

CSS:

CSS fonts: CSS fonts is a module of css that defines font related properties and how fonts resources are loaded. Choosing the right font has a huge impact on how the readers experience a website. Using a font that is easy to read is important. The font adds value to your text.

➤ Basic Font property:

```
font-family: "Arial";  
font-size: 20px/1rem/1em;  
font-style: normal/italic;  
font-weight: bold/bolder;
```

CSS Colors:

Css uses color values to specify a color. They are used to set a color either for foreground, background of elements. They can also be used to affect color of borders and other decorative effects.

You can specify color values in various format. Following table lists all the possible formats.

Format	Syntax	Example
Hex code	#RRGGBB	P {color: #FF0000;}
Short Hex Code	#RGB	P {color: #6A7;}
RGB%	Rgb(rrr%, ggg%, bbb%)	P {color: rgb(50%,50%,50%);}
RGB Absolute	Rgb(rrr,ggg,bbb)	P {color: rgb(0,0,255);}
Keyword	Aqua,black, etc	P {color: teal;}

Css Background color:

The background-color property allows us to specify the background color for an element and value can be given using any css color format.

Ex: p { background-color: #9ACA42;}

CSS border:

The CSS border properties allow you to specify the style, width, and color of an element's border. The border-style property specifies what kind of border to display.

Ex:

```
p {border-style: dotted;}
```

- You can individually change the style of all side using:
--> border-bottom-style, border-top-style, border-left-style, border-right-style.

- The border-width property specifies the width of the four borders.

Ex: border-width: 5px;
border-width: 5px 10px;
border-width: 5px 6px 7px 8px;

- The border-color property is used to set the color of the four borders.

Ex: border-color: red green blue yellow;
border-color: red;

- The border-radius property is used to add rounded borders to an element.

Ex: border-radius: 5px;

- The border property is a shorthand property to specify all the individual border properties in one property

Ex: border: 5px solid red;

CSS margin:

The CSS “margin” properties are used to create space around elements, outside of any defined borders. CSS has properties for specifying the margin for each side of an element:

margin-top

margin-right
margin-bottom
margin-left

Ex:

```
p {  
  margin-top: 100px;  
  margin-bottom: 100px;  
  margin-right: 150px;  
  margin-left: 80px;  
}
```

- The margin shorthand property with four values

```
p {  
  margin: 25px 50px 75px 100px;  
}
```

CSS padding:

The CSS padding properties are used to generate space around an element's content, inside of any defined borders. CSS has properties for specifying the padding for each side of an element:

padding-top
padding-right
padding-bottom
padding-left

Ex: div {

```
  padding-top: 50px;  
  padding-right: 30px;  
  padding-bottom: 50px;  
  padding-left: 80px;  
}
```

The padding property is a shorthand property for the following individual padding properties:

EX: div {

```
  padding: 25px 50px 75px 100px;  
}
```

➤ CSS text :

We can apply different effects on the text used within an html document. The properties of the text effect helps us to make the text attractive and clear. There are some text effect properties in css that are listed below:

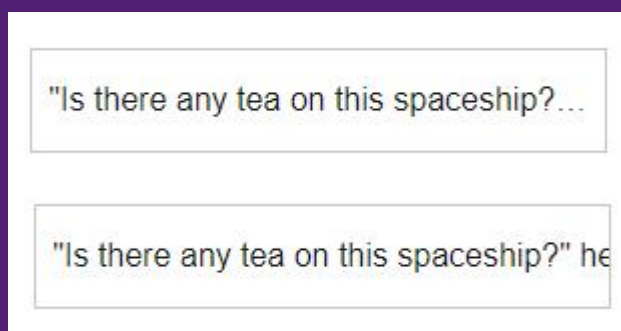
- text-overflow
- word-wrap
- word-break
- writing-mode

1. text-overflow:

- **Description:** The `text-overflow` property is used to specify how the content should behave when it overflows the box that contains it.
- **Values:**
 - `clip`: The content is clipped and any overflowing content is hidden.
 - `ellipsis`: Render an ellipsis ("...") to represent clipped text.

