Media Queries in CSS

Media queries allow you to apply different styles to a web page based on the device's characteristics, such as screen width or device orientation. They are fundamental in responsive web design, ensuring that web pages look good on various devices and screen sizes.

1. Difference Between `min-width` and `max-width` in Media Queries

- `min-width`: Applies styles when the viewport is at least the specified width. It's used to target larger screens or to create responsive designs that adapt as the viewport expands.

```
/* Apply styles for viewports 600px wide or wider */
@media (min-width: 600px) {
  body {
    background-color: lightblue;
  }
}
```

- `max-width`: Applies styles when the viewport is at most the specified width. It's used to target smaller screens or to ensure designs work well on narrower viewports.

```
/* Apply styles for viewports 599px wide or narrower */
@media (max-width: 599px) {
  body {
    background-color: lightcoral;
  }
}
```

2. `float` Property in CSS

The `float` property in CSS is used to position an element to the left or right of its container, allowing other content to flow around it.

- Float Left: Moves the element to the left, and text or inline elements wrap around it.
```
.float-left {
  float: left;
  margin-right: 10px; /* Optional margin to provide space */
}

<img src="example.jpg" class="float-left" alt="Example Image">
<p>This text will wrap around the floated image on the left.</p>
```

- **Float Right:** Moves the element to the right, and text or inline elements wrap around it.

```
.float-right {
  float: right;
  margin-left: 10px; /* Optional margin to provide space */
}
```

```html
html
<img src="example.jpg" class="float-right" alt="Example Image">
<p>This text will wrap around the floated image on the right.</p>
```

3. `clear` Property in CSS

The `clear` property is used to control the behavior of elements that follow floated elements. It ensures that an element is displayed below floated elements, preventing overlapping.

- Clear Both: Prevents an element from floating next to any floated elements on either side.

```
.clear-both {
  clear: both;
}
```

```
<div class="float-left">Floated content</div>
<div class="clear-both">This content will clear the float above and appear below it.</div>
```

- Clear Left: Ensures that an element does not float next to any floated elements on the left side.

```
.clear-left {
  clear: left;
}
```

```
<div class="float-left">Floated content</div>
```

<div class="clear-left">This content will clear any floats on the left side.</div>