

MODULE: 2 (CSS and CSS 3)



From: Shivani Gohil

To: Arpit Kansara

**1.What are the benefits of using CSS?**

Ans. CSS handles the look and feel part of a web page. Using CSS, you can control the colour of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, etc.

The following are the advantages of CSS −

* **CSS saves time** − You can write CSS once and then reuse the same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.
* **Easy maintenance** − To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.
* **Global web standards** − Now HTML attributes are being deprecated and it is being recommended to use CSS. So it's a good idea to start 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.

**2. What are the disadvantages of CSS?**

**Ans. Disadvantages of CSS:**

* CSS, CSS 1 up to CSS3, result in creating of confusion among web browsers.
* With CSS, what works with one browser might not always work with another. The web developers need to test for compatibility, running the program across multiple browsers.
* There exists a scarcity of security.
* After making the changes we need to confirm the compatibility if they appear. The similar change affects on all the browsers.
* The programming language world is complicated for non-developers and beginners. Different levels of CSS i.e. CSS, CSS 2, CSS 3 are often quite confusing.
* Browser compatibility (some styles sheet are supported and some are not).
* CSS works differently on different browsers. IE and Opera supports CSS as different logic.
* There might be cross-browser issues while using CSS.
* There are multiple levels which creates confusion for non-developers and beginners.

**3. What is the difference between CSS2 and CSS3?**

**Ans. CSS2:** CSS stands for Cascading Style Sheet. Its main objective is to provide styling and fashion to the web page. CSS provides color, layout, background, font, and border properties. CSS features allow better content accessibility, enhanced flexibility, and control, as well as the specification of the characteristics of presentation.

**CSS3:** CSS3 stands for Cascading Style Sheet level 3, which is the advanced version of CSS. It is used for structuring, styling, and formatting web pages. Several new features have been added to CSS3 and it is supported by all modern web browsers. The most important feature of CSS3 is the splitting of CSS standards into separate modules that are simpler to learn and use.

**Difference between CSS and CSS3:**

|  |  |  |
| --- | --- | --- |
|  | CSS2 | CSS3 |
|  | * CSS is capable of positioning texts and objects. | * On the other hand, CSS3 is capable of making the web page more attractive and takes less time to create. CSS3 is backward compatible with CSS. |
|  | * Responsive designing is not supported in CSS | * CSS3 is the latest version, hence it supports responsive design. |
|  | * CSS cannot be split into modules. | * Whereas CSS3 can be breakdown into modules. |
|  | * Using CSS, we cannot build 3D animation and transformation. | * But in CSS3 we can perform all kinds of animation and transformations as it supports animation and 3D transformations. |
|  | * CSS is very slow as compared to CSS3 | * Whereas CSS3 is faster than CSS. |
|  | * In CSS we have set of standard colors and it uses basic color schemes only. | * Whereas CSS3 has a good collection of HSL RGBA, HSLA, and gradient colors. |
|  | * In CSS we can only use single text blocks. | * But in CSS3 we can use multi-column text blocks |
|  | * CSS does not support media queries. | * But CSS3 supports media queries |
|  | * CSS codes are not supported by all types of modern browsers. | * Being the latest version, CSS3 codes are supported by all modern browsers. |
|  | * In CSS, designers have to manually develop rounded gradients and corners. | * But CSS3 provides advanced codes for setting rounded gradients and corners |
|  | * There is no special effect like shadowing text, text animation, etc. in CSS. The animation was coded in jQuery and JavaScript. | * CSS3 has many advance features like text shadows, visual effects, and a wide range of font styles and colors. |
|  |  |  |
|  | * In CSS, the user can add background colors to list items and lists, set images for the list items, etc. | * Whereas CSS3 list has a special *display* property defined in it. Even list items also have counter reset properties. |
|  | * CSS was developed in 1996. | * CSS3 is the latest version of CSS and was released in 2005. |
|  | * CSS is memory intensive. | * CSS3 memory consumption is low as compared to CSS. |

**4. Name a few CSS style components**

**Ans. The major components of a CSS style are as follows:**

* **Selector:** HTML element name, id name, class name.
* **Property:** It's like an attribute such as background color, font-size, position,text-align, color,border etc.
* **Values:** Which defines property or values allocate for properties.

