UNIT -3 Cascading Style Sheet

Introduction

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- External
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Introduction

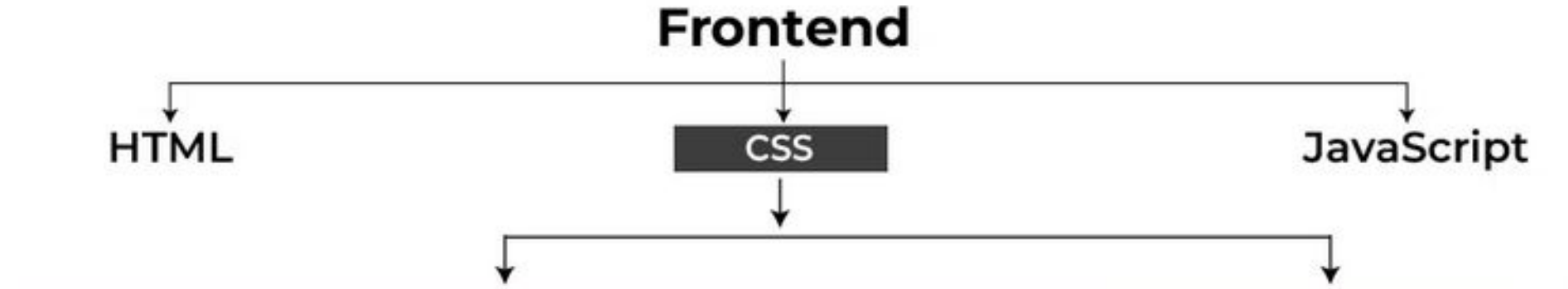
- CSS (Cascading Style Sheets) is used to styles web pages. Cascading Style Sheets are fondly referred to as CSS.
- The reason for using this is to simplify the process of making web pages presentable. It allows you to apply styles on web pages.
- More importantly, it enables you to do this independently of the HTML that makes up each web page.

Introduction

- Cascading Style Sheets, fondly referred to as CSS, is a simply designed language intended to simplify the process of making web pages presentable.
- CSS allows you to apply styles to web pages. More importantly, CSS enables you to do this independently of the HTML that makes up each web page.
- It describes how a webpage should look: it prescribes colours, fonts, spacing, and much more.

Introduction

- In short, you can make your website look however you want. CSS lets developers and designers define how it behaves, including how elements are positioned in the browser.
- While HTML uses tags, CSS uses rulesets. CSS is easy to learn and understand, but it provides powerful control over the presentation of an HTML document.



