* **Benefits of using CSS**:

- **CSS saves time**: We can write CSS once and then reuse the same sheet in multiple HTML pages.

- **Easy maintenance**: To make global change, simply change the style and all elements in the web pages will be updated automatically.

-**Global web standards**: Using CSS in all the HTML pages to make them compatible with future browsers.

-**Platform Independence**: The script offer consistent platform independence and can support latest browsers as well.

* **Disadvantages of CSS**

-**Security Issues**: Anyone with access can make changes to CSS.

-**Creates Confusion:** There are CSS, CSS2 and CSS3. Each of these versions is distinct from other in terms of features. This produces confusion, and it strikes beginners and users who aren’t developers even more.

-**Cross-browsers issues**: This such drawback of CSS that consumes a lot of time. If compatibility testing is not done correctly, the website will fail to run adequately on other browsers.

-**Differences in Display**: CSS data is interpreted depending on the internet browser version. If the visitors are using an outdated version, they won’t be able to see the design properly.

* **Difference between CSS2 and CSS3**

|  |  |  |
| --- | --- | --- |
| Sr. No. | **CSS2** | **CSS3** |
| 1 | CSS is capable of positioning texts and objects. | CSS3 is capable of making the web page more attractive and takes less time to create. |
| 2 | Responsive designing is not supported in CSS. | It supports responsive design. |
| 3 | CSS cannot be split into modules. | CSS3 can be breakdown into modules. |
| 4 | We cannot build 3D animation and transformation. | We can perform all kinds of animation and transformations. |
| 5 | CSS is very slow as compared to CSS3 | CSS3 is faster than CSS |
| 6 | We can only use single text blocks. | We can use multi-column text blocks. |
| 7 | CSS does not support media queries. | CSS3 supports media queries. |

* **CSS Style components**

1) **Selector**: HTML element name, id name, class name.

2) **Property**: It’s like an attribute such as background color, font-size, position , text-align, color, border,etc.

3)**Value**: which defines property or values allocate for properties.

* **CSS Opacity**:

The opacity property specifies the opacity/transparency of an element. The opacity property can take a value from 0.0-0.1. The lower value, the more transparent.

* **Change the background color of an element:**

<!DOCTYPE html>

<html>

<head>

<style>

h1 {

background-color: green;

}

</style>

</head>

<body>

<h1>CSS background-color example!</h1>

</body>

</html>

Output:

**CSS background-color example!**

* **Image no repetition example:**

<!DOCTYPE html>

<html>

<head>

<style>

body {

background-image: url("img.png");

background-repeat: no-repeat;

}

</style>

</head>

<body>

<h1>Hello World!</h1>

<p>W3Schools background image example.</p>

</body>

</html>

* **The use of background-position property**:

The position property specifies the type of positioning method used for an element. Elements are then positioned using the top, bottom, left and right properties. However, these properties will not work unless the position property is set first. They also work differently depending on the position value.

There are five different position values:

1. Static

2. Relative

3. Fixed

4. Absolute

5. Sticky

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

The background-attachment property sets whether a background image scrolls with the rest of the page, or is fixed.

* **Why background and color property be used as separate properties?**

-It enhances the legibility of style sheets. The background property is a complex property in CSS, and if it combined with color, the complexity will further increase.

-Color is an inherited property while the background is not. So this can make confusion further.

* **How to center block elements using CSS1?**

As block elements take full line width, to center them we only have the margin property that is controlling them horizontally.

Ex.

<!DOCTYPE html>

<html lang=’en’>

<head>

<style>

.myblock{

margin:auto;

border: 2px solid red;

padding: 15px;

text-align:center;

}

</style>

</head>

<body>

<div class=”myblock”>div who has default display:block

</div>

</body>

</html>

* **How to maintain CSS specifications?**

-CSS specifications can include dimensions, position, color and background color of objects. Specifications can only be made if they can be applied to the specified tag object.

- For example, consider a paragraph tag,<p> and a division tag, <div>, which could be used as an object or grouping tag. The style “color”, when applied to the paragraph, will set the color of the text.

The style “background” or “background-color”, when applied to the paragraph and a division, will color the background of both.

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

CSS can be added to HTML documents 3 ways:

-Inline: by using the style attribute inside HTML elements.

-Internal: by using a <style> element in the <head> section.

-External: by using a <link> element to link an external css file.

* **Embedded Style sheet:**

It allows you to define styles for a particular HTML document as a whole in one place. This is done by embedding the <style> </style> tags containing the CSS properties in the head of the document.

Ex.

<!DOCTYPE html>

<html>

  <head>

     <title>Page Title</title>

    <style>

         h2 {

             color: red;

         }

         P{

             font-variant: italic;

         }

     </style>

</head>

<body>

     <h2>Welcome to GFG</h2>

     <p>This document is using an embedded style sheet! </p>

</body>

</html>

* **External Style sheets**:

-With an external style sheet, we can change the look of an entire website by changing just one file.

- Each HTML page must include a reference to the external style sheet file inside the <link> element, inside the head section.

Ex.

