



HTML5, CSS3, Bootstrap 4

HTML

- Hyper text markup language
- XML with which one can structure information
- Relationships between information is done via hyperlinks (a tags)
- Elements and attributes are the building blocks

HTML page

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<meta charset="utf-8">
```

```
<title>File Server Test</title>
```

```
</head>
```

```
<body>
```

```
<h1>Server works!</h1>
```

```
</body>
```

```
</html>
```

HTML5

- `<!DOCTYPE html>` -> tells the browser that the document is HTML5
- HTML5 adds new element with semantic roles such that the content of the page has more meaning, ex: footer, header
- It better connects to the server, ex: attributes `async`, `defer`
- It increases media capabilities, ex: `<video>` tag
- 2D/3D graphics effects, ex: `<canvas>` tag
- Storage, performance, device access

Semantics

```
<div id="header"> <div id="nav"> </div> </div>
```

```
<div id="main"> <div id="article"> </div> </div>
```

```
<div id="footer"> </div>
```

```
<header> <nav> </nav> </header>
```

```
<main> <article> </article> </main>
```

```
<footer> </footer>
```

CSS

- Adds styling to an html document
- Colors, spacing, sizes
- Themes to animations, fonts, grids etc.
- Property and value: {color: red}

```
<link rel="stylesheet" href="my-css-file.css">
```

Selectors

- Type/Element selectors: p, h1
- Class selectors: .column, .title
- Id selectors: #newsArticle
- Pseudo class: a:hover
- Pseudo elements: div::first-element

Embed styles

- Inline styles
- Internal stylesheet
- External stylesheet

Responsive websites

- Approach to web design which makes pages render well on a variety of devices
- Due to smartphones popularity and gsm internet a lot of browsing happens on the phones

Key points:

- Fluid grid to adapt on Desktop, Tablets and Phones
- Flexible images
- Different CSS based on screen size

Mobile first

- Designing for the smallest screen -> the hardest
- Make your way up to bigger screens
- Prioritize elements
- Big touch targets
- No hovers
- Small footprint for images, styles, scripts

Mobile viewport

