Introduction to HTML/CSS

Agenda

- What is HTML ?
- Document Structure
- Meta tags
- HTML elements
- Basic HTML tags

- HTML form elements
- HTML Tables
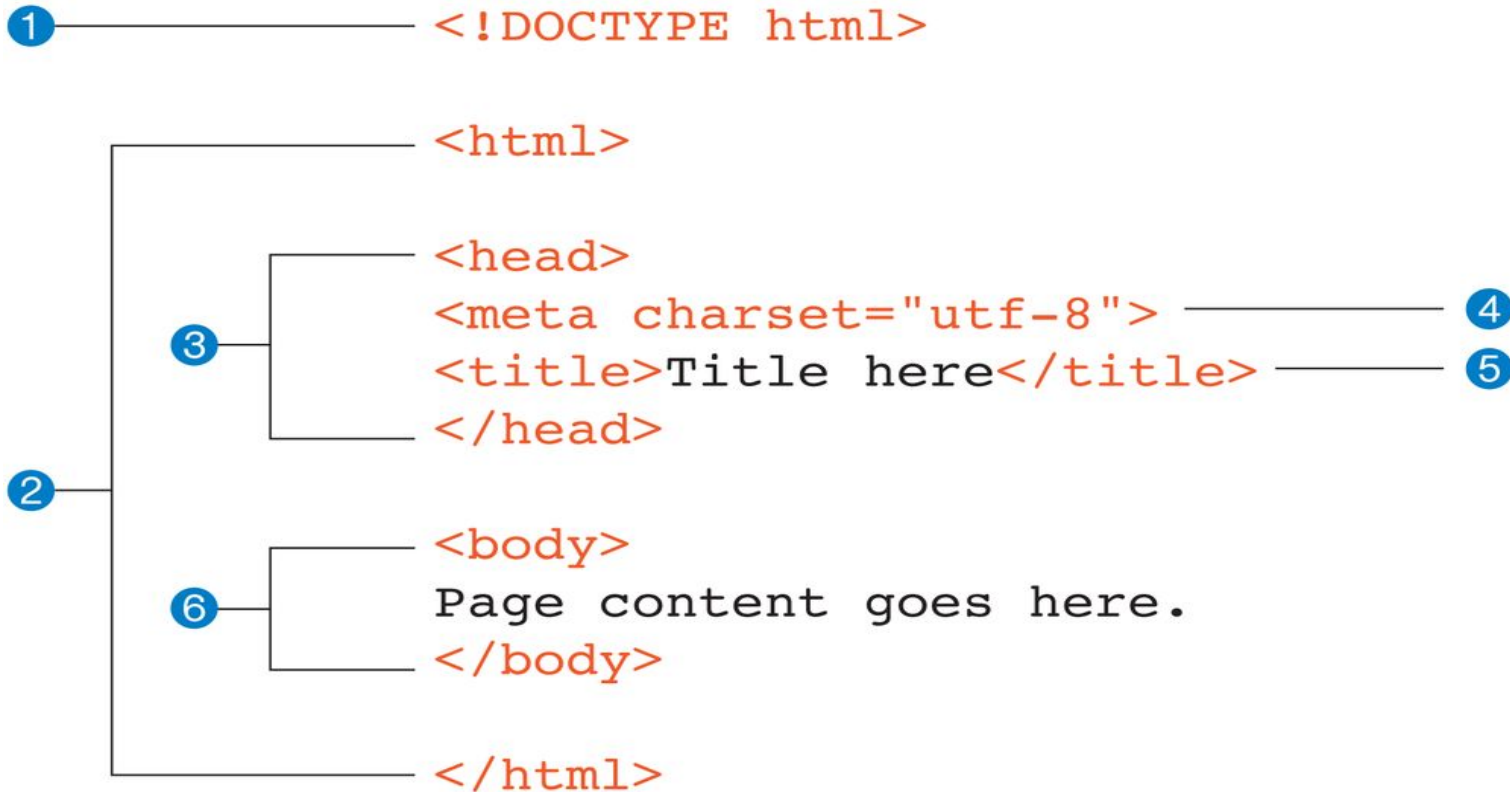- Classes and Ids
- W3c validations

What is HTML?

1. HTML abbreviated for Hyper Text Markup Language
2. A markup language is a set of **markup tags**
3. Each HTML tag **describes** different document content
4. HTML tags normally come **in pairs** like <p> and </p>

Document Structure

① ———————————————— `<!DOCTYPE html>`

② ③ `<html>`

③ `<head>`
`<meta charset="utf-8">` ————— ④
`<title>`Title here`</title>` ————— ⑤
`</head>`

⑥ `<body>`
Page content goes here.
`</body>`

`</html>`

Meta tags

○ The <meta> tag provides metadata about the HTML document. Metadata will not be displayed on the page, but will be machine parsable.