Ex:

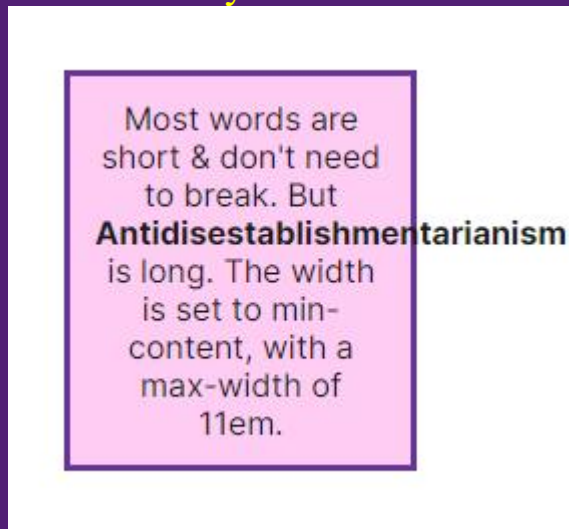
```
overflow: hidden;  
white-space: nowrap;  
text-overflow: ellipsis;
```



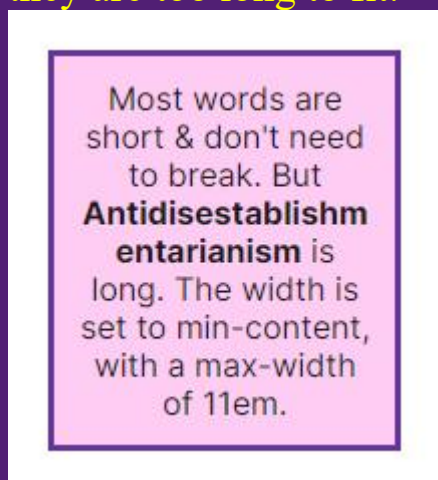
2. word-wrap:

- **Description:** The `word-wrap` property is used to specify whether or not the browser should break words that are too long to fit within the container.
- **Values:**

- ``normal``: Default value. Words are not broken, and an overflow may occur.



- ``break-word``: Words may be broken at arbitrary points if they are too long to fit.



Ex: `word-wrap: break-word;`

3. word-break:

- **Description:** The ``word-break`` property is used to control how words should break when reaching the end of a line.
- **Values:**
 - ``normal``: Break words according to their usual rules.
 - ``break-all``: Break words at any character when the box overflows.
 - ``keep-all``: Keep all characters within words on the same line. It prevents breaking within words.

Ex: `word-break: break-all;`

4. writing-mode:

- Description: The `writing-mode` property specifies the direction in which the inline-level boxes are placed in a block container. It is often used for vertical text or for specifying a specific text flow direction.
- Values:
 - `horizontal-tb`: Default value. Horizontal text, top-to-bottom flow.
 - `vertical-rl`: Vertical text, right-to-left flow.
 - `vertical-lr`: Vertical text, left-to-right flow.

EX:

```
writing-mode: vertical-rl;
```

● CSS height and width

The height and width properties are used to set the height and width of an element.

The height and width properties do not include padding, borders, or margins. It sets the height/width of the area inside the padding, border, and margin of the element.

```
Ex: div {  
  height: 200px;  
  width: 50%;  
  background-color: powderblue;  
}
```

● Css Position and float

The position property specifies the type of positioning method used for an element and determines in what manner an item is positioned on the page.

There are five different position values:

1. static
2. relative
3. fixed
4. absolute
5. Sticky

● CSS Overflow

The overflow property specifies whether to clip the content or to add scrollbars when the content of an element is too big to fit in the specified area.

- The overflow property has the following values:
 - **visible** - Default. The overflow is not clipped. The content renders outside the element's box
 - **hidden** - The overflow is clipped, and the rest of the content will be invisible
 - **scroll** - The overflow is clipped, and a scrollbar is added to see the rest of the content
 - **auto** - Similar to scroll, but it adds scrollbars only when necessary

● CSS border radius:

The border-radius property defines the radius of the element's corners. This property allows you to add rounded corners to elements. This property can have from one to four values.

- **Four values** => border-radius: 15px 50px 30px 5px; (T-R-B-L)
- **Three values** => border-radius: 15px 50px 30px; (T-RL-B)
- **Two values** => border-radius: 15px 50px; (TB-RL)
- **One value** - border-radius: 15px; (all side i.e TRBL)

● CSS border-image Property:

The border-image property allows you to specify an image to be used as the border around an element.

```
Ex: #borderimg1 {  
  padding: 50px;  
  border: 10px solid transparent;  
  border-image-source: url(border.png);  
  border-image-slice: 30;  
  border-image-width: 30px;  
  border-image-repeat: round;  
}
```

Or it can be shorthand using border-image property.