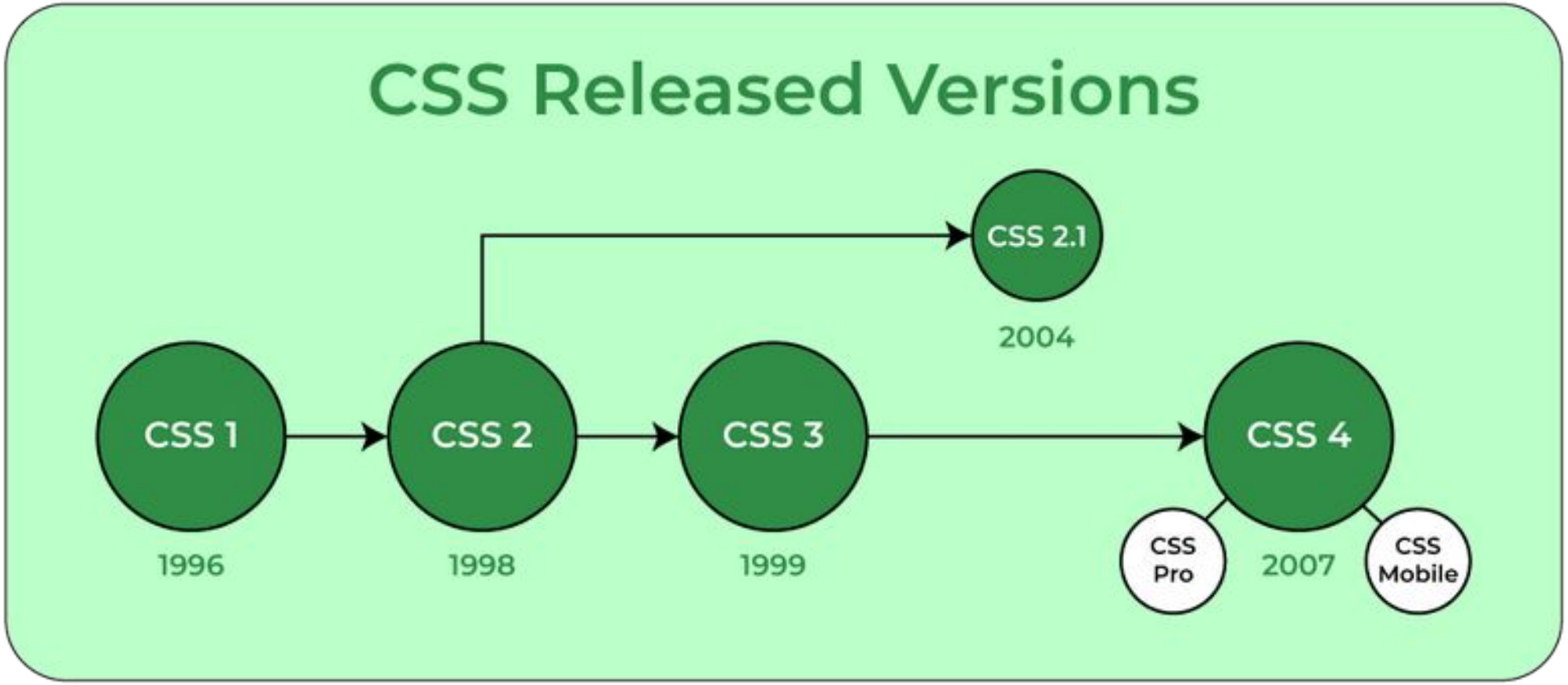
CSS Frameworks		
Bootstrap	Tailwind CSS	Bulma
Foundation	Primer CSS	Spectre CSS
Materialize CSS	Onsen UI	Semantic UI
Blaze UI	Pure CSS	Tachyons

CSS Preprocessors

Understanding the concepts of CSS

- Styling is an essential property for any website.
- It increases the standards and overall look of the website that makes it easier for the user to interact with it.
- A website can be made without CSS, as styling is MUST since no user would want to interact with a dull and shabby website.
- So for knowing Web Development, learning CSS is mandatory.

CSS versions release years:



Advantages of CSS

- CSS plays an important role, by using CSS you simply got to specify a repeated style for element once & use it multiple times as because CSS will automatically apply the required styles.
- The main advantage of CSS is that style is applied consistently across variety of sites. One instruction can control several areas which is advantageous.
- Web designers needs to use few lines of programming for every page improving site speed.

Advantages of CSS

- Cascading sheet not only simplifies website development, but also simplifies the maintenance as a change of one line of code affects the whole web site and maintenance time.
- It is less complex therefore the effort are significantly reduced.
- It helps to form spontaneous and consistent changes.
- CSS changes are device friendly. With people employing a batch of various range of smart devices to access websites over the web, there’s a requirement for responsive web design.

Advantages of CSS

- It has the power for re-positioning. It helps us to determine the changes within the position of web elements who are there on the page.
- These bandwidth savings are substantial figures of insignificant tags that are indistinct from a mess of pages.
- Easy for the user to customize the online page
- It reduces the file transfer size.

Disadvantages of CSS

- CSS, CSS 1 up to CSS3, result in creating of confusion among web browsers.
- With CSS, what works with one browser might not always work with another. The web developers need to test for compatibility, running the program across multiple browsers.
- There exists a scarcity of security.
- After making the changes we need to confirm the compatibility if they appear. The similar change affects on all the browsers.

