Here are some common HTML and CSS interview questions with answers that can help you prepare:

HTML Interview Questions

1. **What is HTML?**
   - **Answer**: HTML (HyperText Markup Language) is the standard markup language used to create web pages. It defines the structure and content of a webpage using elements like headings, paragraphs, links, images, etc.
2. **What is the difference between `<div>` and `<span>`?**
   - **Answer**: `<div>` is a block-level element used for grouping larger sections of content, while `<span>` is an inline element used for smaller sections of content within a block-level element. `<div>` occupies the entire width, whereas `<span>` only takes up as much width as the content inside.
3. **What are semantic HTML elements?**
   - **Answer**: Semantic HTML elements are those that clearly describe their meaning in a human- and machine-readable way. Examples include `<article>`, `<section>`, `<header>`, `<footer>`, and `<nav>`. These help with SEO and accessibility.
4. **What is the purpose of the `<head>` tag in HTML?**
   - **Answer**: The `<head>` element contains meta-information about the document, such as the title, character set, links to external files (e.g., CSS, JavaScript), and other meta tags (e.g., keywords, description).
5. **What is the difference between the `id` and `class` attributes in HTML?**
   - **Answer**: The `id` attribute is used to uniquely identify a single element on a page and should be used only once per page. The `class` attribute is used to group multiple elements with the same styling or behavior, and it can be used multiple times on a page.
6. **What is the purpose of the `alt` attribute in an `<img>` tag?**
   - **Answer**: The `alt` attribute provides alternative text for an image if it cannot be displayed. It is important for accessibility, allowing screen readers to describe the image to visually impaired users.
7. **Explain the difference between the `<link>` and `<script>` tags.**
   - **Answer**: The `<link>` tag is used to link external resources like CSS files to the HTML document, whereas the `<script>` tag is used to link or embed JavaScript files into the document.
8. **What are data attributes in HTML?**
   - **Answer**: Data attributes are custom attributes that can be added to any HTML element. They store extra information about an element that is not displayed on the page. Example: `<div data-id="123">`.

CSS Interview Questions

1. **What is CSS?**

- **Answer**: CSS (Cascading Style Sheets) is a language used to style and format the layout of web pages. It controls the design, colors, fonts, spacing, and other visual aspects of a website.

2. **What is the difference between `class` and `id` selectors in CSS?**
   - **Answer**: The `id` selector targets a single, unique element on a page and is prefixed with `#`. The `class` selector can target multiple elements and is prefixed with a `.`. For example, `#header` targets the element with `id="header"`, while `.header` can target all elements with `class="header"`.
3. **What are the different ways to apply CSS to a webpage?**
   - **Answer**: There are three primary ways to apply CSS:
     - **Inline CSS**: Using the `style` attribute directly within an HTML tag (e.g., `<p style="color: red;">`).
     - **Internal CSS**: Defining CSS rules within a `<style>` tag inside the `<head>` section of the HTML document.
     - **External CSS**: Linking to an external CSS file using the `<link>` tag.
4. **What are CSS Flexbox and Grid?**
   - **Answer**: Flexbox and Grid are two layout systems in CSS used to create responsive, flexible designs:
     - **Flexbox** is a one-dimensional layout model that helps distribute space along a row or column.
     - **CSS Grid** is a two-dimensional layout model that enables both rows and columns to be aligned and spaced efficiently.
5. **What is the difference between `position: relative`, `absolute`, `fixed`, and `sticky` in CSS?**
   - **Answer**:
     - **`relative`**: The element is positioned relative to its normal position.
     - **`absolute`**: The element is positioned relative to the nearest positioned ancestor (not static).
     - **`fixed`**: The element is positioned relative to the browser window and stays in place even when scrolling.
     - **`sticky`**: The element behaves like `relative` until it reaches a defined scroll position, at which point it becomes `fixed`.
6. **What is the box model in CSS?**
   - **Answer**: The box model describes the rectangular structure of an HTML element, including:
     - **Content**: The actual content of the element.
     - **Padding**: Space between the content and the border.
     - **Border**: A border surrounding the padding (if any).
     - **Margin**: Space outside the border that separates the element from other elements.
7. **What are pseudo-classes in CSS?**
   - **Answer**: Pseudo-classes are keywords added to selectors that specify a special state of an element. Examples include:
     - `:hover` – When the user hovers over an element.
     - `:focus` – When an element receives focus, such as an input field.
     - `:nth-child()` – To select elements based on their position in a group.

8. **What is the difference between `visibility: hidden` and `display: none`?**
    - **Answer**:
        - `visibility: hidden` makes the element invisible, but it still takes up space in the layout.
        - `display: none` completely removes the element from the document flow, and it does not occupy any space.
9. **What are media queries in CSS?**
    - **Answer**: Media queries allow CSS to be applied conditionally based on the device's characteristics, such as screen size or resolution. This is often used to create responsive designs.

    Example:

```
@media (max-width: 600px) {
  body {
    background-color: lightblue;
  }
}
```

10. **What is the difference between `em` and `rem` units in CSS?**
    - **Answer**:
        - `em` is relative to the font-size of its parent element.
        - `rem` (root em) is relative to the font-size of the root element (typically `<html>`).

These are just a few examples to help you prepare for an HTML and CSS interview. Understanding the fundamentals of both languages and how they work together is key to answering these questions effectively.