

where you *really* graduate

A photograph of a modern office interior at dusk or dawn. Large windows provide a view of a city skyline. Several people are silhouetted against the bright light coming from the windows. Some are standing, some are sitting at desks, and some are walking. The overall atmosphere is professional and focused.



About Me

C3 : Fundamentals of HTML & CSS

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3 years of experience in the IT industry.

Expertise :

- ReactJS
- Javascript
- HTML5
- CSS3
- Node JS
- Mongo DB



Agenda

- 01 | Introduction & History
- 02 | Elements and Attributes
- 03 | HTML5 Features
- 04 | Styles
- 05 | Introduction - CSS
- 06 | Syntax and Usage
- 07 | CSS Selectors
- 08 | Margin, Border, Padding
- 09 | Box Model
- 10 | Display & Position
- 11 | CSS3 - Features
- 12 | Bootstrap CSS





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- **HTML - Hypertext Markup Language**
- **Can easily be said “Mother Tongue of Browsers”**
- **Used for:**
 - ❖ Creating web pages
 - ❖ Describing Structure of Pages
- **HTML page constitutes of:**
 - ❖ DOCTYPE `<!DOCTYPE html>`
 - ❖ Root Element `<html>`
 - ❖ Head `<head>`
 - ❖ Body `<body>`



History

- There have been various HTML versions:

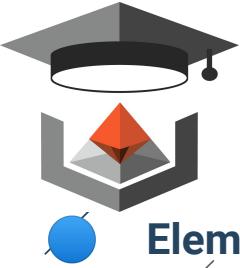
Version	Year
HTML	1991
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
XHTML	2000
HTML5	2014



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Elements & Attributes

Element

- ❖ Consists of start tag and end tag `<tagname></tagname>`
- ❖ HTML elements can be nested.
- ❖ Some HTML elements would display correctly even if they don't have end tag
- ❖ Elements with no content are called empty elements. HTML5 does not require empty elements to be closed.
- ❖ Tags are not case-sensitive which means `<H1>` is equal to `<h1>`

Attributes

- ❖ Provide additional information to HTML elements
- ❖ Always specified in the start tag
- ❖ Usually come in name/value pair
- ❖ W3C recommends attribute name in lowercase
- ❖ W3C recommends quotes for attribute values
- ❖ `<p title="para1">`, title is the attribute here



Elements

Some Elements

- ❖ **<head>** container for HTML document metadata
- ❖ **<h1>** to **<h6>** for defining headings
- ❖ **<hr>** is for thematic break in the page
- ❖ **<p>** defines a paragraph
- ❖ **<pre>** element helps in displaying text in a fixed-width font (usually Courier), and it preserves both spaces and line breaks
- ❖ **<table>** tag is used to define a table
- ❖ **<tr>** defines the table row
- ❖ **<th>** defines the table header
- ❖ **<td>** defines the data/cell
- ❖ **** for defining an unordered list
- ❖ **** represents each item in the list
- ❖ **** is for the ordered lists
- ❖ **<div>** is used as a container for other HTML elements
- ❖ **** is often used as container for text



Attributes

Some Attributes

- ❖ **title** specifies extra information about element
- ❖ **style** specifies inline style of the element
- ❖ **src** specifies url
- ❖ **id** specifies id of the element
- ❖ **href** specifies url for a link
- ❖ **disabled** specifies if an element should be disabled



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HTML5



New Doctype

```
<!DOCTYPE html>
```



Typeless <script> and <link> tags



XHTML

```
<link rel="stylesheet"
      href="path/to/stylesheet.css"
      type="text/css" />
<script type="text/javascript"
      src="path/to/script.js"></script>
```

HTML5

```
<link rel="stylesheet"
      href="path/to/stylesheet.css" />
<script
      src="path/to/script.js"></script>
```



Placeholder



Placeholders

```
<input type="text" placeholder="First name" name="fname">
```



New types for input tag

Type	Description
number	Numeric value only
range	For a range of numbers. Example slider
tel	Input should be a telephone number
email	For an email input



Input Tag



New types for input tag

Type	Description
date	For a date input
search	For search input.
url	Input should be a url
time	Time selector
color	Color selector



