Introduction to CSS

Tutorial 2

SOEN 287

How does HTML works?

A web browser is our Runtime environment for HTML. Whenever we write an URL on the web, browser sends a request to that server to render the html page for that URL. Once it gets the html page, it reads the page. While reading the page, the following points are important to remember:

1.Doctype: From the doctype, it knows the page is an html document.

2.head tag meta-data: Information about the web page i.e. its title, CSS styling info, javaScript info, character encoding.

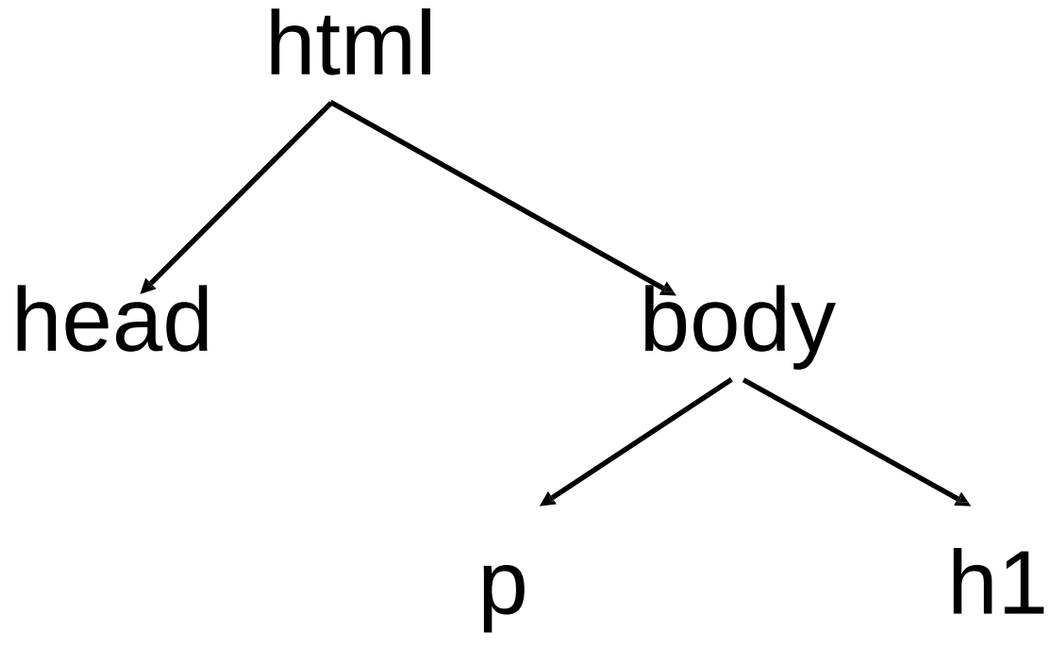
3.body: When the browser reads the html page, it treats every tag in the html page as an object. Thus, a ‘p’ tag, ‘h’ tag becomes child of ‘div’ tag.

4.This results in a Document-Object-Model tree which becomes our webpage layout.

Remember, browser is always in sync with this DOM tree.

