**HTML**

**50+ HTML Interview Questions and Answers**

1. **What is HTML?**

**Answer: -** It is language of the World Wide Web (WWW) HTML stands for Hyper Text Markup Language and is used to create dynamic and interactive pages that include text, images, headings, links, etc…

1. **How to comment in HTML?**

**Answer: -** Normally, HTML comments are not shown in the browser. However, these comments might serve to document the HTML source code.

**<!** —This is how we write comment🡪

1. **What is the difference between block-level and inline elements in HTML?**

**Answer: -** Block-level elements take up the full width available and start on a new line (e.g., <div>, <p>).

Inline elements only take up as much width as necessary and don’t start on a new line (e.g., <span>, <a>).

1. **Which HTML tag is used to display the data in the tabular form?**

**Answer: -** The HTML table element is used to show data in a table format (row by column). It also maintains the page layout, including the footer sections.

1. **How to insert a copyright symbol on a browser page?**

**Answer: -** You may use © or © to put a copyright sign in an HTML file.

1. **Explain the purpose and use of the data-[ ] attribute in HTML5**

**Answer: –** The data-\* property allows you to store custom data on HTML components. It is handy for storing additional information that may be accessed later using JavaScript**.**

1. **How can you include a video in an HTML document?**

**Answer:** – Include the <video> tag. Attributes such as controls, autoplay, loop, and muted influence how the video operates. You could also provide a src property to indicate the video file.

1. **What is the difference between the <script> tag placed in the <head> section and the <body> section of an HTML document?**

**Answer:** – A <script> in the <head> executes before the page is entirely loaded, potentially slowing down page load. It runs in the <body> after the page content loads, resulting in a speedier page appearance.

1. **Explain the purpose of the defer and async attributes on the <script> tag.**

**Answer:** – defer delays the script till the page loads. async executes the script as soon as it is downloaded, without waiting for the remainder of the page to load.

1. **What is the difference between <section>, <div>, and <article> tags in HTML5?**

**Answer:** – <section> is for grouping related content. <div> is a general-purpose container with no meaning by itself. <article> is for independent content, like a blog post.

1. **How do you create an accessible form in HTML?**

**Answer:** – Label each input, utilize aria-\* attributes to provide further context, and make sure the form is keyboard accessible.

1. **What is the purpose of the <meta> tag in HTML?**

**Answer:** – <meta> provides metadata about the HTML document, like the charset, author, or viewport settings for responsive design.

1. **What is a marquee?**

**Answer:** – Marquees are used to display scrolling text on web pages. It automatically scrolls a picture or text up, down, left, or right. Put the text you wish to scroll inside the ……<marquee> </marquee> tag.

1. **Explain the use and benefits of semantic HTML.**

**Answer:** – Semantic HTML uses meaningful tags like <header>, <nav>, <footer> that help search engines and screen readers understand the content better.

1. **How do you create a responsive image using the <picture> element in HTML5?**

**Answer:** – Use the <picture> element with multiple <source> tags to define different images for different screen sizes, making the image responsive.

1. **What are web components and how do you create them in HTML?**

**Answer:** Web components are reusable custom elements with their own styles and behaviour. You create them using HTML, CSS, and JavaScript.

1. **Explain the purpose and usage of the srcset attribute in the <img> tag.**

**Answer:** srcset allows you to define different image files for different screen sizes or resolutions, making images sharper on high-res screens.

1. **How can you create an HTML table with merged cells (both row-wise and column-wise)?**

**Answer:** Use rowspan to merge cells vertically and colspan to merge cells horizontally.

1. **Describe how to create an HTML5 <audio> element and explain its attributes.**

**Answer:** Use the <audio> tag. Attributes like controls, autoplay, and loop control playback. Use the src attribute to specify the audio file.

1. **How do you implement browser caching strategies using HTML5?**

**Answer:** Use the <meta> tag with cache-related attributes and configure your server to set caching rules, ensuring that resources are stored in the browser for faster loading.

1. **Explain the use of the sandbox attribute in iframes.**

**Answer:** The sandbox attribute restricts what an iframe can do, like preventing scripts from running or restricting forms from being submitted, to improve security.

1. **How do you create a sticky element using HTML and CSS?**

**Answer:** Use position: sticky; in CSS to make an element stick to the top of the page (or a parent element) when scrolling.

1. **Describe how to use microdata in HTML to improve SEO.**

**Answer:** Microdata adds structured data to your HTML, helping search engines understand your content better and potentially improving your search ranking.

1. **How do you create an image map in HTML and what are its use cases?**

**Answer:** Use the <map> and <area> tags to create clickable areas on an image, which can link to different pages or actions. It’s useful for interactive diagrams.

1. **What is the difference between the rel and rev attributes in the <link> tag?**

**Answer:** The rel attribute defines the relationship between the current document and the linked resource, like stylesheet. The rev attribute (rarely used) defines the reverse relationship.

1. **Explain the purpose of the input mode attribute in HTML5.**

**Answer:** The input mode attribute helps control the type of keyboard that appears for a specific input, like showing a numeric keypad for number input.

1. **How do you create a custom tooltip using HTML and CSS?**

**Answer:** Use an HTML element with CSS :hover or :focus to display a hidden <span> or <div> as a tooltip when the user interacts with the element.

1. **What are the different types of input fields available in HTML5 forms?**

**Answer:** HTML5 offers various input types like text, email, number, date, color, range, and file, each designed for specific kinds of data.

1. **Explain the use of the pattern attribute in HTML5 forms.**

**Answer:** The pattern attribute allows you to define a regular expression that the input value must match, which is useful for validating things like phone numbers or postal codes.

1. **How do you create a responsive grid layout using HTML and CSS?**

**Answer:** Use CSS Grid or Flexbox to create a layout that adjusts to different screen sizes. You can define rows and columns that change based on the screen width.

1. **What is the purpose of the <wbr> tag in HTML?**

**Answer:** The <wbr> (Word Break Opportunity) tag suggests where a line break can occur if needed, helping with word wrapping in long texts.

1. **How do you handle form validation using HTML5 attributes?**

**Answer:** Use attributes like required, minlength, maxlength, pattern, and type to enforce validation rules on form inputs directly in the HTML.

1. **Explain the use of the no validate attribute in the <form> tag.**

**Answer:** The no validate attribute disables HTML5 form validation, allowing forms to be submitted without the browser checking for validation rules.

1. **How do you create a fullscreen background image using HTML and CSS?**

**Answer:** Use a CSS background-image on an element with position: fixed; width: 100%; height: 100%; and background-size: cover; to make the image cover the entire background.

1. **What is the difference between the <mark> and <cite> tags in HTML?**

**Answer:** <mark> highlights text as important or relevant, usually with a yellow background. <cite> is used to reference a title or source, often italicized.

1. **How do you create an HTML email template that is compatible with most email clients?**

**Answer:** Use inline CSS, tables for layout, and simple HTML elements. Avoid using JavaScript, as it’s not supported in most email clients.

1. **Explain the use of the accept attribute in the <input> tag for file uploads.**

**Answer:** The accept attribute specifies the types of files that are allowed to be uploaded, like accept="image/\*" for only images.

1. **How do you create a fixed sidebar using HTML and CSS?**

**Answer:** Use position: fixed; in CSS on a sidebar element to keep it in place as the user scrolls the page.

1. **What is the purpose of the <legend> tag in HTML forms?**

**Answer:** The <legend> tag is used to add a caption to a <fieldset>, helping to describe the group of form elements inside.

1. **Explain the use of the spellcheck attribute in HTML5.**

**Answer:** The spellcheck attribute enables or disables spelling and grammar checking in text inputs and content-editable areas. Set spellcheck="true" or "false" as needed.

1. **How do you implement an infinite scrolling feature using HTML and JavaScript?**

**Answer:** Use JavaScript to detect when the user scrolls near the bottom of the page and then automatically load more content, creating an infinite scroll effect.

1. **What is the difference between the <datalist> and <select> tags in HTML forms?**

**Answer:** The <datalist> tag provides a list of predefined options that users can choose from when typing in an input field, whereas <select> creates a dropdown menu with options.

1. **How do you create a toggle switch using HTML and CSS?**

**Answer:** Use a combination of <input type="checkbox"> for the toggle and CSS for styling to make it look like a switch. You can add a label and animate the switch using CSS.

