## HTML project: Cat Photo App

## index.html

<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset='UTF-8'>

    <title>CatPhotoApp</title>

  </head>

  <body>

    <h1>CatPhotoApp</h1>

    <main>

      <section>

        <h2>Cat Photos</h2>

        <!-- TODO: Add link to cat photos -->

        <p>Click here to view more <a target="\_blank" href="https://freecatphotoapp.com">cat photos</a>.</p>

        <a href="https://freecatphotoapp.com"><img src="https://cdn.freecodecamp.org/curriculum/cat-photo-app/relaxing-cat.jpg" alt="A cute orange cat lying on its back."></a>

      </section>

      <section>

        <h2>Cat Lists</h2>

        <h3>Things cats love:</h3>

        <ul>

          <li>cat nip</li>

          <li>laser pointers</li>

          <li>lasagna</li>

        </ul>

        <figure>

          <img src="https://cdn.freecodecamp.org/curriculum/cat-photo-app/lasagna.jpg" alt="A slice of lasagna on a plate.">

          <figcaption>Cats <em>love</em> lasagna.</figcaption>

        </figure>

        <h3>Top 3 things cats hate:</h3>

        <ol>

          <li>flea treatment</li>

          <li>thunder</li>

          <li>other cats</li>

        </ol>

        <figure>

          <img src="https://cdn.freecodecamp.org/curriculum/cat-photo-app/cats.jpg" alt="Five cats looking around a field.">

          <figcaption>Cats <strong>hate</strong> other cats.</figcaption>

        </figure>

      </section>

      <section>

        <h2>Cat Form</h2>

        <form action="https://freecatphotoapp.com/submit-cat-photo">

          <fieldset>

            <legend>Is your cat an indoor or outdoor cat?</legend>

            <label><input id="indoor" type="radio" name="indoor-outdoor" value="indoor" checked> Indoor</label>

            <label><input id="outdoor" type="radio" name="indoor-outdoor" value="outdoor"> Outdoor</label>

          </fieldset>

          <fieldset>

            <legend>What's your cat's personality?</legend>

            <input id="loving" type="checkbox" name="personality" value="loving" checked> <label for="loving">Loving</label>

            <input id="lazy" type="checkbox" name="personality" value="lazy"> <label for="lazy">Lazy</label>

            <input id="energetic" type="checkbox" name="personality" value="energetic"> <label for="energetic">Energetic</label>

          </fieldset>

          <input type="text" name="catphotourl" placeholder="cat photo URL" required>

          <button type="submit">Submit</button>

        </form>

      </section>

    </main>

    <footer>

      <p>

        No Copyright - <a href="https://www.freecodecamp.org">freeCodeCamp.org</a>

      </p>

    </footer>

  </body>

</html>

## Basic CSS project: Café Menu

## index.html

<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="utf-8" />

    <meta name="viewport" content="width=device-width, initial-scale=1.0" />

    <title>Cafe Menu</title>

    <link href="styles.css" rel="stylesheet"/>

  </head>

  <body>

    <div class="menu">

      <header>

        <h1>CAMPER CAFE</h1>

        <p class="established">Est. 2020</p>

      </header>

      <hr>

      <main>

        <section>

          <h2>Coffee</h2>

          <img src="https://cdn.freecodecamp.org/curriculum/css-cafe/coffee.jpg" alt="coffee icon"/>

          <article class="item">

            <p class="flavor">French Vanilla</p><p class="price">3.00</p>

          </article>

          <article class="item">

            <p class="flavor">Caramel Macchiato</p><p class="price">3.75</p>

          </article>

          <article class="item">

            <p class="flavor">Pumpkin Spice</p><p class="price">3.50</p>

          </article>

          <article class="item">

            <p class="flavor">Hazelnut</p><p class="price">4.00</p>

          </article>

          <article class="item">

            <p class="flavor">Mocha</p><p class="price">4.50</p>

          </article>

        </section>

        <section>

          <h2>Desserts</h2>

          <img src="https://cdn.freecodecamp.org/curriculum/css-cafe/pie.jpg" alt="pie icon"/>