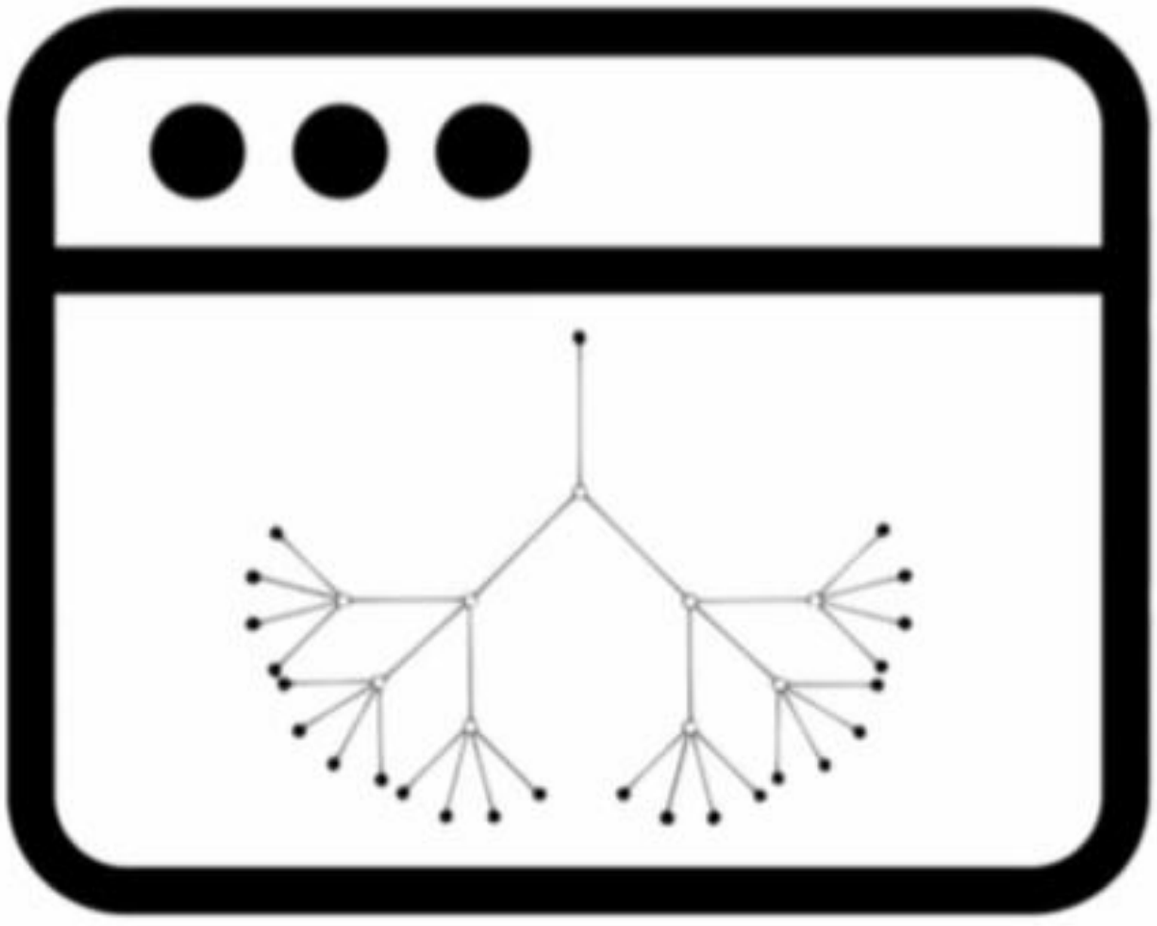
```
<!Doctype html>
<html>
<head>….</head>
<body>
<p>…</p>
<h1>…</h1>
</body>
</html>
```

HTML document



(DOM Tree)
Document-Object-Tree model
(for the html code on left)

HTML



Introduction to CSS

CSS stands for Cascading Style Sheets and it describes how HTML elements are to be displayed on your screen.

Check out this link: http://www.w3schools.com/css/css_intro.asp

Why do we need CSS?

1.To beautify our webpages and make them presentable.

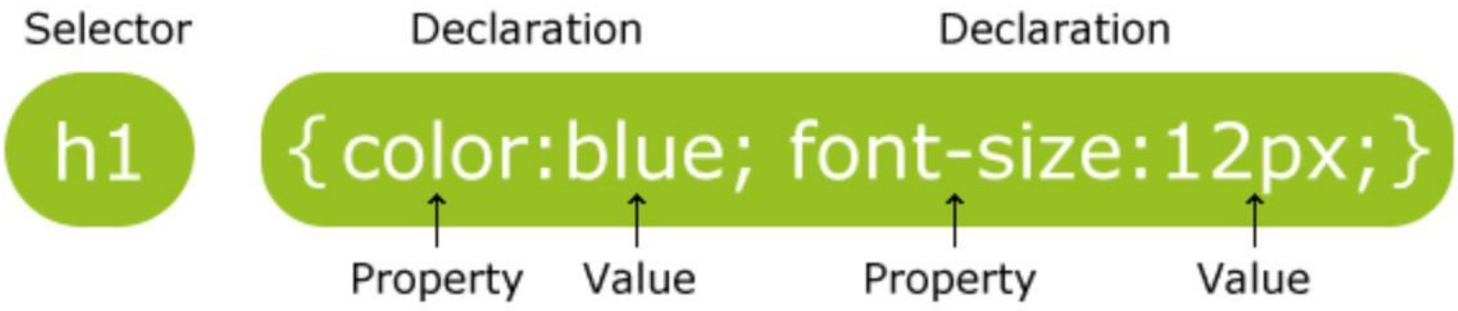
2.HTML was created to describe the content of a web page like heading, paragraphs, etc.

But then, tags like <font>, and color attributes were added to the HTML 3.2 specification,which created a problem!!

Development of large websites, where fonts and color information were added to every single page, became a long and expensive process.

Here is now role of CSS comes.

CSS Syntax



Selector: selectors are patterns used to select the element(s) you want to style.

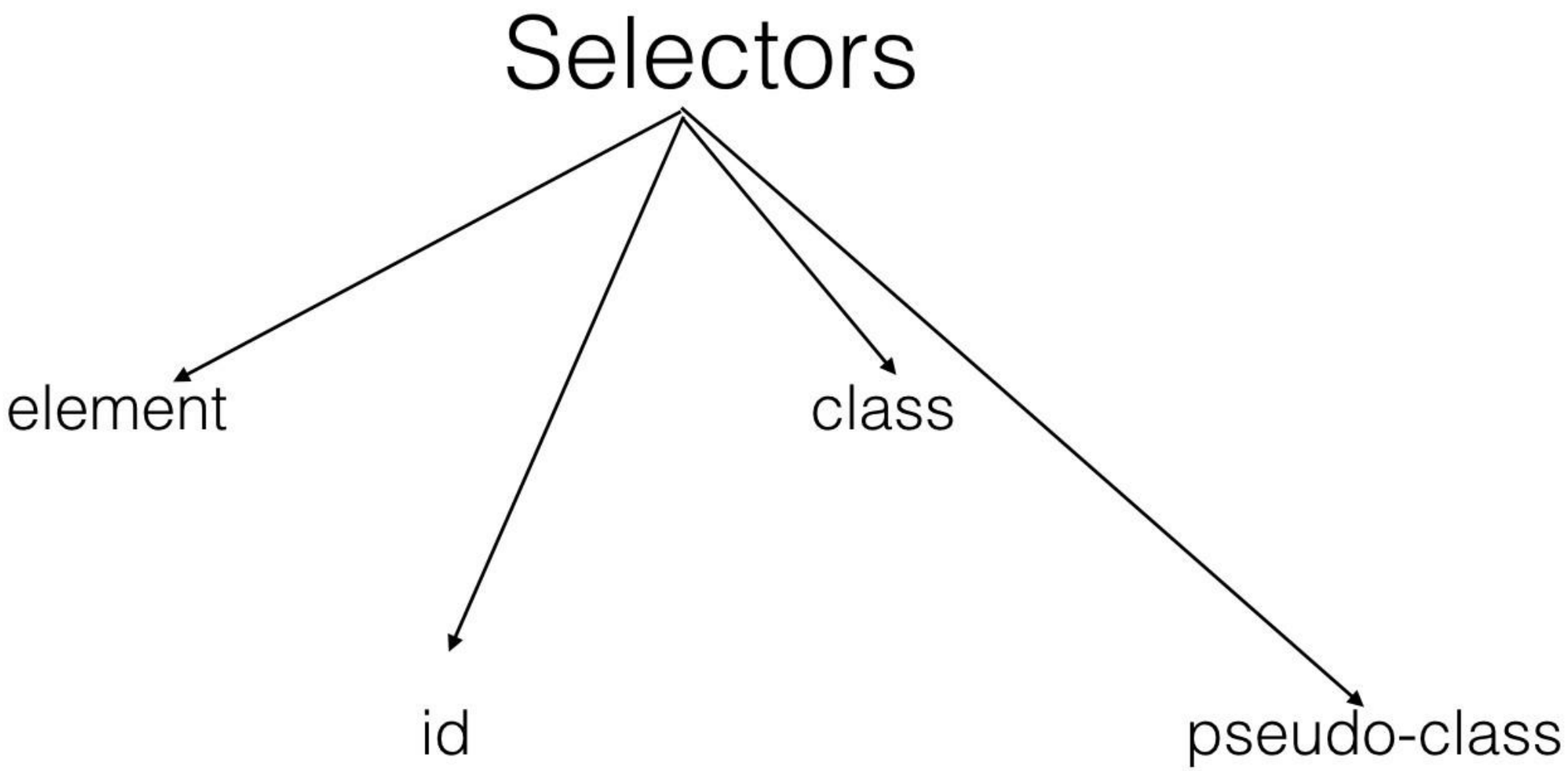
Declaration: declares our styling for that element using property and its value