**Main Components of CSS**

* In the Above Section, we have studied about Introduction to CSS, So now we are going ahead with the main components of CSS are as below:
* **Easily maintainable:** If you are intended to make any global change, simply change the styling and you can see all other elements in all other webpages getting automatically updated.
* **CSS is time-saving:** You can just write the script once and reuse the same sheet as much time as you want.
* **Superior styles to the native front end:** CSS has comparatively a much wider array of attributes and list if compared to HTML. Therefore the HTML page can have a brighter look and feel if compared to the normal HTML attributes.
* **Ease with Search Engines:** CSS is considered as a very convenient and an easy to read styling sheet. This means, that the search engines don’t have to put in a lot of effort in trying to read the text.
* **Efficient cache storing:** CSS can be used to store the web applications locally with the help of an offline cache mechanism which can be used to view the offline websites.

**5.What do you understand by CSS opacity**

**Ans.** The opacity CSS property sets the opacity of an element. Opacity is the degree to which content behind an element is hidden, and is the opposite of transparency.

* Opacity is the degree of transparency of an element.
* The Opacity takes a value between 0 to 1.
* The default value of opacity is 1.
* The Opacity value of 0.5 is called Translucent.

In modern browsers or the latest version of browsers, you can simply use the property with the name as *opacity*to set the degree of transparency.

The transparency is inversely proportional to opacity which means if you have a lesser value of opacity, then the image is more transparent. Similarly, if you have a larger value of opacity, then the image is less transparent.

/\* Global values \*/

opacity: inherit;

opacity: initial;

opacity: revert;

opacity: revert-layer;

opacity: unset;

**6.How can the background color of an element be changed?**

**Ans.** To add background colour in HTML, use the CSS background-colour property. Set it to the colour name or code you want and place it inside a style attribute. Then add this style attribute to an HTML element, like a table, heading, div, or span tag.

Adding a background colour can help a certain element stand out on the page, making it more readable.

**7. How can image repetition of the backup be controlled?**

**Ans.** To control the repetition of an image in the background, use the *background-repeat* property. You can use no-repeat value for the background-repeat property if you do not want to repeat an image, in this case, the image will display only once.

Example

You can try to run the following code to learn how to work with the *background-repeat* property:

<html>

   <head>

      <style>

         body {

            background-image: url("/css/images/css.jpg");

            background-repeat: repeat;

         }

      </style>

   </head>

   <body>

      <p>Tutorials Point</p>

   </body>

</html>

**8. What is the use of the background-position property?**

**Ans.** The background-position property in CSS is mainly used to sets the initial position for the background image i.e., it is used to set an image at a certain position. The position that is relative to the positioning layer, can be set by using the [background-origin](https://www.geeksforgeeks.org/css-background-origin-property/) property.

**Syntax:**

background-position: value;

**Note:**The [background-image](https://www.geeksforgeeks.org/css-background-image-property/) is placed default to the top-left corner of an element with a repetition on both horizontally & vertically.

**Property values:**

**background-position: left top:** This property is used to set the image at the left top.

**Example:**This example illustrates the use of background-position property where the position value is set to the left top.

HTML

|  |
| --- |
| <!DOCTYPE html>  <**html**>  <**head**>      <**title**> CSS | background-position Property </**title**>      <**style**>      body {          background-image: url(  "<https://media.geeksforgeeks.org/wp-content/uploads/background-position1.png>");          background-repeat: no-repeat;          background-attachment: fixed;          background-position: left top;      }      </**style**>  </**head**>    <**body**>  </**body**>  </**html**> |

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

**Ans.** The [*background-*attachment](https://www.geeksforgeeks.org/css-background-attachment-property/) property in CSS is used to specify the kind of attachment of the background image with respect to its container. It can be set to scroll or make it remain fixed. It can be applied to all[HTML](https://www.geeksforgeeks.org/html/)elements.