1. **Explain the purpose of the nonce attribute in the <script> tag.**

**Answer:** The nonce attribute adds an extra layer of security by allowing only scripts with a matching nonce value to run, helping prevent certain types of attacks like Cross-Site Scripting (XSS).

1. **How do you create a breadcrumb navigation using HTML and CSS?**

**Answer:** Use an unordered list (<ul>) with list items (<li>) for each breadcrumb link, and style it with CSS to separate each link with a symbol like ”>” or ”/“.

1. **What is the itemprop attribute and how is it used in HTML5 microdata?**

**Answer:** The itemprop attribute is part of microdata, used to define properties of an item, making it easier for search engines to understand and index content.

1. **How do you create a timeline using HTML and CSS?**

**Answer:** Use a series of <div> or <li> elements to represent timeline events and use CSS to position them vertically or horizontally with connecting lines.

1. **Explain the difference between target="\_blank" and rel="noopener noreferrer" in anchor tags.**

**Answer:**  
target="\_blank" makes a link open in a new tab.  
rel="noopener noreferrer" keeps your website safe by stopping the new tab from accessing your page’s information.

1. **How do you create a progress indicator that shows the current step in a multi-step form using HTML and CSS?**

**Answer:**  
Use HTML elements like <div> or <ul> to list the steps.  
Use CSS to highlight the current step, showing users where they are in the form.

1. **Explain the use of the tabindex attribute in HTML and how it affects keyboard navigation.**

**Answer:**  
The tabindex attribute sets the order elements are focused when pressing the Tab key.  
It helps users move through the page using the keyboard easily.

1. **How do you implement a lightbox effect for images using HTML and CSS?**

**Answer:**  
Create a hidden overlay with a larger image using HTML.  
Use CSS to show the overlay when a smaller image is clicked, making the image appear in a “lightbox.”

1. **What is the purpose of the <keygen> tag in HTML5, and why is it deprecated?**

**Answer:**  
The <keygen> tag was used to create a key pair for secure forms.  
It is deprecated because it’s not safe and better security methods are now available.

1. **How do you create a fixed table header and scrollable body using HTML and CSS?**

**Answer:**  
Use CSS to fix the header row at the top with position: sticky; or fixed;.  
Set a height and overflow: auto; on the table body to make it scrollable.

**CSS**

**100+ CSS Interview Questions**

**Beginner Level Questions**

1. **What is CSS and what is its purpose?**

**Answer:** CSS (Cascading Style Sheets) is a stylesheet language that controls the appearance of HTML pages, including layout, colors, and fonts.

1. **What are the different types of CSS?**

**Answers:** Inline CSS, Internal CSS, External CSS

1. **What is the syntax of CSS?**

**Answer:**

CSS

selector {

property: value;

}

1. **What are selectors in CSS?**

**Answer:** Selectors are patterns used to target elements on a webpage. Examples include id, class, type, universal, and attribute selectors.

1. **What is the difference between id and class in CSS?**

**Answer:** **id**: Used for unique elements and is defined with #, **class**: Used for multiple elements and is defined with .

1. **What is the difference between relative, absolute, and fixed positioning?**

**Answer:**

* **relative**: Positioned relative to its normal position.
* **absolute**: Positioned relative to its nearest positioned ancestor.
* **fixed**: Positioned relative to the viewport and does not move when scrolling.

1. **What is the purpose of the z-index property?**

**Answer:** controls the stacking order of items. Higher values appear in front of smaller ones.

1. **What are pseudo-classes in CSS?**

**Answer:** Special states of elements, e.g.,: hover, :focus, :nth-child().

1. **What is the difference between em and rem units in CSS?**

**Answer:** **em**: Relative to the font size of its parent, **rem**: Relative to the root font size (usually the <html> element).

