Styling with Cascading Stylesheets

Objective

In this session we will focus on following points:

- Why CSS?
- What is CSS?
- Styling with Cascading Style sheets (CSS)
- Selectors and style definitions
- Properties of css
- Linking HTML and CSS
  - Inline css
  - Internal css
  - External css
- Limitations of normal selectors
- Types of selectors

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Why CSS?

- HTML is used tags for formatting a documents like:

  `<h1>This is a heading</h1>`

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

- **Problem in HTML-**
  - When tags like `<font>`, and color attributes were added to the HTML ,it nightmare for web developers.
  - Development of large web sites, where fonts and color information were added to every single page, became a long and expensive process.

- **Solution-**
  - World Wide Web Consortium (W3C) created CSS.
  - By using all formatting could be removed from the HTML document, and stored in a separate CSS file.
  - External style sheets enable you to change the appearance and layout of all the pages in a Web site, just by editing one single file!

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CSS: A New Philosophy

Content (HTML document)

Title

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Suspendisse at pede ut purus malesuada dictum. Donec vitae neque non magna aliquam dictum.

• **Vestibulum et odio et ipsum**

• **accumsan accumsan. Morbi at**

• **arcu vel elit ultricies porta. Proin**

tortor purus, luctus non, aliquam nec,.

Presentation (CSS Document)

Bold

Italics

Underline

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4

The Resulting Page

Title

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Suspendisse at pedeut purus malesuada dictum. Donec vitae neque non magna aliquam dictum.

- *Vestibulum et odio et ipsum*
- *accumsan accumsan. Morbi at*
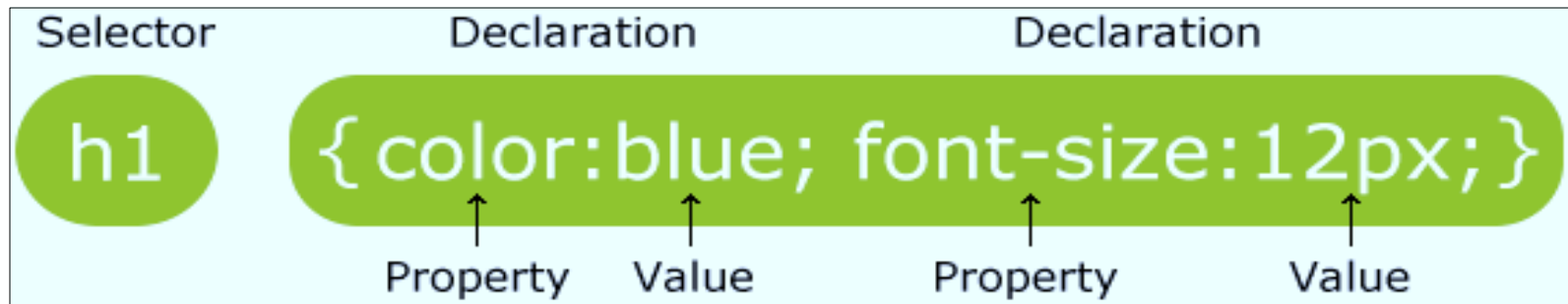- *arcu vel elit ultricies porta. Proin*

Tortor purus, luctus non, aliquam nec, interdum vel, mi. Sed nec quam nec.

What is CSS?

- Cascading Style Sheets (CSS)
  - Used to describe the presentation of documents
  - Define sizes, spacing, fonts, colors, layout, etc.
  - Improve flexibility
- Designed to separate presentation from content
- Due to CSS, all HTML presentation tags and attributes are modified.
  - E.g. font, border etc.
- CSS can be applied to any XML,HTML,Javascript document

CSS Syntax

- A CSS rule has two main parts: a selector, and declarations.

Selector	Declaration	Declaration
h1	{ color:blue;	font-size:12px;}
	Property Value	Property Value

- The selector is the HTML element that you want to style.
- Each declaration consists of a property and a value.