○ Meta elements are typically used to specify page description, keywords, author of the document, last modified, and other metadata. Also, it helps to improve the SEO(Search Engine Optimization) of a web page by using certain keywords related to the web page.

○ <meta> tags always go inside the <head> element.

Following are few examples of <meta> tag with different attributes :

1)   <meta name="keywords" content="HTML, CSS, XML, XHTML, JavaScript"> **(For Search engines)**

2)   <meta name="description" content="Free Web tutorials on HTML and CSS"> **(Description of web page)**

3)   <meta name="author" content="John Doe"> **(Author of web page)**

4)   <meta name="viewport" content="width=device-width, initial-scale=1.0"> **(Responsiveness)**

How it looks in browser?

Demo

Elements inside BODY element

- HTML elements are written with a **start** tag, with an **end** tag, with the **content** in between:

- Syntax :: <tagname>element content</tagname>
    - <p>MY First Paragraph.</p>
    - <div>My Container</div>
    - <h1>Heading1</h1>

- The elements which has not the end tag are called self-closing tags , as -
, <hr/>, <img />,<input />

Basic HTML tags

1. Headings tags
2. Paragraph tag
3. Hyperlink tag
4. Order list and Unordered list tags
5. Miscellaneous tag

HTML Headings

- Headings are defined with the <h1> to <h6> tags.

- <h1> defines the most important heading. <h6> defines the least important heading.

  Samples of the six heading types:

  <H1>Level-1 (H1)</H1>

  <H2 >Level-2 (H2)</H2>

  <H3>Level-3 (H3)</H3>

  <H4 >Level-4 (H4)</H4>

  <H5>Level-5 (H5)</H5>

  <H6>Level-6 (H6)</H6>

HTML Paragraphs

The HTML <p> element defines a paragraph.

Example:

<p>This is a paragraph</p>

<p>This is another paragraph</p>

HTML Links - Hyperlinks

- HTML links are hyperlinks.

- A hyperlink is a text or an image you can click on, and jump to another document.

Example:

link text

 <img src="smiley.gif" alt="HTML tutorial" style="width:42px;height:42px;border:0">

HTML Lists

Example of an unordered list and an ordered list in HTML:

Unordered List:

```
<ul>
      <li> First item </li>
      <li> Second item </li>
       <li> Third item </li>
</ul>
```

- First Item
- Second Item
- Third Item

Ordered List:

```
<ol>
      <li> First item </li>
      <li> Second item </li>
       <li> Third item </li>
</ol>
```

1. First item
2. Second item
3. Third item

Miscellaneous

➤ **STRONG** – The HTML Strong Element (<strong>) gives text strong importance, and is typically displayed in bold.

➤ **HR** - The <hr> element is used to separate content in an HTML page.

➤ **BR** - The <br> tag inserts a single line break.

➤ **DIV** -The <div> tag defines a division or a section in an HTML document and is used to group block-elements to format them with CSS.

➤ **SPAN** - The <span> tag is used to group inline-elements in a document.

Block-level and Inline-level Elements

- There are two types of elements in HTML page – INLINE and BLOCK.

- A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).

- The <div> element is a block-level element.

- An inline element does not start on a new line and only takes up as much width as necessary.

- This <span> element is an inline-level element.

Demo

HTML Form Elements

- The most important form element is the **<input>** element.
- Type of an input element decided by its "type" attribute
- Some basic input types :
  - text input - <input type="text" />
  - password input - <input type="password" />
  - email input - <input type="email" />
  - checkbox input - <input type="checkbox" />
  - radio input - <input type="radio" />
  - submit button - <input type="submit" />

HTML Tables

- Tables are defined with the **<table>** tag.

- Tables are divided into **table rows** with the **<tr>** tag.

- Table rows are divided into **table data** with the **<td>** tag.

- A table row can also be divided into **table headings** with the **<th>** tag.

Example of Table

```
<table style="width:100%">

<thead>
    <tr>
     <th>Lastname</th>
     <th>Points</th>
  </tr>
</thead>

<tbody>
<tr>
        <td>Smith</td>
        <td>50</td>
  </tr>
  <tr>
         <td>Jackson</td>
        <td>94</td>
  </tr>
</tbody>
```

```
<tfoot>
    <tr>
       <td>Copyright</td>
       <td> @ TTN </td>
    </tr>
</tfoot>

</table>
```

Classes and Ids

- You should only give elements an ID attribute if they are unique. They should be applied to that element only and nothing else.