1. **What are media queries in CSS?**

**Answer:**

CSS

@media (max-width: 768px) {

body {

background-color: red;

}

}

1. **How do you include a CSS file in an HTML document?**

**Answer:** Using the <link> tag inside the <head> section.

CSS

<link rel="stylesheet" href="styles.css">

1. **What is the purpose of the float property?**

**Answer:** Elements are positioned to the left or right so that additional content may wrap around them.

1. **Explain the CSS specificity hierarchy.**

**Answer:** Determines which CSS rule is used when several rules target the same element. Specificity hierarchy (from top to bottom): Inline styles > IDs > Classes, Attributes, and Pseudo-Classes > Elements/Pseudo-Elements.

1. **What is a CSS reset?**

**Answer:** A collection of CSS rules that eliminate the default browser style to maintain uniformity across browsers.

1. **How can you make a responsive layout using CSS?**

**Answer:** Some ways to do this are relative units (%, em, rem), media queries, responsive pictures, and flexible grids.

1. **What is the box-sizing property?**

**Answer:** Defines how an element’s total width and height are calculated.

V**alues:** border-box content-box (default)

1. **What is the purpose of the display property?**

**Answer:** Specifies how an element is displayed on the page (e.g., block, inline, flex, none).

1. **Explain the difference between padding and margin.**

**Answer:**

* **Padding**: Space between the content and the border of an element.
* **Margin**: Space outside the border of an element, separating it from other elements.

1. **What is the background shorthand property?**

**Answer:** A shorthand property to set all background properties in one declaration.

CSS

background: #fff url('image.png') no-repeat right top;

​

1. **How do you apply multiple classes to an HTML element?**

**Answer:** By listing them separated by spaces in the class attribute.

HTML

<div class="class1 class2"></div>

**Intermediate Level Questions**

1. **What are CSS variables?**

**Answer:** Variables that store reusable values. Declared using --.

CSS

:root {

--main-color: green;

}

.wrapper {

color: var(--main-color);

}

​

1. **Explain the box model in CSS.**

**Answer:** The CSS box model includes:

* **Content**: The actual content.
* **Padding**: Space between content and border.
* **Border**: Surrounds the padding.
* **Margin**: Space outside the border.

1. **What is the difference between inline, block, and inline-block elements?**

**Answer:**

* **Inline**: Does not start on a new line, only occupies as much width as necessary.
* **Block**: Starts on a new line and takes up the full width.
* **Inline-block**: Behaves like inline but allows setting height and width.

1. **What is the position: sticky; property?**

**Answer:** A hybrid between relative and fixed. The element is positioned based on scroll but remains “sticky” within its container.

1. **What is the difference between nth-child and nth-of-type selectors?**

**Answer:**

* **nth child**: Targets the nth child regardless of its type.
* **nth-of-type**: Targets the nth child of a specific type.

1. **What is the clip-path property?**

**Answer:** Clips an element to a specific shape.

CSS

div {

clip-path: circle(50%);

}

​

1. **How can you hide an element in CSS?**

**Answer:**

* **display:** none; (removes the element from the document flow)
* **visibility:** hidden; (hides the element but maintains its space).

1. **What is the difference between flexbox and grid?**

**Answer:**

* **Flexbox**: One-dimensional layout (row or column).
* **Grid**: Two-dimensional layout (row and column)

1. **What is the difference between max-width and min-width?**

**Answer:**

* **max-width**: Sets the maximum width an element can take.
* **min-width**: Sets the minimum width an element can take.

1. **What is a pseudo-element?**

**Answer:** Selects and styles parts of an element, e.g., ::before, ::after.

1. **Explain the CSS Cascade and how it works.**

**Answer:** The cascade determines which CSS rules apply when multiple rules target the same element. It follows the specificity hierarchy, importance (!important), and source order.

1. **What are combinators in CSS?**

**Answer:** Combinators define the relationship between selectors. Types include descendant (), child (>), adjacent sibling (+), and general sibling (~).

1. **How do you create a CSS gradient?**

**Answer:** Using the background-image property with linear-gradient or radial-gradient.

CSS

background-image: linear-gradient(to right, red, yellow);

1. **What is the calc() function in CSS?**

**Answer:** Allows you to perform calculations to determine CSS property values.

CSS

width: calc(100% - 50px);

1. **How can you ensure cross-browser compatibility in CSS?**

**Answer:**

* Use vendor prefixes (e.g., -webkit-, -moz-).
* Utilize CSS resets.
* Test across different browsers.
* Use feature queries (@supports).

1. **What is the filter property in CSS?**

**Answer:** Applies graphical effects like blur or color shift to an element.

CSS

img {

filter: grayscale(100%);

}

1. **Explain the object-fit property.**

**Answer:** Specifies how an <img> or <video> should be resized to fit its container.  
**Values:** fill, contain, cover, none, scale-down.

1. **What is the aspect-ratio property?**

**Answer:** Sets a preferred aspect ratio for an element.

CSS

.box {

aspect-ratio: 16 / 9;

}

1. **How do you implement a CSS reset and why?**

**Answer:** A CSS reset removes default browser styles to ensure consistency across different browsers.

CSS

\* {

margin: 0;

padding: 0;

box-sizing: border-box;

}

1. **What are the different ways to implement shadows in CSS?**

**Answer:**

* **Box-shadow**: Adds shadow to elements.
* **Text-shadow**: Adds shadow to text.

CSS

div {

box-shadow: 2px 2px 5px rgba(0,0,0,0.3);

}

p {

text-shadow: 1px 1px 2px gray;

}

1. **Explain the overflow property and its values.**

**Answer:** Controls what happens to content that overflows an element’s box.  
**Values:** visible, hidden, scroll, auto.

1. **What is the transition property and how is it used?**

**Answer:** Defines the transition effect between two states of an element.

CSS

button {

transition: background-color 0.3s ease;

}

button:hover {

background-color: blue;

}

1. **How do you create a responsive image using CSS?**

**Answer:** Use relative units and properties like max-width: 100%; and height: auto;.

CSS

img {

max-width: 100%;

height: auto;

}

1. **What is the visibility property in CSS?**

**Answer:** Controls whether an element is visible or hidden, while still occupying space.  
**Values:** visible, hidden, collapse.

1. **Explain the text-align property**.

**Answer:** Specifies the horizontal alignment of text within an element.  
**Values:** left, right, center, justify.

1. **How do you vertically center an element using CSS?**

**Answer:**

CSS

using flex

.container {

display: flex;

align-items: center;

justify-content: center;

}

CSS

using grid

.container {

display: grid;

place-items: center;

}

CSS

Absolute positioning with transform

.element {

position: absolute;

top: 50%;

left: 50%;

transform: translate(-50%, -50%);

}

​

1. **What is the font-face rule in CSS?**

**Answer:** Allows you to define custom fonts to be used in your web pages.

CSS

@font-face {

font-family: 'MyFont';

src: url('myfont.woff2') format('woff2');

}

body {

font-family: 'MyFont', sans-serif;

}

1. **Explain the line-height property.**

**Answer:** Sets the height of a line box, affecting the spacing between lines of text.

CSS

p {

line-height: 1.5;

}

1. **What is the white-space property?**

**Answer:** Controls how whitespace inside an element is handled.  
**Values:** normal, nowrap, pre, pre-wrap, pre-line

1. **How do you create a CSS sprite?**

**Answer:** Combine multiple images into a single image file and use background-position to display the desired part. This reduces HTTP requests.

**Advanced Level Questions**

1. **What is the purpose of content in pseudo-elements?**

**Answer:** Used to insert generated content in ::before and ::after.

CSS

.element::after {

content: '★';

}

​

1. **Explain CSS Grid Areas.**

**Answer:** Grid areas allow defining specific regions for layout using grid-template-areas.

CSS

.container {

display: grid;

grid-template-areas:

"header header"

"sidebar main"

"footer footer";

}

.header { grid-area: header; }

.sidebar { grid-area: sidebar; }

.main { grid-area: main; }

.footer { grid-area: footer; }

​

1. **What is the difference between transition and animation in CSS?**

**Answer:**

* **transition**: For smooth state changes between two states.
* **animation**: For more complex multi-step animations with keyframes.

1. **How can you implement dark mode using CSS?**

**Answer:** Use the prefers-color-scheme media query.

CSS

@media (prefers-color-scheme: dark) {

body {

background-color: black;

color: white;

}

}

1. **What is the will-change property in CSS?**

**Answer:** Hints to the browser about changes to optimize rendering.

CSS

.animating-element {

will-change: transform, opacity;

}

​

1. **How does backface-visibility work?**

**Answer:** Controls the visibility of an element’s backside during a 3D transformation.

CSS

.card {

backface-visibility: hidden;

}

​

1. **What is the difference between opacity: 0; and visibility: hidden;?**

**Answer:**

* **opacity: 0;**: Hides the element but keeps its space and allows interactions (unless pointer-events is also modified).
* **visibility: hidden;**: Hides the element but keeps its layout space, similar to opacity: 0;.

1. **What is the mix-blend-mode property?**

**Answer:** Defines how an element blends with its background.

CSS

.blend {

mix-blend-mode: multiply;

}

​

1. **What is the difference between absolute length units and relative length units?**

**Answer:**

* **Absolute Units**: Fixed sizes (e.g., px, cm, mm, in, pt, pc).
* **Relative Units**: Relative to another value (e.g., em, %, rem, vw, vh).

1. **What is isolation in CSS?**

**Answer:** Defines whether an element creates a new stacking context, isolating its children from blending with elements outside.

CSS

.isolated {

isolation: isolate;

}

​

1. **Explain CSS Custom Properties and their benefits.**

**Answer:** Also known as CSS variables, they allow storing values to be reused throughout the stylesheet. Benefits include easier maintenance, theming, and dynamic updates.

CSS

:root {

--primary-color: #3498db;

}

button {

background-color: var(--primary-color);

}

​

1. **How do you create complex shapes using CSS?**

**Answer:** Using properties like clip-path, border-radius, and CSS gradients.

CSS

.triangle {

width: 0;

height: 0;

border-left: 50px solid transparent;

border-right: 50px solid transparent;

border-bottom: 100px solid red;

}

​

1. **What are CSS preprocessors and name a few?**

**Answer:** CSS preprocessors are scripting languages that extend CSS and compile into standard CSS. Examples include Sass, LESS, and Stylus.

1. **Explain the concept of Critical CSS.**

**Answer:** Critical CSS refers to the styles required to render above-the-fold content. Optimizing Critical CSS improves page load performance by prioritizing essential styles.

1. **How can you optimize CSS for better performance?**

**Answer:**

* Minify CSS files.
* Remove unused CSS.
* Use efficient selectors.
* Combine multiple CSS files.
* Implement Critical CSS.

1. **What is CSS-in-JS and its advantages?**

**Answer:** A styling approach where CSS is written within JavaScript files. Advantages include scoped styles, dynamic styling based on props/state, and better integration with component-based frameworks like React.

1. **Explain the @supports rule in CSS.**

**Answer:** Allows you to apply CSS only if the browser supports certain CSS features.

CSS

@supports (display: grid) {

.container {

display: grid;

}

}

1. **What are CSS Modules and how do they work?**

**Answer:** CSS Modules are CSS files in which all class names and animation names are scoped locally by default. They help in avoiding naming conflicts by generating unique class names.

1. **How do you implement server-side rendering (SSR) with CSS?**

**Answer:** SSR involves rendering CSS on the server and sending fully styled HTML to the client. This can be achieved using CSS-in-JS libraries like Styled Components or Emotion, which extract and inline critical CSS during the build process.

1. **What is the contain property in CSS?**

**Answer:** Improves rendering performance by indicating that an element and its subtree are independent of the rest of the document.

CSS

.widget {

contain: layout style;

}

1. **Explain CSS Houdini.**

**Answer:** A set of APIs that give developers more control over the CSS rendering process, allowing them to write JavaScript that can extend CSS capabilities.

1. **How do you create a responsive typography system?**

**Answer:** Using relative units like vw, vh, em, rem, and media queries to adjust font sizes based on viewport dimensions.

CSS

html {

font-size: 16px;

}

@media (max-width: 600px) {

html {

font-size: 14px;

}

}

​

1. **What is CSS Logical Properties?**

**Answer:** Properties that allow you to control layout based on the flow of content, adapting to different writing modes (e.g., left-to-right, right-to-left). Examples include margin-block-start, padding-inline-end.

1. **Explain the @import rule and its drawbacks.**

**Answer:** The @import rule allows you to import one CSS file into another.  
**Drawbacks:** This can cause additional HTTP requests and render-blocking, leading to slower page loads.

1. **What is the font-display property in @font-face?**

**Answer:** Controls how a font is displayed based on its download status.  
**Values:** auto, block, swap, fallback, optional.

1. **How do you create a responsive grid layout without using CSS Grid or Flexbox?**

**Answer:** Using float-based layouts or inline-block elements combined with media queries. However, these methods are less flexible and more prone to issues compared to modern layout systems.

1. **What is the :root selector in CSS?**

**Answer:** Targets the root element of the document, typically the <html> element. Commonly used to define CSS variables.

1. **Explain the rem unit and its advantages over em.**

**Answer:**

* **rem**: Relative to the root (<html>) font size.
* **Advantages:** Consistent sizing across the document, easier to manage compared to em, which is relative to the parent element’s font size and can compound.

1. **How do you create a multi-column layout in CSS?**

**Answer:** Using the column-count and column-gap properties.

CSS

.multicolumn {

column-count: 3;

column-gap: 20px;

}

​

1. **What is the object-position property?**

**Answer:** Specifies the position of the content within a replaced element, such as an <img> or <video>, when using object-fit.

CSS

img {

object-fit: cover;

object-position: center;

}

​

1. **Explain the grid-template-columns and grid-template-rows properties.**

**Answer:** Define the size and number of columns and rows in a CSS Grid layout.

CSS

.container {

display: grid;

grid-template-columns: 1fr 2fr 1fr;

grid-template-rows: 100px auto 100px;

}

​

1. **How do you create a CSS-only tooltip?**

**Answer:** Using pseudo-elements and the :hover pseudo-class.

HTML

<div class="tooltip">Hover me

<span class="tooltiptext">Tooltip text</span>

</div>

CSS

.tooltip {

position: relative;

display: inline-block;

}

.tooltiptext {

visibility: hidden;

width: 120px;

background-color: black;

color: #fff;

text-align: center;

border-radius: 6px;

padding: 5px;

position: absolute;

z-index: 1;

bottom: 125%; /\* Position above \*/

left: 50%;

transform: translateX(-50%);

}

.tooltip:hover .tooltiptext {

visibility: visible;

}

​

1. **What is CSS Scroll Snap and how it is used.**

**Answer:** A CSS module that allows web developers to control the scroll behavior, snapping the scroll position to specific elements.

CSS

.container {

scroll-snap-type: x mandatory;

overflow-x: scroll;

display: flex;

}

.item {

scroll-snap-align: start;

flex: none;

width: 100%;

}

​

1. **Explain the @keyframes rule in CSS animations.**

**Answer:** Defines the intermediate steps in a CSS animation sequence by specifying styles at various points during the animation timeline.

CSS

@keyframes slidein {

from {

transform: translateX(0%);

}

to {

transform: translateX(100%);

}

}

.animate {

animation: slidein 3s forwards;

}

​

1. **How do you create a CSS-only modal?**

**Answer:** Using hidden checkboxes or the :target pseudo-class along with CSS to display the modal when triggered.

HTML

<a href="#modal">Open Modal</a>

<div id="modal" class="modal">

<a href="#" class="close">Close</a>

<p>Modal Content</p>

</div>

​CSS

.modal {

display: none;

position: fixed;

top: 50%;

left: 50%;

transform: translate(-50%, -50%);

background: white;

padding: 20px;

border: 1px solid #ccc;

}

.modal:target {

display: block;

}

​

1. **What is pointer-events in CSS and how is it used?**

**Answer:** Controls whether an element can be the target of mouse events.

CSS

.overlay {

pointer-events: none;

}

.button {

pointer-events: auto;

}

​

1. **Explain the :not() pseudo-class and provide an example**.

