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

**Ans**.

* 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 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.
* 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.

1. **What are the disadvantages of CSS?**

**Ans.**

* 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.
* 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.

1. **What is the difference between CSS2 and CSS3?**

**Ans.**

* **Difference between CSS and CSS3:**

|  |  |  |
| --- | --- | --- |
| S.No. | CSS | CSS3 |
| 1 | CSS is capable of positioning texts and objects. | On the other hand, CSS3 is capable of making the web page more attractive and takes less time to create. CSS3 is backward compatible with CSS. |
| 2 | Responsive designing is not supported in CSS | CSS3 is the latest version, hence it supports responsive design. |
| 3 | CSS cannot be split into modules. | Whereas CSS3 can be breakdown into modules. |
| 4 | Using CSS, we cannot build 3D animation and transformation. | But in CSS3 we can perform all kinds of animation and transformations as it supports animation and 3D transformations. |
| 5 | CSS is very slow as compared to CSS3 | Whereas CSS3 is faster than CSS. |
| 6 | In CSS we have set of standard colors and it uses basic color schemes only. | Whereas CSS3 has a good collection of HSL RGBA, HSLA, and gradient colors. |
| 7 | In CSS we can only use single text blocks. | But in CSS3 we can use multi-column text blocks |
| 8 | CSS does not support media queries. | But CSS3 supports media queries |
| 9 | CSS codes are not supported by all types of modern browsers. | Being the latest version, CSS3 codes are supported by all modern browsers. |
| 10 | In CSS, designers have to manually develop rounded gradients and corners. | But CSS3 provides advanced codes for setting rounded gradients and corners |
| 11 | There is no special effect like shadowing text, text animation, etc. in CSS. The animation was coded in jQuery and JavaScript. | CSS3 has many advance features like text shadows, visual effects, and a wide range of font styles and colors. |
| 12 | In CSS, the user can add background colors to list items and lists, set images for the list items, etc. | Whereas CSS3 list has a special *display* property defined in it. Even list items also have counter reset properties. |
| 13 | CSS was developed in 1996. | CSS3 is the latest version of CSS and was released in 2005. |
| 14 | CSS is memory intensive. | CSS3 memory consumption is low as compared to CSS. |

1. **Name a few CSS style components.**

**Ans.**

* 1. `color`: Sets the color of the text content.
* 2. `font-size`: Specifies the size of the font.
* 3. `background-color`: Sets the background color of an element.
* 4. `padding`: Specifies the space between the content and the border of an element.
* 5. `margin`: Defines the space outside an element's border.
* 6. `border`: Sets the style, width, and color of an element's border.
* 7. `width`: Defines the width of an element.
* 8. `height`: Specifies the height of an element.
* 9. `display`: Determines how an element should be displayed (e.g., block, inline, flex).
* 10. `text-align`: Aligns the text within an element (e.g., left, center, right).
* 11. `position`: Specifies the positioning method of an element (e.g., relative, absolute, fixed).
* 12. `box-shadow`: Adds a shadow effect to an element.
* 13. `border-radius`: Rounds the corners of an element.
* 14. `opacity`: Sets the transparency level of an element.
* 15. `transition`: Defines the transition effect when a property changes.

1. **What do you understand by CSS opacity?**

**Ans.**

* The CSS opacity property is used to specify the transparency of an element. In simple word, you can say that it specifies the clarity of the image. In technical terms, Opacity is defined as degree in which light is allowed to travel through an object.

1. **How can the background color of an element be changed?**

**Ans.**

* To add background color in HTML, use the CSS background-color property. Set it to the color name or code you want and place it inside a style attribute. Then add this style attribute to an HTML element, like a table, heading, div, or span tag.

1. **How can image repetition of the backup be controlled?**

**Ans.**

* This task can be achieved by using the background-repeat property that will help us to control the repetition of the image. The background-repeat property in CSS is used to repeat the background image both horizontally and vertically. It also decides whether the background image will be repeated or not.

1. **What is the use of the background-position property?**

**Ans.**

* The **background-position** property in CSS is mainly used to sets the initial position for the background image ie., it is used to set an image at a certain position. The position that is relative to the positioning layer, can be set by using the [background-origin](https://www.geeksforgeeks.org/css-background-origin-property/) property.
* The [background-image](https://www.geeksforgeeks.org/css-background-image-property/) is placed default to the top-left corner of an element with a repetition on both horizontally & vertically.

**Syntax:**

background-position: value;

1. **Which property controls the image scroll in the background?**

**Ans.**

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

**Syntax:**

background-attachment: scroll|fixed|local|initial|inherit;

1. **Why should background and color be used as separate properties?** **Ans.**

There are two reasons behind this:

* 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.
* Color is an inherited property while the background is not. So this can make confusion further.

1. **How to center block elements using CSS1?**

**Ans.**

There are two steps to center a block-level element –

* **Step 1: Define the external width –**We need to define the external width. Block-level elements have the default width of 100% of the webpage, so for centering the block element, we need space around it. So for generating the space, we are giving it a width.
* **Step 2: Set the left-margin and the right-margin of the element to auto –**Since we produced a remaining space by providing external width so now we need to align that space properly that’s why we should use margin property. Margin is a property that tells how to align a remaining space. So for centering the element you must set left-margin to auto and right-margin to auto.

**Syntax:**

element {

width:200px;

margin: auto;

}

1. **How to maintain the CSS specifications?**

**Ans.**

* Maintain CSS specifications effectively:-

1. \*\*Consistent Naming Conventions:\*\* Use a consistent and meaningful naming convention for your CSS classes and IDs. This makes it easier to understand and maintain the code, especially in larger projects.