Property: which property of the element we wish to style

Value: new value we wish to assign to that property

Lets switch to below link to understand different types of selector:

http://www.w3schools.com/css/css_syntax.asp


Selectors
element
class
id
pseudo-class

Frequently used patterns for selector Table

Selector	Example	Example description
.class	.intro	Selects all elements with class="intro"
#id	#firstname	Selects the element with id="firstname"
*	*	Selects all elements
element	p	Selects all <p> elements
element,element	div, p	Selects all elements and all <p> elements
element element	div p	Selects all <p> elements inside elements
element>element	div > p	Selects all <p> elements where the parent is a element
:focus	input:focus	Selects the input element which has focus
:hover	a:hover	Selects links on mouse over

CSS Pseudo-Classes

Pseudo-classes are CSS classes used to add effects to certain elements. They are used most often to style the anchor elements <a> of hyperlinks. Example:

a:link { color: blue; text-decoration: underlined; } Can also be written without the a (anchor) element:

:link { color: blue; text-decoration: underlined; }

CSS Pseudo-Classes

There are four pseudo-class elements provided to make rollover and on-click effects possible:

a:link { color: blue; text-decoration: underlined; }
link not yet visited

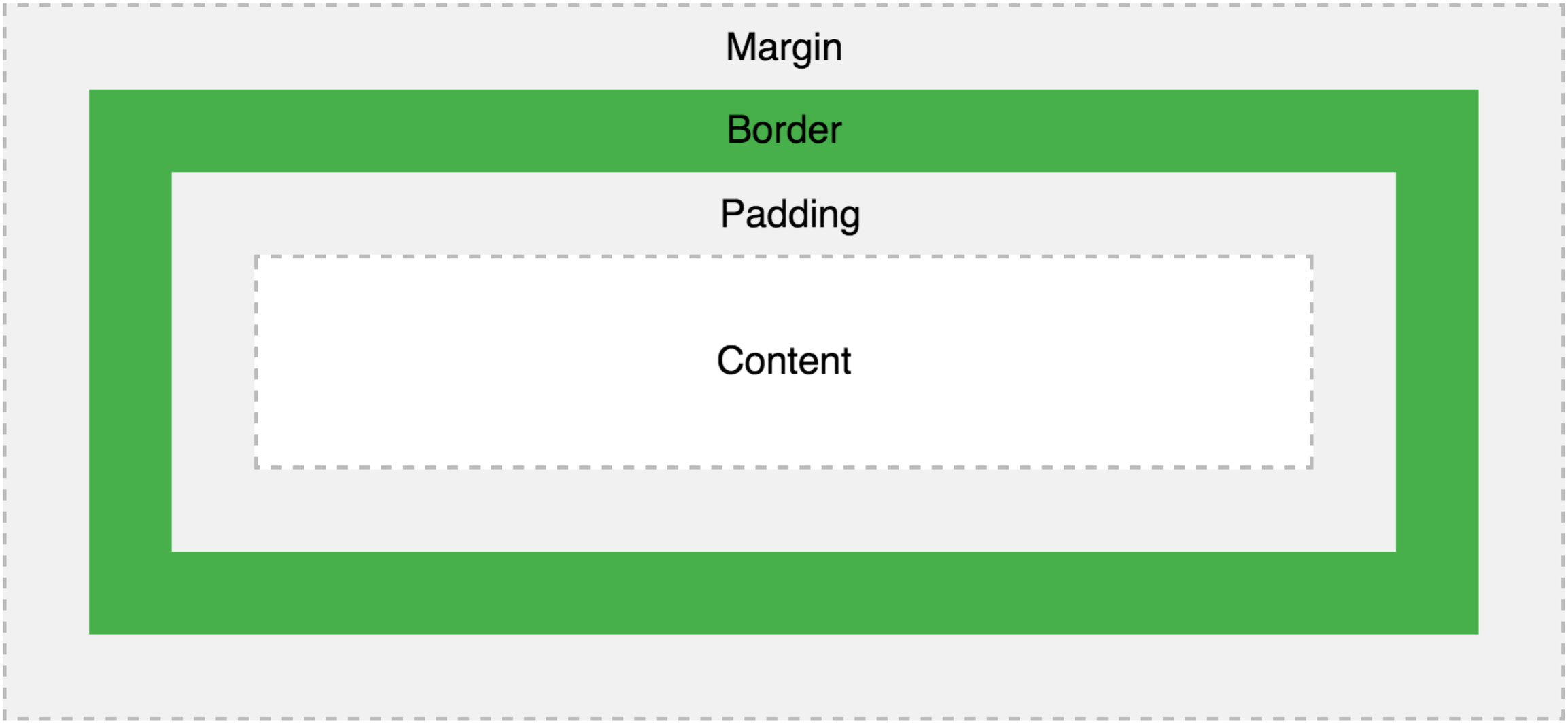
a:visited { color: green; text-decoration: underlined; }
visited link

a:hover { color: red; text-decoration: none; }
effect on the link when the mouse hovers over it

a:active { color: purple; text-decoration: none; }
effect on the link when the mouse button is pressed down on it

Note that pseudo-classes for rollover effects must be written in this order in a CSS file for them to work correctly.

Box Model in CSS



Content - The content of the box, where text and images appear
Padding - Clears an area around the content. The padding is transparent
Border - A border that goes around the padding and content
