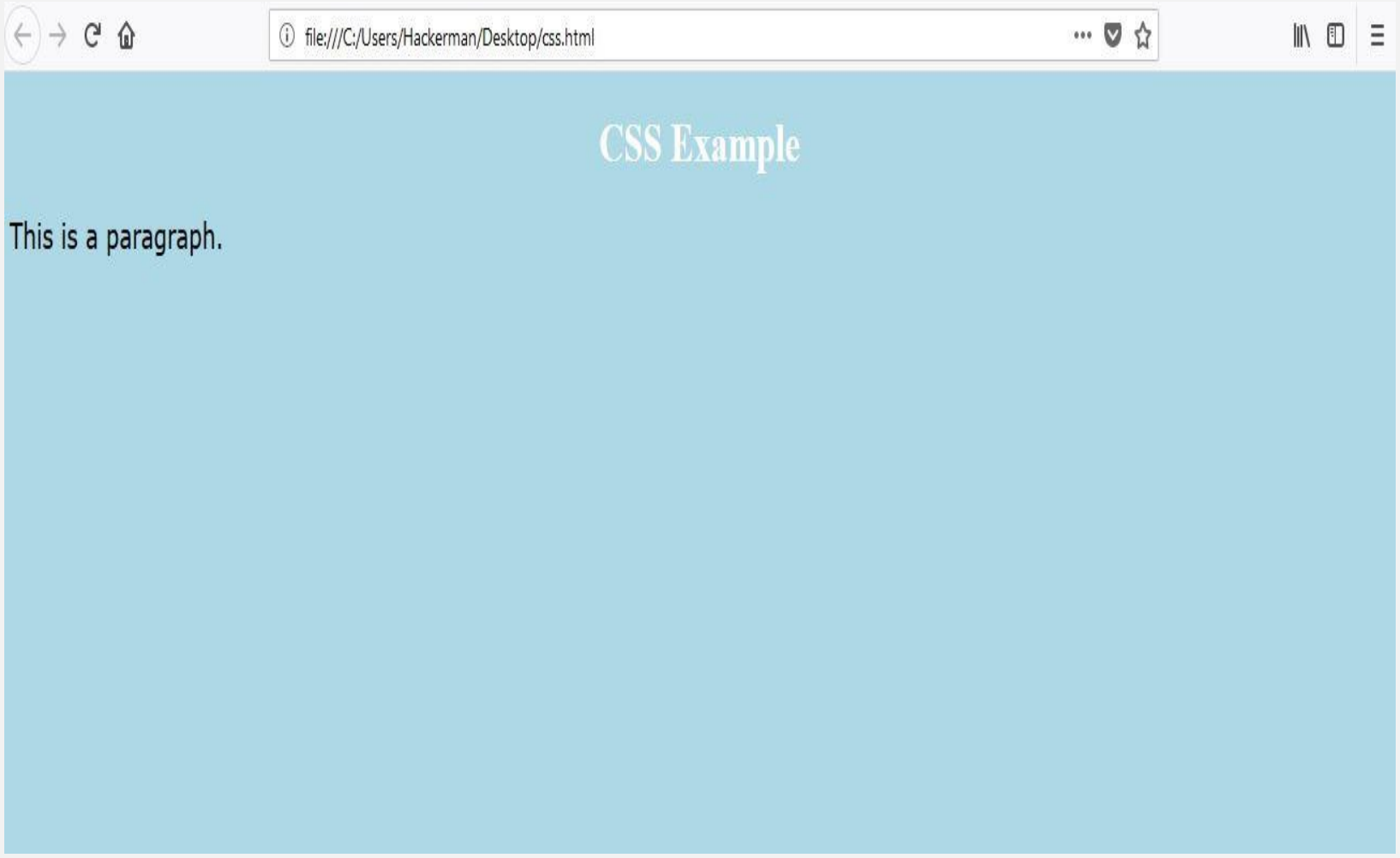
- With CSS:

css.html

```
<!DOCTYPE html>
<html>
<head>

<!--CSS code-->
<style>
body {
    background-color: lightblue;
}

h1 {
    color: white;
    text-align: center;
}

p {
    font-family: verdana;
    font-size: 20px;
}
</style>

</head>

<body>  <!-- Background color: lightblue. -->

<h1>CSS Example</h1>    <!-- Color: white, Text-align: center.  -->
<p>This is a paragraph.</p>     <!-- Font-family: verdana, Font-size: 20px. -->

</body>
</html>
```

EXAMPLE

- With CSS:



HOW CSS WORKS ALONG WITH HTML?

External Style sheet

It is a separate file where you can declare all the styles that you want to use on your website.

Internal Style sheet

Embedded the style sheet within <style></style>tags in the <head> element.

Inline style

The style is applied directly to the current Element.

EXTERNAL STYLE SHEET

```
<head>
<link rel="stylesheet" type="text/css" href="styles.css">
</head>
```

href: the path that you just create a file with the extension styles.css

<link> element will link the HTML code to the external style sheet

rel : describe the relationship between HTML page and the external file. The value should be "stylesheet"

type: the type of the file being linked to. The value should be text/css

styles.css

```
body {
    background-color: green;
}
h1 {
    color: blue;
    margin-left: 15px;
}
```

INTERNAL STYLE SHEET

```
<head>
<style>
body {
    background-color: green;
}
h1 {
    color: blue;
    margin-left: 15px;
}
</style>
</head>
```

You can try to run the code with your own html element and insert the internal style sheet