**10. Why should background and color be used as separate properties?**

**Ans. There are two reasons behind this:**

* It enhances the legibility of style sheets. The background property is a complex property in CSS, and if it is combined with color, the complexity will further increase.
* Colour is an inherited property while the background is not. So this can make confusion further.
* The major difference between CSS background vs background-color property is that the background property is shorthand of all background properties. On the other hand, the background-color property is the subset of the background property used to set the background color. Moreover, our expert developers compare and describe the differences between these two properties in this article.

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

**Ans. There are two steps to center a block-level element –**

* **Step 1: Define the external width – We need to define the external width. Block-level elements have the default width of 100% of the webpage, so for centering the block element, we need space around it. So for generating the space, we are giving it a width.**
* **Step 2: Set the left-margin and the right-margin of the element to auto – Since we produced a remaining space by providing external width so now we need to align that space properly that’s why we should use margin property. Margin is a property that tells how to align a remaining space. So for centering the element you must set left-margin to auto and right-margin to auto.**

**12. How to maintain the CSS specifications?**

**Ans.** When more than one set of CSS rules apply to the same element, the browser will have to decide which specific set will be applied to the element. The rules the browser follows are collectively called Specificity

* Specificity Rules include:
* CSS style applied by referencing external stylesheet has lowest precedence and is overridden by Internal and inline CSS.
* Internal CSS is overridden by inline CSS.
* Inline CSS has highest priority and overrides all other selectors.
* Example:

html

|  |
| --- |
| <html>    <head>      <link rel="stylesheet" type="text/css" href="external.css">      <style type="text/css">          h1 {             background-color: red;             color: white;          }            h2 {              color: blue;          }      </style>  </head>    <body>      <h1>          Internal CSS overrides external CSS      </h1>      <h2 style="color: green;">          Inline CSS overrides internal CSS      </h2>  </body>    </html> |

**Specificity Hierarchy:**

Every element selector has a position in the Hierarchy.

* **Inline style:** Inline style has highest priority.
* **Identifiers(ID):** ID have the second highest priority.
* **Classes, pseudo-classes and attributes:**Classes, pseudo-classes and attributes are come next.
* **Elements and pseudo-elements:** Elements and pseudo-elements have lowest priority.

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

**Ans.** There are three ways to integrate CSS into web page.

1. **Inline:** HTML elements may have CSS applied to them via the STYLE attribute.
2. **Embedded:** By placing the code in STYLE element within the head elements.
3. **linked/imported:** Place the CSS in an external file and link it via a link elements.

**14. What is embedded style sheets?**

**Ans**. Embedded Stylesheet: 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 your document. Embedded style sheets are particularly useful for HTML documents that have unique style requirements from the rest of the documents in your project. However, if the styles need to be applied across multiple documents, you should link to an external style sheet instead of using individual embedded style sheets. Using embedded stylesheets holds a distinct advantage over inline styles which only allow you to address one HTML element at a time.

15**. What are the external style sheets?**

**Ans.**The external style sheet is generally used when you want to make changes on multiple pages. It is ideal for this condition because it facilitates you to change the look of the entire web site by changing just one file.

It uses the <link> tag on every page and the <link> tag should be put inside the head section.

Example:

1. <head>
2. <link rel="stylesheet" type="text/CSS" href="mystyle.css">
3. </head>

The external style sheet may be written in any text editor but must be saved with a .css extension. This file should not contain HTML elements.

