

Web Technologies

Lecture Week Six

Learn CSS and More...



This week's agenda

- 1). Text and typography
- 2). Flexbox
- 3). Backgrounds
- 4). Ethics



Text and Typography

Text is one of the core building blocks of the web.

By changing a few basic properties, you can significantly improve the reading experience for your users!

Cascading Style Sheets (CSS)

[From Wikipedia, the free encyclopedia](#)

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and repetition in the structural content as well as enabling the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

Cascading Style Sheets (CSS)

[From Wikipedia, the free encyclopedia](#)

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and repetition in the structural content as well as enabling the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.



Do you prefer Left or Right to read?

Cascading Style Sheets (CSS)

[From Wikipedia, the free encyclopedia](#)

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and repetition in the structural content as well as enabling the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

Cascading Style Sheets (CSS)

[From Wikipedia, the free encyclopedia](#)

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file which reduces complexity and repetition in the structural content as well as enabling the .css file to be cached to improve the page load speed between the pages that share the file and its formatting.

Some fundamental CSS font properties

font-family, *font-style*, *font-weight*, and *font-size*

font-family: Change the typeface

```
/* A font family name and a generic family name */  
font-family: "Gill Sans Extrabold", sans-serif;  
font-family: "Goudy Bookletter 1911", sans-serif;
```



```
font-family: "Goudy Bookletter 1911", sans-serif;
```



```
font-family: Goudy Bookletter 1911, sans-serif;
```

```
font-family: Red/Black, sans-serif;
```

```
font-family: "Lucida" Grande, sans-serif;
```

```
font-family: Ahem!, sans-serif;
```

```
font-family: test@foo, sans-serif;
```

```
font-family: #POUND, sans-serif;
```

```
font-family: Hawaii 5-0, sans-serif;
```



```
/* A generic family name only */
```

```
font-family: serif;  
font-family: sans-serif;  
font-family: monospace;  
font-family: cursive;  
font-family: fantasy;  
font-family: system-ui;  
font-family: ui-serif;  
font-family: ui-sans-serif;  
font-family: ui-monospace;  
font-family: ui-rounded;  
font-family: emoji;  
font-family: math;  
font-family: fangsong;
```

```
/* Global values */
```

```
font-family: inherit;  
font-family: initial;  
font-family: revert;  
font-family: revert-layer;  
font-family: unset;
```



Some fundamental CSS font properties

font-family, **font-style**, *font-weight*, and *font-size*

Use *font-style* to set whether text should be italic or not. *font-style* accepts one of the following keywords: *normal*, *italic*, and *oblique*.

Use italic and oblique fonts

font-style: normal

font-style: italic

font-style: oblique



Some fundamental CSS font properties

*font-family, font-style, **font-weight**, and font-size*

Use font-weight to set the “boldness” of text. This property accepts keyword values (normal, bold), relative keyword values (lighter, bolder), and numeric values (100 to 900).

The keywords normal and bold are equivalent to the numeric values 400 and 700, respectively.

Make text bold



Make text bold

font-weight: lighter

font-weight: 100

font-weight: 200

font-weight: 300

font-weight: 400

font-weight: normal

font-weight: 500

font-weight: 600

font-weight: 700

font-weight: bold

font-weight: bolder

font-weight: 800

font-weight: 900



Some fundamental CSS font properties

*font-family, font-style, font-weight, and **font-size***

Use font-size to control the size of your text elements. This property accepts length values, percentages, and a handful of keyword values.

In addition to length and percentage values, font-size accepts some *absolute* keyword values (xx-small, x-small, small, medium, large, x-large, xx-large) and a couple of *relative* keyword values (smaller, larger). The relative values are relative to the parent element's font-size.

