Web Development Fundamentals

Learn CSS

Learning Objectives:

- Explain what CSS is?
- How to use it to style pages?
- Purpose of using CSS
- Writing Style Sheets:
- Style Sheet Strategies:
- Using Id’s
- Using Classes
- font properties
- text properties
- styling links
- styling background
- styling tables
- What is the box model?

What is CSS?

CSS stands for cascading style sheets:

- Created by Hakon Lie of MIT in 1994
- Has become the W3C standard for controlling visual presentation of web pages
- Cascading style-sheets are powerful mechanism to add style to web document
- Enforce standards and uniformity
- Create dynamic effects
- Works by allowing you to specify rules

Purpose of using CSS

- Saves time
- Easy to change
- Pages load faster
- Keep consistency
- Give you more control over layout
- Use styles with JavaScript
- Multiple Device Compatibility

Writing Style Sheets in CSS:

Let us understand the differences among inline, internal, and external style sheets.

In-line styles:

- Add styles to each tag within the HTML file.
- Use it when you need to format just a single section in a web page
- Style attribute is used to add style.

Example:

<h1 style="color:red; font-family: sans-sarif" > IU </h1>

Embedded/internal styles

- A style is applied to the entire HTML file.
- Use it when you need to modify all instances of particular element (e.g., h1) in a web page.

Example:

<style>

h1 {color:red; font-family:sans-serif}

</style>

External style sheet

An external style sheet is a text file containing the style definition (declaration)

Use it when you need to control the style for an entire website

- Open a new blank document in Notepad
- Type style declarations
  - h1 {color:red; font-family:calibri;}
- Do not include <style> tags
- Save the document as filename.css
- Open a HTML file
- Between <head> and </head> add
- <link href=URL rel="relation_type" type="link_type">
- URL is the file.css
- Relation_type="stylesheet"
- Link_type="text/css"
- Save this file and the .css file in the same web server directory.

Writing Style Sheets in CSS:

Embedded/internal styles

internal - Notepad

File Edit Format View Help

```
<html>
<head>
<title>Internal CSS</title>
<style>
h1{color:#FF0000;
font-family:Calibri;
font-size:36px
}
</style>
</head>
<body>
<h1>This heading is styled with CSS</h1>
</body>
</html>
```

Writing Style Sheets in CSS:

external - Notepad

File Edit Format View Help

```
<html>
<head>
<title>External Style</title>
<link href="mystyle.css" rel="stylesheet"
type="text/css">
</head>
<body>
<h1>This heading is styled with external
stylesheet</h1>
</body>
</html>
```

mystyle - Notepad

File Edit Format View Help

```
h1{color:green;
   font-size:36px;
   font-family:calibri
  }
```

External style sheet

Understand how to declare a style:

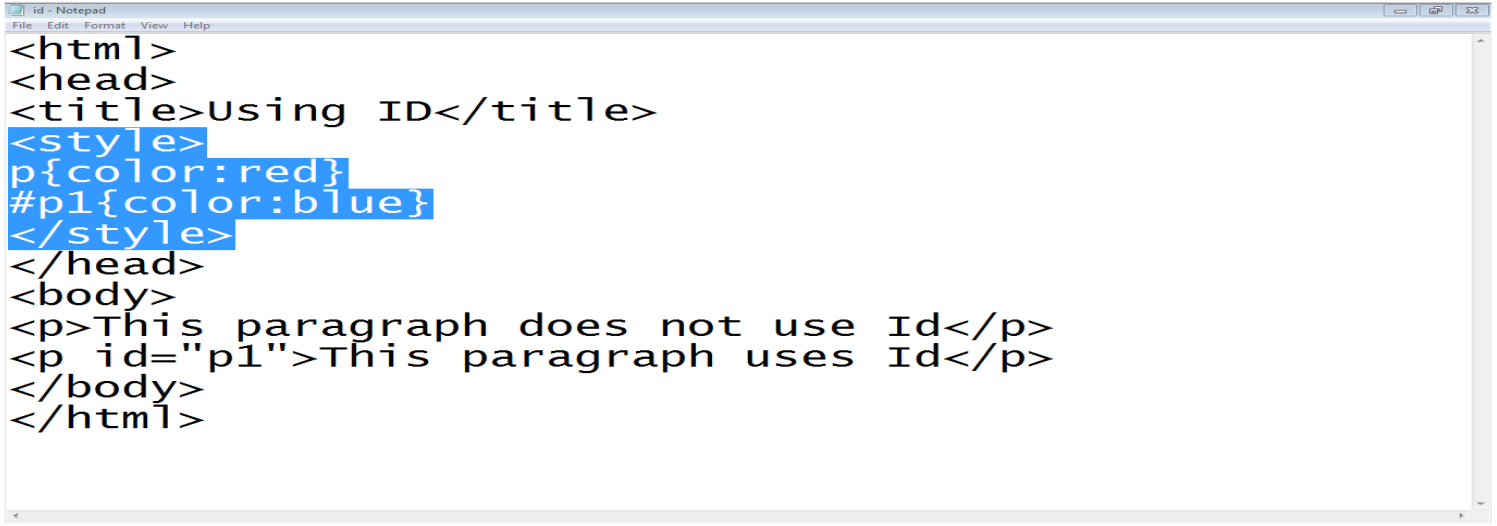
- A rule consists of
  - A selector: element or elements the declaration applies to
  - Declaration: how the elements referred to in the selector should be styled
    - property: which is the property of the selected element
    - value: which is a specification for this property