INLINE STYLE SHEET

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

<p style="color: blue">This text has been styled using inline style sheets.</p>

</body>
</html>
```

Output

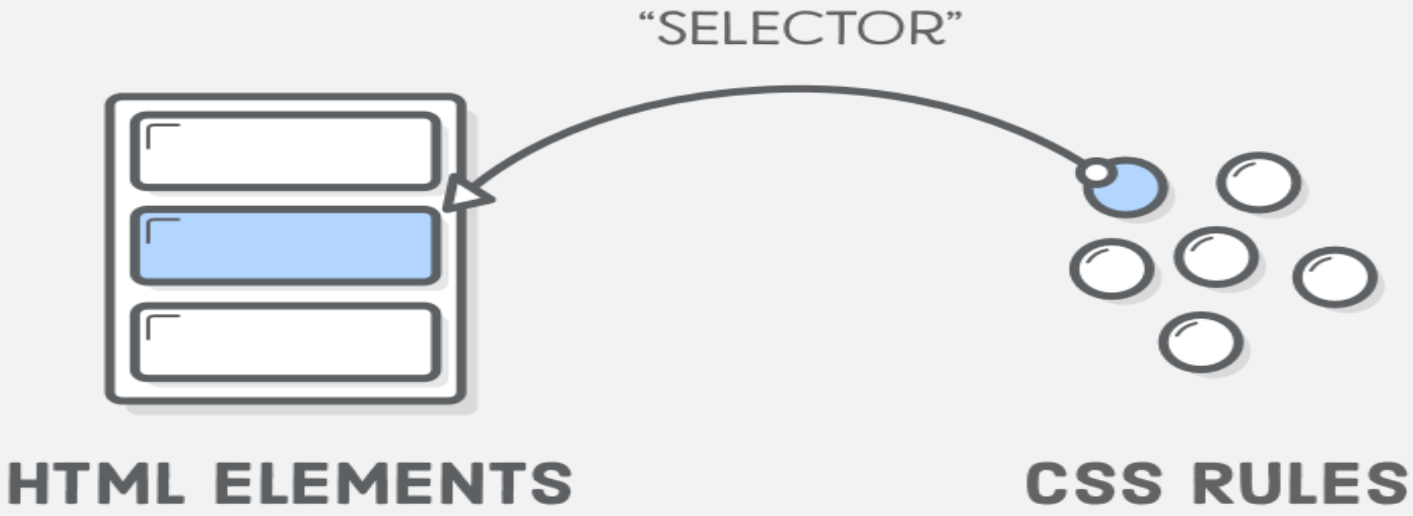
SELECTORS

Content:

1) Definition.
2) Selector structure.
3) Example.

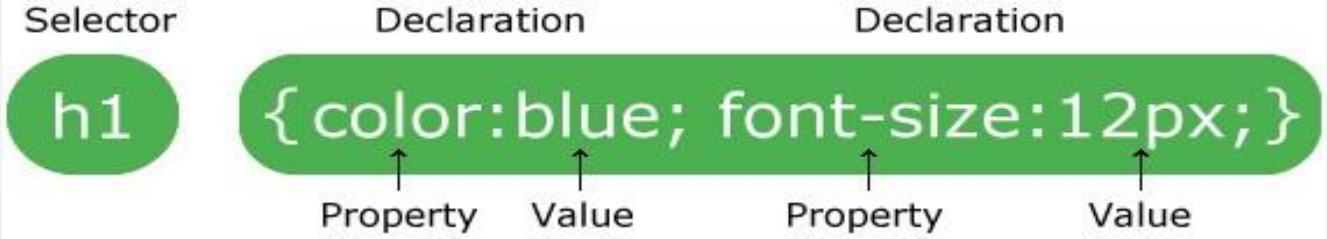
DEFINITION

- What do Selectors mean?
- In CSS, selectors are used to target the HTML elements on our web pages that we want to style. There are a wide variety of CSS selectors available, allowing for fine grained precision when selecting elements to style.



SELECTOR STRUCTURE

- A selector and a declaration block in CSS rule-set:

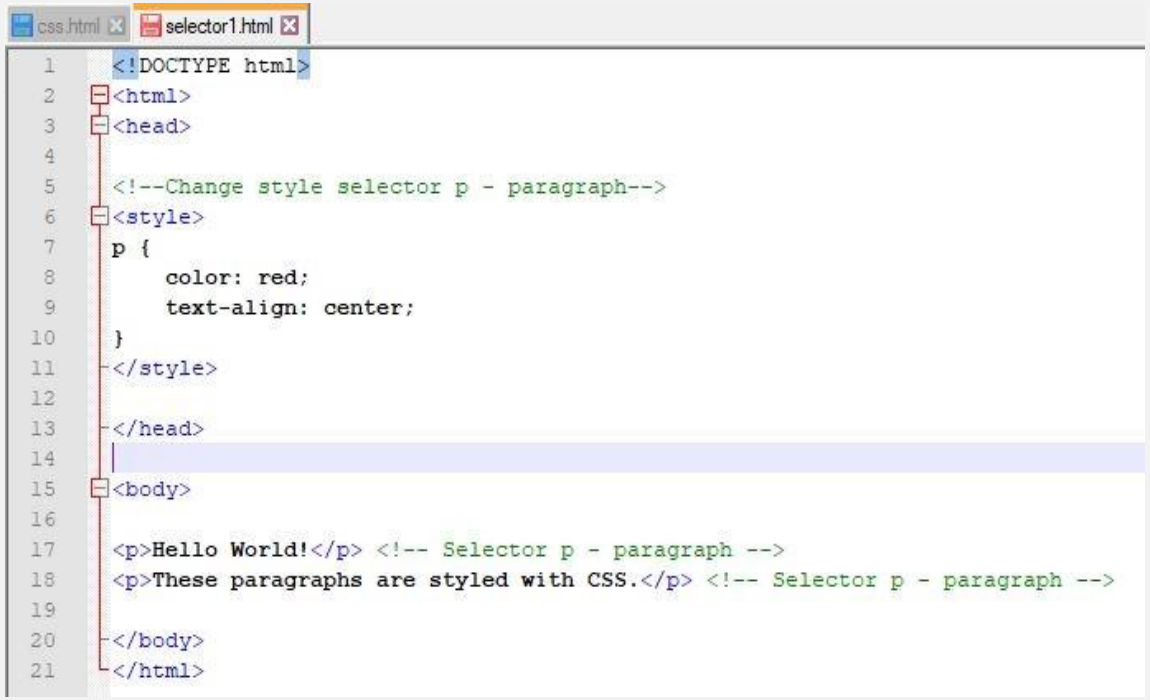


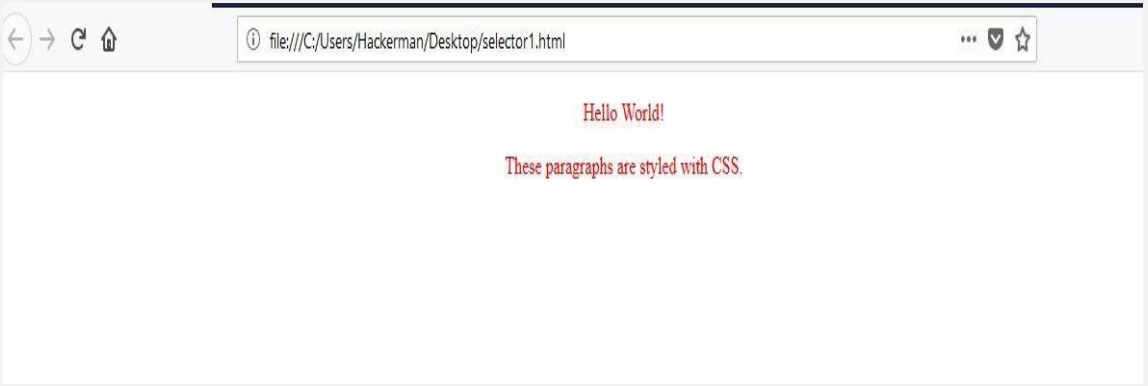
CSS Selectors

Selector	Role
p{ }	Tag selector, **all p tags**
#para{ }	Id para (***unique***)
.para1{ }	Class para1 (***multiple***)
p.para{ }	P tag with class para
P .para{}	P with child having class para
div p{}	p tag having parent div.
*{}	All tags{ **Universal Selector**}
h1, h3, h5{}	Only h1, h3 and h5 (***grouping***)
.para a{ }	A with parent para class
body{}	Parent of all tags

EXAMPLE

- Selector tag (body, p, h1, h2,…)





EXAMPLE

- Selector id:

css.html | selector1.html

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <style>
5  <!-- Only change style in selector id paral -->
6  #para1 {
7      text-align: center;
8      color: red;
9  }
10 </style>
11 </head>
12 <body>
13
14 <p id="para1">Hello World!</p> <!-- Selector id - paral -->
15 <p>This paragraph is not affected by the style.</p>
16
17 </body>
18 </html>
```

COLOR PROPERTY - RGB VALUE

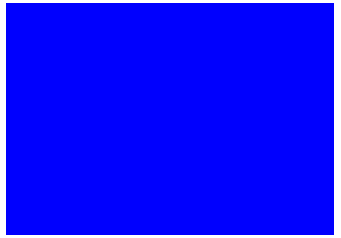
For

RGB values: Value for red, green, blue are expressed the intensity as numbers between 0 and 255.

example: color: RGB(0,0,255)

red green blue

Output:



Always starts with the hash (#)

COLOR PROPERTY - HEX CODES VALUE

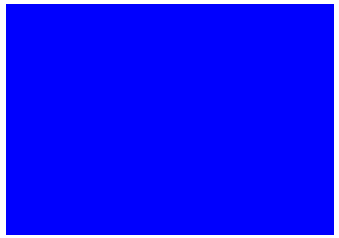
Hex codes is represented for red, green, blue by 6-digit codes which is between 00 and FF specifying an intensity of the color.

Color palette runs from 00 to FF

For example color: #0000FF

red green blue

Output:

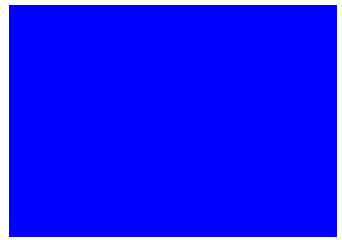


COLOR PROPERTY - COLOR NAMES

Color names is represented by predefined names which are 147 color names. It is very limited and hard to remember the name of each of colors.

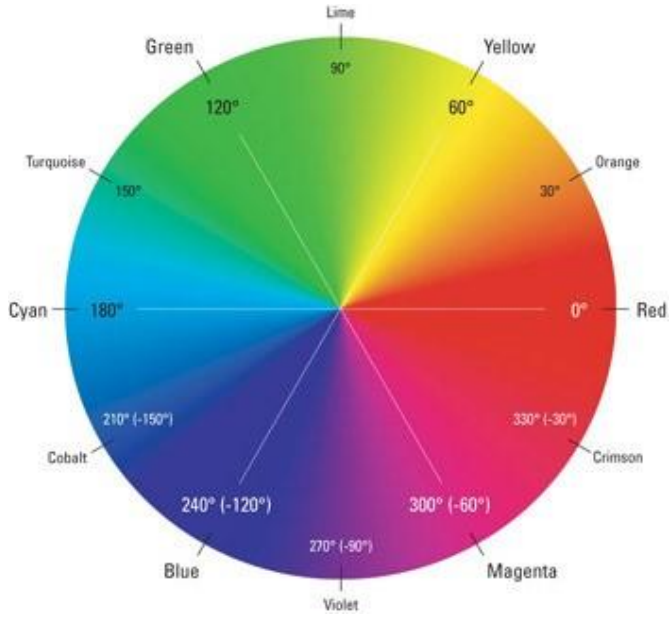
For example: color: blue

Output:



COLOR PROPERTY - HSL COLOR

HSL color stands for hue, saturation, lightness.



Hue is displayed as angles in the color wheel.

Saturation is the amount of gray and represented as a percentage with 0% is shade of gray, 100% is the full color.

Lightness is the amount of white and represented as a percentage;100% is white, 0% is black

For example

```
p {
    background-color: hsl(180, 50%, 50%);
}
```

→ Lorem ipsum dolo
et dolore magna al
aliquip ex ea comm

COLOR PROPERTIES- BACKGROUND COLOR

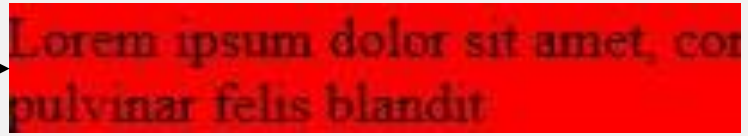
```
<head>
<style>
body {
    background-color:#ffbf00;
}

h1 {
    background-color: rgb(0, 191, 255);
}

p {
    background-color: coral;
}
</style>
</head>
<body>

<h1>Background Color</h1>

<p>Set a background color for only a part of a text.</p>

</body>
```

COLOR PROPERTIES- OPACITY

opacity property sets the opacity level for an element

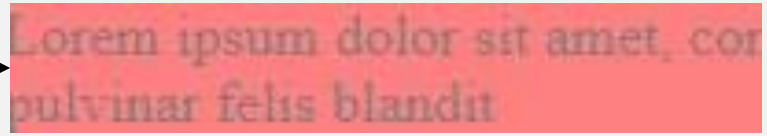
Without opacity:

```
p{
    background-color: red;
}
```



With opacity:

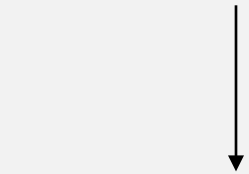
```
p{
    background-color: red;
    opacity: 0.5;
}
```



TEXT PROPERTIES- FONT

- **font-family** lets you specify typeface that should be applied on text.
- **font-size** lets you specify the a size for your text with its units(pixels, points, ems, percent).
- **font-weight** lets you create bold text and it has two-value which are normal and bold.
- **font-style** lets your text appear in italic or normal.

```
p{
    font-family: Arial;
    font-size: 14pt;
    font-weight: bold;
    font-style:italic;

}
```



Text goes here

TEXT PROPERTIES - FONT (CONT.)

font-family

Pixels	Points	Ems	Percent
8px	6pt	0.5em	50%
9px	7pt	0.55em	55%
10px	7.5pt	0.625em	62.5%
11px	8pt	0.7em	70%
12px	9pt	0.75em	75%
13px	10pt	0.8em	80%
14px	10.5pt	0.875em	87.5%
15px	11pt	0.95em	95%
16px	12pt	1em	100%
17px	13pt	1.05em	105%
18px	13.5pt	1.125em	112.5%
19px	14pt	1.2em	120%
20px	14.5pt	1.25em	125%
21px	15pt	1.3em	130%
22px	16pt	1.4em	140%
23px	17pt	1.45em	145%
24px	18pt	1.5em	150%
26px	20pt	1.6em	160%
29px	22pt	1.8em	180%
32px	24pt	2em	200%

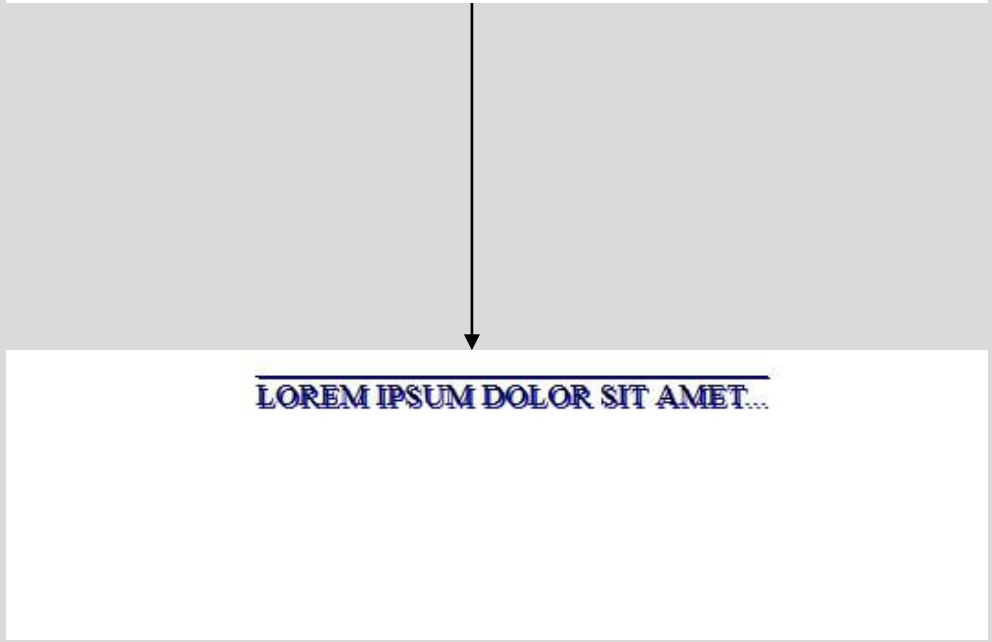
Exchange font-size in each unit

TEXT PROPERTIES

- **text-align** lets you set the text alignment. It has four-value which are center, left, right, justify.
- **text-decoration** lets you specify for the text by: none, overline, underline, line-through, blink.
- **text-transform** is used to change the text form as following value: uppercase, lowercase, capitalize.
- **text-shadow** is used to drop dark shadow behind the word and slightly offset.

```
p{
    text-align: center;
    text-decoration: overline;
    text-transform: uppercase;
    text-shadow: 1.5px 1.5px #0000ff;
}
```

blue shadow



TEXT PROPERTIES

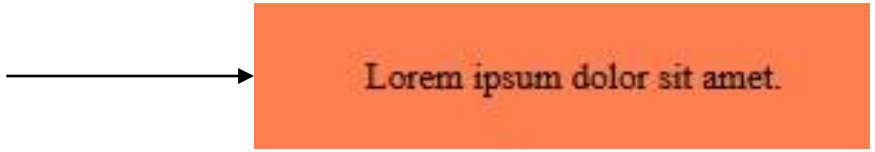
```
h3 {
    letter-spacing: 3px;
    word-spacing: 10px;
}
```

- **letter-spacing** enables you to set the space between each letter.
- **word-spacing** enables you to set the gap between each words.

TEXT PROPERTIES

- **text-align** lets you control the text alignment and it has four-value which are left, right, center, justify
- **vertical-align** is not used for aligning text; however, it is for using with table cell, inline element's box.

```
background-color: coral;
padding: 10px;
text-align: center;
```




```
img.a {
    vertical-align: text-top;
}

img.b {
    vertical-align: text-bottom;
}
```

STYLING LINKS

- **:link** lets you set the state for links that have not been visited yet.
- **:visited** lets you set state for links that you have been visited or clicked on
- **:hover** shows that when user mouse over element.
- **:active** shows that when element is being pressed by user.

```css
/* unvisited link */
a:link {
    color: red;
}

/* visited link */
a:visited {
    color: green;
}

/* mouse over link */
a:hover {
    color: hotpink;
}

/* selected link */
a:active {
    color: blue;
}
```

You can run in your own browser and experience the result .

Source code from w3school

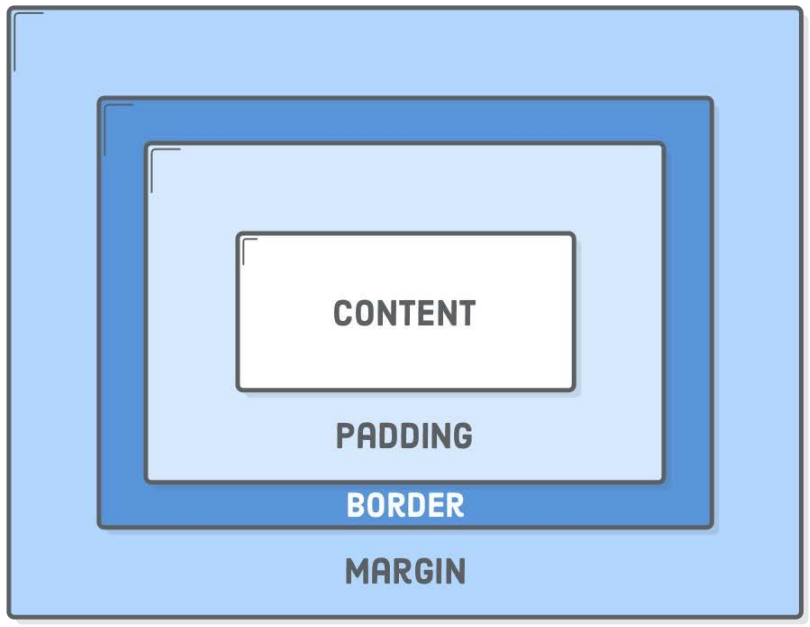
BOX MODEL

It demonstrates how web page is rendered.

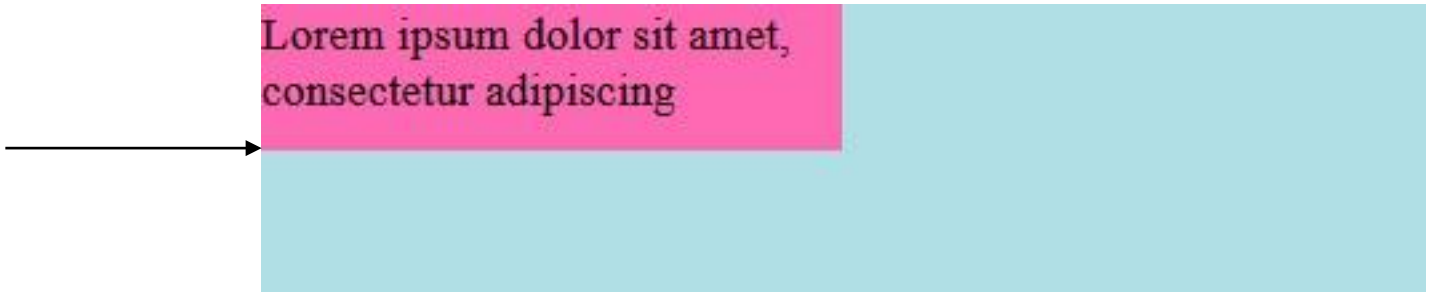
CSS treats each element in your HTML document as a “box” with a bunch of different properties that determine where it appears on the page.

In this chapter we will focus on:

- Padding.
- Borders
- Margins

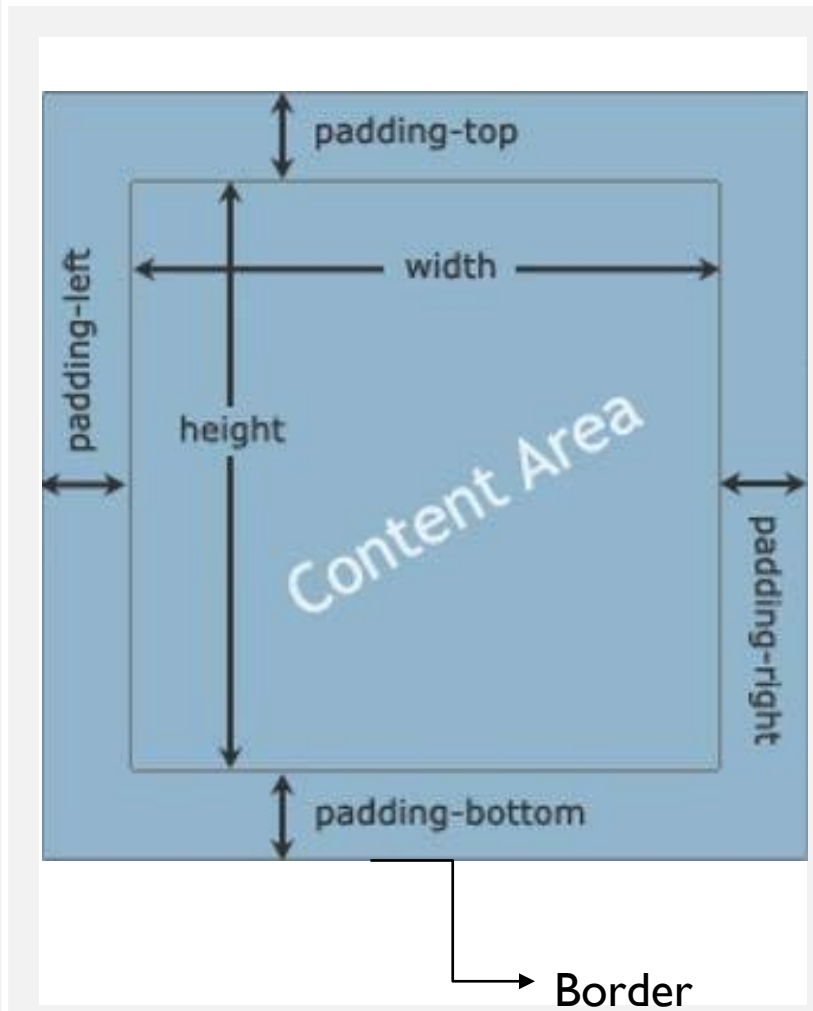


```
<!DOCTYPE html>
<html>
<head>
<style>
div {
    height: 100px;
    width: 400px;
    background-color: powderblue;
}
p{
height:50px;
width:50%;
background-color: hotpink;
}
</style>
</head>
<body>
<div>
<p>Lorem ipsum dolor sit amet, consectetur adipiscing </p>
</div>

</body>
</html>
```



BOX DIMENSIONS- WIDTH, HEIGHT

You can try out with these following properties:
min-width
max-width
min-height
max-height

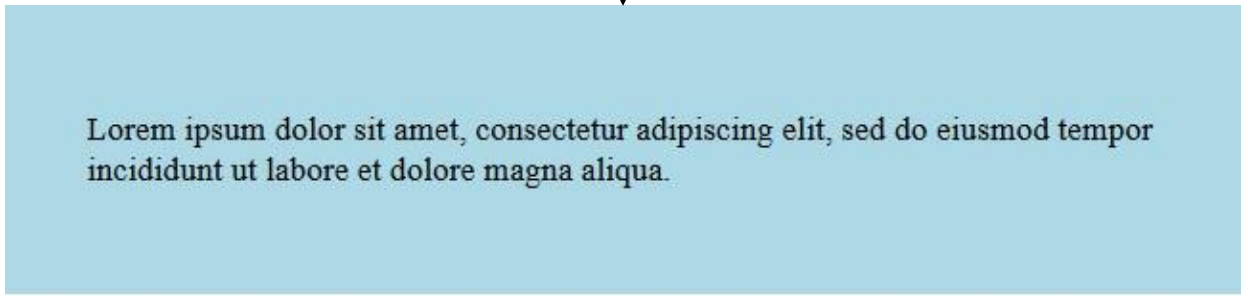


PADDING PROPERTY

- It defines the padding for the selected element. Padding is the space between the border and element's content.

PADDING-PROPERTY(CONT.)

```
<!DOCTYPE html>
<html>
<head>
<style>
div {

    background-color: lightblue;
    padding-top: 50px;
    padding-right: 30px;
    padding-bottom: 50px;
    padding-left: 80px;
}
</style>
</head>
<body>

<div>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do
eiusmod tempor incididunt ut labore et dolore magna aliqua. </div>

</body>
</html>
```



BORDER-PROPERTY

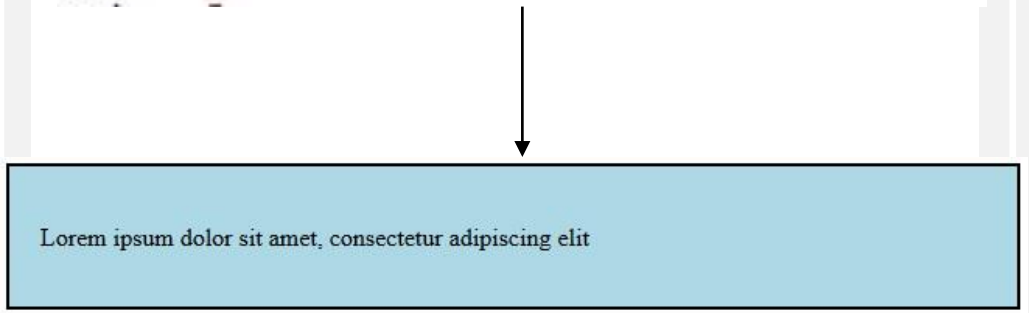
It is a line drawn around the content and padding of an element, the border separates the edge of one box from another.

Like padding, there are –left,-right,-bottom,-top for border property.

border: size style color

Or you can separate them with:
border-width
border-style
border-color

```
div {
    background-color: lightblue;
    padding:20px;
    border: 2px solid black;
}
```

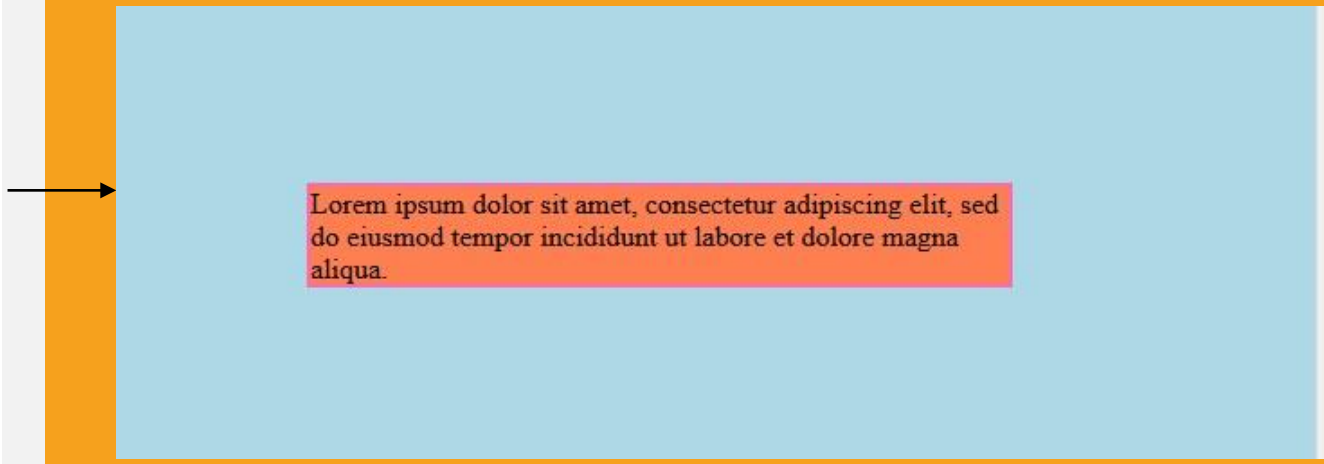


You can try with the border style values as following: dotted, dashed, solid, double,…

MARGINS-PROPERTY

Margins define the space outside of an element's border. Or the space between a box and its surrounding boxes.

```
<!DOCTYPE html>
<html>
<head>
<style>
body{
background-color:lightblue;
}

p{
border: 2px solid hotpink;
margin-top: 100px;
margin-bottom: 100px;
margin-right: 160px;
margin-left: 100px;
background-color: coral;
}
</style>
</head>
<body>
<p>Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor
incididunt ut labore et dolore magna aliqua.</p>

</body>
</html>
```



LAYOUT OF WEBSITE

1) Structure of website.
2) Header.
3) Navigation Bar.
4) Content.
5) Footer.

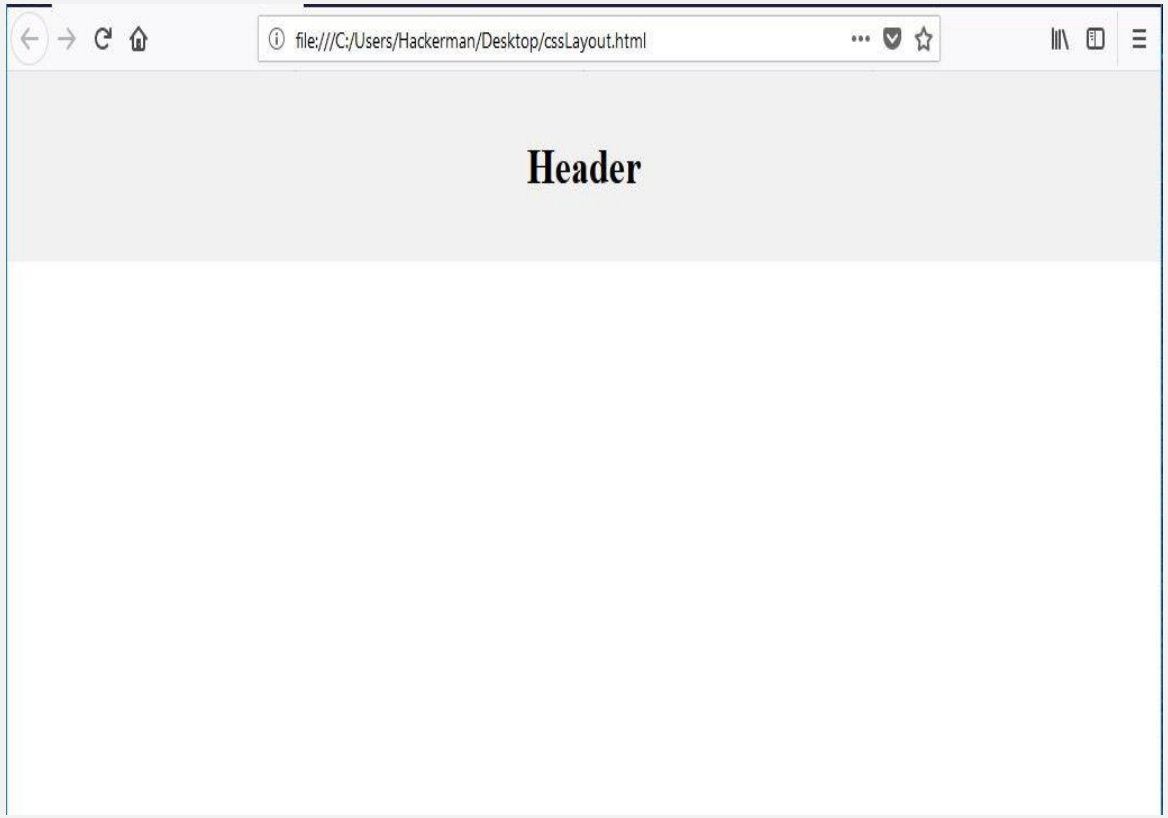
STRUCTURE OF WEBSITE

- A basic website layout is often divided into 4 parts:

- However, we have many kind of layouts. The layout above is one of the most common.