Change the size of text

Change the size of text

font-size: xx-small

font-size: x-small

font-size: small

font-size: medium

font-size: large

font-size: x-large

font-size: xx-large



Change the space between lines

Use line-height to specify the height of each line in an element. This property accepts either a number, length, percentage, or the keyword normal. Generally, it's recommended to use a number instead of a length or percentage to avoid issues with inheritance.

```
div {  
  line-height: 18px;  
  font-size: inherit;  
}
```



Change the space between lines

```
div {  
  line-height: 18px;  
  font-size: inherit;  
}
```

computed line-height: 18px

The Salinas Valley is in Northern California. It is a long narrow swale between two ranges of mountains, and the Salinas River winds and twists up the center until it falls at last into Monterey Bay.

```
div {  
  line-height: 1.25;  
  font-size: inherit;  
}
```

computed line-height: 15px

The Salinas Valley is in Northern California. It is a long narrow swale between two ranges of mountains, and the Salinas River winds and twists up the center until it falls at last into Monterey Bay.

```
div {  
  line-height: 1.25em;  
}  
  
div p {  
  font-size: 16px;  
}
```

computed line-height: 10px

The Salinas Valley is in Northern California. It is a long narrow swale between two ranges of mountains, and the Salinas River winds and twists up the center until it falls at last into Monterey Bay.

```
div {  
  line-height: 1.25;  
}  
  
div p {  
  font-size: 16px;  
}
```

computed line-height: 20px

The Salinas Valley is in Northern California. It is a long narrow swale between two ranges of mountains, and the Salinas River winds and twists up the center until it falls at last into Monterey Bay.

Change the space between characters

Use letter-spacing to control the amount of horizontal space between characters in your text. This property accepts length values such as em, px, and rem.

-0.1em

letter-spacing

normal

letter-spacing

0.2em

letter-spacing

0.4em

l e t t e r - s p a c i n g

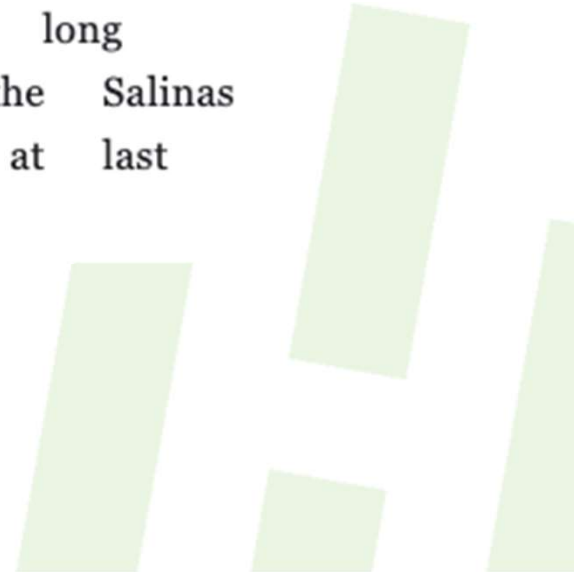
0.8em

l e t t e r - s p a c i n g

Change the space between words

Use **word-spacing** to increase or decrease the length of space between each word in your text. This property accepts length values such as em, px, and rem.

The Salinas Valley is in Northern California. It is a long narrow swale between two ranges of mountains, and the Salinas River winds and twists up the center until it falls at last into Monterey Bay.



font shorthand

You can use the shorthand `font` property to set many font-related properties at once. The list of possible properties are `font-family`, `font-size`, `font-stretch`, `font-style`, `font-variant`, `font-weight`, and `line-height`.

font: normal normal bold 14px/1.4 serif

font: italic 1.1em monospace

FONT: NORMAL SMALL-CAPS 18PX/1 SANS-SERIF

font: 20px cursive

Change the case of text

Use `text-transform` to modify the capitalization of your text without needing to change the underlying HTML. This property accepts the following keyword values: `uppercase`, `lowercase`, and `capitalize`.

normal

Hello world

capitalize

Hello World

uppercase

HELLO WORLD

lowercase

hello world



Add underlines, overlines, and through-lines to text

Use `text-decoration` to add lines to your text. Underlines are most commonly used, but it's possible to add lines above your text or right through it!

The `text-decoration` property is shorthand for the more specific properties detailed below.

The `text-decoration-line` property accepts the keywords `underline`, `overline`, and `line-through`. You can also specify multiple keywords for multiple lines.