Using Id's:

- Use an id to distinguish something, like a paragraph, from the others in a document
- The id selector is used to specify a style for a single, unique element
- Create a style Id:
  - #id_name {style attributes and values}
- Use a style Id:
  - <tag ID=id_name>

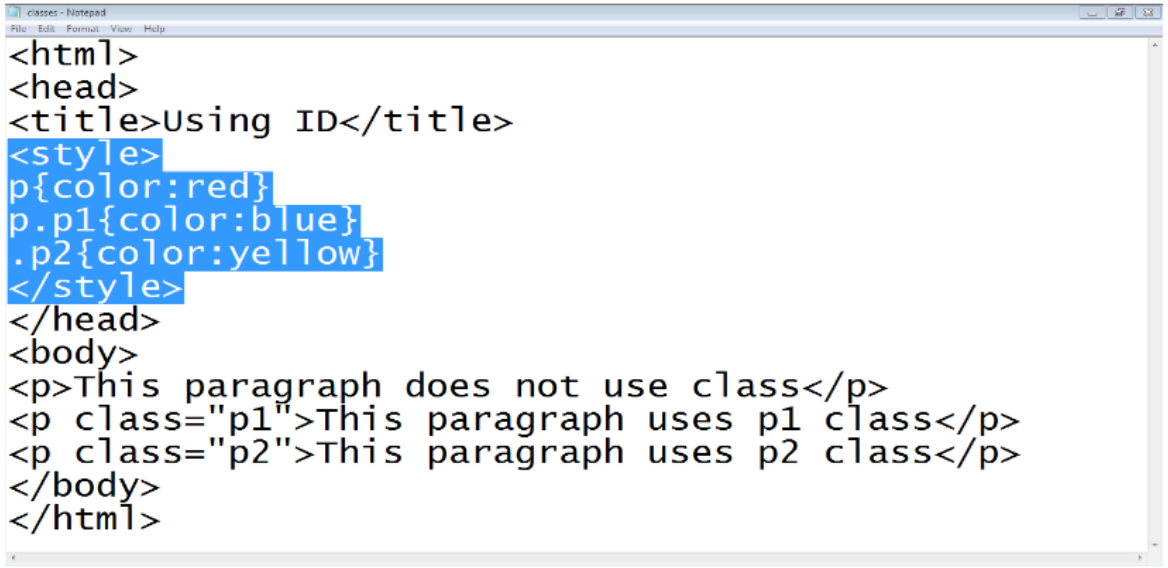
Understand how to declare a style:

Note: HTML requires each id be unique– therefore an id value can only be used once in a document.



