Exercise: Design a Responsive Webpage

Coastal Crafts has been receiving feedback from customers that their website is difficult to read — for example, the navigation menu and main content block do not display side-by-side. Additionally, they receive complaints that their website is slow to load, particularly on mobile devices. The store's owners are concerned that they are losing business, so they have hired you to assist them in designing a more responsive and mobile-friendly website.

After analyzing their website's code and current layout, you identify that the current website is not responsive.

Implement the following changes:

1. Use Flexbox to create responsive layouts based on a 4-column grid. Layout the elements into a row, and use the "display: flex;" "flex-flow: row wrap;" and "justify-content: space-between;" properties. Use the following specifications:

- Desktop Specs:
  - Header image flex-basis: 100%
  - Nav flex-basis: 25%
  - Article flex-basis: 75%
  - Footer flex-basis: 100%
- Mobile Specs: All elements have a flex-basis: 100%

2. Add media queries for both desktop and mobile using the following breakpoint parameters:

- Mobile: max-width: 400px
- Desktop: min-width: 401px

3. Use the following image file to add a responsive background image for mobile devices structuring your CSS syntax, so that it is mobile-first, and so that only one background image downloads.

- Image file: https://cdn-d.mindedgeonline.com/1678/bkg-water-cropped-min.jpg

4. Use the picture element and the following image file to create a responsive header image for mobile. Set the breakpoint to the spec listed below.

- Image file: cdn-d.mindedgeonline.com/1678/beach-header-cropped.jpg
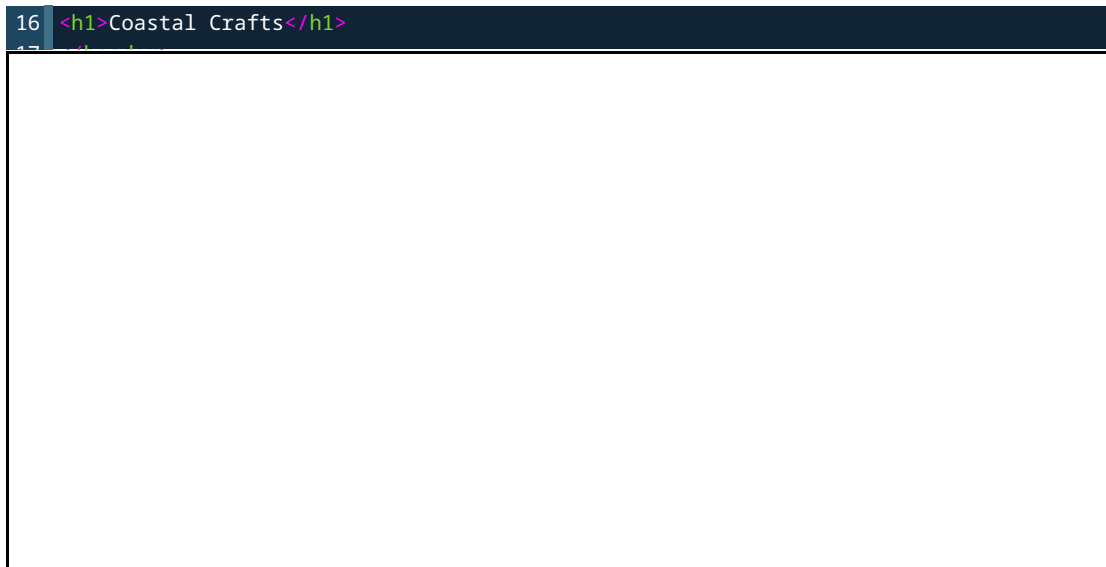- min-width: 401px

Instructions:

- Adjust the HTML source code and CSS Styles based on the directions above
- Click 'run code' to check your work
- Remember to resize your browser to view layout changes at various breakpoints

Run Code | Save | Export | Reset

index.html   styles.css

```html
<!doctype html>
<html>
<head>
  <link rel="stylesheet" href="/styles.css" />
</head>
<body>
<picture>
  <source media ="(min-width:401px)"
    srcset="https://cdn-d.mindedgeonline.com/1678/beach-header.jpg">
  <img src="https://cdn-d.mindedgeonline.com/1678/beach-header-cropped.jpg">
</picture>

<div class="bkgd">
  <div class="row">
<header class="header">
```

```
16  <h1>Coastal Crafts</h1>
17
```

Theme Select:

rubyblue ⌄

▸ **Check Your Answer**

HTML Source Code

The following adjustments were made to the HTML source code.

