



# Bootstrap 5

## Chapter-2

The Next Generation of Web Development



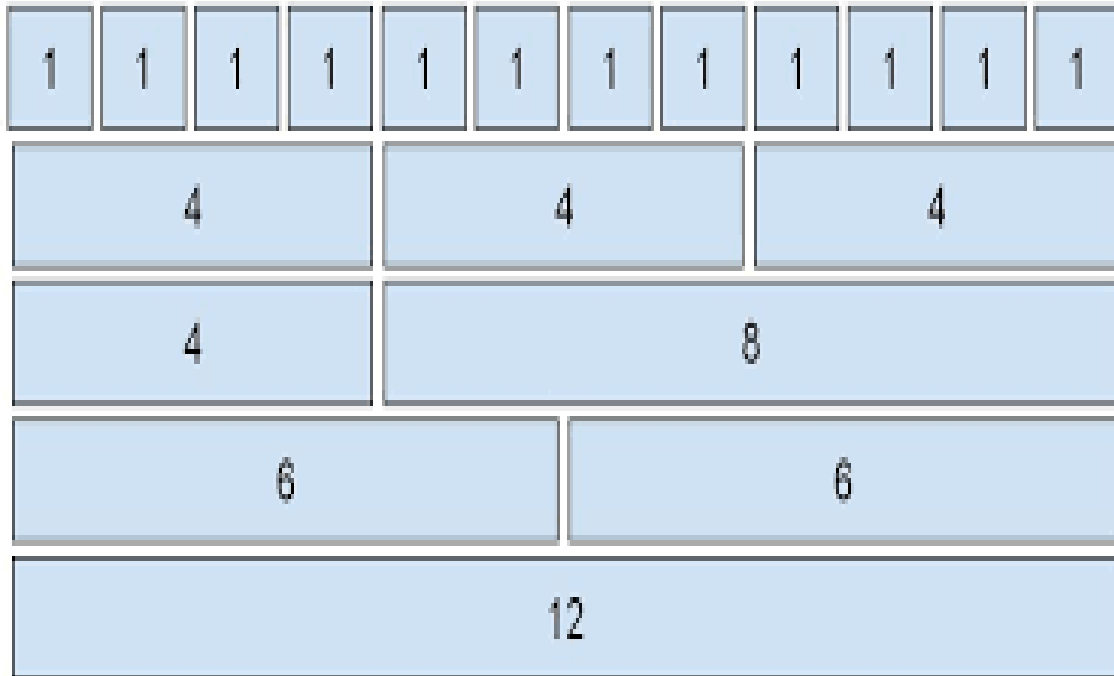


# Bootstrap Grid system

- ❑ The Bootstrap grid system is a powerful and responsive layout system that helps you create flexible and responsive web page layouts.
- ❑ Bootstrap's grid system uses a series of containers, rows, and columns to layout and align content.
- ❑ It's built with flexbox and is fully responsive.



# Grid Structure



The grid system is based on a 12-column layout.

A row is the container for columns.

Columns are defined using the `.col-*` classes, where `*` represents the number of columns the element should span.

Columns within a row should always add up to 12 or less to maintain a proper layout.








# Grid classes

.xs (for phones - screens less than 768px wide)

.col-sm- (for tablets - screens equal to or greater than 768px wide)

.col-md- (for small laptops - screens equal to or greater than 992px wide)

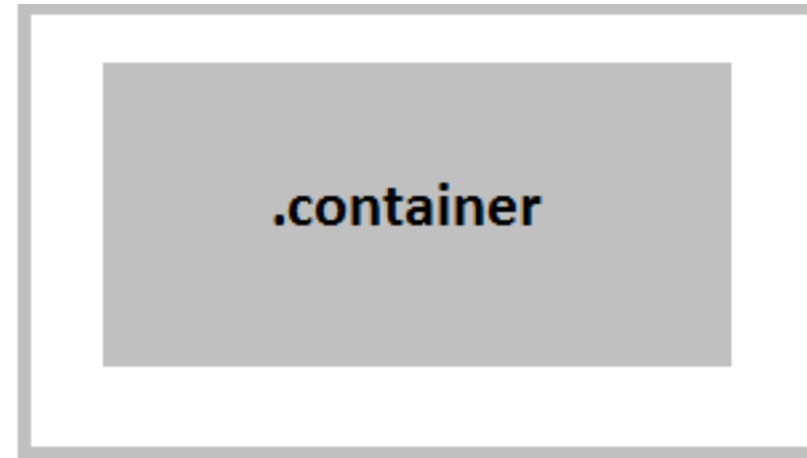
.col-lg- (for laptops and desktops - screens equal to or greater than 1200px wide)

<b>xs</b>	Extra small <576px	 portrait mobile
<b>sm</b>	Small ≥576px	 landscape mobile
<b>md</b>	Medium ≥768px	 portrait tablets <i>navbar collapse</i>
<b>lg</b>	Large ≥992px	 landscape tablets
<b>xl</b>	Extra large ≥1200px	 laptops, desktops, TVs



# Bootstrap-5 Containers

The container class creates a fixed-width container for your content.

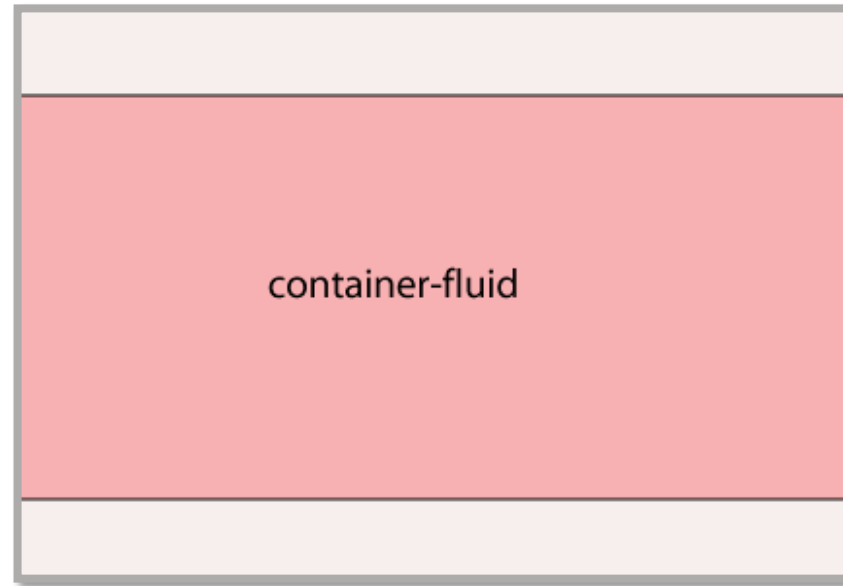


It provides a responsive layout that adjusts its width based on the screen size and available breakpoints.

The container's width is defined using a fixed pixel value, and it maintains a maximum width to prevent excessive stretching on larger screens.