          <article class="item">

            <p class="dessert">Donut</p><p class="price">1.50</p>

          </article>

          <article class="item">

            <p class="dessert">Cherry Pie</p><p class="price">2.75</p>

          </article>

          <article class="item">

            <p class="dessert">Cheesecake</p><p class="price">3.00</p>

          </article>

          <article class="item">

            <p class="dessert">Cinnamon Roll</p><p class="price">2.50</p>

          </article>

        </section>

      </main>

      <hr class="bottom-line">

      <footer>

        <p>

          <a href="https://www.freecodecamp.org" target="\_blank">Visit our website</a>

        </p>

        <p class="address">123 Free Code Camp Drive</p>

      </footer>

    </div>

  </body>

</html>

## styles.css

body {

  background-image: url(https://cdn.freecodecamp.org/curriculum/css-cafe/beans.jpg);

  font-family: sans-serif;

  padding: 20px;

}

h1 {

  font-size: 40px;

  margin-top: 0;

  margin-bottom: 15px;

}

h2 {

  font-size: 30px;

}

.established {

  font-style: italic;

}

h1, h2, p {

  text-align: center;

}

.menu {

  width: 80%;

  background-color: burlywood;

  margin-left: auto;

  margin-right: auto;

  padding: 20px;

  max-width: 500px;

}

img {

  display: block;

  margin-left: auto;

  margin-right: auto;

  margin-top: -25px;

}

hr {

  height: 2px;

  background-color: brown;

  border-color: brown;

}

.bottom-line {

  margin-top: 25px;

}

h1, h2 {

  font-family: Impact, serif;

}

.item p {

  display: inline-block;

  margin-top: 5px;

  margin-bottom: 5px;

  font-size: 18px;

}

.flavor, .dessert {

  text-align: left;

  width: 75%;

}

.price {

  text-align: right;

  width: 25%;

}

/\* FOOTER \*/

footer {

  font-size: 14px;

}

.address {

  margin-bottom: 5px;

}

a {

  color: black;

}

a:visited {

  color: black;

}

a:hover {

  color: brown;

}

a:active {

  color: brown;

}

## CSS colors by building a set of colored markers

One way to represent a color is color keyword, for example, black, white, red, green, blue, etc.

One way to represent a color is ***rgb*** function, which used as ***rgb***(red, green, blue). The color will be displayed depends on the value of 3 channels.

Complementary color: two colors that their sum of rgb values is (255, 255, 255). What we need to know is that if it is overused on a webpage, it will distract user attention while using complementary color. The batter practice to choose one color as the dominant color, and use its complementary color as an accent to bring attention to certain content on the page.

Another way to represent a color in rgb model is using hexadecimal values. For example, #4B5320, 4B(75) is the value of red, 53(83) is the value of green, 20(32) is the value of blue.

HSL(hue, satuation, lightness) color model is another way to represent color.

***hsl*** fuction is used as ***hsl***(hue, satuation, lightness). hue is degree from 0 to 360. Satuation and lightness are percentage from 0% to 100%. In a color wheel, the hue red is at 0 degrees, green is at 120 degrees, and blue is at 240 degrees. Saturation is the intensity of a color from 0%, or gray, to 100% for pure color. Lightness is how bright a color appears, from 0%, or complete black, to 100%, complete white, with 50% being neutral.

The CSS ***linear-gradient*** function lets you control the direction of the transition along a line, and which colors are used. *linear-gradient* function actually creates an image element, so it is usually paired with the background property which can accept an image as a value. *linear-gradient* function is used as ***linear-gradient***(gradientDirection, color1, color2, ...); The default value of gradientDirection is 180deg.

Color-stops allow you to fine-tune where colors are placed along the gradient line. They are a length unit like px or percentages that follow a color in the ***linear-gradient*** function. For example, in this red-black gradient, ***linear-gradient***(90deg, red 90%, black);

We can use two way to control the opacity of the color: use opacity property in CSS element, or use ***rbga*** function. ***rgba*** function is used as ***rgba***(red, green, blue, alpha), and alpha channel is a percentage to control the opacity of the color.