Disadvantages of CSS

- The programming language world is complicated for non-developers and beginners. Different levels of CSS i.e. CSS, CSS 2, CSS 3 are often quite confusing.
- Browser compatibility (some styles sheet are supported and some are not).
- CSS works differently on different browsers. IE and Opera supports CSS as different logic.
- There might be cross-browser issues while using CSS.
- There are multiple levels which creates confusion for non-developers and beginners.

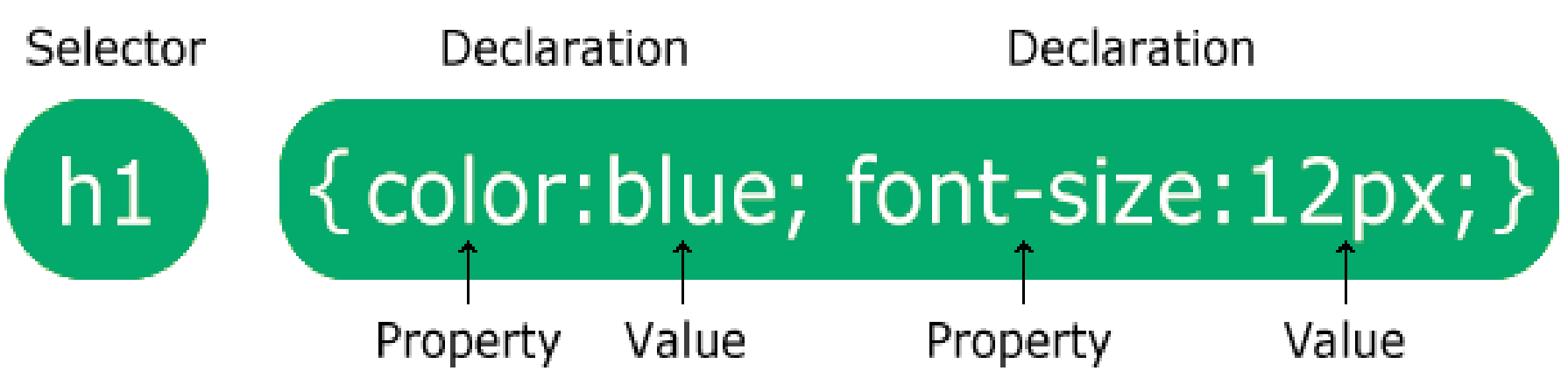
CSS Syntax

- A cascade style rule set consists of a selector and declaration block.
- **Selector:** A selector in CSS is used to target and select specific HTML elements to apply styles to.
- **Declaration:** A declaration in CSS is a combination of a property and its corresponding value.

Selector { Property : Vlaue; }

```
selector {
    property1: value1;
    property2: value2;
}
```

- CSS declaration always ends with a semicolon, and declaration blocks are surrounded by curly braces.
- The selector points to the HTML element you want to style.
- The declaration block contains one or more declarations separated by semicolons.
- Each declaration includes a CSS property name and a value, separated by a colon.



- Here is a more specific example:

  In the above example all h1 elements will be with a blue in color and size would be 12px.

Without CSS

```
<html>
<head>
<title>Example</title>
</head>
<body>
<h1>HTML Page</h1>
<p>This is a basic web page.</p>
</body></html>
```

Without CSS output

With CSS

```
<!DOCTYPE html>
<html><head>
<title>Example</title>
<style>
h1 {
color: olivedrab;
border-bottom: 1px dotted darkgreen;
}
p {
font-family: sans-serif;
color: orange;
}
</style></head>
<body> <h1>My first Page</h1>
<p>This is a basic web page.</p>
</body></html>
```

With CSS output

Working with Class and Id in CSS

The “#” CSS id selector is used to set the style of the given id. The id attribute is the unique identifier in an HTML document. The id selector is used with a # character.

