* **CSS and CSS 3**

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

* Benefits of using CSS include:
  + **Consistency:** Allows consistent styling across multiple web pages.
  + **Separation of Concerns:** Separates content from presentation, enhancing maintainability.
  + **Flexibility:** Enables easy and efficient styling changes across a website.
  + **Faster Loading:** Reduces page load times by minimizing code duplication and file sizes.
  + **Accessibility:** Supports responsive design, improving accessibility across devices.
  + **Browser Compatibility:** Helps achieve consistent display across various web browsers.

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

* Disadvantages of CSS include:
  + **Browser Compatibility:** Inconsistencies in CSS rendering across different browsers can be challenging to manage.
  + **Learning Curve:** Understanding CSS concepts and mastering its intricacies can be time-consuming.
  + **Specificity Issues:** CSS specificity rules can lead to unexpected styling conflicts and complexities.
  + **Limited Layout Control:** CSS has limitations in controlling complex layouts compared to other technologies like CSS frameworks or JavaScript libraries.
  + **Debugging Complexity:** Identifying and fixing CSS issues can be difficult due to its cascading nature and inheritance rules.
  + **Performance Impact:** Poorly optimized CSS can affect page loading speed and performance.

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

* CSS3 introduced several new features and enhancements over CSS2, including:
  + **Selectors:** CSS3 introduced new selectors such as attribute selectors, structural pseudo-classes, and the :nth-child() pseudo-class.
  + **Box Model:** CSS3 introduced new properties and values for box sizing (box-sizing) and rounded corners.
  + **Media Queries:** CSS3 introduced media queries, allowing styles to adapt based on device characteristics like screen size, resolution, and orientation.
  + **Transitions and Animations:** CSS3 introduced properties for creating smooth transitions (transition) and animations (@keyframes).
  + **Flexbox and Grid:** CSS3 introduced powerful layout modules like Flexbox and Grid, providing more control over page layout.
  + **Typography:** CSS3 added support for custom fonts (@font-face), text shadows, and text effects. Overall, CSS3 expanded the capabilities of CSS2, providing developers with more tools for creating modern and dynamic web designs.

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

* A few CSS style components include:
  + **Typography:** Styling fonts, sizes, spacing, and alignment of text.
  + **Colours:** Setting colours for text, backgrounds, borders, and other elements.
  + **Layout:** Controlling the positioning, size, and arrangement of elements on a page.
  + **Box Model:** Styling the padding, margin, border, and content of elements.
  + **Transitions and Animations:** Adding movement and interactivity to elements.
  + **Flexbox and Grid:** Creating flexible and responsive layouts.
  + **Media Queries:** Applying styles based on device characteristics like screen size and orientation.

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

* CSS opacity refers to the degree of transparency applied to an element.
* It's controlled using the `opacity` property, where a value of 0 makes the element completely transparent, and 1 makes it fully opaque.

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

* The background color of an element can be changed using the CSS background-color property, followed by the desired color value
* For example:
  + .element { background-color: red; }

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

* Image repetition of the background can be controlled using the CSS `background-repeat` property.
* Values include `repeat`, `repeat-x`, `repeat-y`, and `no-repeat`.

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

* The `background-position` property in CSS is used to specify the initial position of a background image within its containing element.

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

* The `background-attachment` property controls the scrolling behavior of a background image.

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

* Separating background and color into distinct properties provides greater flexibility and control over styling.
* It allows for independent adjustment of background images and colors, facilitating more complex and dynamic designs.

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

* CSS1 does not have a dedicated property for centering block elements.
* However, you can center block elements horizontally by setting the left and right margins to auto and specifying a width for the element.
* For example:
  + .block-element {

width: 50%; /\* Adjust as needed \*/

margin-left: auto;

margin-right: auto;

}

* This technique takes advantage of the automatic margin calculation feature of CSS to horizontally center block-level elements.

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

* Maintaining CSS specifications involves:
  + **Consistent Naming:** Use clear, consistent class and ID names.
  + **Modularization:** Break styles into modular components for easier management.
  + **Comments:** Add comments to explain complex or important sections.
  + **Documentation:** Maintain documentation for future reference.
  + **Version Control:** Use version control systems like Git to track changes and collaborate effectively.
  + **Testing:** Regularly test styles across different browsers and devices for consistency.

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

* CSS can be integrated into a web page in three main ways:
  + **External Style Sheets:** Linked externally using the <link> element in the HTML <head> section.
  + **Embedded Style Sheets:** Placed within the HTML document using the <style> element in the <head> section.
  + **Inline Styles:** Applied directly to HTML elements using the style attribute within the HTML tag.

1. **What is embedded style sheets?**

* Embedded style sheets are CSS code placed directly within an HTML document's `<style>` element.
* They allow for defining styles specific to that document without the need for an external style sheet.

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

* External style sheets are separate documents containing CSS code that define the presentation and layout of HTML elements across multiple web pages.
* They are linked to HTML documents using the `<link>` element and allow for centralized styling, promoting consistency and easier maintenance.

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

* Advantages:

 **Consistency:** Ensures consistent styling across multiple web pages.

 **Easy Maintenance:** Changes made to one external stylesheet apply to all pages linked to it.

 **Bandwidth:** Reduces page load time by caching stylesheets, leading to faster loading.

* Disadvantages:

 **Dependency:** Requires an internet connection to load the external stylesheet, potentially impacting offline access.

 **Extra HTTP Request:** Adds an additional HTTP request, slightly increasing page load time.

 **Override Conflicts:** Styles defined externally may be overridden by inline or embedded styles, causing unexpected results.

1. **What is the meaning of the CSS selector?**

* A CSS selector is a pattern used to select and style elements on a web page.

1. **What are the media types allowed by CSS?**

* The media types allowed by CSS include screen, print, speech, and more.

1. **What is the rule set?**

* The rule set refers to a predefined set of regulations or guidelines that dictate behaviour or actions within a specific context, such as a game, organization, or system.