## index.html

<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="utf-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Colored Markers</title>

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

  </head>

  <body>

    <h1>CSS Color Markers</h1>

    <div class="container">

      <div class="marker red">

        <div class="cap"></div>

        <div class="sleeve"></div>

      </div>

      <div class="marker green">

        <div class="cap"></div>

        <div class="sleeve"></div>

      </div>

      <div class="marker blue">

        <div class="cap"></div>

        <div class="sleeve"></div>

      </div>

    </div>

  </body>

</html>

## styles.css

h1 {

  text-align: center;

}

.container {

  background-color: rgb(255, 255, 255);

  padding: 10px 0;

}

.marker {

  width: 200px;

  height: 25px;

  margin: 10px auto;

}

.cap {

  width: 60px;

  height: 25px;

}

.sleeve {

  width: 110px;

  height: 25px;

  background-color: rgba(255, 255, 255, 0.5);

  border-left: 10px double rgba(0, 0, 0, 0.75);

}

.cap, .sleeve {

  display: inline-block;

}

.red {

  background: linear-gradient(rgb(122, 74, 14), rgb(245, 62, 113), rgb(162, 27, 27));

  box-shadow: 0 0 20px 0 rgba(83, 14, 14, 0.8);

}

.green {

  background: linear-gradient(#55680D, #71F53E, #116C31);

  box-shadow: 0 0 20px 0 #3B7E20CC;

}

.blue {

  background: linear-gradient(hsl(186, 76%, 16%), hsl(223, 90%, 60%), hsl(240, 56%, 42%));

  box-shadow: 0 0 20px 0 hsla(223,59%,31%,0.8);

}

## HTML forms project: Registration Form

## index.html

<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="UTF-8">

    <title>Registration Form</title>

    <link rel="stylesheet" href="styles.css" />

  </head>

  <body>

    <h1>Registration Form</h1>

    <p>Please fill out this form with the required information</p>

    <form action='https://register-demo.freecodecamp.org'>

      <fieldset>

        <label for="first-name">Enter Your First Name: <input id="first-name" name="first-name" type="text" required /></label>

        <label for="last-name">Enter Your Last Name: <input id="last-name" name="last-name" type="text" required /></label>

        <label for="email">Enter Your Email: <input id="email" name="email" type="email" required /></label>

        <label for="new-password">Create a New Password: <input id="new-password" name="new-password" type="password" pattern="[a-z0-5]{8,}" required /></label>

      </fieldset>

      <fieldset>

        <label for="personal-account"><input id="personal-account" type="radio" name="account-type" class="inline" /> Personal Account</label>

        <label for="business-account"><input id="business-account" type="radio" name="account-type" class="inline" /> Business Account</label>

        <label for="terms-and-conditions" name="terms-and-conditions">

          <input id="terms-and-conditions" type="checkbox" required name="terms-and-conditions" class="inline" /> I accept the <a href="https://www.freecodecamp.org/news/terms-of-service/">terms and conditions</a>

        </label>

      </fieldset>

      <fieldset>

        <label for="profile-picture">Upload a profile picture: <input id="profile-picture" type="file" name="file" /></label>

        <label for="age">Input your age (years): <input id="age" type="number" name="age" min="13" max="120" /></label>

        <label for="referrer">How did you hear about us?

          <select id="referrer" name="referrer">

            <option value="">(select one)</option>

            <option value="1">freeCodeCamp News</option>

            <option value="2">freeCodeCamp YouTube Channel</option>

            <option value="3">freeCodeCamp Forum</option>

            <option value="4">Other</option>

          </select>

        </label>

        <label for="bio">Provide a bio:

          <textarea id="bio" name="bio" rows="3" cols="30" placeholder="I like coding on the beach..."></textarea>

        </label>

      </fieldset>

      <input type="submit" value="Submit" />

    </form>

  </body>

</html>

## styles.css

body {

  width: 100%;

  height: 100vh;

  margin: 0;

  background-color: #1b1b32;

  color: #f5f6f7;

  font-family: Tahoma;

  font-size: 16px;

}

h1, p {

  margin: 1em auto;

  text-align: center;

}

form {

  width: 60vw;

  max-width: 500px;

  min-width: 300px;

  margin: 0 auto;

  padding-bottom: 2em;

}

fieldset {

  border: none;

  padding: 2rem 0;

  border-bottom: 3px solid #3b3b4f;

}

fieldset:last-of-type {

  border-bottom: none;

}

label {

  display: block;

  margin: 0.5rem 0;

}

input,

textarea,

select {

  margin: 10px 0 0 0;

  width: 100%;

  min-height: 2em;