**16. What are the advantages and disadvantages of using external style sheets?**

**Ans.**The advantages of External Style Sheets are as follows:

* With the help of External Style Sheets, the styles of numerous documents can be organized from one single file.
* In External Style Sheets, Classes can be made for use on numerous HTML element types in many forms of the site.
* In complex contexts, Methods like selector and grouping can be implemented to apply styles.

The disadvantages of External Style Sheets are as follows:

* An extra download is essential to import style information for each file.
* The execution of the file may be deferred till the external style sheet is loaded.
* While implementing style sheets, we need to test Web pages with multiple browsers in order to check compatibility issues.

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

**Ans**. In [CSS](https://developer.mozilla.org/en-US/docs/Glossary/CSS), selectors are used to target the [HTML](https://developer.mozilla.org/en-US/docs/Glossary/HTML) elements on our web pages that we want to style. There are a wide variety of CSS selectors available, allowing for fine-grained precision when selecting elements to style.

**[There are several different types of selectors:](https://www.thoughtco.com/preformatted-text-3468275)**

* **[type selectors – matching a specific element](https://www.thoughtco.com/preformatted-text-3468275)**
* **[class selectors – matching elements with a specific class](https://www.thoughtco.com/preformatted-text-3468275)**
* **[ID selectors – matching the element with a specific ID](https://www.thoughtco.com/preformatted-text-3468275)**
* [**descendant selectors**](https://www.thoughtco.com/property-definition-3466899)**– matching elements that are descendants of a specific element**
* **child selectors – matching elements that are a child of the specific element**
* **universal selectors – matching any element**
* **adjacent sibling selectors – matching elements immediately preceded by a specific element**
* **attribute selectors – matching elements with a specific attribute or attribute value**
* **pseudo-class selectors – matching elements with a specific pseudo-class**
* **pseudo-element selectors – matching elements with specific pseudo-element properties**

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

**Ans.** **Introduction to media types**

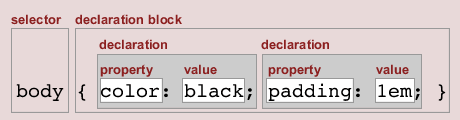
One of the most important features of style sheets is that they specify how a document is to be presented on different media: on the screen, on paper, with a speech synthesizer, with a braille device, etc.