Semantic Elements



Semantic Elements

Element	Description
<section>	Section of a document - Heading + Content
<article>	For blog, forum, news post
<header>	Includes introductory content
<footer>	Info about containing document. Eg. Author, Copyright
<nav>	Set of major block of navigation links



Semantic Elements

Element	Description
<aside>	Content slightly related to less of the page. Eg. Sidebar
<article>	For blog, forum, news post
<figure>	For images, diagrams, illustrations
<figcaption>	Caption for <figure> element



Media Elements



Regular Expressions

pattern attribute for writing regular-expressions



Media Elements

Element	Description
<audio>	For audio/sound content
<video>	For video content
<source>	Defines multiple media elements
<track>	Text track of media elements
<embed>	Container for non-html documents



Graphic Elements



Graphic Elements

Element	Description
<canvas>	Draw graphics
<svg>	For drawing scalable vector graphics



Web Storage



Local Storage

- ❖ For storing data in user's browser
- ❖ At least 5MB of data per browser per domain can be stored
- ❖ Stores data without any expiration date

```
localStorage.setItem('firstName', 'John'); → Create a name/value pair  
localStorage.getItem('firstName'); //John → Get item  
localStorage.removeItem('firstName'); → Remove item (firstName)
```



Session Storage

- ❖ Stores data only for the session
- ❖ Data is deleted when browser tab is closed



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Style Attribute



Style

- For styling element
- Can set background color, text color, text font, font size, text alignment

```
<tagname style="property:value;">
```

Style	Description
background-color	Defines background color of HTML element
color	Sets text color
font-size	Sets size of the font
text-align	Horizontal text alignment



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Introduction

CSS

- ❖ Cascading Style Sheet
- ❖ Describes how elements would be displayed

CSS can be inserted in 3 ways in the HTML document:

- ❖ External style sheet
- ❖ Internal style sheet
- ❖ Inline style

External style Sheet

- ❖ Reference to external style sheet file is in the `<link>` tag



Introduction



Internal Style Sheet

- ◆ Defined in the `<style>` tag



Inline Styles

- ◆ Apply style to single element

Priority : Inline Style > External/Internal Stylesheet > Internal Style



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Syntax



CSS rule-set includes:

- / Selector
- / Declaration Block

Selector

p

Declaration Block

```
{color:blue; font-size: 14px;  
text-align: center}
```



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CSS Selectors

CSS Selectors

Type Selector

elementname

input will match <input>

Class Selector

.classname

.mt10 will match any element with class clas="mt10"

Id Selector

#id

#fname will match the only element that has id="fname"
Should be unique on an element



CSS Selectors

Universal Selector

*

* will choose all nodes

Attribute Selector

[attribute]

Select all the elements with specified attribute

Adjacent Sibling Selectors

A + B

<div> + <p> will match any <p> that follows <div>



CSS Selectors

General Sibling Selector

A~B

Select the nodes that matches the element that follows the former element, if both share same element

Child Selector

A>B

Direct childrens of the former specified element

Descendant Selector

A B

Childrens (not necessary direct) of the former specified element



CSS Selectors

Pseudo Classes

:active

Eg: `a:active{color:blue}`

User clicks on element or selects it with tab.
Commonly used for `<a>` and `<button>`

:link

Any link that has not yet been visited

:hover

Selects hovered element

:visited

Links that have been visited

:nth child

matches an element that has $a+b-1$ siblings before it
 $n \rightarrow +ve / 0$
 $a,b \rightarrow integers$



