**Module: 2(CSS and CSS3)**

**1)What are the benefits of using CSS?**

**Cascading Style Sheets (CSS):** CSS is defined as a method sheet language that provides web designers control over how an internet site communicates with web browsers including the formatting and display of their HTML documents.

**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.
* 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 is 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.
* 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.

**2) What are the disadvantages of CSS?**

**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 effects on all the browsers.
* 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 sheets 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

**3) What is the difference between CSS2 and CSS3?**

* CSS3 is split into many various documents known as Modules. each module adds new capability or extends options outlined in CSS2 over conserving backward compatibility. Work on CSS3 started around the time of publication of the initial CSS2 recommendation.
* The CSS3 version supports more browsers than CSS2.
* CSS3 introduces several new selectors. Those new selectors square measure largely in an exceeding type of pseudo-elements and pseudo-categories.
* The new addition of General relation Combinator will be wont to match relation parts of a given part through diacritic (~) combinator.
* CSS3 introduces several properties attended with new values and units. It facilitates styling of backgrounds, borders, boxes, etc…, that permits the USA to stay most of the styling at intervals the computer network and HTML standards and our document, while not a necessity for all those proprietary third-party package packages.
* New values and new units square measure introduced to support all those new properties. for example, Angle units deg, grad, rad, and switch or Time units s and ms.

**4) Name a few CSS style components.**

The components of CSS style are:  
1) Selector: HTML element name, id name, class name.  
2) Property: It's like an attribute such as background color, font-size, position, text-align, color, border etc.  
3) Values: which defines property or values allocate for properties.

**5) What do you understand by CSS opacity?**

The opacity property sets the opacity level for an element.

The opacity-level describes the transparency-level, where 1 is not transparent at all, 0.5 is 50% see-through, and 0 is completely transparent.

When using the opacity property to add transparency to the background of an element, all of its child elements become transparent as well. This can make the text inside a fully transparent element hard to read. If you do not want to apply opacity to child elements, use RGBA color values instead

**6) How can the background color of an element be changed?**

**The background-color property** sets the background color of an element. The background of an element is the total size of the element, including padding and border (but not the margin

**7) How can image repetition of the backup be controlled?**

To control the repetition of an image in the background, **use the background-repeat property**. You can use no-repeat value for the background-repeat property if you do not want to repeat an image, in this case, the image will display only once.

**8) What is the use of the background-position property?**

The background-position property sets the starting position of a background image.

By default, a [background-image](https://www.w3schools.com/cssreF/pr_background-image.php) is placed at the top-left corner of an element, and repeated both vertically and horizontally.

**9) Which property controls the image scroll in the background?**

background-attachment property

The **background-attachment** property sets whether a background image scrolls with the rest of the page, or is fixed.

**10) Why should background and color be used as separate properties?**

There are two reasons behind this:

1. It enhances the legibility of style sheets. The background property is a complex property in CSS, and if it is combined with color, the complexity will further increase.
2. Color is an inherited property while the background is not. So, this can make confusion further.

**11) How to centre block elements using CSS1?**

There are two ways of centering block level elements:  
  
1. By setting the properties margin-left and margin-right to auto and width to some explicit value:  
  
BODY {width: 30em; background: cyan;}  
P {width: 22em; margin-left: auto; margin-right: auto}  
  
In this case, the left and right margins will each be four ems wide, since they equally split up the eight ems left over from (30em - 22em). Note that it was not necessary to set an explicit width for the BODY element; it was done here to keep the math clean.  
  
Another example:  
  
TABLE {margin-left: auto; margin-right: auto; width: 400px;}  
In most legacy browsers, a table's width is by default determined by its content. In CSS-conformant browsers, the complete width of any element (including tables) defaults to the full width of its parent element's content area. As browser become more conformant, authors will need to be aware of the potential impact on their designs.

**13) What are the ways to integrate CSS as a web page?**

CSS can be added to HTML documents in 3 ways:

* **Inline** - by using the style attribute inside HTML elements
* **Internal** - by using a <style> element in the <head> section
* **External** - by using a <link> element to link to an external CSS file

The most common way to add CSS, is to keep the styles in external CSS files. However, in this tutorial we will use inline and internal styles, because this is easier to demonstrate, and easier for you to try it yourself.

## Inline CSS

An inline CSS is used to apply a unique style to a single HTML element.

An inline CSS uses the style attribute of an HTML element.

## Internal CSS

An internal CSS is used to define a style for a single HTML page.