HEADER

- Create a header layout:



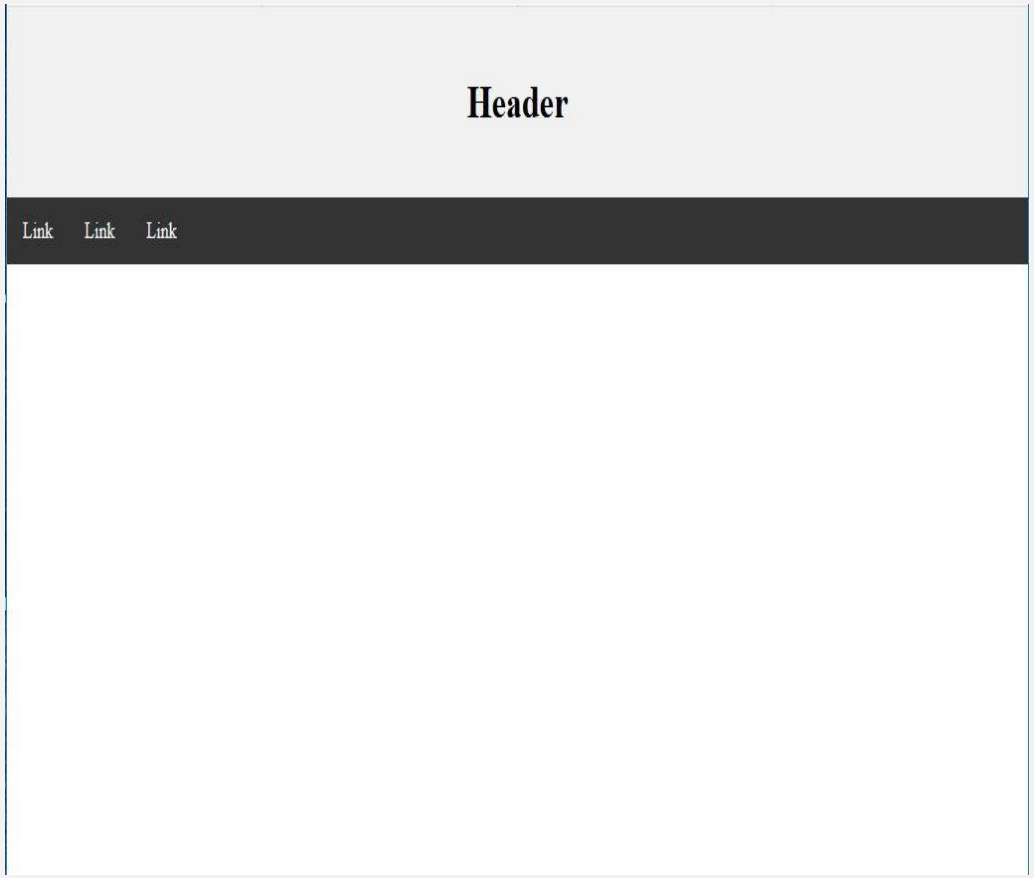
cssLayout.html

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>CSS Website Layout</title>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<style>
body {
  margin: 0;
}

/* Style the header */
.header {
    background-color: #f1f1f1;
    padding: 25px;
    text-align: center;
}
</style>
</head>
<body>

<div class="header">
  <h1>Header</h1>
</div>

</body>
</html>

```

NAVIGATION BAR

LAY OUT

- Continue to create navigation bar in layout:



CODE

- Code for navigation bar and add it below the header code in body:

```
<div class="topnav">
  <a href="#">Link</a>
  <a href="#">Link</a>
  <a href="#">Link</a>
</div>
```

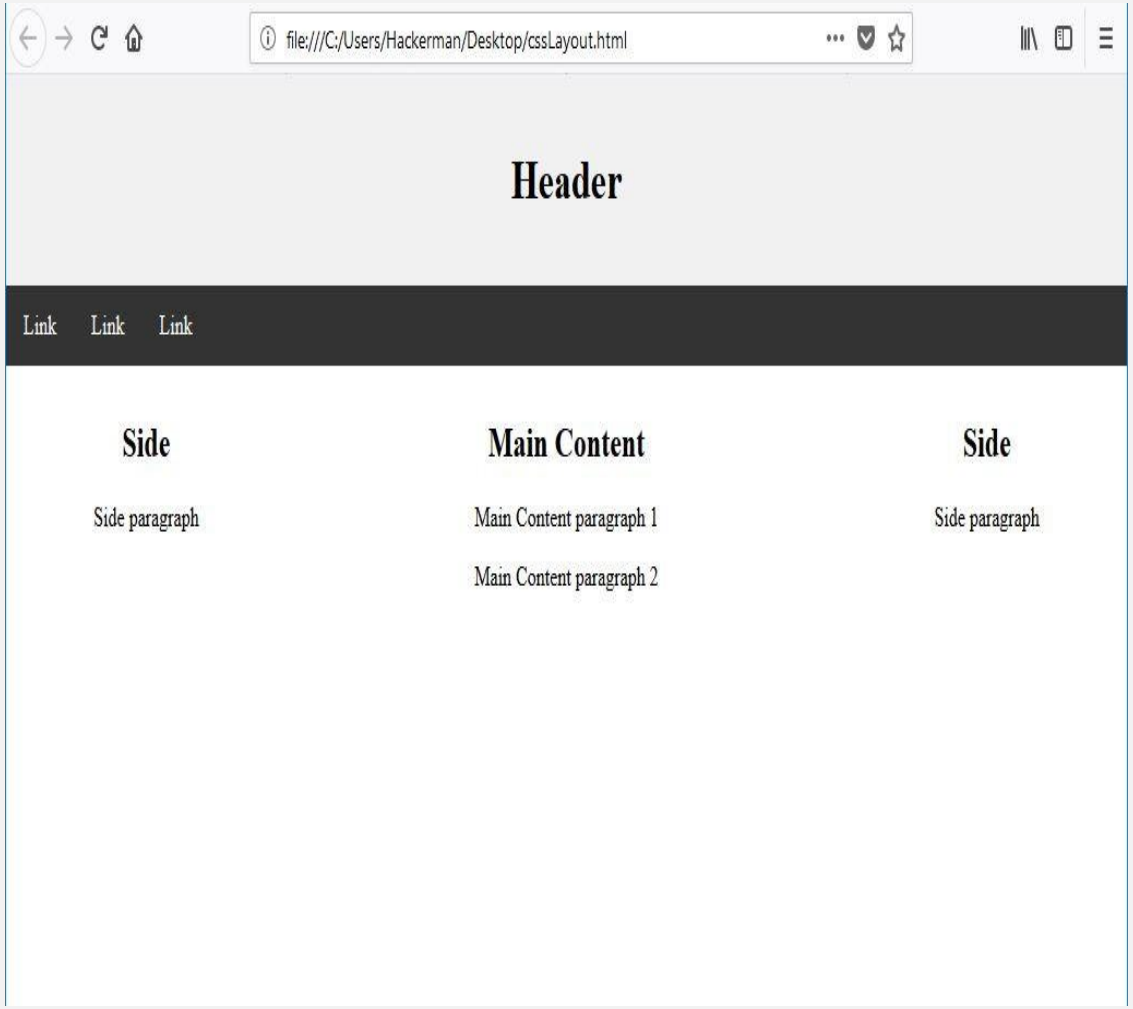
- Add these code to style:

```
/* Style the top navigation bar */
.topnav {
    overflow: hidden;
    background-color: #333;
}

/* Style the topnav links */
.topnav a {
    float: left;
    display: block;
    color: #f2f2f2;
    text-align: center;
    padding: 14px 16px;
    text-decoration: none;
}

/* Change color on hover */
.topnav a:hover {
    background-color: #ddd;
    color: black;
```

CONTENT

LAY OUT

- Continue to create content in layout:



CODE

- Code for content and add it below the navigation code in body:

```
<div class="row">
  <div class="column side">
    <h2>Side</h2>
    <p>Side paragraph</p>
  </div>
  <div class="column middle">
    <h2>Main Content</h2>
    <p>Main Content paragraph 1</p>
    <p>Main Content paragraph 2</p>
  </div>
  <div class="column side">
    <h2>Side</h2>
    <p>Side paragraph</p>
  </div>
</div>
```

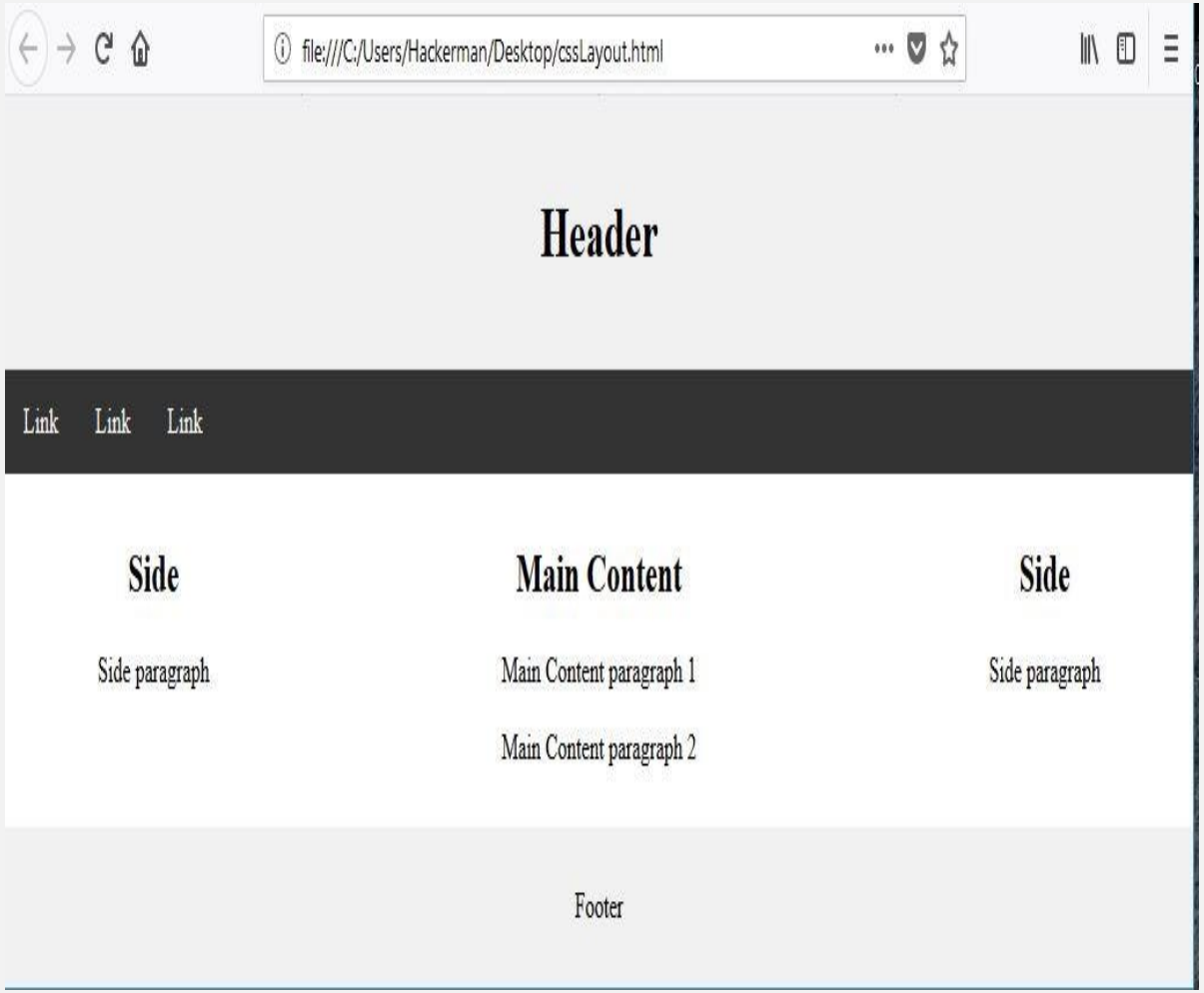
- Add these code to style:

```
/* Create three unequal columns that floats next to each other */
.column {
    float: left;
    padding: 10px;
    text-align: center;
}

/* Left and right column */
.column.side {
    width: 25%;
}

/* Middle column */
.column.middle {
    width: 50%;
}

/* Clear floats after the columns */
.row:after {
    content: "";
    display: table;
    clear: both;
}
```

FOOTER

LAY OUT

- Continue to create footer in layout:



CODE

- Code for footer and add it below the content code in body:

```
<div class="footer">
  <p>Footer</p>
</div>
```

- Add these code to style:

```
/* Style the footer */
.footer {
    background-color: #f1f1f1;
    padding: 10px;
    text-align: center;
}
```

GIVING FEEDBACK AND CONTRIBUTION

IF THERE ARE SOME MISTAKES, YOU CAN FREELY REPORT IT.

GIVING FEEDBACK.

ANY SUGGESTION ?

THANK YOU FOR YOUR TIME!