- Added the <meta viewport> tag
- Added the picture element to create a responsive header image. The structure is mobile-first with the smaller image loading by default, and the larger image loading at screen widths of 401px or larger.
- Add Flexbox row structure by adding a div tag (div class="row") around the header, nav, article, and footer elements.

```
<!doctype html>
<html>
<head>
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <link rel="stylesheet" href="/styles.css" />
</head>
<body>
  <picture>
    <source media="(min-width: 401px)"
  srcset="https://cdn-d.mindedgeonline.com/1678/beach-header.jpg">
    <img src="https://cdn-d.mindedgeonline.com/1678/beach-header-cropped.jpg">
  </picture>

<div class="bkgd">

 <div class="row">

    <header>
        <h1>Coastal Crafts</h1>
    </header>

     <nav>
       <ul>
        <li><a href="#home">Home</a></li>
        <li><a href="#shop">Shop</a></li>
```

```
            <li><a href="#specials">Specials</a></li>
            <li><a href="#about">About</a></li>
            <li><a href="#contact">Contact</a></li>
          </ul>
      </nav>

      <article>
          <h2>Shop Local</h2>
            <p>Coast Crafts offers a treasure trove of unique gifts for everyone
on your list. We feature handmade gifts that are crafted by local artisans —
from jewelry, home decor, clothing, toys and more!</p>
      </article>

      <footer>
          <p>Family owned and operated since 1972</p>
      </footer>

    </div>
</div>

</body>
</html>
```

CSS Styles

The following adjustments were made to the CSS styles.

- Created media queries based on the defined breakpoints
- Ensured the media queries are structured so that they are mobile-first
- Added Flexbox structure to each media query based on the defined layout specs
- Moved the background images inside the media queries to ensure only one background image loads depending on device width

```
/*the following styles are presentational*/
html {
      box-sizing: border-box;
      }
          *, *:before, *:after {
      box-sizing: inherit;
      }

body {
  /* push our display to the edges of the browser window */
      margin: 0;
      padding: 0;
      }

header {
      border: 5px solid #0e385c;
      color:#0e385c;
      text-align: center;
      }

nav {
      color:#3c79a2;
      }

nav ul {
      list-style-type: none;
      margin: 0;
      padding: 0;
      }
```

```
nav li {
      padding: 8px;
      margin-bottom: 7px;
      background-color: #73d7e6;
      }

nav li:hover {
      background-color: #4caebb;
      }

article {
      padding: 8px;
      color:#0e385c;
      }

footer {
      color:#0e385c;
      text-align: center;
      padding: 2px;
      }

/* these are our default layouts with Flexbox for mobile devices */

  .row {
    display: flex;
    flex-flow: row wrap;
    justify-content: space-between;
    }

header {
    flex-basis: 100%;
    }

nav {
    flex-basis: 100%;
    }

article {
    flex-basis: 100%;
    }

footer {
    flex-basis: 100%;
    }

/* Managing background image - remember to put background images in a media
query so only one image loads */

@media (max-width: 400px) {
      .bkgd {
          background-image: url('https://cdn-d.mindedgeonline.com/1678/bkg-
water-cropped-min.jpg');
          background-size: cover;
          width: 100%;
          height: 100%;
          }
}

@media (min-width: 401px) {
      .bkgd {
          background-image:url('https://cdn-d.mindedgeonline.com/1678/bkg-
water-min.jpg');
          background-size: cover;
          width: 100%;
```

```
            height: 100%;
            }

/* change flex-basis values for larger displays */

        nav {
            flex-basis: 25%;
            }

        article {
            flex-basis: 75%;
            }

        footer {
            flex-basis: 100%;
            }
}
```

Give it a Try!

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index.html   styles.css

Theme Select:

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