1.Explain how CSS differs from HTML in the context of web development.
HTML is used to create web pages by telling the browser how to display its content, it's mainly the structure of the page and content while CSS describes how the element of HTML can be displayed on screen,basically the style of the content.
2.List the methods of including CSS in an HTML document and briefly describe each.
1. Inline CSS-This method involves adding the style directly to the HTML element using the "style" attribute. It allows you to apply specific styles to individual elements. For example:
```html
<p style="color: blue;">This text is blue!</p>
```
2. Internal CSS-With this method, you place CSS rules inside a `<style>` tag within the `<head>` section of the HTML document. This allows you to define styles for multiple elements in one place. For example:
```html
<head>
  <style>
    p {
      color: blue;
    }
  </style>
</head>
```
3.Internal CSS-keeps the styles separate from the HTML elements, making it easier to maintain and update.
External CSS: This method involves creating a separate .css file and linking it to your HTML document using the `<link>` tag. The CSS rules are written in the external file, which can be reused across multiple HTML pages. For example:
```html
<head>
  <link rel="stylesheet" href="styles.css">
</head>
```
3.Describe the anatomy of a CSS rule.

- Selector - Basically what we would like to style
- Declaration - Basically Everything in the curly braces
- Property - Basically left of the colon
- Value - Basically right of the colon followed by a semicolon

4.When might you want to use RGBA instead of RGB?

So, the RGB color model is all about mixing red, green, and blue light to create different colors. Now, when you add the "A" for alpha, you introduce transparency. With RGBA, you can specify how see-through a color should be. For example, `rgba(255, 0, 0, 0.5)` would give you a semi-transparent red. This is super handy when you want to layer elements on top of each other

and still see a bit of what's underneath. It adds depth and can create some really cool visual effects on your web page.

5.How do Hex color values differ from RGB?

Hex color values are like the web's shorthand for RGB. Instead of using three numbers for red, green, and blue, Hex combines them into one six-digit number starting with a #. It's more compact, and designers love it for coding colors quickly.

6.When might a developer prefer to use HSL over other color formats?

HSL stands for Hue, Saturation, and Lightness.Hue represents the actual color itself, like red, blue, or green. It's measured in degrees on a color wheel.Saturation refers to the intensity or purity of the color. A higher saturation means a more vibrant and vivid color, while a lower saturation results in a more muted or pastel-like color.- Lightness determines how bright or dark the color appears. A higher lightness value makes the color lighter, while a lower value makes it darker.Developers often prefer using HSL because it provides more intuitive control over color adjustments. It allows them to easily tweak the brightness, saturation, and hue of a color without affecting the others. This flexibility makes it ideal for tasks like creating gradients, generating color schemes, or dynamically adjusting colors based on user interactions.

7.What are the primary text properties used in CSS to modify the appearance and layout of text?

1. `font-family`: This property allows you to specify the font or list of fonts to be used for the text.

2. `font-size`: It determines the size of the text, whether in pixels, ems, or other units.

3. `font-weight`: You can use this property to make the text appear bold or normal.

4. `font-style`: It enables you to apply italic or normal styles to the text.

5. `text-decoration`: This property is used to add underline, overline, line-through, or none to the text.

6. `text-align`: It controls the alignment of the text within its container, such as left, right, center, or justify.

7. `line-height`: It sets the height of each line of text, affecting the spacing between lines.

8. `letter-spacing` and `word-spacing`: These properties allow you to adjust the spacing between letters and words, respectively.By utilizing these text properties, you can customize the appearance and layout of text in your web projects.

8.In what scenarios might it be beneficial to use `vh` or `vw` as a unit for font size?

Using `vh` (viewport height) or `vw` (viewport width) units for font size is super handy when you want your text to scale based on the browser window's size. This can be especially beneficial for:1. Making headlines responsive so they fit well on different screen sizes.2. Creating a fluid and dynamic typography that adjusts to the window size, which is great for a more responsive design.3. Ensuring text remains legible on large displays without having to specify font sizes for multiple breakpoints.

9.Explain the difference between `em` and `rem` units.

- `em` is relative to the font size of its own element. If you change the font size of a parent element, it'll affect the `em` units in the child elements because they're based on the parent's font size. While - `rem` (root em), on the other hand, is relative to the root element's font size, which is usually the `<html>` element. This means `rem` units are consistent across the entire document, making it easier to manage the font sizes and spacing throughout your design.

10.If multiple font families are listed in the font-family property, how does the browser decide which one to display?

The browser goes through the list of font families you've provided in the `font-family` property from left to right. It tries to use the first font that's installed on the system or available online. If the first one isn't available, it moves on to the next one in the list, and so on, until it finds one that works. If none of the specified fonts are available, it will default to a generic font family, like serif or sans-serif, depending on the browser's default settings.