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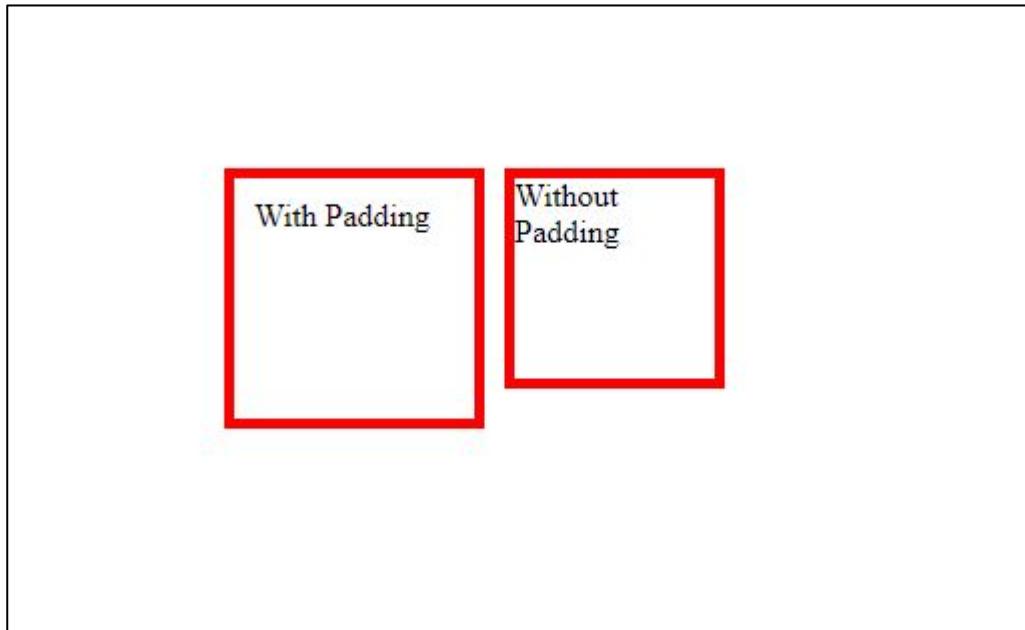




Padding

Padding

- ◆ Generates space around the content
- ◆ Padding can be called as inner margin of content





FREE DEMO

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Border

Border

- Allows to specify style, color, width of an element

- Properties :

`border-style, border-top-style, border-right-style, border-bottom-style,
border-left-style, border-width, border-color`

- Shorthand Property: `border`

```
border-width:5px; border-  
style:dotted; border-color:blue
```

```
border-width:5px; border-  
style:solid; border-color:blue
```

```
border-left:5px solid #C0C0C0;
```

```
border:5px solid #C0C0C0;
```



FREE DEMO

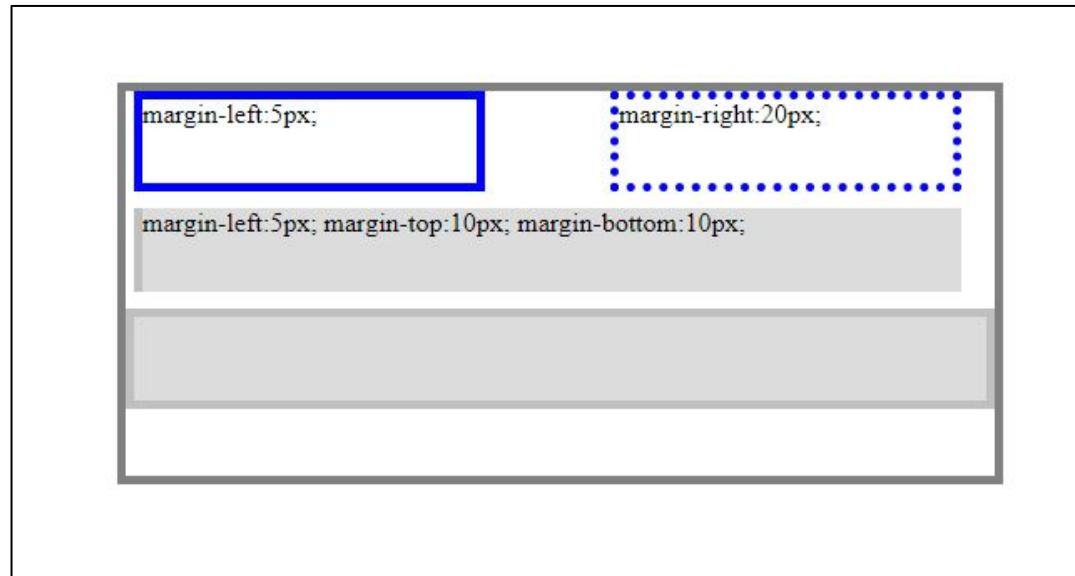
Try it now!!