# container-fluid



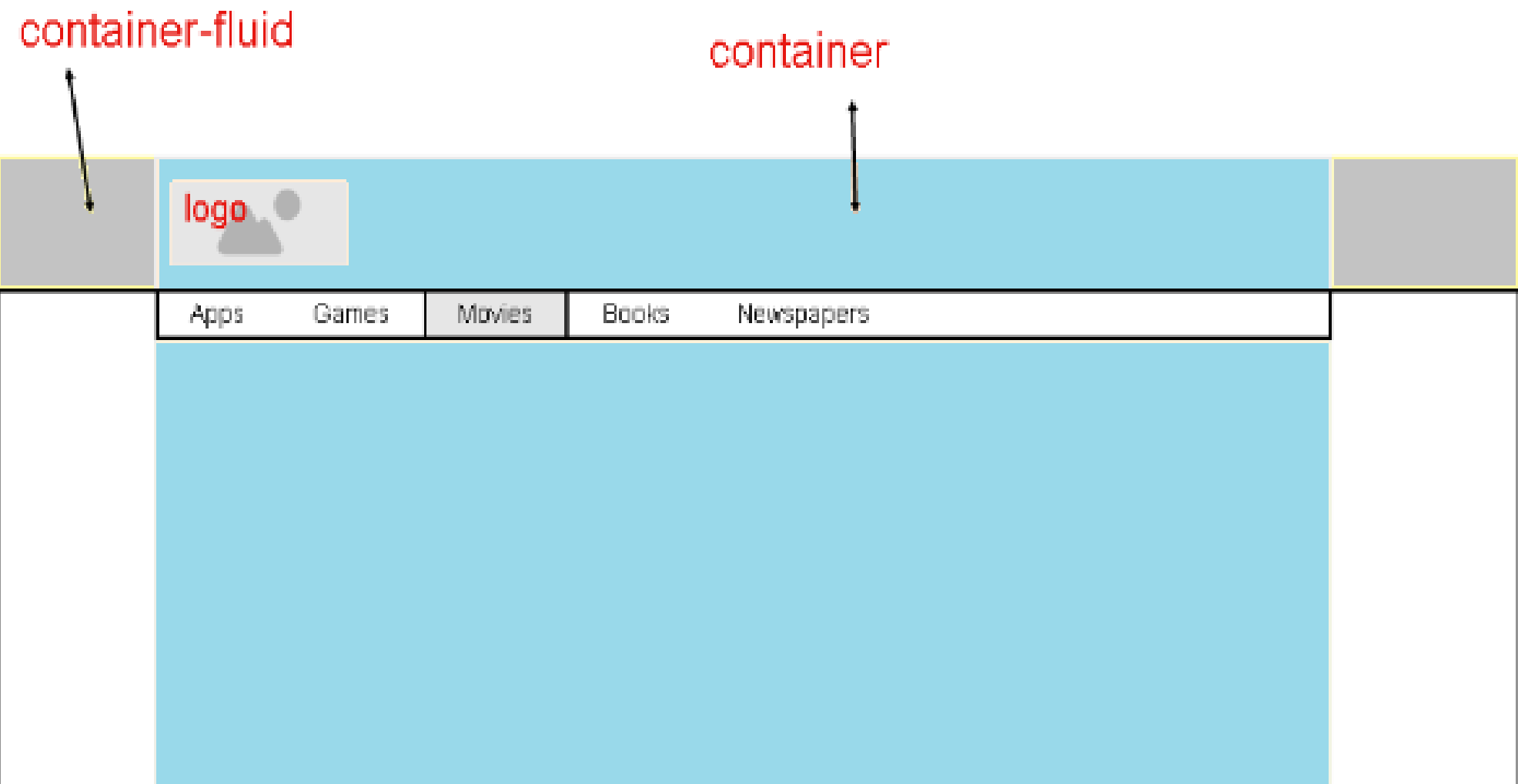
The container-fluid class creates a full-width container that spans the entire width of the viewport.

It provides a responsive layout that adjusts to different screen sizes by filling the available horizontal space.

The container's width is set to 100% of the viewport width, enabling the content to extend to the edges of the screen.



# Container & container-fluid





# Grid System Rules

Rows must be placed within a `.container` (fixed-width) or `.container-fluid` (full-width) for proper alignment and padding

Use rows to create horizontal groups of columns

Content should be placed within columns, and only columns may be immediate children of rows

Predefined classes like `.row` and `.col-sm-4` are available for quickly making grid layouts





Columns create gutters (gaps between column content) via padding. That padding is offset in rows for the first and last column via negative margin on .rows

Column widths are in percentage, so they are always fluid and sized relative to their parent element



# Three equal columns

The following example shows how to create 3 equal width columns, on all devices and screen widths.

```
<div class="container">  
  <div class="row">  
    <div class="col"></div>  
    <div class="col"></div>  
    <div class="col"></div>  
  </div>
```

.col	.col	.col
------	------	------



# Responsive columns

The following example shows how to create four equal width columns starting at tablets and scaling to extra large desktops.

```
<div class="container">  
  <div class="row">  
    <div class="col-sm-3">col-sm-3</div>  
    <div class="col-sm-3">col-sm-3</div>  
    <div class="col-sm-3">col-sm-3</div>  
    <div class="col-sm-3">col-sm-3</div>  
  </div></div>
```

.col-sm-3

.col-sm-3

.col-sm-3

.col-sm-3



# 2 Unequal Responsive Columns

The following example shows how to get various-width columns.

```
<div class="row">  
  <div class="col-sm-4">col-sm-4</div>  
  <div class="col-sm-8">col-sm-8</div>  
</div>
```

.col-sm-4

.col-sm-8





# Basic Structure of a Bootstrap Grid

```
<div class="container">  
  <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>  
  <div class="row">  
    ...  
  </div>  
</div>
```