An internal CSS is defined in the <head> section of an HTML page, within a <style> element.

## External CSS

An external style sheet is used to define the style for many HTML pages.

To use an external style sheet, add a link to it in the <head> section of each HTML page

**14) What is embedded style sheets?**

**Embedded Stylesheet:**It allows you to define styles for a particular HTML document as a whole in one place. This is done by embedding the **<style></style>** tags containing the CSS properties in the head of your document. Embedded style sheets are particularly useful for HTML documents that have unique style requirements from the rest of the documents in your project. However, if the styles need to be applied across multiple documents, you should link to an external style sheet instead of using individual embedded style sheets. Using embedded stylesheets holds a distinct advantage over inline styles which only allow you to address one HTML element at a time.

**Syntax:**The CSS syntax for embedded style sheets is exactly the same as other CSS code, apart from the fact that it is now wrapped within the <style></style> tags. The <style> tag takes the ‘type’ attribute that defines the type of style sheet being used (i.e., text/CSS)

**15) What are the external style sheets?**

To apply a rule to multiple pages, an external style sheet is used. An external style sheet is a separate CSS file that can be accessed by creating a link within the head section of the webpage. Multiple webpages can use the same link to access the stylesheet.

The link to an external style sheet is placed within the head section of the page.

<head><link rel="stylesheet" type="text/CSS" href="mystyle.css"></head>

The actual style sheet file will contain CSS rules that are then applied across the entire page.

External style sheets have the following advantages over internal and inline styles:

* one change to the style sheet will change all linked pages
* you can create classes of styles that can then be used on many different HTML elements
* consistent look and feel across multiple web pages
* improved load times because the CSS file is downloaded once and applied to each relevant page as needed

**16) What are the advantages and disadvantages of using external style sheets?**

The greatest points of interest in external style sheets are that they can be connected to different records while being overseen from a single style sheet. This keeps code DRY and improves productivity and comfort. The weaknesses are that it might decrease the loading time in some situations.

**Advantages**

1) The style of a few documents can be controlled from the site by utilizing them.  
2) Multiple HTML elements can have numerous documents, where classes can be made.  
3) To assemble styles in complex circumstances, selector and grouping strategies are utilized.

**Disadvantages**

1) The additional download is expected to import documents having style information.  
2) To render the documents, the outer template ought to be stacked.  
3) Not practical for small style definitions.

**17) What is the meaning of the CSS selector?**

CSS selectors are used to "find" (or select) the HTML elements you want to style.

We can divide CSS selectors into five categories:

* Simple selectors (select elements based on name, id, class)
* [Combinator selectors](https://www.w3schools.com/css/css_combinators.asp) (select elements based on a specific relationship between them)
* [Pseudo-class selectors](https://www.w3schools.com/css/css_pseudo_classes.asp) (select elements based on a certain state)
* [Pseudo-elements selectors](https://www.w3schools.com/css/css_pseudo_elements.asp) (select and style a part of an element)
* [Attribute selectors](https://www.w3schools.com/css/css_attribute_selectors.asp) (select elements based on an attribute or attribute value)

**18) What are the media types allowed by CSS?**

One of the most important features of style sheets is that, you can specify separate style sheets for different media types. This is one of the best ways to build printer friendly Web pages — Just assign a different style sheet for the "print" media type.

Some CSS properties are only designed for certain media. For example, the [page-break-after](https://www.tutorialrepublic.com/css-reference/css-page-break-after-property.php) property only applies to paged media. However, there are several properties that may be shared by different media types, but may require different values for that property. The [font-size](https://www.tutorialrepublic.com/css-reference/css-font-size-property.php) property for example can be used for both screen and print media, but possibly with different values.

A document usually needs a larger font on a computer screen as compared to the paper for better readability, also sans-serif fonts are considered easier to read on the screen, while serif fonts are popular for printing. Therefore, it is necessary to specify that a style sheet, or a set of style rules, applies to certain media types.

**19)What is the rule set?**

If style sheets could only apply a declaration to each element of a Web page, they would be pretty useless. The real goal is to apply different declarations to different parts of the document.

CSS allows this by associating conditions with declarations blocks. Each (valid) declaration block is preceded by one or more comma-separated [**selectors**](https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_Selectors), which are conditions selecting some elements of the page. A [selector group](https://developer.mozilla.org/en-US/docs/Web/CSS/Selector_list) and an associated declarations block, together, are called a **ruleset**, or often a **rule**.