Margin

Margin

- Used to generate space around the elements
- Properties : margin-top, margin-right, margin-bottom, margin-left
- Shorthand Property: margin



The diagram illustrates the effect of CSS margin properties on a series of rectangular boxes. A large outer gray border surrounds the entire group of boxes. Inside, there are four distinct boxes:

- A top-left box with a solid blue border and the text "margin-left:5px;".
- A top-right box with a dotted blue border and the text "margin-right:20px;".
- A middle box with a solid gray border and the text "margin-left:5px; margin-top:10px; margin-bottom:10px;".
- A bottom box with a solid gray border.

The "margin-left" and "margin-right" properties create horizontal gaps between the boxes, while the "margin-top" and "margin-bottom" properties create vertical gaps above and below the middle box respectively.



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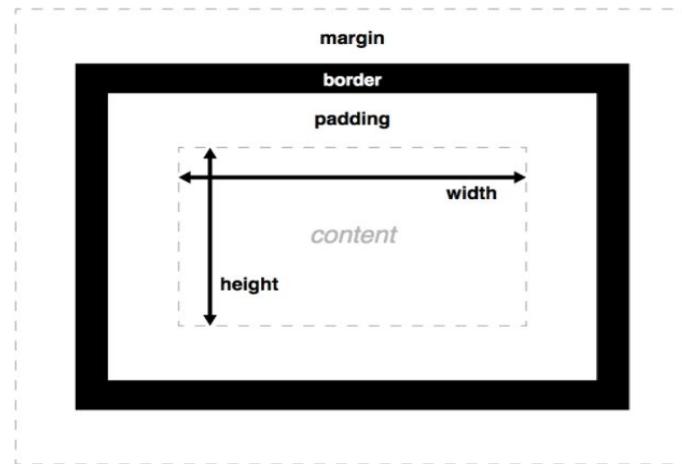




Box Model

Box Model

- Constitutes of : margin, border, padding, content
- width and height are given to the content area



Total width = width + left padding + right padding + left border + right border + left margin + right margin

Total Height = height + top padding + bottom padding + top border + bottom border + top margin + bottom



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Display



Display

- ❖ Defines how an element would be displayed
- ❖ Elements are either displayed block or inline
- ❖ `display:none` property can be used to hide an element

Block Level Elements

```
<h1> - <h6>, <div>, <p>, <form>, <header>, <footer>, <section>
```

Inline Elements

```
<span>, <img>, <a>
```



FREE DEMO

Try it now!!



Position



Position

- ❖ Type of positioning method used for an element
- ❖ static, relative, fixed, absolute
- ❖ Elements can then be positioned on the using top, bottom, left, right properties

Position	Description
static	By default, an element is statically positioned
relative	Positioned according to normal or static position
absolute	Positioned relative to its first parent element that is not statically positioned
fixed	Positioned relative to viewport



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CSS3 Modules



Backgrounds and Borders

- ◆ Rounded Corners
- ◆ Border Images
- ◆ New Background Properties
- ◆ Box Shadow

Feature	Description
Rounded Corners	<code>border-radius</code> property can be used to give rounded corners
Border Images	With <code>border-image</code> property, image can be used as border around elements
Background Properties	<code>background-size</code> , <code>background-clip</code> , <code>background-origin</code> allow greater control of background element
Box Shadow	<code>box-shadow</code> property attaches one or more drop-shadows



CSS3 Modules

Colors

- ◆ RGBA Colors
- ◆ HSL Colors
- ◆ HSLA Colors
- ◆ Opacity

Feature	Description
RGBA	<code>rgba (red, green, blue, alpha)</code> where alpha is opacity defined in number between 0.0-1.0
HSL	HSL - Hue Saturation Lightness Hue - Degree on color wheel, Saturation - Color Percentage, Light - Light/Dark in percentage
HSLA	<code>hsla(hue, saturation, lightness, alpha)</code>
Opacity	Sets opacity for whole element - both text and background color



Gradients and Patterns

- ◆ Linear Gradients
- ◆ Radial Gradients

Feature	Description
Linear Gradients	<code>background: linear-gradient(direction, color-stop1, color-stop2, ...);</code> <code>background: linear-gradient(angle, color-stop1, color-stop2);</code> At least two color stops are needed The angle is specified as an angle between a horizontal line and the gradient line. To add transparency <code>rgba()</code> can be used
Radial Gradients	<code>background: radial-gradient(shape size at position, start-color, ..., last-color);</code> Defined by its center At least two colors are needed