Using Classes:

- To create a class
  - tag.class_name {style attributes}
    or
  - .class_name {style attributes}
- To apply a style
  - <tag CLASS=class_name>
    - <h1
      CLASS=FirstHeader>IU</h1>



Difference between classes and Id’s:

- You can’t have more than one tag with the same ID value
- You can apply the same Class value to multiple document tags
  - Classes or Id?
    - use ID's for any elements that are simply used once on a page

OR

    - only use classes to style websites, but, when you have to use an element in JavaScript, use an identifier

  - You can apply a style to many selectors if you like

```
h1, h2, h3 {
color: #36C;
font-weight: normal;
letter-spacing: .4em;
margin-bottom: 1em;
text-transform: lowercase;
}
```

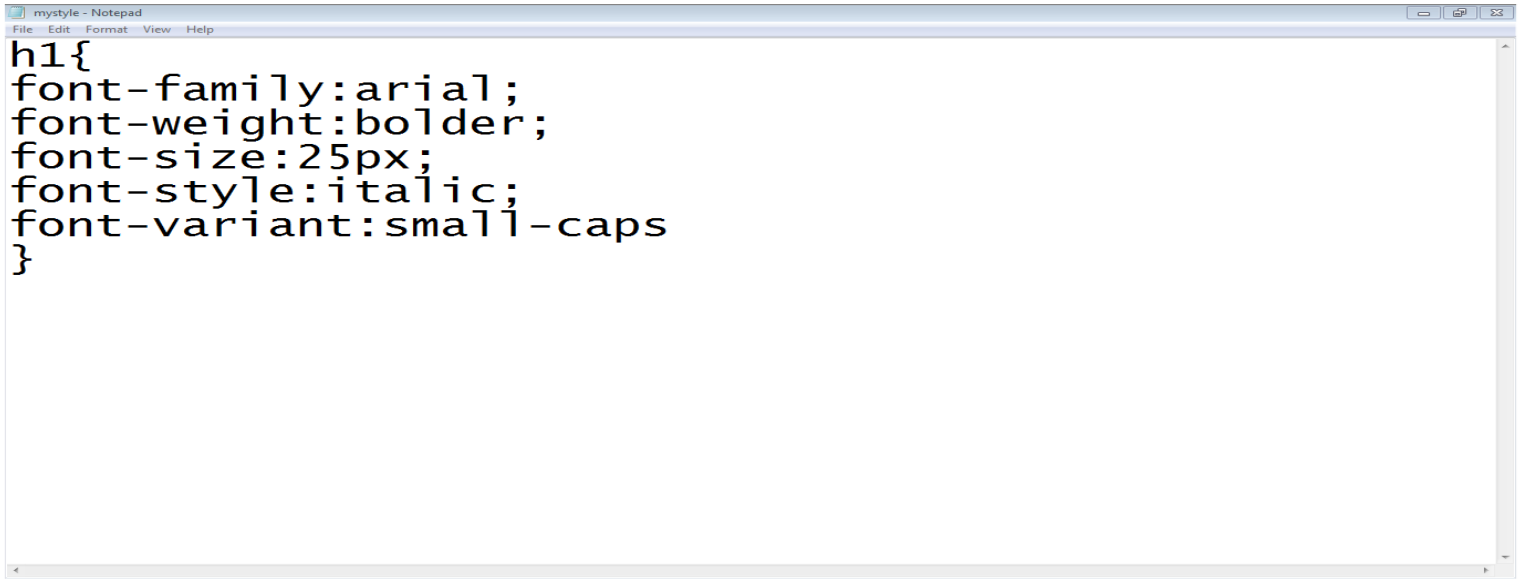
CSS properties:

Font properties:

***Font properties*:** Common font properties: font-family: • Specifies the typeface or family of font that should be used. Common values: • Arial, Courier/Courier New, Georgia, Times/Times New Roman and Verdana Example: H1{font-family:arial}	***Font-size:*** Specifies the size of a font Common values: In pixels (12px,20px etc.) Absolut size (small, medium, lage, x-large etc.) Example: H1{font-size:20px}	***Font-weight:*** Specifies whether the font should be bold or normal. Common values: Normal, bold, bolder, lighter Example: H1{font-weight:bold}	***Font-style:*** Specifies whether the font should be normal, italic or oblique. Common values: Normal, italic, oblique Example: H1{font-style:italic}
Font-variant: Specifies whether the font should be normal or small-caps (smaller version of upper case) Common values: Normal, small-caps Example: H1{font-variant:small-caps}			