2. \*\*Modular CSS:\*\* Divide your CSS into smaller modules or components. This approach, often known as modular CSS or component-based CSS, promotes re-usability and simplifies maintenance.

3. \*\*Comments and Documentation:\*\* Add comments to your CSS code to explain the purpose of different sections or styles. Proper documentation helps other developers (and yourself) understand the codebase and make changes without introducing unintended side effects.

4. \*\*Version Control:\*\* Use version control systems like Git to keep track of changes in your CSS files. This allows you to easily revert to previous versions if needed and collaborate with others on the code base.

5. \*\*Avoid Global Styles:\*\* Minimize the use of global styles that affect the entire project. Instead, apply styles locally to specific components or elements. This reduces the risk of unintended style conflicts.

6. \*\*CSS Resets or Normalize:\*\* Consider using CSS resets or normalize.css to ensure consistent default styles across different browsers. This helps prevent unexpected styling variations between browsers.

7. \*\*Keep It DRY (Don't Repeat Yourself):\*\* Avoid duplication of CSS code. Repeated styles should be extracted into classes, and elements with similar styling should share common classes.

8. \*\*Use Preprocessors:\*\* Consider using CSS Preprocessors like Sass or LESS to enhance maintainability by using variables, mixins, and nested styles. Preprocessors make CSS code more organized and easier to maintain.

9. \*\*Regular Code Reviews:\*\* Perform regular code reviews with your team to ensure adherence to coding standards, catch potential issues, and promote consistency across the project.

10. \*\*Stay Updated:\*\* Stay informed about the latest CSS specifications, browser support, and best practices. This includes new CSS features, updates, and deprecations. Attend conferences, workshops, or follow reputable CSS blogs and resources.

11. \*\*Test Across Browsers:\*\* Test your CSS on different browsers and devices to ensure it displays correctly and consistently. Consider using browser developer tools for debugging and fine-tuning styles.

By following these practices, you can maintain CSS specifications effectively, improve code quality, and make future updates and enhancements more manageable. Regularly reviewing and re-factoring your CSS code base will help keep it organized and optimized for the long term.

1. **What are the ways to integrate CSS as a web page?**

**Ans.**

There are several ways to integrate CSS into a web page. CSS can be included in the HTML file directly, linked externally from a separate CSS file, or even added dynamically using JavaScript. Here are the common methods:-

1. ****Inline CSS:-**** You can apply CSS styles directly to HTML elements using the **style** attribute. This method is suitable for adding styles to individual elements.
2. ****Internal CSS:**** You can add CSS rules directly inside the **<style>** element within the HTML file's **<head>** section. This method is useful for small-scale styles that apply to a specific page.
3. ****External CSS:**** The recommended approach for most projects is to create a separate CSS file and link it to the HTML file using the **<link>** element. This allows for better organization, re-usability, and easier maintenance.
4. ****@import Directive:**** If necessary, you can use the **@import** directive within a **<style>** block to include an external CSS file. However, this method is less preferred compared to using the **<link>** element, as it may slightly impact page load times.
5. **What is embedded style sheets?**

**Ans.**

* 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.

**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 (ie. text/CSS).

1. **What are the external style sheets?**

**Ans.**

* An external style sheet is a separate CSS file that can be accessed by creating a link within the head section of the web-page. Multiple web-pages can use the same link to access the style-sheet. The link to an external style sheet is placed within the head section of the page.

1. **What are the advantages and disadvantages of using external style sheets?**

**Ans.**

**Advantages:-**

1. With the help of External Style Sheets, the styles of numerous documents can be organized from one single file.
2. In External Style Sheets, Classes can be made for use on numerous HTML element types in many forms of the site.
3. In complex contexts, Methods like selector and grouping can be implemented to apply styles.

**Disadvantages:-**

1. An extra download is essential to import style information for each file.
2. The execution of the file may be deferred till the external style sheet is loaded.
3. While implementing style sheets, we need to test Web pages with multiple browsers in order to check compatibility issues.
4. **What is the meaning of the CSS selector?**

**Ans.**

* CSS selectors are used to "find" (or select) the HTML elements you want to style.
* We can divide CSS selectors into five categories:

1. Simple selectors (select elements based on name, id, class)
2. [Combinator selectors](https://www.w3schools.com/css/css_combinators.asp) (select elements based on a specific relationship between them)
3. [Pseudo-class selectors](https://www.w3schools.com/css/css_pseudo_classes.asp) (select elements based on a certain state)
4. [Pseudo-elements selectors](https://www.w3schools.com/css/css_pseudo_elements.asp) (select and style a part of an element)
5. [Attribute selectors](https://www.w3schools.com/css/css_attribute_selectors.asp) (select elements based on an attribute or attribute value).
6. **What are the media types allowed by CSS?**

**Ans.**

* the main media types allowed by CSS:-

1. ****all:**** The default media type that applies to all devices and media.
2. ****screen:**** Intended for screens, including computer monitors, tablets, and smart-phones.
3. ****print:**** Used for print preview and print output, allowing you to define styles for printed documents.
4. ****speech:**** Intended for screen readers and other speech synthesizers that read the page out loud.
5. ****aural (deprecated):**** Formerly used for speech synthesizers, but it has been deprecated in favor of the **speech** media type.
6. ****braille:**** Designed for braille tactile feedback devices.
7. ****embossed:**** Used for embossed braille printers.
8. **What is the rule set?**

**Ans.**

* A CSS rule set contains one or more selectors and one or more declarations.
* The selector(s), which in this example is h1 , points to an HTML element.
* The declaration(s), which in this example are color: blue and text-align: center style the element with a property and value.