CSS Syntax

- The property is the style attribute that you want to change. Each property has a value.
- A CSS declaration always ends with a semicolon
- Declaration groups are surrounded by curly brackets
- To make the CSS more readable, you can put one declaration on each line, like this:
- E.g.

```
p
{
color: red;
text-align: center;
background-color:yellow;
}
```

Properties from CSS

- Comments in CSS
- Text related properties
- CSS background
- CSS borders
- Text transform effect

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CSS Comments

- Comments are used to explain your code,
- Comments are ignored by browsers.
- A CSS comment begins with "/*", and ends with "*/", like this:
- E.g.

```
/*This is a comment*/
p
{
text-align:center;
/*This is another comment*/
color:black;
font-family:arial;
}
```

Text-related CSS Properties

- `color`
  - specifies the color of the text
- `font-size`
  - size of font-numeric value
- `font-family`
  - comma separated font names
  - Example: `verdana`, `sans-serif`, etc.

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CSS Rules for Fonts

- `font-style`
  - styles the font
  - Values: `normal`, `italic`,
- `text-align`
  - defines the alignment of text or other content
  - Values: `left`, `right`, `center`, `justify`

Text-related CSS Properties

- Text-shadow: horizontal-shadow vert-shadow color

  adds shadow to text

- letter-spacing

  specify the space between the characters in a text.

- Text-overflow:clip,initial,inherit,etc

  Specifies how overflowed content that is not displayed should be signaled to the user

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CSS Backgrounds

- `background-image`
  - URL of image to be used as background, e.g.: `background-image:url("back.gif");`

- `background-color`
  - Using color and image and the same time
- `background-repeat`
  - `repeat-x`, `repeat-y`, `repeat`, `no-repeat`

Borders in CSS

- `border-width`
  - `thin`, `medium`, `thick` or numerical value (e.g. `10px`)
- `border-color`
  - color alias or RGB value
- `border-style`
  - `none`, `hidden`, `dotted`, `dashed`, `solid`, `double`

Text Transform

- The text-transform property is used to specify uppercase and lowercase letters in a text.
- It can be used to turn everything into uppercase or lowercase letters, or capitalize the first letter of each word.
- E.g.

  text-transform: uppercase

  text-transform: lowercase

  text-transform: capitalize

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CSS in HTML

Three Ways to Insert CSS in HTML-

- Inline style
- Internal style sheet
- External style sheet

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Inline Style sheet

- An inline style have advantage of style sheets by mixing content with presentation at the line.
- In inline **style** attribute is added in the relevant tag.
- The **style** attribute can contain any CSS property. E.g.

 `<p style="color:red;font-size:20;">This is a paragraph.</p>`

Demo-Inline style sheet

Apply inline CSS formatting for following text

<p>This is Paragraph tag</p>

<h3>This is heading tag 3</h3>

- **Paragraph-**
  - font-color as blue
  - font- family as Arial
  - Size as 30
  - Background color as yellow
- **Headings tag-**
  - heading h3 using style-sheet
  - font family-verdana
  - color-red.
  - Background color as green

Internal Style sheet

- Define internal styles in the head section of an HTML page, by using the <style> tag.
- E.g.

```
    <head>
  <style>
       p
       {
            Background-color: red;
            Font-size:30;
       }
       body
       {
            background-image:url("image.jpg");
       }
  </style>
    </head>
```

Demo-Internal style sheet

Apply internal CSS formatting for following text

<p>This is Paragraph tag</p>

<h3>This is heading tag 3</h3>

- **Paragraph-**
  - font-color as blue
  - font- family as Arial
  - Size as 30
  - Background color as yellow
- **Headings tag-**
  - heading h3 using style-sheet
  - font family-verdana
  - color-red.
  - Background color as green

External Style sheet

- Each HTML page must link to the style sheet using the <link> tag.
- The <link> tag is used inside the head section of HTML.
- Steps to create External CSS-
  - Create CSS file seperatly,save it with extension .css
  - Add CSS file in head section of HTML page by using <link> tag.
  - E.g.
    ```
        <head>
    <link rel="stylesheet" type="text/css"
    href="mystyle.css">
    </head>
    ```
  - The CSS file should not contain any html tags.

