Learn CSS FlexBox

Flexbox helps you design your webpage so that it looks good on any screen size.

In this course, you'll use Flexbox to build a responsive photo gallery webpage.

**Here's a preview of what you will build**

# Step 2

Within your head element, add a meta tag with the name set to viewport and the content set to width=device-width, initial-scale=1.

Also add a meta tag with the charset set to UTF-8.

# Step 3

Within your head element, add a title element with the text set to Photo Gallery, and a link element to add your styles.css file to the page.

# Step 4

Add a header element within the body element and assign a class of header to it.

Inside the header, create an h1 with css flexbox photo gallery as the text.

<!DOCTYPE html>

<html>

  <head lang="en">

    <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>

  </body>

</html>

# Step 5

Below your .header element, create a new div element and assign it a class of gallery. This div will act as a container for the gallery images.

Inside that .gallery element, create nine img elements.

  <header class="header">

      <h1>css flexbox photo gallery</h1>

    </header>

    <div class="gallery">

      <img src="#" alt="image">

      <img src="#" alt="image">

      <img src="#" alt="image">

      <img src="#" alt="image">

      <img src="#" alt="image">

      <img src="#" alt="image">

      <img src="#" alt="image">

      <img src="#" alt="image">

      <img src="#" alt="image">

      </div>

  </body>

</html>

# Step 6

Next, give each img a src attribute according to its order in the document. The first img should have a src of https://cdn.freecodecamp.org/curriculum/css-photo-gallery/1.jpg. The rest should be the same, except replace the 1 with the number the img is in the document.

# Step 7

Normalize your box model by creating a \* selector and setting the box-sizing property to border-box as the value.

\*{

  box-sizing:"border-box";

}

# Step 8

Your images are too big. Create a .gallery img selector to target them. Give them all a width of 100% and a max-width of 350px so they shrink as needed but don't get too big.

Also set the height property to 300px to keep your images a uniform size.

.gallery img{

  width:100%;

  max-width:350px;

  height:300px;

}

# Step 9

Remove the margin from your body element, set the font-family to sans-serif, and give it a background-color of #f5f6f7 as the value.

body{

  font-family:sans-serif;

  background-color:#f5f6f7;

  margin:0;

}

# Step 10

Align your .header text in the center. Make the text uppercase using the text-transform property with uppercase as the value.

Give it a padding of 32px on all sides. Set the background to #0a0a23 and the text to #fff as the color values.

Add a border-bottom with 4px solid #fdb347 as the value.

.header{

text-align:center;

  text-transform:uppercase;

  padding:32px;

  background-color:#0a0a23;

  color:#fff;

  border-bottom:4px solid #fdb347;

}

  <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>

# Step 11

Flexbox is a one-dimensional CSS layout that can control the way items are spaced out and aligned within a container.

To use it, give an element a display property of flex. This will make the element a flex container. Any direct children of a flex container are called flex items.

Create a .gallery selector and make it a flex container.

.gallery{

  display:flex;

}

# Step 12

Flexbox has a main and cross axis. The main axis is defined by the flex-direction property, which has four possible values:

* row (default): horizontal axis with flex items from left to right
* row-reverse: horizontal axis with flex items from right to left
* column: vertical axis with flex items from top to bottom
* column-reverse: vertical axis with flex items from bottom to top

**Note**: The axes and directions will be different depending on the text direction. The values shown are for a left-to-right text direction.

Try the different values to see how they affect the layout.

When you are done, set an explicit flex-direction of row on the .gallery element.

.gallery {

  display: flex;

  flex-direction:row;

}

# Step 13

The flex-wrap property determines how your flex items behave when the flex container is too small. Setting it to wrap will allow the items to wrap to the next row or column. nowrap (default) will prevent your items from wrapping and shrink them if needed.

Make it so your flex items wrap to the next row when they run out of space.

flex-wrap:nowrap; (default) will prevent your items from wrapping and shrink them if needed.

flex-wrap:wrap; will allow the items to wrap to the next row or column

# Step 14

The justify-content property determines how the items inside a flex container are positioned along the main axis, affecting their position and the space around them.

Give your .gallery selector a justify-content property with center as the value.

justify-content:center;

}

.gallery {

  display: flex;

  flex-direction: row;

  flex-wrap: wrap;

  justify-content: center;

}

# Step 15

The align-items property positions the flex content along the cross axis. In this case, with your flex-direction set to row, your cross axis would be vertical.

To vertically center your images, give your .gallery selector an align-items property with center as the value.

  align-items:center;

# Step 16

Give your .gallery selector a padding property set to 20px 10px to create some space around the container.

Then, give it a max-width of 1400px and add a margin of 0 auto to center it.

padding:20px 10px;

  max-width:1400px;

  margin:0 auto;

.gallery {

  display: flex;

  flex-direction: row;

  flex-wrap: wrap;

  justify-content: center;

  align-items: center;

  padding:20px 10px;

  max-width:1400px;

  margin:0 auto;

}

# Step 17

Notice how some of your images have become distorted. This is because the images have different aspect ratios. Rather than setting each aspect ratio individually, you can use the object-fit property to determine how images should behave.

Give your .gallery img selector the object-fit property and set it to cover. This will tell the image to fill the img container while maintaining aspect ratio, resulting in cropping to fit.

 object-fit:cover;

.gallery img {

  width: 100%;

  max-width: 350px;

  height: 300px;

  object-fit:cover;

}

# Step 18

Your images need some space between them.

The gap CSS shorthand property sets the gaps, also knowns as gutters, between rows and columns. The gap property and its row-gap and column-gap sub-properties provide this functionality for flex, grid, and multi-column layout. You apply the property to the container element.

Give your .gallery flex container a gap property with 16px as the value.

 gap:16px;

this will row gap

also use column-gap

gap is a short property

.gallery {

  display: flex;

  flex-direction: row;

  flex-wrap: wrap;

  justify-content: center;

  align-items: center;

  max-width: 1400px;

  margin: 0 auto;

  padding: 20px 10px;

  gap:16px;

}

# Step 19

Smooth out your images a bit by giving the .gallery img selector a border-radius property with 10px set as the value.

 border-radius:10px;

.gallery img {

  width: 100%;

  max-width: 350px;

  height: 300px;

  object-fit: cover;

  border-radius:10px;

}

# Step 20

The ::after pseudo-element creates an element that is the last child of the selected element. You can use it to add an empty element after the last image. If you give it the same width as the images it will push the last image to the left when the gallery is in a two-column layout. Right now, it is in the center because you set justify-content: center on the flex container.

Example:

.container::after {

content: "";

width: 860px;

}

Create a new selector using an ::after pseudo-element on the .gallery element. Add a content property set to an empty string "" and 350px set for the width property.

.gallery::after{

  content:"";

  width:350px;

}

# Step 21

The alt image attribute should describe the image content. Screen readers announce the alternative text in place of images. If the image can't be loaded, this text is presented in place of the image.

To complete the project, add an alt attribute to all nine of your cat images to describe them. Use a value at least five characters long for each.