CSS properties:

Font properties:



CSS properties:

TEXT properties:

Color:	***Text-align:***	***Vertical-align:***	***Text-decoration:***
• Specifies the color of the text. • P{color : green}	• horizontal alignment of the text • Left, right, center or justify	• Vertical alignment of the text. • Sub, super, top, middle, bottom	• Specifies the whether the text should be underline, overline, line-through or blinking
Text-transform:	***Letter-spacing:***	***Word-spacing:***	
• Text should be lowercase, uppercase or capitalized	• Specifies the space between letters. H1{letter-spacing:3px}	• Specifies the space between words H1{word-spacing:4px}	

CSS properties:

Styling links:

Color:	***Background-color:***	***Text-decoration:***
Changes the color of the links	Highlights the link, as if it had been highlighted with a highlighter pen.	Underline, strike through, over-line, blink

CSS properties:

Styling Background:

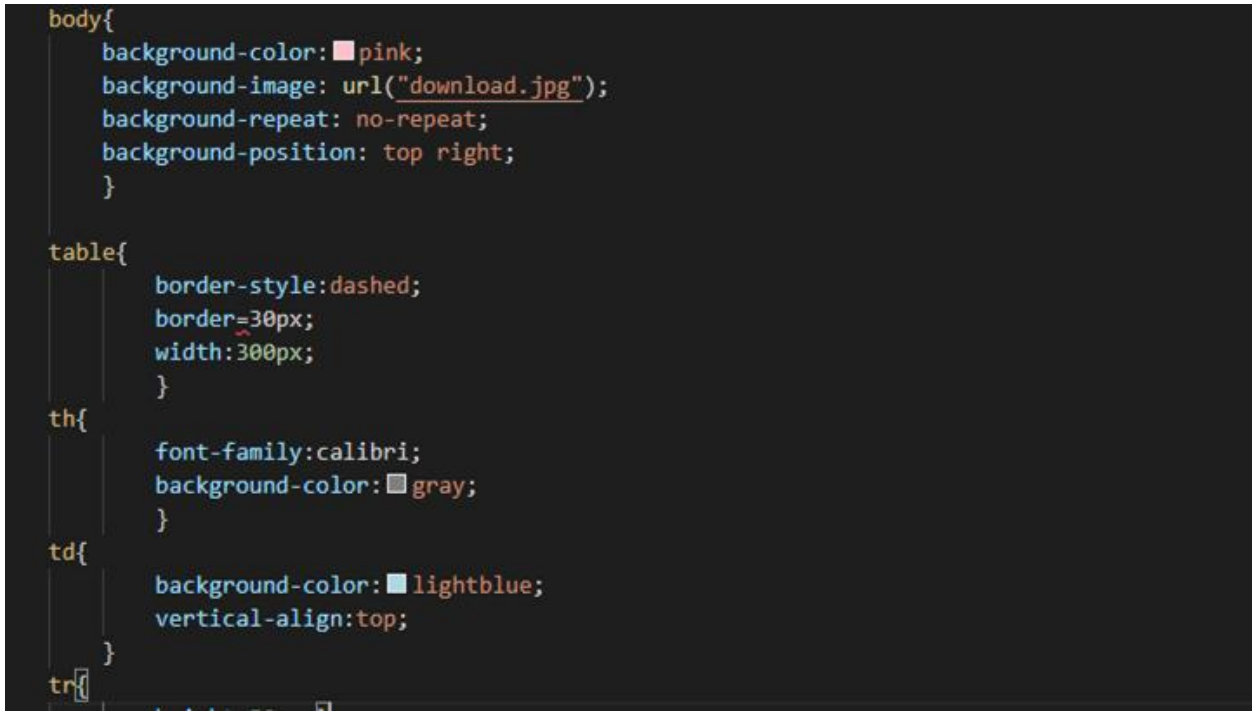
1. *background-color:*
   - Specifies the background color
2. *background-image:*
   - Specifies the background image
3. *background-repeat:*
   - Specifies whether the image should repeat or not
4. *background-position:*
   - Where an image should be positioned.

```
body{
    background-color: pink;
    background-image: url("download.jpg");
    background-repeat: no-repeat;
    background-position: top right;
    }
```

CSS properties:

Styling tables:

1. *text and font*
2. *vertical – align*
3. *width*
4. *height*
5. *background - color*
6. *background – image*
7. *border:*
   a. *border-style (solid, dashed, doted, double etc.)*
   b. *border-color*
   c. *border-bottom (solid, dashed, doted, double etc.)*
8. *padding*
   a. *Padding-left*
   b. *Padding-right*
   c. *Padding-top*
   d. *padding-bottom*



```
body{
    background-color: pink;
    background-image: url("download.jpg");
    background-repeat: no-repeat;
    background-position: top right;
    }

table{
        border-style:dashed;
        border=30px;
        width:300px;
        }
th{
        font-family:calibri;
        background-color: gray;
        }
td{
        background-color: lightblue;
        vertical-align:top;
    }
tr{
```

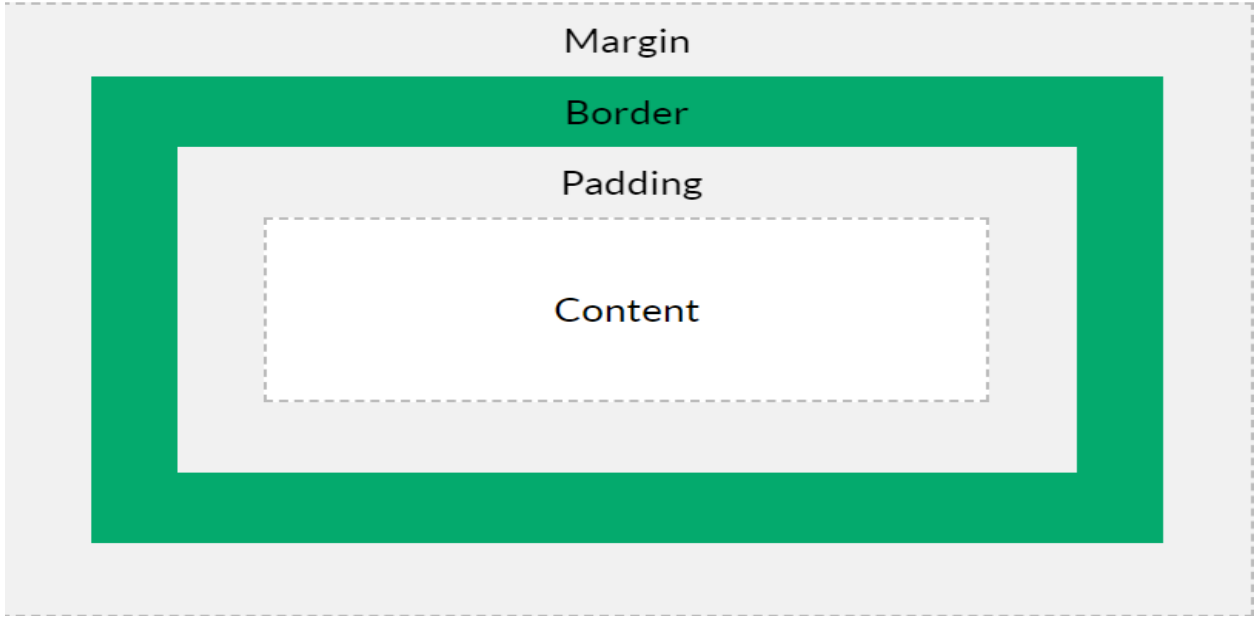
CSS properties:

What is the box model?

Every element on a page is a rectangular box and may have width, height, padding, borders, and margins.

The box model allows us to add a border around elements, and to define space between elements.

- **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



CSS properties:

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```
<!DOCTYPE html>
<html>
    <head>
        <style>
            div {
            width: 320px;
            padding: 10px;
            border: 5px solid gray;
            margin: 0;
            }
        </style>
    </head>
    <body>

        <h2>Hello everyone</h2>

        <img src="download.jpg" width="350" height="263" alt=" no image found">
        <div>The picture above is 350px wide. The total width of this element is also 350px.</div>

    </body>
</html>
```

Questions ?