- Classes can be applied to multiple elements that share the same style properties. Things that should look and work in the same way can have the same class name.

  Example:

  ```
  <ul id="categories">
              <li class="item">Category 1</li>
              <li class="item">Category 2</li>
              <li class="item">Category 3</li>
      </ul>
  ```

Introduction to HTML5

Agenda

➢ Semantic Tags

➢ API'S

➢ HTML5 Form Validations

HTML5 Tags

HTML5 is the latest version of HTML and it introduces many new <tags> and features.

Some of the commonly used new tags of HTML5 are :

- <article> - Defines an article in the document

- <aside> - Defines content aside from the page content like sidebar.

- <footer> - Defines a footer for the document or a section

- <header> - Defines a header for the document or a section

- <nav> - Defines navigation links in the document

- <section> - Defines a section in the document

HTML5 APIs

1) **Web Audio API** -- It provides a simple yet powerful mechanism to implement and manipulate audio content inside web applications. It allows you to develop complex audio mixing, effects, panning and more.

2) **Geolocation API** -- It allows the user to provide their location to web applications if they so desire. For privacy reasons, the user is asked for permission to report location information.

3) **Web Storage API** -- It provides mechanisms by which browsers can store key/value pairs, in a much more intuitive fashion than using cookies.

4) **Page Visibility API** -- performs a simple but important function – it lets your application know when a page is visible to the user.

5) **Vibration API** -- allows developers to direct the device, using JavaScript, to vibrate in a pattern for a given duration if the device has the vibration mechanism.

6) **There are many more HTML5 APIs. Above were the ones which are being mostly used these.**

HTML5 Form Validations

We use Html5 form validations for verifying the form data on the client side itself. In Html5 new input types and attributes were added to <input> tags that allow the browsers themselves to perform the client-side validation for us: no JavaScript required.

Lets have a better understanding with the help of following example :

<form>

<input type="text" id="name" required>

<input type="submit" value="Submit"/>

</form>

Validating required fields is as easy as adding the **required** attribute to each <input> tag.

Now, If one tries to submit the form without filling anything in input field. A tooltip will appear on that particular field which is not validating according to the requirement.

⚠ Please fill out this field.

HTML5 Form Validations

We can also tell the browser that which type of data we want in a particular field by applying regular expressions in an <input> tag attribute known as **pattern.**

For example :

<input id="name" type="text" name="name" required pattern="[A-Za-z]" title="firstname lastname">

Now if a user tries to submit the form without filling the required data, a tooltip will appear reminding that it is not a valid input.

An Introduction to CSS

Agenda

➢ What is CSS?

➢ Type of CSS

➢ Selectors

➢ Id and Class

➢ Box Model

➢ CSS Properties

What is CSS?

- **CSS** stands for **C**ascading **S**tyle **S**heets
- CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.
- control layout of many documents from one single style sheet;

Type of CSS

There are three types of CSS

1. Inline CSS

2. Internal CSS

3. External Style CSS

Inline Style

<p style="color: #ff0000;">Some red text</p>

Internal Style

```
<head>
<title><title>
<style type="text/css">
.alternate{background:#ff0000;}
#alternate{background:#ff0000;}
</style>
</head>
```

External Style Sheet

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

Selectors

In CSS, selectors are patterns used to select the element(s)
You want to style.

selector { property: value }
body {background: #eeeeee; font-family: Georgia, sans-serif;}
h1 {font-family: Georgia, sans-serif;}
h1, h2 {color: #009900;font-family: Georgia, sans-serif;}

Id and Class

ID's are unique

- Each element can have only one ID

- Each page can have only one element with that ID

Classes are NOT unique

- You can use the same class on multiple elements.

- You can use multiple classes on the same element.

Syntax:

#id {property: value}

.class {property: value}

Padding and Margin

padding-top:10px;

padding-right:10px;

padding-bottom:10px;

padding-left:10px;

Or

padding:10px;

margin-top:10px;
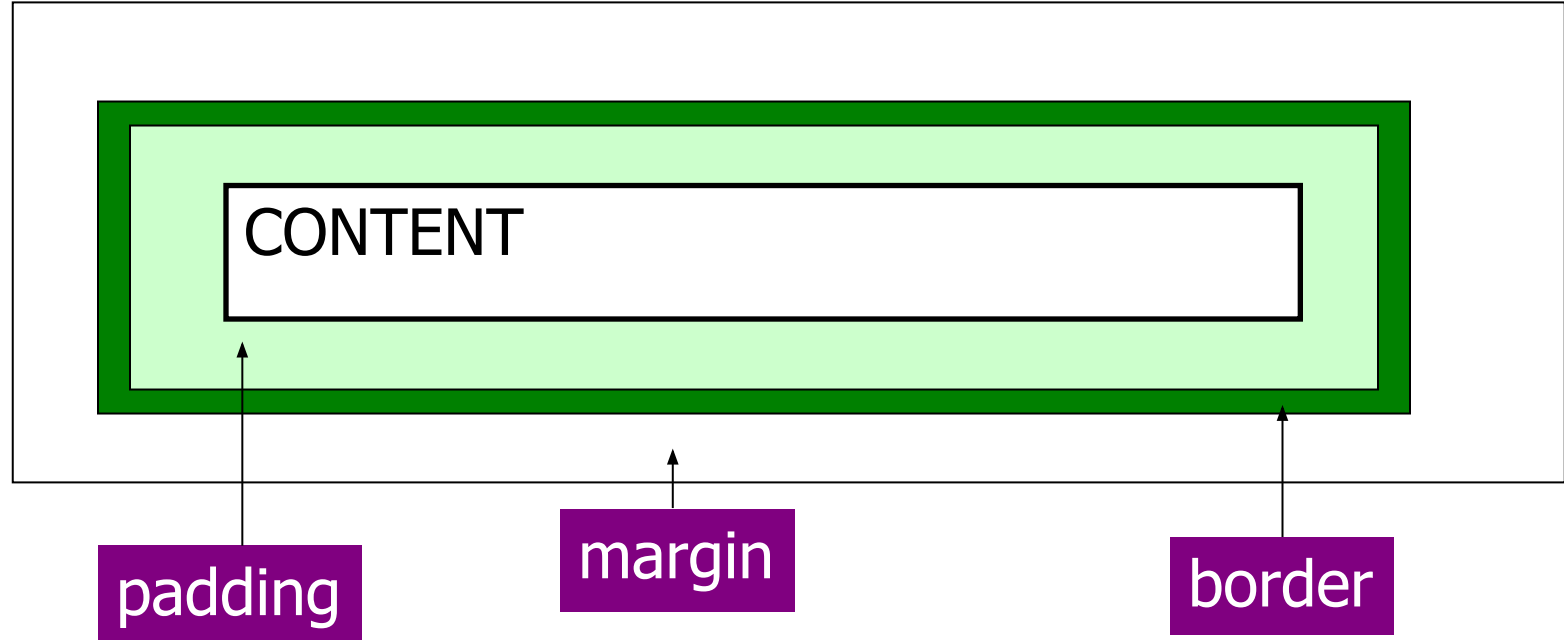
margin-right:10px;

margin-bottom:10px;

margin-left:10px;

Or

margin:10px;

Box Model

.

CONTENT

padding

margin

border

Display Property

display is CSS's most important property for controlling layout. Every element has a default display value depending on what type of element it is.

display: block;

display: inline;

display: inline-block;

display: none;

Color

Colors are displayed combining RED, GREEN, and BLUE light.

color: value;

#container {

Width: 70px;

Height:200px;

padding: 30px;

border: 1px solid #666;

color: #ffffff; }

Text Align

The **text-align** CSS property describes how inline content like text is aligned in its parent block element. text-align does not control the alignment of block elements, only their inline content.

Syntax:

text-align: value;

text-align: left;

text-align: right;

text-align: center;

text-align: justify;

Clear and float

Clear:both;

Clear:left;

Clear:right;

Float:left;

Float:right;

Text Decoration

text-decoration: none

text-decoration: underline

Font -Family, Font Size

font-family: Verdana, sans-serif;

font-size: 15px;

Font Weight

font-weight: Value

font-weight: bold;

font-weight: normal;

font-weight: numbers; (300, 400, 600, 800)

Link

some link text

a {color: #009900;}

Pseudo classes

a:visited {color: #999999;}

a:hover {color: #333333;}

a:focus {color: #333333;}

a:active {color: #009900;}

Background and border

background: #ffffff;

background: url(path of image);

background: #ffffff url(path of image)

border: 1px solid #333333;

border-top: 1px solid #333333;

border-right: 1px solid #333333;

border-bottom: 1px solid #333333;

border-left: 1px solid #333333;

Position and z-index

position: absolute;

position: relative;

position: fixed;

position: static;

z-index: 1;

.yellow-box{position: relative; z-index: 1;}

.blue-box{position: relative; z-index: 2;}

Introduction to CSS3

Agenda

➢ Animation

➢ Transation

➢ Media Queries

➢ Flexbox

CSS3 Animations

What are CSS3 Animations?