The `text-decoration-color` property sets the color of all decorations from `text-decoration-line`.



text-decoration-line

text-decoration-line

~~text-decoration-line~~

text-decoration-line

text-decoration-line

text-decoration-color

text-decoration-color

text-decoration-color

text-decoration-color



The `text-decoration-style` property accepts the keywords `solid`, `double`, `dotted`, `dashed`, and `wavy`.

text-decoration-style

text-decoration-style

text-decoration-style

text-decoration-style

text-decoration-style



Add a shadow to text

Use `text-shadow` to add a shadow to your text. This property expects three lengths (`x-`
`offset`, `y-offset`, and `blur-radius`) and a color.

text-shadow

text-shadow

text-shadow

text-shadow

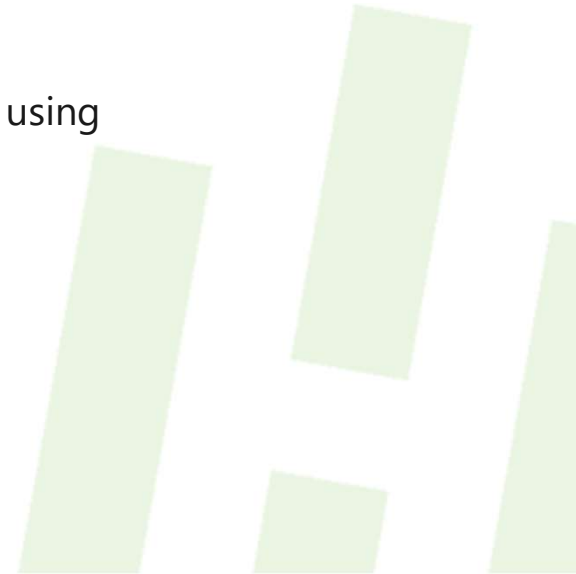
text-shadow

text-shadow



Flexible Box Layout Model (flexbox)

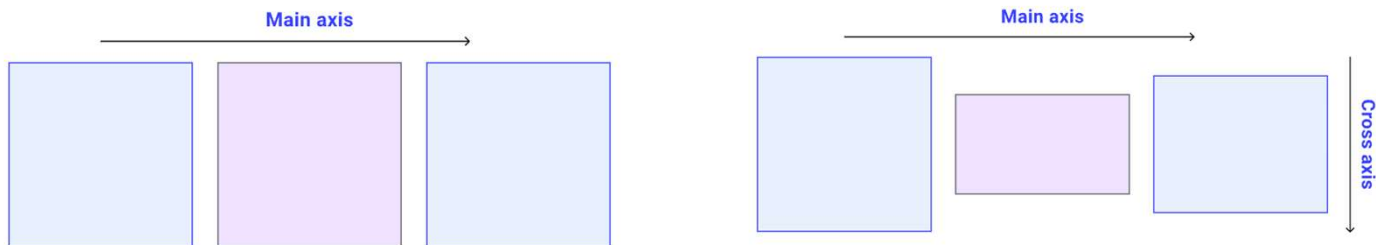
1. They can display as a row, or a column.
2. They are single line by default, but can be asked to wrap onto multiple lines.
3. Items in the layout can be visually reordered, away from their order in the DOM.
4. Space can be distributed inside the items, so they become bigger and smaller according to the space available in their parent.
5. Space can be distributed around the items and flex lines in a wrapped layout, using the Box Alignment properties.
6. The items themselves can be aligned on the cross axis.



The main axis and the cross axis

The key to understanding flexbox is to understand the concept of a main axis and a cross axis.

The main axis is the one set by your `flex-direction` property. If that is `row` your main axis is along the row, if it is `column` your main axis is along the column.



Creating a flex container

```
<div class="container" id="container">
  <div>One</div>
  <div>Item two</div>
  <div>The item we will refer to as three</div>
</div>
```

```
.container {
  display: flex;
}
```

The initial values mean that:

- Items display as a row.
- They do not wrap.
- They do not grow to fill the container.
- They line up at the start of the container.

I am sat next
to a sibling
element

If the writing
direction is
horizontal.



Flexbox item behaviour

The `align-items`, `justify-content` and `flex-wrap` properties allow you to control how flex children elements behave with and around their sibling elements.