The browser's viewport is area of the window in which web content can be seen. This is often not the same size as the rendered page, in which case the browser provides scrollbars for the user to scroll around and access all the content.

Narrow screen devices (e.g. mobiles) render pages in a virtual window or viewport, which is usually wider than the screen.

This mechanism is not so good for pages that are optimized for narrow screens

<meta name="viewport" content="width=device-width, initial-scale=1">

Media Query

- Modify your app/site depending on the device type and characteristics
- Usually used to apply styles based on screen size of device

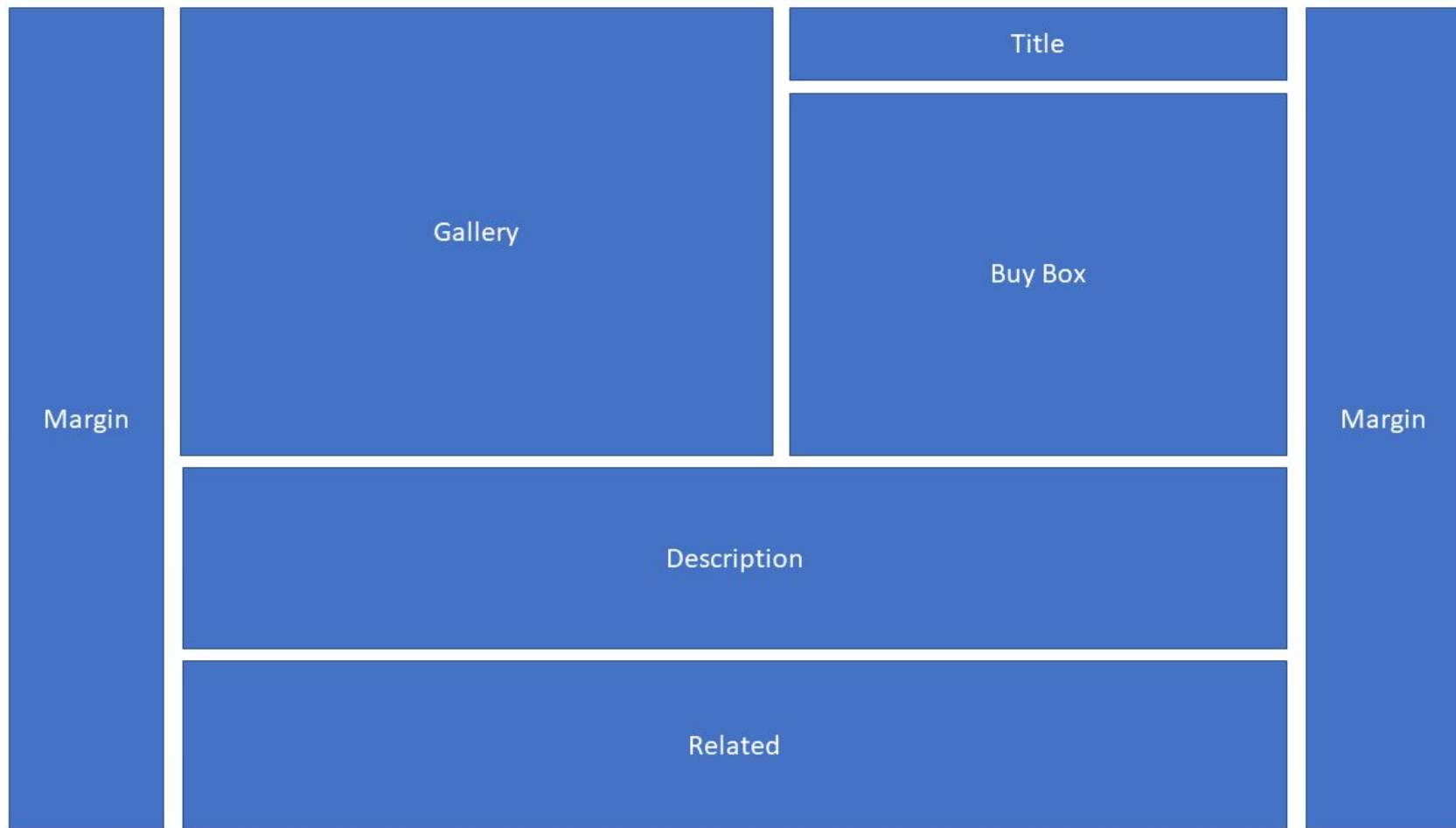
@media screen and (min-width: 300px) and (orientation: landscape) { ... }

Flexbox

- Document layout is better done via flexbox
- Improves space distribution
- Improves alignment capabilities, including vertical alignment
- It makes the justification and distribution of free space easier

Grid system

- Build responsive layouts easier
- Consistency between browsers and devices
- Historically layout was done via tables and floats
- Modern way is with media queries and flexbox



Call to action

- Usually a button or a link that tries to convince a user to take some action



Jumbotron

- Is a big part of a presentation page
- Calls for extra attention
- It conveys special/important information
- Summary of the product



DREAM BIG.

"If my mind can conceive it and my heart can believe it, then I can achieve it."

— Muhammad Ali

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Bootstrap 4

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

B4 Grid

- 12 column grid
- Adapt to various screen sizes with modifiers: .col-sm- .col-md- .col-lg- .col-xl-
- Has gutter
- Is nestable

B4 components

Bootstrap reusable components for:

- Alerts, Buttons
- Navigation
- Cards
- Carousels
- Dropdowns
- Forms
- Pagination
- Tooltips

B4 Utilities

Bootstrap 4 gives several utilities including:

- Spacing, sizing and Text
- Visibility
- Colors
- Images

Sources and extra

- <https://getbootstrap.com/>
- <https://css-tricks.com/>
- <https://developer.mozilla.org/en-US/docs/Learn>
- <https://catalin.red/>
- <https://www.codecademy.com/>