Margin - Clears an area outside the border. The margin is transparent

Ways to include CSS

- Inline

Use this method sparingly

```
<p style="color:red;margin-left:20px">This is a
paragraph.</p>
```

- Document level

Selector

```
<head>
<style type="text/css">
h1 {color:red}
p {margin-left:20px}
body {background-image:url("images/back40.gif")}
</style>
</head>
```

- External Style Sheet

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

Relationship

- Inside mystyle.css

```
h1 {color:red}
p {margin-left:20px}
body {background-image:url("images/back40.gif")}
```

Positions in CSS

Static

- This position is by default.
- It means div will occupy default location in the html document.
- We cannot define top, right, bottom and left for static.

Relative

- Once the position is set to Relative, we can define top, right, bottom and left attribute for the div in the html document with reference to its default position.

Absolute

- We can define an exact position for the div on screen with reference to nearest parent div which has position either relative or absolute.
- Please note, a div is parent only when it lies under another div.
- By default, html document is the reference if there is no parent element positioned as relative or absolute.

Fixed

- Div can be assigned a fixed position on screen. It stays there irrespective of whatever is added or deleted later .

Useful link: http://www.barelyfitz.com/screencast/html-training/css/positioning/

Some good practices to follow

Naming in web development:

1.Casing and spacing while building a website. Interoperation of spacing and upper or lower case letters is not standard in different systems. So the best way to name folders and files is writing your folder and file names lowercase with *no spaces.*

2.Use underscore or dash in between 2 words. Follow one throughout your project.

Standard structure of folders:

index.html images styles scripts

File path naming is imp. e.g.: images/my-image.jpg