Child element 1	Child element 2	Child element 3 has a bit more text than the others	Child element 4	Child element 5	Child element 6	The last item
-----------------	-----------------	---	-----------------	-----------------	-----------------	---------------

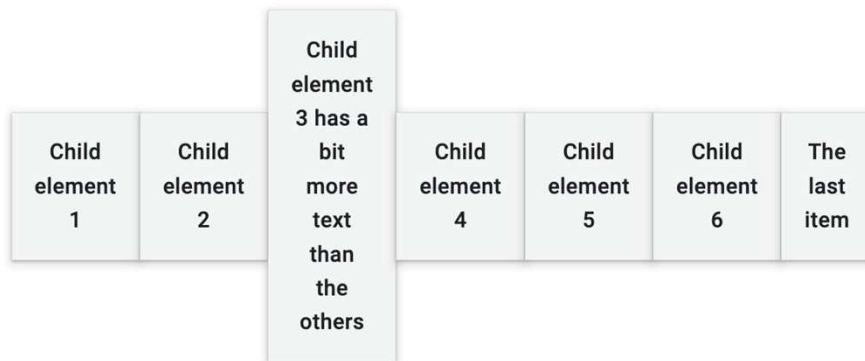
Flex-wrap: Wrap

Child element 1	Child element 2	Child element 3 has a bit more text than the others	
Child element 4	Child element 5	Child element 6	The last item

Flexbox item behaviour

The `align-items`, `justify-content` and `flex-wrap` properties allow you to control how flex children elements behave with and around their sibling elements.

`align-items: center`



Responsive Flexbox

Laptop and Desktops:

1	2	3
---	---	---

Mobile phones and Tablets:

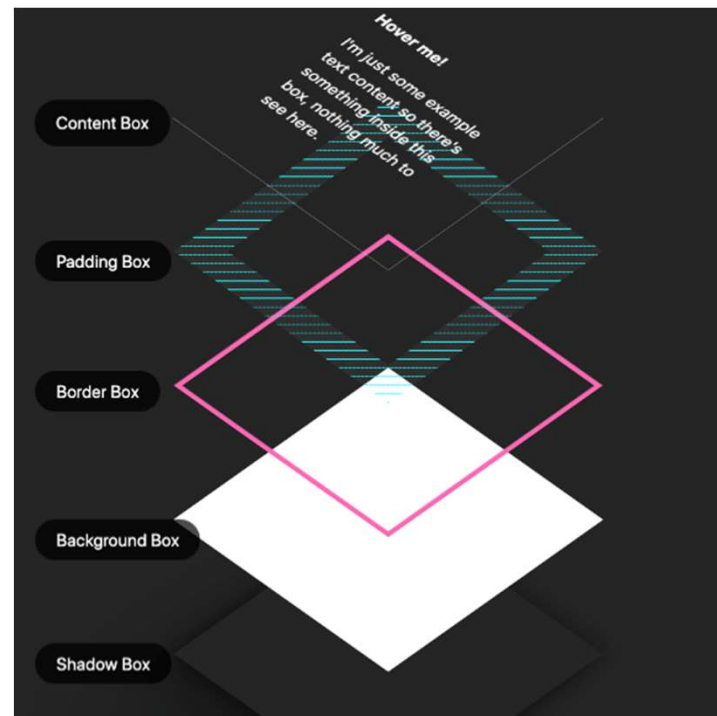
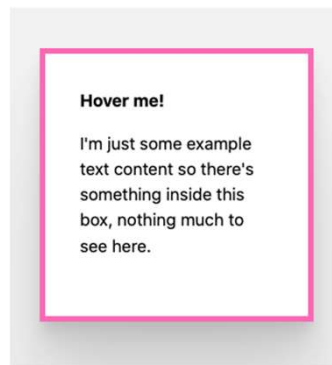
1
2
3

```
.flex-container {  
  display: flex;  
  flex-direction: row;  
}
```

```
/* Responsive layout – makes a one column layout instead of a two-column layout */  
@media (max-width: 800px) {  
  .flex-container {  
    flex-direction: column;  
  }  
}
```