}

input, textarea {

  background-color: #0a0a23;

  border: 1px solid #0a0a23;

  color: #ffffff;

}

.inline {

  width: unset;

  margin: 0 0.5em 0 0;

  vertical-align: middle;

}

input[type="submit"] {

  display: block;

  width: 60%;

  margin: 1em auto;

  height: 2em;

  font-size: 1.1rem;

  background-color: #3b3b4f;

  border-color: white;

  min-width: 300px;

}

input[type="file"] {

  padding: 1px 2px;

}

a {

  color: #dfdfe2;

}

## Certificate project: Survey Form

## index.html

<!DOCTYPE html>

<html lang='en'>

  <head>

    <meta charset='utf-8' />

    <meta name='viewport' content='width=device-width, initial-scale-1.0'/>

    <title>Survey Form</title>

    <link rel='stylesheet' href='styles.css'/>

  </head>

  <body>

    <h1 id='title'>Survey Form</h1>

    <p id='description'>Thank you for helping us improve our service</p>

    <form id='survey-form'>

      <!--Input name, email, number, dropdown-->

      <fieldset>

        <label id='name-label'>

          Name <input id='name' type='text' class='personal-info' placeholder='e.g. Jim' required/>

        </label>

        <label id='email-label'>

          Email <input id='email' type='email' class='personal-info' placeholder='e.g. \*\*\*@gmail.com' required/>

        </label>

        <label id='number-label'>

          Age <input id='number' type='number' class='personal-info' min='14' placeholder='e.g. 22' max='120' />

        </label>

        <label id='referred'>

          How do you know about us?

          <select id='dropdown' class='personal-info'>

            <option value=''>(select one)</option>

            <option value='1'>Google</option>

            <option value='2'>Social Media</option>

            <option value='3'>Company Website</option>

          </select>

        </label>

      </fieldset>

      <!--radio buttons, checkboxes and textarea-->

      <fieldset>

        <label>How do you value this service experience?</label>

        <label>

          <input id='awful' type='radio' name='value' class='inline' value='0' /> awful

        </label>

        <label>

          <input id='bad' type='radio' name='value' class='inline' value='1' /> bad

        </label>

        <label>

          <input id='normal' type='radio' name='value' class='inline' checked value='2' /> normal

        </label>

        <label>

          <input id='good' type='radio' name='value' class='inline' value='3' /> good

        </label>

        <label>

          <input id='perfect' type='radio' name='value' class='inline' value='4' /> perfect

        </label>

        <p></p>

        <label>Which services do you like?</label>

        <label>

          <input id='waiter' type='checkbox' name='services' class='inline' value='1'> waiter service

        </label>

        <label>

          <input id='banquet' type='checkbox' name='services' class='inline' value='2'> banquet service

        </label>

        <label>

          <input id='buffet' type='checkbox' name='services' class='inline' value='3'> buffet service

        </label>

        <label>

          <input id='room' type='checkbox' name='services' class='inline' value='4'> room service

        </label>

        <p></p>

        <label>Any comments or suggestion?

          <textarea id='comments' name='comments' row='3'></textarea>

        </label>

      </fieldset>

      <input id='submit' type='submit' value='submit'/>

    </form>

  </body>

</html>

## styles.css

body {

  width: 100%;

  height: 100vh;

  font-family: Tahoma;

  font-size: 16px;

}

h1, p {

  margin: 1em auto;

  text-align: center;

}

form {

  min-width: 300px;

  max-width: 500px;

  margin: 0 auto;

  padding-bottom: 2em;

}

label, input{

  display: block;

}

.personal-info, textarea {

  width: 100%;

  font-size: 16px;

  font-family: Tahoma;

}

fieldset {

  border: 0;

  border-bottom: 2px solid #000000

}

.inline {

  display: inline;

}

#submit {

  display: block;

  width: 60%;