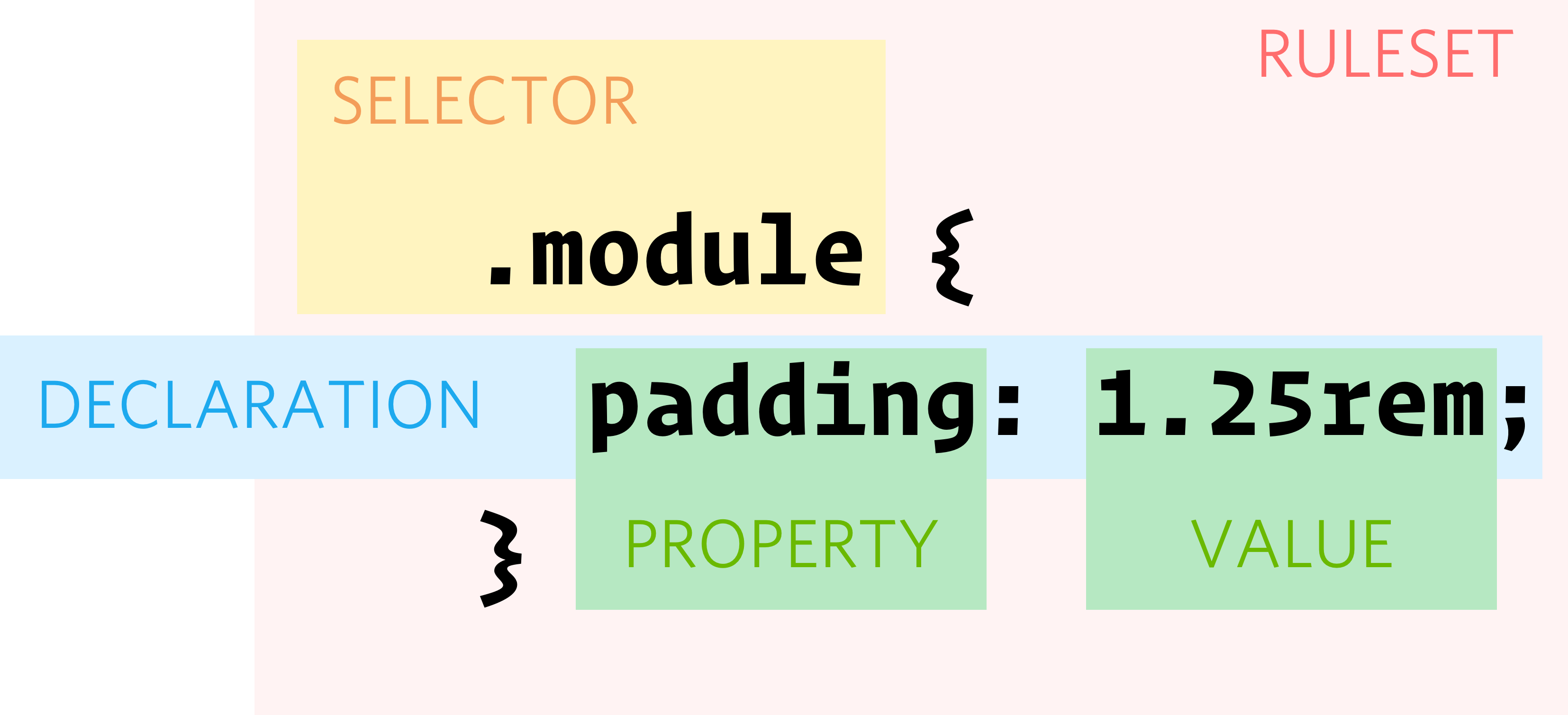
Certain CSS properties are only designed for certain media (e.g., the ['page-break-before'](https://www.w3.org/TR/CSS21/page.html#propdef-page-break-before) property only applies to paged media). On occasion, however, style sheets for different media types may share a property, but require different values for that property. For example, the ['font-size'](https://www.w3.org/TR/CSS21/fonts.html#propdef-font-size) property is useful both for screen and print media. The two media types are different enough to require different values for the common property; a document will typically need a larger font on a computer screen than on paper. Therefore, it is necessary to express that a style sheet, or a section of a style sheet, applies to certain media types.

**19. What is the rule set?**

Ans. A rule or "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.

**Rule structure**





**Selector**

The selector "selects" the elements on an HTML page that are affected by the rule set. The selector consists of everything up to (but not including) the first left curly bracket.

**For example:**

h1 {color: blue; margin-top: 1em;}  
p { padding: 5px; }  
td {bckground-color: #ddd; }

**Declaration block**

The declaration block is a container that consists of anything between (and including) the curly brackets. Whitespace inside a declaration block is ignored - so it can be used to lay out rules in any way you want.

**For example:**

h1 {color: blue;}  
p {padding: 5px;}  
td {background-color: #ddd;}

Or, with whitespace added to aid readability:

h1  
{  
color: blue;  
}

**Declaration**

The declaration tells a browser how to draw any element on a page that is selected. A declaration consists of a property and a value, separated by a colon ":". Although it is not essential to add a semicolon after a single declaration, it is recommended that you finish the last declaration in a block with a semicolon. **For example:**

h1 {color: blue;}

**Property**

The property is the aspect of that element that you are choosing to style. There can only be one property within each declaration.

**For example:**

p {padding: 5px;}

Value

The value is the exact style you wish to set for the property. For example:

p {padding:5px;}

**20. Create Layouts**

**Ans.** https://github.com/Shivani081/assignment/blob/main/css%20lay%20out.html

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