https://www.w3schools.com/css/css3_flexbox_responsive.asp

Backgrounds



https://www.w3schools.com/css/css_background.asp

Background color

```
.red {  
  /* hsl(0deg, 70%, 18%); */  
  background-color: #4e0e0e;  
}  
  
.yellow {  
  /* hsl(60deg, 70%, 80%); */  
  background-color: rgb(240, 240,  
168);  
}  
  
.blue {  
  /* hsl(210, 70.6%, 80%) */  
  background-color: rgb(65.9%, 80%,  
94.1%);  
}  
  
.gray {  
  /* hsl(144, 3%, 77%) */  
  background-color: #c3c6c432;  
}
```



Rebecca Purple



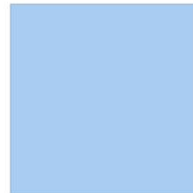
hsl(180deg, 70%, 18%)



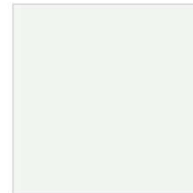
#4e0e0e



rgb(240, 240, 168)



rgb(65.9%, 80%, 94.1%)



#c3c6c432 (#c3c6c4 + 50% opacity)



Setting a background-image with the url CSS function

```
background: url("https://images.unsplash.com/photo-1536707076730-0615b7f5b49a?auto=format&fit=crop&w=3034&q=80");
```



CSS gradient backgrounds

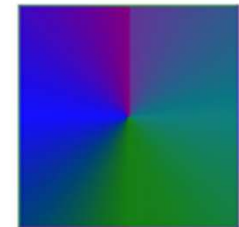
```
.linear-gradient {  
  background-image: linear-  
gradient(rebeccapurple, teal);  
}  
  
.radial-gradient {  
  background-image: radial-  
gradient(teal, rebeccapurple);  
}  
  
.conic-gradient {  
  background-image: conic-  
gradient(rebeccapurple, teal, green,  
blue, purple);  
}
```



Linear
gradient



Radial
gradient



Conic
gradient

CSS Frameworks

The framework already has classes built-in for common website elements – footer, slider, navigation bar, hamburger menu, column-based layouts, etc.

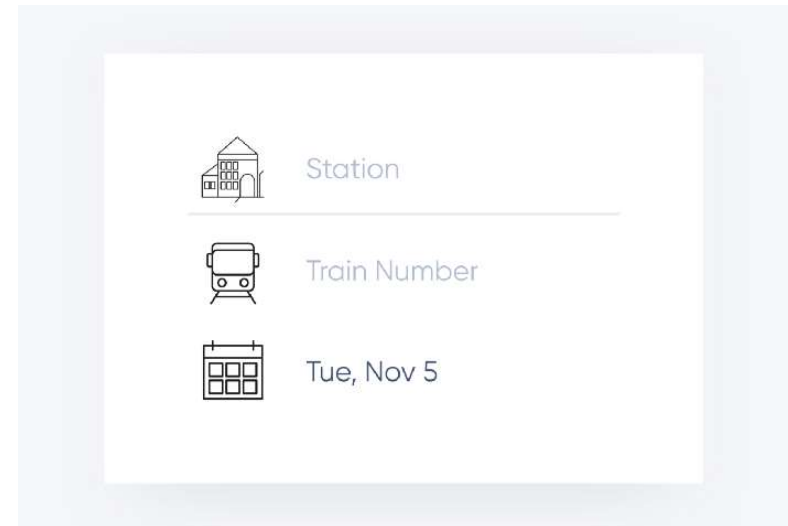
1. *Bootstrap*
2. *Tailwind CSS*
3. *Foundation*
4. *Bulma*
5. *Skeleton*

<https://www.browserstack.com/guide/top-css-frameworks>



How To Use Icons To Support Content In Web Design

Why use icons? *Design is all about communication: it doesn't matter how important or exciting the information that you're sharing is if you fail to hook your visitors. When initially viewing a website, most users will first scan the page for visually interesting content, and only after something grabs their attention will they actually begin reading. Icons are a simple, effective way to draw users into the content of your website.*