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Demo-External style sheet

Apply external CSS formatting for following text

<p>This is Paragraph tag</p>

<h3>This is heading tag 3</h3>

- **Paragraph-**
  - font-color as blue
  - font- family as Arial
  - Size as 30
  - Background color as yellow
- **Headings tag-**
  - heading h3 using style-sheet
  - font family-verdana
  - color-red.
  - Background color as green

Limitations in Normal selector

There are some limitations while doing following formatting using CSS.

- Won't able to apply same formatting for different tags from HTML.
- Won't able to apply different formatting for same tag from HTML
- Won't able to create own selector name

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1ˢᵗ-Limitation

Won't able to apply same formatting for different tags from HTML.

Q. Apply CSS formatting for following text

<p>This is Paragraph tag</p>

<h3>This is heading tag 3</h3>

<h6>This is heading tag 6</h6>

- – font-color as blue
- – font- family as Arial
- – Size as 30
- – Background color as yellow

Limitation-

– Have to create 3 different selector for same formatting.

  i.e p,h3 and h6 selector.

2nd -Limitation

Won't able to apply different formatting for same tag from HTML.

Q. Apply CSS formatting for following text

<p>This is Paragraph tag</p>

1st formatting-

- – font-color as blue
- – font- family as Arial
- – Size as 30
- – Background color as yellow

2nd formatting-

- – font-color as red
- – font- family as times new roman
- – Size as 40
- – Background color as black

2nd -Limitation

Limitation-

– Only one selector can be used to give formatting for paragraph and that is p selector, but have to apply 2 different formatting.

3rd -Limitation

Won't able to create own selector name.

- Create Login form using HTML and apply following CSS formatting

User Name	
Password	
SUBMIT	RESET

- For User Name text box-
  - Background color =yellow
- For Password text box-
  - Background color =pink
- For all buttons -
  - Background color =green

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Solution on Normal selector

- To solve all the limitaions,we have different types of selector.
  - Won't able to apply same formatting for different tags from HTML.
    - Solution-Group selector
  - Won't able to apply different formatting for same tag from HTML
    - Solution-Class selector
  - Won't able to create own selector name
    - Solution-ID selector

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Group Selector

- Used to apply same formatting for different tags from HTML.
- We can group selectors using a comma (,) separator.
- Syntax-

  selector1,selector2,……..SelectorN

  {

  formatting properties with values

  }

Demo-Group selector

Q. Apply Group selector formatting for following text

<p>This is Paragraph tag</p>

<h3>This is heading tag 3</h3>

<h6>This is heading tag 6</h6>

- font-color as blue
- font- family as Arial
- Size as 30
- Background color as yellow

Class Selector

- Used to apply different formatting for same tag from HTML.
- The class selector finds elements with the specific class.
- The class selector uses the HTML class attribute.
- To find elements with a specific class, write a dot character, followed by the alias name of the class.
- Syntax-

```
Selector_name.alias_name1
{
    formatting 1
}
Selector_name.alias_name2
{
    formatting 2
}
```

Class Selector

- To access formatting in HTML

  <tag_name class="alias_name">

Demo-Class selector

Q. Apply Class selector formatting for following text

<p>This is Paragraph tag</p>

1st formatting-

- – font-color as blue
- – font- family as Arial
- – Size as 30
- – Background color as yellow

2nd formatting-

- – font-color as red
- – font- family as times new roman
- – Size as 40
- – Background color as black

Id selector

- By using id selector we able to create own selector name.
- The id selector uses the id attribute of an HTML tag to find the specific element.
- An id should be unique within a page.
- To find an element with a specific id, write a hash character, followed by the id of the element.
- Syntax-

        #own_selector_name

        {

          formatting attributes and values

        }

- To access formatting in HTML

    <tag_name   id="own_selector_name">

Demo-Id selector

Create Login form using HTML and apply following CSS

- For User Name text box-
  - Background color =yellow
- For Password text box-
  - Background color =pink
- For all buttons -
  - Background color =green