Syntax: border-image: source slice repeat;

```
Ex: #borderimg2 {  
  border: 10px solid transparent;  
  border-image: url(border.png) 20% round;  
}
```

● CSS Shadow:

With CSS you can add shadow to text and to elements.

Types:

1. text-shadow
2. box-shadow

1. Text shadow:

The CSS text-shadow property applies shadow to text.

```
h1 {  
  text-shadow: 2px 2px 5px red;  
  //(i.e horizontal 2px, vertical 2px, blur 5px and red color)  
}
```

➤ Multiple Shadows

To add more than one shadow to the text, you can add a comma-separated list of shadows.

```
Ex:h1 {  
  text-shadow: 0 0 3px #FF0000, 0 0 5px #0000FF;  
}
```

2. Box Shadow:

The CSS box-shadow property is used to apply one or more shadows to an element.

```
div {  
  box-shadow: 10px 10px 5px lightblue;  
}
```

➤ Multiple Shadows:

```
div {  
  box-shadow: 5px 5px blue, 10px 10px red, 15px 15px green;  
}
```


● CSS Gradients

CSS gradients let you display smooth transitions between two or more specified colors.

➤ Types of css gradients are:

1. Linear Gradients (goes down/up/left/right/diagonally)

To create a linear gradient you must define at least two color stops. Color stops are the colors you want to render smooth transitions among.

Syntax

```
background-image: linear-gradient(direction, color-stop1, color-stop2, ...);
```

```
Ex: #grad1 {  
  background-image: linear-gradient(to right, red, orange, yellow,  
  green, blue, indigo, violet);  
}
```

2. Radial Gradients (defined by their center)

A radial gradient is defined by its center. To create a radial gradient you must also define at least two color stops. By default, shape is ellipse, size is farthest-corner, and position is center.

Syntax

```
background-image: radial-gradient(shape size at position, start-color, ..., last-color);
```

```
Ex: #grad {  
  background-image: radial-gradient(circle, red, yellow, green);  
}
```

● CSS measurement unit:

➤ Absolute Lengths

The absolute length units are fixed and a length expressed in any of these will appear as exactly that size.

Unit	Description
cm	centimeters
mm	millimeters
in	inches (1in = 96px = 2.54cm)
px	pixels (1px = 1/96th of 1in)
pt	points (1pt = 1/72 of 1in)
pc	picas (1pc = 12 pt)

➤ **Relative Lengths**

Relative length units specify a length relative to another length property. Relative length units scale better between different rendering medium.

%	Relative to the parent element
em	Relative to the font-size of the element (2em means 2 times the size of the current font)
ex	Relative to the x-height of the current font

- **Navigation bar:** List of Links, that helps the visitors in accessing information from different pages or section.

Types:

1. Horizontal navigation bar

A navigation bar where the menu items are arranged horizontally, typically in a single row.

2. Vertical navigation bar

A navigation bar where the menu items are arranged vertically, usually in a single column.

3. Responsive navigation bar

A navigation bar that adjusts its layout and appearance based on the screen size, ensuring a good user experience on various devices, such as smartphones, tablets, and desktops.

4. Fixed Navigation Bar

A navigation bar that remains in a fixed position on the screen, typically at the top, even when the user scrolls down the page.

- **CSS Website Layout**

A CSS website layout refers to the arrangement and styling of various elements on a web page using Cascading Style Sheets (CSS). The layout involves positioning and styling elements such as headers, navigation menus, content areas, sidebars, and footers to create a visually appealing and organized web page.

- A simple breakdown of the CSS website layout components:

- **Header:** The top section of the webpage typically containing the website name, logo, and navigation.
- **Navigation:** The menu or links that allow users to navigate through the website.
- **Main Content:** The primary area where the main information or content of the webpage is displayed.
- **Sidebar:** An optional section usually placed alongside the main content for additional information or navigation.
- **Footer:** The bottom section of the webpage containing copyright information, links, or other footer content.

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