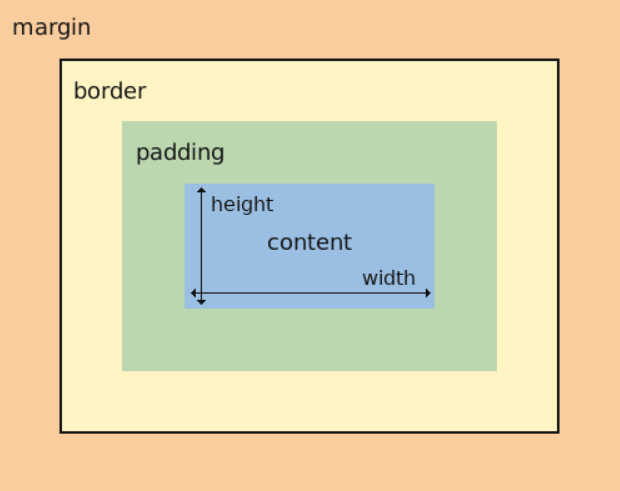
  margin: 1em auto;

  height: 2em;

  min-width: 200px;

}

## CSS Box Model Learning: Rothko Painting



## index.html

<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="UTF-8">

    <title>Rothko Painting</title>

    <link href="./styles.css" rel="stylesheet">

  </head>

  <body>

    <div class="frame">

      <div class="canvas">

        <div class="one"></div>

        <div class="two"></div>

        <div class="three"></div>

      </div>

    </div>

  </body>

</html>

## styles.css

.canvas {

  width: 500px;

  height: 600px;

  background-color: #4d0f00;

  overflow: hidden;

  filter: blur(2px);

}

.frame {

  border: 50px solid black;

  width: 500px;

  padding: 50px;

  margin: 20px auto;

}

.one {

  width: 425px;

  height: 150px;

  background-color: #efb762;

  margin: 20px auto;

  box-shadow: 0 0 3px 3px #efb762;

  border-radius: 9px;

  transform: rotate(-0.6deg);

}

.two {

  width: 475px;

  height: 200px;

  background-color: #8f0401;

  margin: 0 auto 20px;

  box-shadow: 0 0 3px 3px #8f0401;

  border-radius: 8px 10px;

  transform: rotate(0.4deg);

}

.one, .two {

  filter: blur(1px);

}

.three {

  width: 91%;

  height: 28%;

  background-color: #b20403;

  margin: auto;

  filter: blur(2px);

  box-shadow: 0 0 5px 5px #b20403;

  border-radius: 30px 25px 60px 12px;

  transform: rotate(-0.2deg);

}

## CSS Flexbox Learning: Photo Gallery

## index.html

<!DOCTYPE html>

<html lang="en">

  <head>

    <meta charset="utf-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">

    <title>Photo Gallery</title>

    <link rel="stylesheet" href="./styles.css">

  </head>

  <body>

    <header class="header">

      <h1>css flexbox photo gallery</h1>

    </header>

    <div class="gallery">

      <img src="https://cdn.freecodecamp.org/curriculum/css-photo-gallery/1.jpg">

      <img src="https://cdn.freecodecamp.org/curriculum/css-photo-gallery/2.jpg">

      <img src="https://cdn.freecodecamp.org/curriculum/css-photo-gallery/3.jpg">

      <img src="https://cdn.freecodecamp.org/curriculum/css-photo-gallery/4.jpg">

      <img src="https://cdn.freecodecamp.org/curriculum/css-photo-gallery/5.jpg">

      <img src="https://cdn.freecodecamp.org/curriculum/css-photo-gallery/6.jpg">

      <img src="https://cdn.freecodecamp.org/curriculum/css-photo-gallery/7.jpg">

      <img src="https://cdn.freecodecamp.org/curriculum/css-photo-gallery/8.jpg">

      <img src="https://cdn.freecodecamp.org/curriculum/css-photo-gallery/9.jpg">

    </div>

  </body>

</html>

## styles.css

\* {

  box-sizing: border-box;

}

body {

  margin: 0;

  font-family: sans-serif;

  background: #f5f6f7;

}

.header {

  text-align: center;

  text-transform: uppercase;

  padding: 32px;

  background-color: #0a0a23;

  color: #fff;

  border-bottom: 4px solid #fdb347;

}

.gallery {

  display: flex;

  flex-direction: row;

  flex-wrap: wrap;

  justify-content: center;

  align-items: center;

  gap: 16px;

  max-width: 1400px;

  margin: 0 auto;

  padding: 20px 10px;

}

.gallery img {

  width: 100%;

  max-width: 350px;

  height: 300px;

  object-fit: cover;

  border-radius: 10px;

}

.gallery::after {

  content: "";

  width: 350px;

}