ECAP472

Web Technologies

Dr. Pritpal Singh

Associate Professor

Learning Outcomes

After this lecture, you will be able to

- Concept of Cascading Style Sheets.
- Syntax of Cascading Style Sheets

Cascading Style Sheet

- CSS is used to control the style of a web document in a simple and easy way.
- CSS is the acronym for "Cascading Style Sheet".

Cascading Style Sheet

- CSS is used to control the style of a web document in a simple and easy way.
- CSS is the acronym for "Cascading Style Sheet".

Cascading Style Sheet

- Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.
- CSS is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain

Cascading Style Sheet

- Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.
- CSS is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain

Why to Learn CSS?

- **Create Stunning Web site** - CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs,variations in display for different devices and screen sizes as well as a variety of other effects.
- **Become a web designer** - If you want to start a carrer as a professional web designer, HTML and CSS designing is a must skill.

Why to Learn CSS?

- **Create Stunning Web site** - CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs,variations in display for different devices and screen sizes as well as a variety of other effects.
- **Become a web designer** - If you want to start a carrer as a professional web designer, HTML and CSS designing is a must skill.

Why to Learn CSS?

- **Control web** - CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.
- **Learn other languages** - Once you understands the basic of HTML and CSS then other related technologies like javascript, php, or angular are become easier to understand.

Why to Learn CSS?

- **Control web** - CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.
- **Learn other languages** - Once you understands the basic of HTML and CSS then other related technologies like javascript, php, or angular are become easier to understand.

Applications of CSS

- CSS saves time - You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.
- Pages load faster - If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So less code means faster download times.

Applications of CSS

- CSS saves time - You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.
- Pages load faster - If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So less code means faster download times.

Applications of CSS

- Easy maintenance - To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.
- Superior styles to HTML - CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.

Applications of CSS

- Easy maintenance - To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.
- Superior styles to HTML - CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.

Applications of CSS

- Multiple Device Compatibility - Style sheets allow content to be optimized for more than one type of device. By using the same HTML document, different versions of a website can be presented for handheld devices such as PDAs and cell phones or for printing.

Applications of CSS

- Global web standards - Now HTML attributes are being deprecated and it is being recommended to use CSS. So its a good idea to start using CSS in all the HTML pages to make them compatible to future browsers.

CSS - Syntax

- A CSS comprises of style rules that are interpreted by the browser and then applied to the corresponding elements in your document. A style rule is made of three parts

CSS - Syntax

Selector − A selector is an HTML tag at which a style will be applied. This could be any tag like <h1> or <table> etc.

Property − A property is a type of attribute of HTML tag. Put simply, all the HTML attributes are converted into CSS properties. They could be color, border etc.

Value − Values are assigned to properties. For example, color property can have value either red or #F1F1F1 etc.

CSS - Syntax

Selector − A selector is an HTML tag at which a style will be applied. This could be any tag like <h1> or <table> etc.

Property − A property is a type of attribute of HTML tag. Put simply, all the HTML attributes are converted into CSS properties. They could be color, border etc.

Value − Values are assigned to properties. For example, color property can have value either red or #F1F1F1 etc.

CSS - Syntax

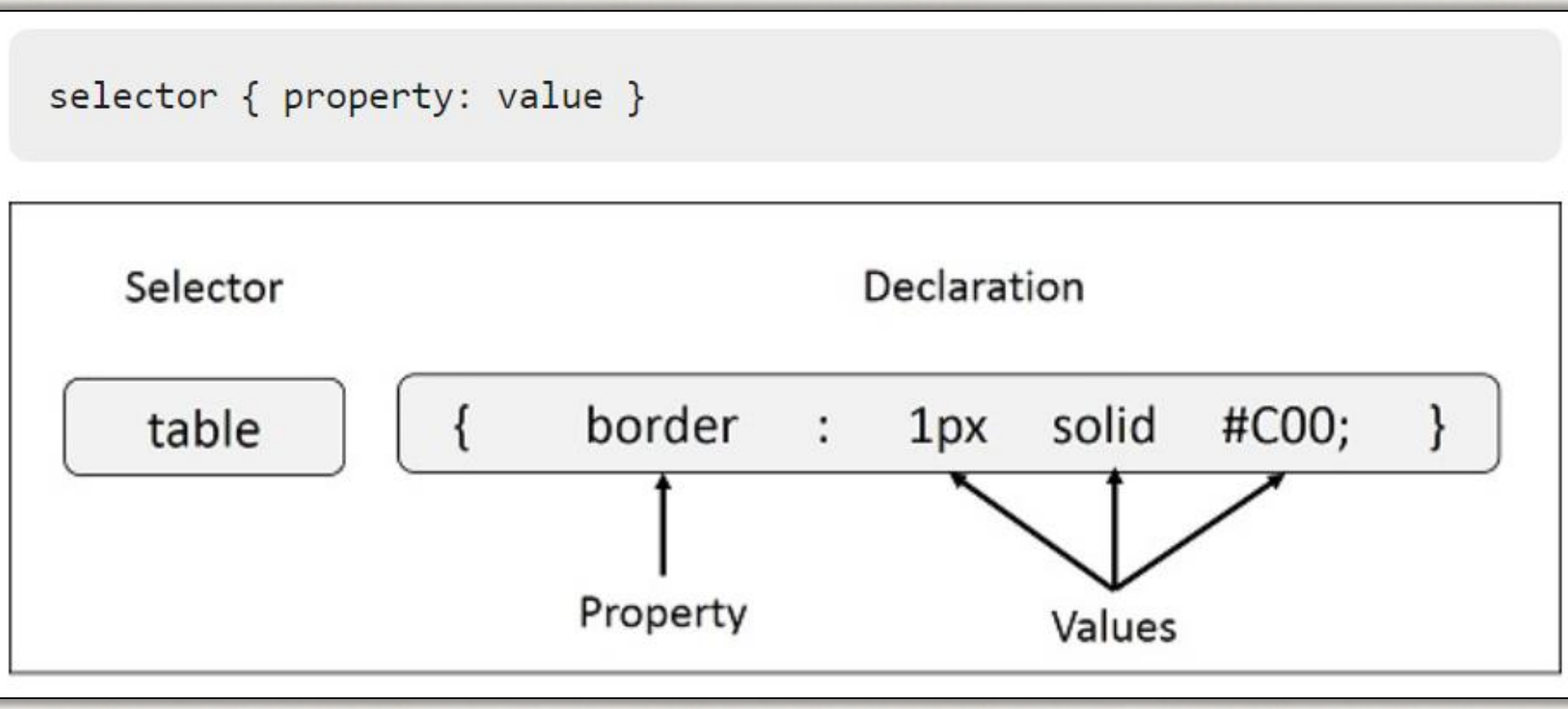
Selector − A selector is an HTML tag at which a style will be applied. This could be any tag like <h1> or <table> etc.

Property − A property is a type of attribute of HTML tag. Put simply, all the HTML attributes are converted into CSS properties. They could be color, border etc.

Value − Values are assigned to properties. For example, color property can have value either red or #F1F1F1 etc.

CSS Style Rule Syntax

```
selector { property: value }
```



Example

- − You can define a table border as follows −
- table{ border :1px solid #C00; }
- Here table is a selector and border is a property and given value 1px solid #C00 is the value of that property.

Define selectors in various simple ways

The Type Selectors

```
h1 {
   color: #36CFFF;
}
```

The Universal Selectors

Rather than selecting elements of a specific type, the universal selector quite simply matches the name of any element type −

```
* {
   color: #000000;
}
```

This rule renders the content of every element in our document in black.

Define selectors in various simple ways

The Descendant Selectors

Suppose you want to apply a style rule to a particular element only when it lies inside a particular element. As given in the following example, style rule will apply to element only when it lies inside <ul> tag.

```
ul em {
   color: #000000;
}
```

The Class Selectors

You can define style rules based on the class attribute of the elements. All the elements having that class will be formatted according to the defined rule.

```
.black {
   color: #000000;
}
```

This rule renders the content in black for every element with class attribute set to black in our document.

Example

You can make it a bit more particular. For example −

```
h1.black {
   color: #000000;
}
```

Example

This rule renders the content in black for only <h1> elements with class attribute set to black.

You an apply more than one class selectors to given element. Consider the following example −

This para will be styled by the classes center and bold.

CSS - Inclusion

- There are four ways to associate styles with your HTML document.
- Most commonly used methods are
  - Inline CSS and
  - External CSS.

CSS - Inclusion

- There are four ways to associate styles with your HTML document.
- Most commonly used methods are
  - Inline CSS and
  - External CSS.

Embedded CSS - The <style> Element

- You can put your CSS rules into an HTML document using the <style> element. This tag is placed inside the <head>...</head> tags. Rules defined using this syntax will be applied to all the elements available in the document.

Embedded CSS - The <style> Element

```
<!DOCTYPE html>
<html> <head>
    <style type = "text/css" media = "all">
      body {
        background-color: linen;
      }
      h1 { color: maroon;
        margin-left: 40px;  }
    </style>
  </head>
  <body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
  </body>
</html>
```

Attributes

- Attributes associated with <style> elements are −

Attribute	Value	Description
type	text/css	Specifies the style sheet language as a content-type (MIME type). This is required attribute.
media	screen tty tv projection handheld print braille aural all	Specifies the device the document will be displayed on. Default value is *all*. This is

Inline CSS - The style Attribute

- You can use style attribute of any HTML element to define style rules. These rules will be applied to that element only. Here is the generic syntax −
- <element style = "...style rules...."">

Attribute	Value	Description
style	style rules	The value of *style* attribute is a combination of style declarations separated by semicolon (;).

Example

```
<html>
    <head>
    </head>

    <body>
        <h1 style = "color:#36C;">
            This is inline CSS
        </h1>
    </body>
</html>
```

External CSS - The <link> Element

- The <link> element can be used to include an external stylesheet file in your HTML document.
- An external style sheet is a separate text file with .css extension. You define all the Style rules within this text file and then you can include this file in any HTML document using <link> element.

External CSS - The <link> Element

- The <link> element can be used to include an external stylesheet file in your HTML document.
- An external style sheet is a separate text file with .css extension. You define all the Style rules within this text file and then you can include this file in any HTML document using <link> element.

External CSS - The <link> Element

- Here is the generic syntax of including external CSS file −
- <head>
- <link type = "text/css" href = "..." media = "..." />
- </head>

Attributes

Attribute	Value	Description
type	text css	Specifies the style sheet language as a content-type (MIME type). This attribute is required.
href	URL	Specifies the style sheet file having Style rules. This attribute is a required.
media	screen tty tv projection handheld print braille aural all	Specifies the device the document will be displayed on. Default value is *all*. This is optional attribute

Example

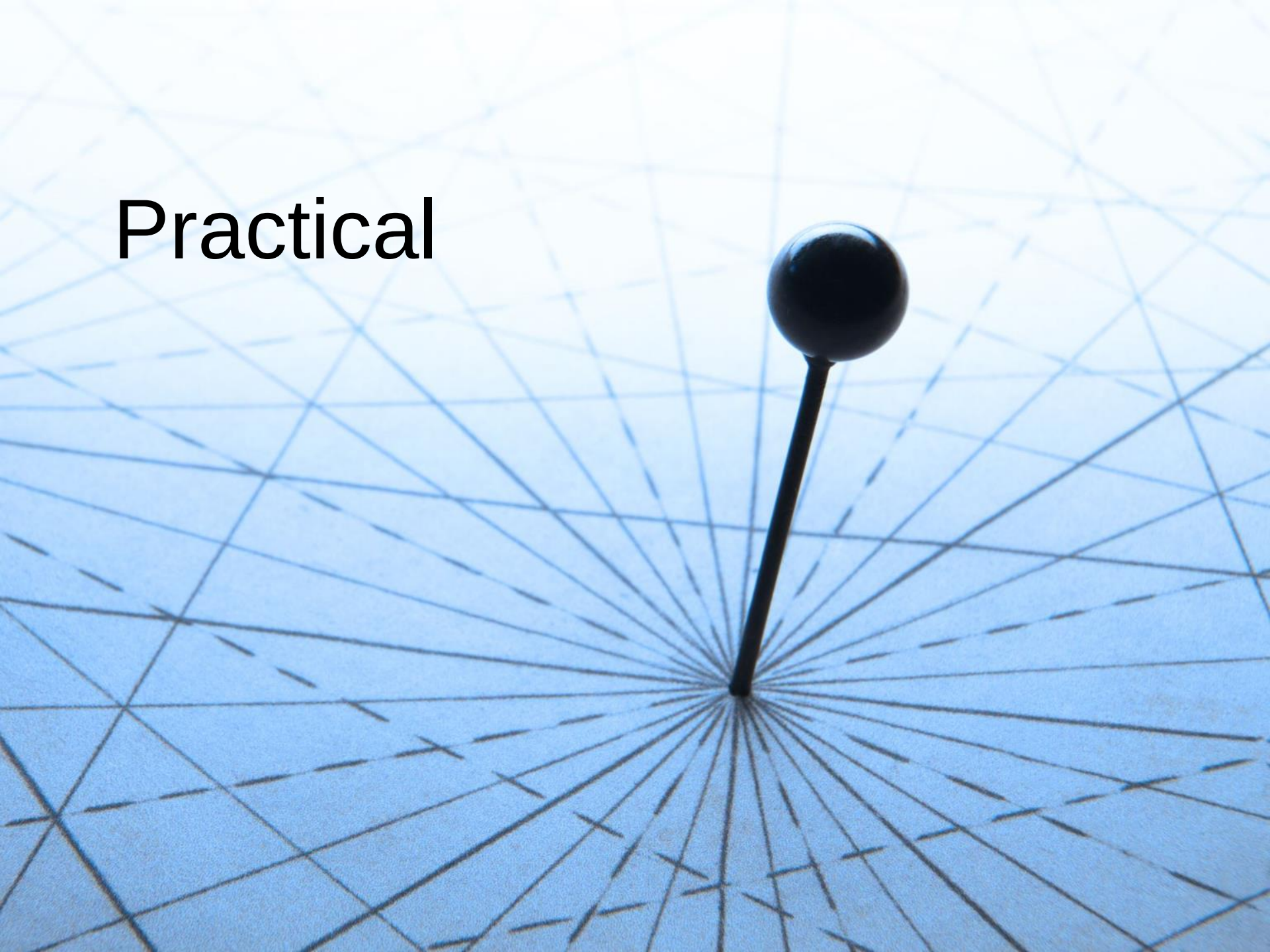
- Consider a simple style sheet file with a name mystyle.css having the following rules −
- h1, h2, h3 {
- color: #36C;
- font-weight: normal;
- letter-spacing: .4em;
- margin-bottom: 1em;
- text-transform: lowercase;
- }
- Now you can include this file mystyle.css in any HTML document as follows −

- <head>
- <link type = "text/css" href = "mystyle.css" media = " all" />
- </head>

Imported CSS - @import Rule

- @import is used to import an external stylesheet in a manner similar to the <link> element. Here is the generic syntax of @import rule.
- <head>
- @import "URL";
- </head>
- Here URL is the URL of the style sheet file having style rules. You can use another syntax as well −
  - <head>
  - @import url("URL");
  - </head>

Practical



That’s all for now…