- Syntax:

```
#id {
    // CSS property
}
```

```
<!DOCTYPE html>
<html><head><title>#id selector</title>
	<!-- CSS property using id attribute -->
<style>
	#glsu1 {
		color: green;
		text-align: center;
	}
	#glsu2 {
		text-align: center;
	}
</style></head>
<body><!-- id attribute declare here -->
	<h1 id="glsu1">GLS University</h1>
	<h2 id="glsu2">#id selector example</h2>
</body>
</html>
```

CSS Class Selector

- The .class selector is used to select all elements which belong to a particular class attribute. In order to select the elements with a particular class, use the period (.) character specifying the class name ie., it will match the HTML element based on the contents of their class attribute. The class name is mostly used to set the CSS property to a given class.

  Syntax:

  ```
  .class {
      // CSS property
  }
  ```

```
<!DOCTYPE html>
<html>
<head><style>
        .glsu { color: green;}
        .fcait{ background-color: yellow; font-style: italic; color:
green;}
</style></head>
<body style="text-align:center">
    <h1 class="glsu">GLS University - FCAIT</h1>
    <h2>.class Selector</h2>
    <div class="fcait">  <p>A computer science course</p>   </div>
</body>
</html>
```

Types of CSS

There are three types of CSS which are given below:

- Inline CSS
- Internal or Embedded CSS
- External CSS

Types of CSS

Inline CSS: Inline CSS contains the CSS property in the body section attached to the element is known as inline CSS. This kind of style is specified within an HTML tag using the style attribute.

Example: This example shows the application of inline-css.

```
<!DOCTYPE html>
<html> <head> <title>Inline CSS</title> </head>
<body> <p style="color:#009900; font-size:50px; font-style:italic; text-align:center;">
Welcome to GLS
</p>
</body>
</html>
```

Types of CSS

- **Internal or Embedded CSS:** This can be used when a single HTML document must be styled uniquely. The CSS rule set should be within the HTML file in the head section i.e. the CSS is embedded within the <style> tag inside the head section of the HTML file.
- **Example:** This example shows the application of internal-css.

```
<!DOCTYPE html>
<html><head>  <title>Internal
CSS</title><style> .main {
                text-align: center;
          }.GFG {
                color: #009900;
                font-size: 50px;
                font-weight: bold;
          }</style> </head>
<body>
     <div class="main">
          <div class="GFG">GLS
University</div>
     </div>
</body>
</html>
```

Types of CSS

External CSS: External CSS contains separate CSS files that contain only style properties with the help of tag attributes (For example class, id, heading, … etc).

- CSS property is written in a separate file with a .css extension and should be linked to the HTML document using a link tag. It means that, for each element, style can be set only once and will be applied across web pages.**Example:** The file given below contains CSS property. This file saves with .css extension. For Ex: Home.css

```
body {
    background-color:powderblue;
}
.main {
    text-align:center;
}
.GFG {
    color:#009900;
    font-size:50px;
    font-weight:bold;
}
#taste {
    font-style:bold;
    font-size:20px;
}
```

Below is the HTML file that is making use of the created external style sheet.

link is used to link the external style sheet with the html webpage.

Href attribute is used to specify the location of the external style sheet file.

```
<!DOCTYPE html> <html> <head> <link rel="stylesheet" href="geeks.css" /> </head>
<body> <div class="main"> <div class="GFG">
GLS University</div> <div id="taste">
We learn Coding
</div> </div>
</body>
</html>
```

Priority of CSS

- **Inline CSS** has the highest priority, then comes Internal/Embedded followed by External CSS which has the least priority. Multiple style sheets can be defined on one page. For an HTML tag, styles can be defined in multiple style types and follow the below order. As **Inline** has the highest priority, any styles that are defined in the internal and external style sheets are overridden by Inline styles.
- **Internal or Embedded** stands second in the priority list and overrides the styles in the external style sheet.
- **External style sheets** have the least priority. If there are no styles defined either in inline or internal style sheet then external style sheet rules are applied for the HTML tags.