<!DOCTYPE html>

<html>

<head>

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

</head>

<body>

<h1>This is a heading</h1>

</body>

</html>

* **Advantages of External stylesheet:**

-Using them, the styles of multiple documents can be controlled from one file.

-Classes can be created for use on multiple HTML element types in many documents.

-In complex situations, selector and grouping methods can be used to apply styles.

**Disadvantages of External Stylesheet:**

-In order to import style information for each document, an extra download is needed.

-Until the external stylesheet is loaded, it may not be possible to render the document.

-For small number of style definitions, it is not viable.

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

CSS selectors are used to find or select the HTML elements you want to style.

There are different types of selectors:

-Element selector:

Ex.

p{  
  text-align: center;  
  color: red;  
}

Here, all <p> elements on the page will be center-aligned, with a red text color.

-id selector: The id of an element is unique within a page, so the id selector is used to select one unique element.

Ex.

#para1{  
  text-align: center;  
  color: red;  
}

-Class selector: The class selector selects HTML elements with a specific class attribute.

Ex.

.first {  
  text-align: center;  
  color: red;  
}

-Universal Selector: The universal selector (\*) selects all HTML elements on the page.

Ex.

\* {  
  text-align: center;  
  color: blue;  
}

-Multi value Selector: The multi value selector selects all the HTML elements with the same style definitions.

Ex.

h1, h2, p {  
  text-align: center;  
  color: red;  
}

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

The @media rule, introduced in CSS2, made it possible to define different style rules for different media types.

**Media types**:

-all: used for all media type devices

-print: used for printers

-screen: used for computer screens, tablets, smart-phones etc.

-speech: used for screenreaders that reads the page out loud

Ex.

<!DOCTYPE html>

<html>

<head>

<style>

Body{

Background-color: pink;

}

@media screen and (min-width:480px){

Body{

Background-color: lightgreen;

}

}

</style>

</head>

<body>

<h1>Resize the browser window to see the effect.

</h1>

</body>

</html>

* **What is the rule set?**

The rule set is a statement that tells browsers how to render particular elements on an HTML page. A rule set consists of a selector followed by a declaration block.

Ex.

H1{

color: blue;

margin-top: 5px;

}

* **Create layout:**
* <!DOCTYPE html>
* <html lang="en">
* <head>
* <meta charset="UTF-8">
* <meta http-equiv="X-UA-Compatible" content="IE=edge">
* <meta name="viewport" content="width=device-width, initial-scale=1.0">
* <title> 6 pics layout</title>
* <style>
* .first{
* height: 350px;
* width: 350px;
* border: 1px solid black;
* display: inline-flex;
* margin-left: 20%;
* margin-top: 5%;
* margin-right: 1%;
* }
* .sub{
* display: flex;
* }
* .second{
* height: 350px;
* width: 350px;
* border: 1px solid black;
* display: inline-flex;
* margin-right: 1%;
* }
* .third{
* height: 350px;
* width: 350px;
* border: 1px solid black;
* display: inline-flex;
* margin-right: 10%;

* }
* .forth{
* height: 350px;
* width: 350px;
* border: 1px solid black;
* display: inline-flex;
* margin-left: 20%;
* margin-top: 1%;
* margin-right: 1%;
* }
* .fifth{
* height: 350px;
* width: 350px;
* border: 1px solid black;
* display: inline-flex;
* margin-right: 1%;
* }
* .sixth{
* height: 350px;
* width: 350px;
* border: 1px solid black;
* display: inline-flex;
* margin-right: 10%;
* }
* </style>
* </head>
* <body>
* <div class="first">
* <div>
* <img src="Images\pic1.jpg" alt="" height="250px" width="350px">
* <div class="sub">
* <p>"The clearest way into the Universe is through a forest wilderness."</p>
* </div>
* </div>
* </div>
* <div class="second">
* <div>
* <img src="Images\pic2.jpg" alt="" height="250px" width="350px">
* <div class="sub">
* <p>"Adopt the pace of nature: her secret is patience."</p>
* </div>
* </div>
* </div>
* <div class="third">
* <div>
* <img src="Images\pic3.jpg" alt="" height="250px" width="350px">
* <div class="sub">
* <p>"The reason birds can fly and we can't is simply because they have perfect faith, for to have faith is to have wings."</p>
* </div>
* </div>
* </div>
* <div class="forth">
* <div>
* <img src="Images\pic4.jpg" alt="" height="250px" width="350px">
* <div class="sub">
* <p>"I googled my symptoms… turned out I just need to go camping"</p>
* </div>
* </div>
* </div>
* <div class="fifth">
* <div>
* <img src="Images\pic5.jpg" alt="" height="250px" width="350px">
* <div class="sub">
* <p>"When they figure out how to bottle up orgasms and sell them as a food additive, I'll be first in line."</p>
* </div>
* </div>
* </div>
* <div class="sixth">
* <div>
* <img src="Images\pic6.jpg" alt="" height="250px" width="350px">
* <div class="sub">
* <p>"The mountains are calling and I must go."</p>
* </div>
* </div>
* </div>
* </body>
* </html>

Output: