



RWD AND BOOTSTRAP



What is Responsive Web Design?

- Responsive web design makes your web page look good on all devices.
- Responsive web design uses only HTML and CSS.
- Responsive web design is not a program or a JavaScript.
- Web pages can be viewed using many different devices: desktops, tablets, and phones. Your web page should look good, and be easy to use, regardless of the device.

Real life examples -

- Barkbox - <https://www.barkbox.com/>
- Street Easy - <https://streeteasy.com/>
- Airbnb - <https://www.airbnb.com/>

Responsive Web Design - The Viewport

- The viewport is the user's visible area of a web page.
- The viewport varies with the device, and will be smaller on a mobile phone than on a computer screen.
- Before tablets and mobile phones, web pages were designed only for computer screens, and it was common for web pages to have a static design and a fixed size.
- Then, when we started surfing the internet using tablets and mobile phones, fixed size web pages were too large to fit the viewport. To fix this, browsers on those devices scaled down the entire web page to fit the screen.
- This was not perfect!! But a quick fix.

Setting The Viewport

- HTML5 introduced a method to let web designers take control over the viewport, through the <meta> tag.
- You should include the following <meta> viewport element in all your web pages:

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

- This gives the browser instructions on how to control the page's dimensions and scaling.
- The width=device-width part sets the width of the page to follow the screen-width of the device (which will vary depending on the device).



Without the viewport meta tag



With the viewport meta tag

Responsive Web Design - Grid-View

- Bootstrap Grid in the latter slides.

Responsive Web Design - Media Queries

- Media query is a CSS technique introduced in CSS3.
- It uses the @media rule to include a block of CSS properties only if a certain condition is true.
- Try this yourself -
https://www.w3schools.com/css/tryit.asp?filename=tryresponsive_mediaquery

What is Bootstrap?

- Bootstrap is a free front-end framework for faster and easier web development
- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plugins
- Bootstrap also gives you the ability to easily create responsive designs

What is Responsive Web Design?

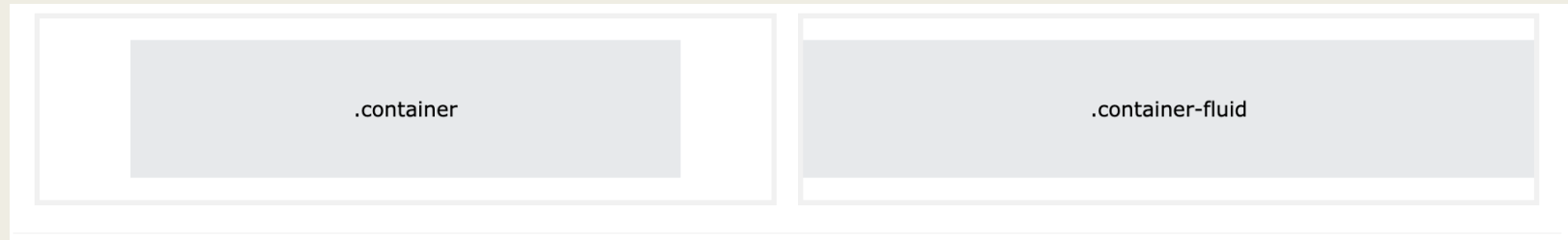
- Responsive web design is about creating web sites which automatically adjust themselves to look good on all devices, from small phones to large desktops.
- Example -
https://www.w3schools.com/bootstrap5/tryit.asp?filename=trybs_default&stacked=h

Bootstrap official documentation

- Go here - <https://getbootstrap.com/docs/5.3/getting-started/introduction/>

Bootstrap 5 Containers

- Containers are used to pad the content inside of them, and there are two container classes available:
- The `.container` class provides a responsive **fixed width container**
- The `.container-fluid` class provides a **full width container**, spanning the entire width of the viewport



Fixed vs Fluid container

- Use the `.container` class to create a responsive, fixed-width container.