CSS3 Modules

Animations

- Let's an element gradually change from one style to another
- One must first specify some keyframes for the animation
- Keyframes hold what styles the element will have at certain times

Feature	Description
@KeyFrame Rule	<code>text-overflow</code> property specifies how overflowed content that is not displayed should be signaled to the user
<code>animation-duration</code>	By default duration is 0. If <code>animation-duration</code> is not mentioned, animation will not work.
<code>animation-delay</code>	Specifies the delay in animation
<code>animation-direction</code>	<code>animation-direction</code> property is used to let an animation run in reverse direction or alternate cycles



FREE DEMO

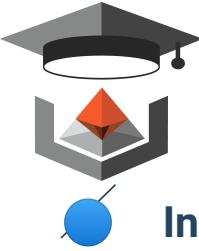
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Introduction

Introduction

- Bootstrap includes a responsive, mobile first fluid grid system that appropriately scales up to 12 columns as the device or viewport size increases
- It includes predefined classes for easy layout options, as well as powerful mixins for generating more semantic layouts.

Grid System

- Rows must be placed within a `.container` (fixed-width) or `.container-fluid` (full-width) for proper alignment and padding
- Use rows to create horizontal groups of columns.
- Content should be placed within columns, and only columns may be immediate children of rows
- Grid columns are created by specifying the number of twelve available columns you wish to span. For example, three equal columns would use three `.col-xs-4`
- If more than 12 columns are placed within a single row, each group of extra columns will, as one unit, wrap onto a new line.



Grid System



Grid Options

Grid Options

	Extra small devices Phones (<768px)	Small devices Tablets (≥768px)	Medium devices Desktops (≥992px)	Large devices Desktops (≥1200px)
Grid behavior	Horizontal at all times	Collapsed to start, horizontal above breakpoints		
Container width	None (auto)	750px	970px	1170px
Class prefix	.col-xs-	.col-sm-	.col-md-	.col-lg-
# of columns	12			
Column width	Auto	~62px	~81px	~97px
Gutter width	30px (15px on each side of a column)			
Nestable	Yes			
Offsets	Yes			
Column ordering	Yes			



FREE DEMO

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Components

Bootstrap Components

- ↳ [Glyphicons](#)
- ↳ [Dropdowns](#)
- ↳ [Button Groups](#)
- ↳ [Button Dropdowns](#)
- ↳ [Sizing](#)
- ↳ [Input Groups](#)
- ↳ [Navbar](#)
- ↳ [Tabs](#)
- ↳ [Pills](#)
- ↳ [Breadcrumbs](#)
- ↳ [Pagination](#)
- ↳ [Labels](#)
- ↳ [Badges](#)



Components

Bootstrap Components

- **Badges**
- **Alerts**
- **Dismissible Alerts**
- **Progress Bars**
- **Disabled Items**
- **Panels**
- **Contextual Alternatives - Tables, Lists**
- **Responsive Embed**
- **Wells**



FREE DEMO
Try it now!!



Any Question?

Q & A





Questions
are
guaranteed in
life;
Answers
aren't.



Q & A



Do it yourself

01 Exercise 1

Create a progress bar using CSS.

02 Exercise 2

Create your personal web page

03 Exercise 3

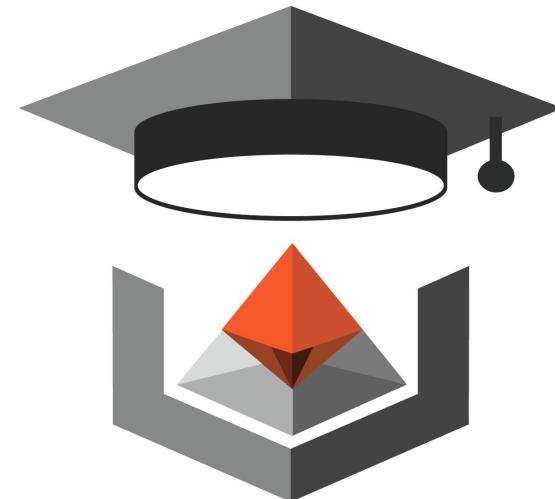
Create a login page using bootstrap css



au.communication@accoliteindia.com

www.accolite.com

Thank You



twitter.com/weareaccolite



facebook.com/accolite



linkedin.com/company/accolite