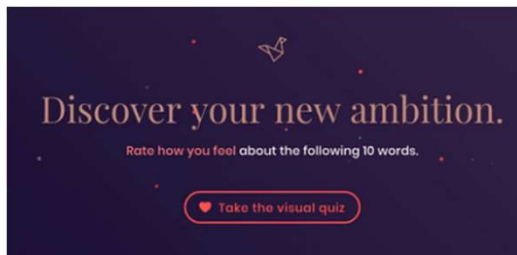


<https://medium.com/outcrowd/icons-in-web-design-824f57cb2db0>

<https://www.smashingmagazine.com/2009/03/how-to-use-icons-to-support-content-in-web-design/>

Choosing and pairing brand fonts like a Pro

When it comes to creating a professional looking website, it's important to not only consider the colors and images you use, but also the fonts. Typography plays such a pivotal role in brand perception that fonts should be at the forefront of the design process, rather than just an afterthought.



<https://www.canva.com/learn/best-professional-fonts-use-website/>



9 Sites for Free Business Stock Photos

With human brains processing images 60,000 times faster than text, good photos are vital for grabbing attention and getting your message across. But what do you do if you don't have enough visual material? Get it for free from one of these free stock photo websites!

1. [Vecteezy](#)
2. [Freepik](#)
3. [Morguefile](#)
4. [Pixabay](#)
5. [Stockvault](#)
6. [Pexels](#)
7. [Picjumbo](#)
8. [Rawpixel](#)
9. [Reshot](#)

<https://www.foleon.com/blog/best-free-business-stock-photo-websites>



9 Sites for Free Business Stock Photos

With human brains processing images 60,000 times faster than text, good photos are vital for grabbing attention and getting your message across. But what do you do if you don't have enough visual material? Get it for free from one of these free stock photo websites!

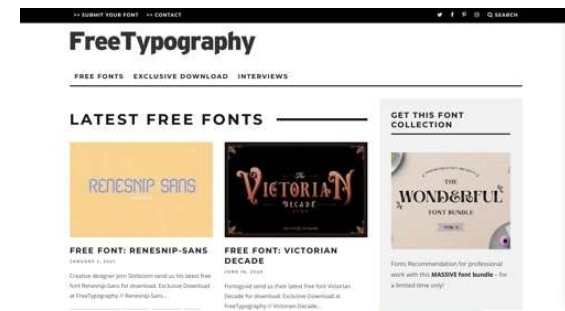
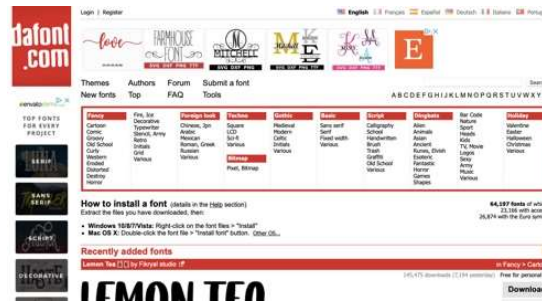
1. [Vecteezy](#)
2. [Freepik](#)
3. [Morguefile](#)
4. [Pixabay](#)
5. [Stockvault](#)
6. [Pexels](#)
7. [Picjumbo](#)
8. [Rawpixel](#)
9. [Reshot](#)

<https://www.foleon.com/blog/best-free-business-stock-photo-websites>



15 Sites for Free Commercial Fonts

One of the best ways to enhance a design is with an attractive font. It's also thrifty, as multiple companies offer free font libraries and curated collections, even for commercial use.



<https://www.practicalecommerce.com/15-sites-for-free-commercial-fonts>

Join Communities Online

<https://www.bcs.org/>

At BCS, we're on a mission to ensure everyone's experience with technology is positive. It's something we've been committed to since 1957.

<https://authenticjobs.com/top30-discord-slack-forums-designers-developers/>

Finding An Online Community: Top 30 Discord Servers, Slack Channels, and Web Forums for Designers & Developers



How can a software engineer best give back to society?

<https://www.quora.com/How-can-a-software-engineer-best-give-back-to-society>



Thank you!