**Answer:** Selects every element that does not match the specified selector.

CSS

/\* Select all paragraphs except those with class 'intro' \*/

p:not(.intro) {

color: gray;

}

1. **How do you create a CSS-only accordion?**

**Answer:** Using hidden checkboxes or radio buttons and the :checked pseudo-class to toggle content visibility.

HTML

<div class="accordion">

<input type="checkbox" id="section1">

<label for="section1">Section 1</label>

<div class="content">

<p>Content for section 1.</p>

</div>

</div>

​CSS

.content {

display: none;

}

.accordion input:checked ~ .content {

display: block;

}

​

1. **What is the scroll-behavior property?**

**Answer:** Defines the scrolling behavior for a scrolling box, such as smooth scrolling.

CSS

html {

scroll-behavior: smooth;

}

​

1. **Explain the @media rule and how it can be used for responsive design.**

**Answer:** The @media rule allows you to apply CSS styles based on specific conditions, such as screen size, resolution, or orientation. It’s essential for creating responsive designs that adapt to different devices.

CSS

@media (max-width: 600px) {

.container {

flex-direction: column;

}

}

​

1. **What is SVG in the context of CSS and how can it be styled?**

**Answer:** SVG (Scalable Vector Graphics) is an XML-based vector image format. CSS can style SVG elements by targeting their attributes and using CSS properties like fill, stroke, and transform.

CSS

svg {

width: 100px;

height: 100px;

}

svg path {

fill: #3498db;

stroke: #2c3e50;

stroke-width: 2;

}

​

1. **How do you create a responsive navigation bar using CSS?**

**Answer:** Using Flexbox or Grid for layout, media queries to adjust for different screen sizes, and possibly a hamburger menu for smaller screens.

CSS

.navbar {

display: flex;

justify-content: space-between;

align-items: center;

}

@media (max-width: 600px) {

.navbar {

flex-direction: column;

}

}

​

1. **Explain the filter property and provide an example of its usage.**

**Answer:** The filter property applies graphical effects like blur, brightness, contrast, etc., to elements.

CSS

img {

filter: grayscale(100%);

}

​

1. **What is CSS Blend Modes and how are they used?**

**Answer:** Blend modes determine how an element’s content should blend with the content behind it. They are set using the mix-blend-mode and background-blend-mode properties.

CSS

.blend {

mix-blend-mode: multiply;

}

​

1. **How do you create a CSS-only dropdown menu?**

**Answer:** Using the :hover or :focus pseudo-classes to show and hide the dropdown content.

HTML

<div class="dropdown">

<button class="dropbtn">Menu</button>

<div class="dropdown-content">

<a href="#">Link 1</a>

<a href="#">Link 2</a>

</div>

</div>

CSS

.dropdown-content {

display: none;

position: absolute;

background-color: #f9f9f9;

}

.dropdown:hover .dropdown-content {

display: block;

}

​

1. **What is the :focus-within pseudo-class?**

**Answer:** Selects an element if any of its descendants have focus. Useful for styling parent elements when child elements are focused.

CSS

.form-group:focus-within {

border-color: blue;

}

​

1. **Explain the use of @charset in CSS.**

**Answer:** Specifies the character encoding of the CSS file. Must be the first rule in the CSS.

CSS

@charset "UTF-8";

​

1. **How do you implement a CSS-only carousel?**

**Answer:** Using radio buttons or checkboxes to control which slide is visible, combined with labels and the :checked pseudo-class. Animations and transitions can enhance the effect.

HTML

<div class="carousel">

<input type="radio" name="slides" id="slide1" checked>

<input type="radio" name="slides" id="slide2">

<div class="slides">

<div class="slide" id="s1">Slide 1</div>

<div class="slide" id="s2">Slide 2</div>

</div>

<label for="slide1">1</label>

<label for="slide2">2</label>

</div>

CSS

.slides .slide {

display: none;

}

#slide1:checked ~ .slides #s1,

#slide2:checked ~ .slides #s2 {

display: block;

}

​

1. **What is the aspect-ratio property and how is it useful?**

**Answer:** The aspect-ratio property allows you to define a preferred aspect ratio for an element, ensuring it maintains the ratio regardless of its size. Useful for responsive designs.

CSS

.video-container {

aspect-ratio: 16 / 9;

width: 100%;

}

​

1. **Explain the @font-feature-values rule in CSS**.

**Answer:** Allows you to define specific font feature settings for OpenType fonts, enabling advanced typography features like ligatures, alternate characters, and stylistic sets.

css @font-feature-values ‘Open Sans’ { @liga { 0, 0; } } p { font-feature-settings: ‘liga’ 0; }