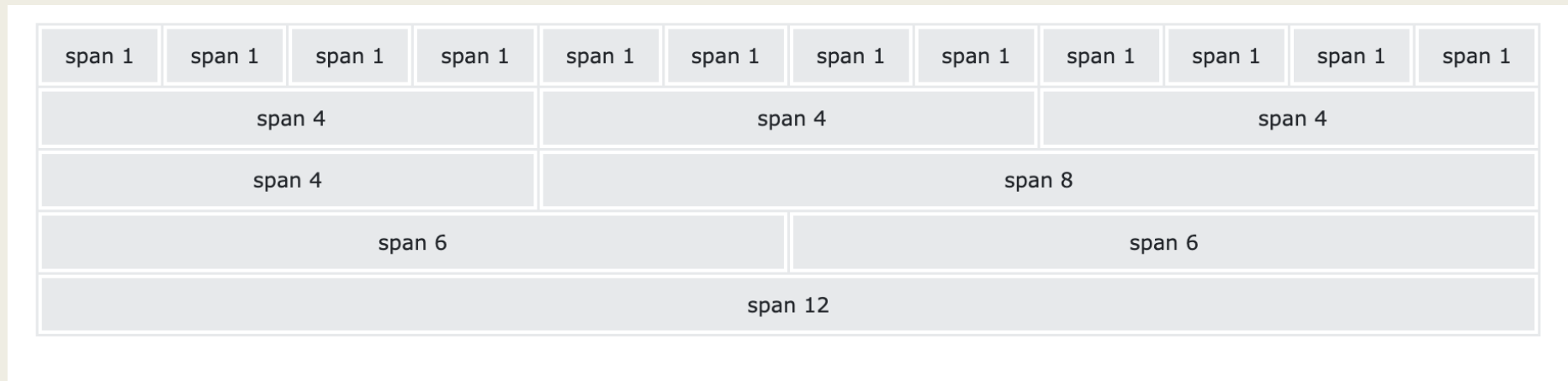
```
<div class="container">
  <h1>My First Bootstrap Page</h1>
  <p>This is some text.</p>
</div> .
```

- Use the `.container-fluid` class to create a full width container, that will always span the entire width of the screen (`width` is always `100%`):

```
<div class="container-fluid">
  <h1>My First Bootstrap Page</h1>
  <p>This is some text.</p>
</div>
```

Bootstrap 5 Grids

- Bootstrap's grid system is built with flexbox and allows up to 12 columns across the page. If you do not want to use all 12 columns individually, you can group the columns together to create wider columns:



Grid Classes

The Bootstrap 5 grid system has six classes:

1. `.col`– (extra small devices - screen width less than 576px)
 2. `.col-sm`– (small devices - screen width equal to or greater than 576px)
 3. `.col-md`– (medium devices - screen width equal to or greater than 768px)
 4. `.col-lg`– (large devices - screen width equal to or greater than 992px)
 5. `.col-xl`– (xlarge devices - screen width equal to or greater than 1200px)
 6. `.col-xxl`– (xxlarge devices - screen width equal to or greater than 1400px)
- The classes above can be combined to create more dynamic and flexible layouts.

Tip: Each class scales up, so if you want to set the same widths for `sm` and `md`, you only need to specify `sm`.

Basic Structure of a Bootstrap 5 Grid

```
<!-- Control the column width, and how they should appear on different devices -->
<div class="row">
  <div class="col-**-**"></div>
  <div class="col-**-**"></div>
</div>
<div class="row">
  <div class="col-**-**"></div>
  <div class="col-**-**"></div>
  <div class="col-**-**"></div>
</div>

<!-- Or let Bootstrap automatically handle the layout -->
<div class="row">
  <div class="col"></div>
  <div class="col"></div>
  <div class="col"></div>
</div>
```


Practice

- [Bootstrap images](#)
- [Navigation bars](#)
- [Carousel](#)
- [Popups](#)