An animation lets an element gradually change from one style to another. You can change as many CSS properties you want, as many times you want. To use CSS3 animation, you must first specify some keyframes for the animation.

Keyframes hold what styles the element will have at certain times.

```css
@keyframes example {
    0% {background-color: red;}

    50% {background-color: green;}

    100% {background-color: yellow;}
}
```

```css
div {
    width: 100px;
    height: 100px;
    background-color: red;
    animation-name: example;
    animation-duration: 4s;
}
```

CSS3 Transitions

CSS3 transitions allows you to change property values smoothly.

For example :

```
div {
    width: 100px;
    height: 100px;
    background: red;
    transition: width 2s;
}
div:hover {
    width: 300px;
}
```

CSS3 media queries

When we have to make a web page responsive, we need to specify that which CSS properties will be applied on a particular viewport (device screen). This can be achieved by using media queries in our CSS file.

Let's understand this better with an example

```
@media screen and (min-width: 480px) {
  body {
    background-color: lightgreen;
  }
}
```

So, the above code will work only when the **device width** is **at least 480px**. Hence, this code will not work on devices who's width will be less than 480px.
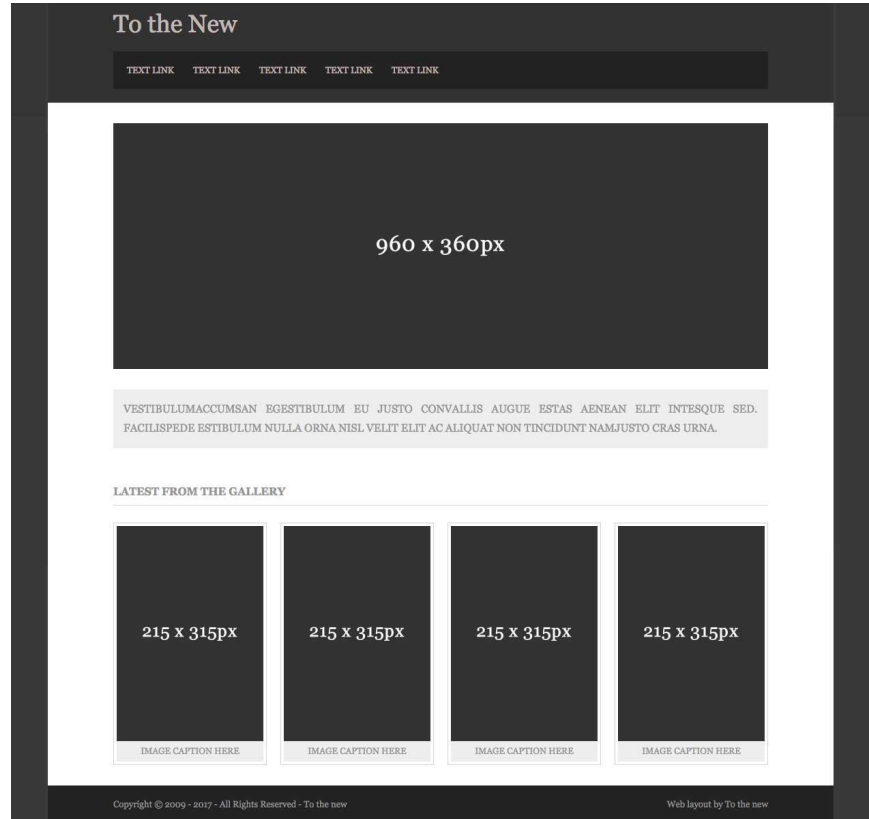
CSS3 Flexbox

- Flexbox is Flexible Box Layout Module
- It is mainly a flexible container inshort flexbox
- CSS floats and clearfix hacks are very much popular to get proper multi-column layouts.
- Flexbox is an alternative for this.
- In future it can overcome Floats and clearfixs.
- It's great for mobile screens and responsive content for dynamic layouts and webapps.

Exercises

1. Please create the following web page using html5 tags and required css.

2. Please create the following form using required html5 form tags.

TO THE NEW

Bug Report

Title:*

Description:*

Operating system:

Windows XP ▼

Product:*

Formoid ▼

Version:*

License:
○ Free   ○ Business

Severity:

Critical ▼

Attachments:

No file selected | Choose File

Send

Thank You