Bootstrap

Lab Module 3

Bootstrap

- Bootstrap is a **front-end** framework
- **free** and **open-source** CSS framework used for designing websites and applications.
- Compatible with both iOS and Android.
- **Mobile-first** front-end web development
    - Layout where the default configuration is for narrow screen/mobile devices, and layout features for wider viewports are then layered on top of that default.
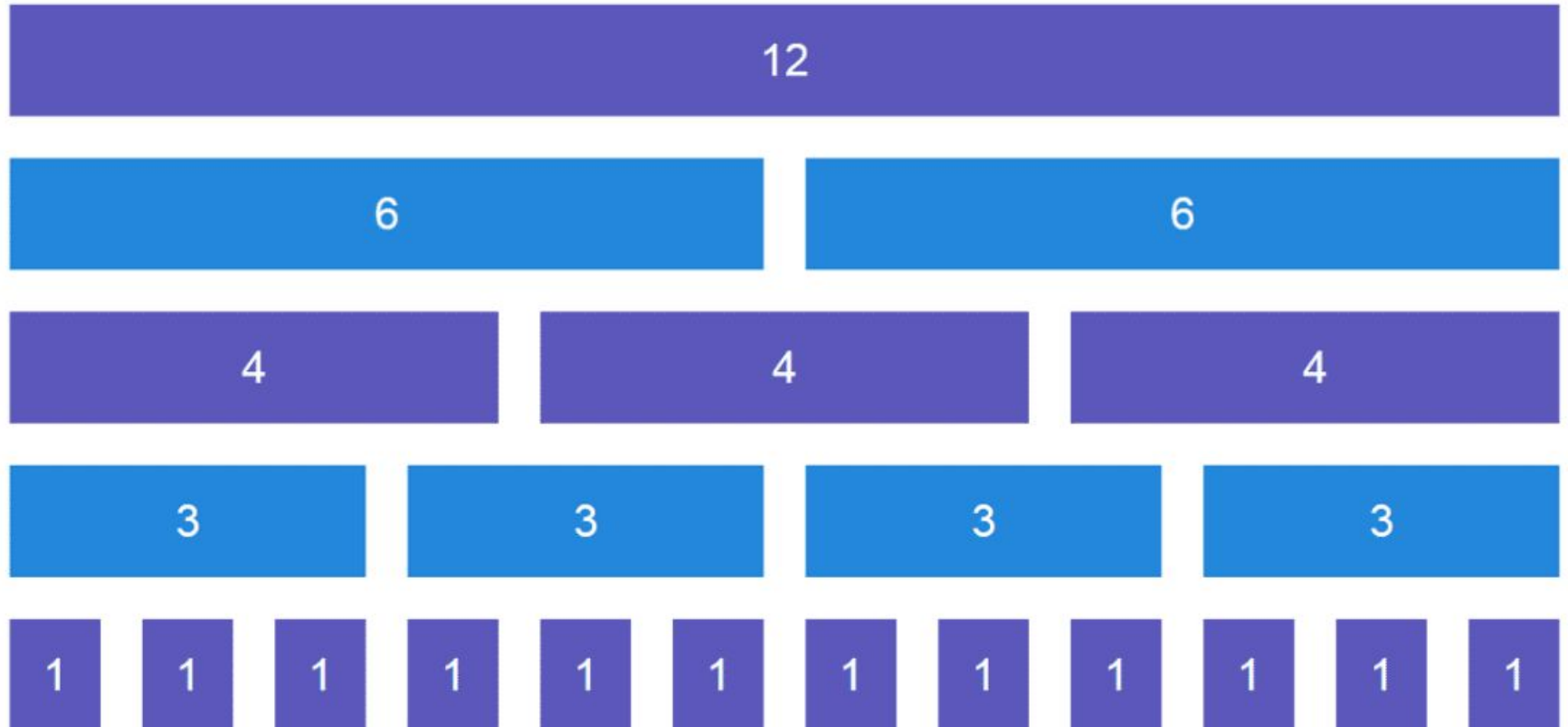- originally called Twitter Blueprint

Why Bootstrap?

- Easy to use
- LESS as Well as CSS Files
- Easily Customizable
- Components of Bootstrap
- Drop-downs, Button, Navigation, Progress Bar
- Bootstrap Templates
- Cross Browser Compatibility
- Responsive Grid System
- Ensures Consistency

- Time-Saving
- Huge Number of Resources and Community Support

Bootstrap is a combination of

- Grid System
- Classes
- Components

Grid System

12

6	6

4	4	4

3	3	3	3

1	1	1	1	1	1	1	1	1	1	1	1

Components

. HTML and Css Components

Bootstrap includes several predefined button styles, each serving its own semantic purpose, with a few extras thrown in for more control.

| Primary | Secondary | Success | Danger | Warning | Info | Light | Dark | Link |

```
<button type="button" class="btn btn-primary">Primary</button>
<button type="button" class="btn btn-secondary">Secondary</button>
<button type="button" class="btn btn-success">Success</button>
<button type="button" class="btn btn-danger">Danger</button>
<button type="button" class="btn btn-warning">Warning</button>
<button type="button" class="btn btn-info">Info</button>
<button type="button" class="btn btn-light">Light</button>
<button type="button" class="btn btn-dark">Dark</button>

<button type="button" class="btn btn-link">Link</button>
```

Copy

Components

- Dropdown menus.
- Navigation Bars.
- Button Groups.
- Labels.
- Breadcrumbs.
- Alerts & Progress Bars.
- Pagination.
- Typographic.

Classes

Responsive images

```
<img src="..." class="img-fluid" alt="Responsive image">
```

Image thumbnails

```
<img src="..." alt="..." class="img-thumbnail">
```

Aligning images

```
<img src="..." class="rounded float-left" alt="...">
```

```
<img src="..." class="rounded float-right" alt="...">
```

Include Bootstrap

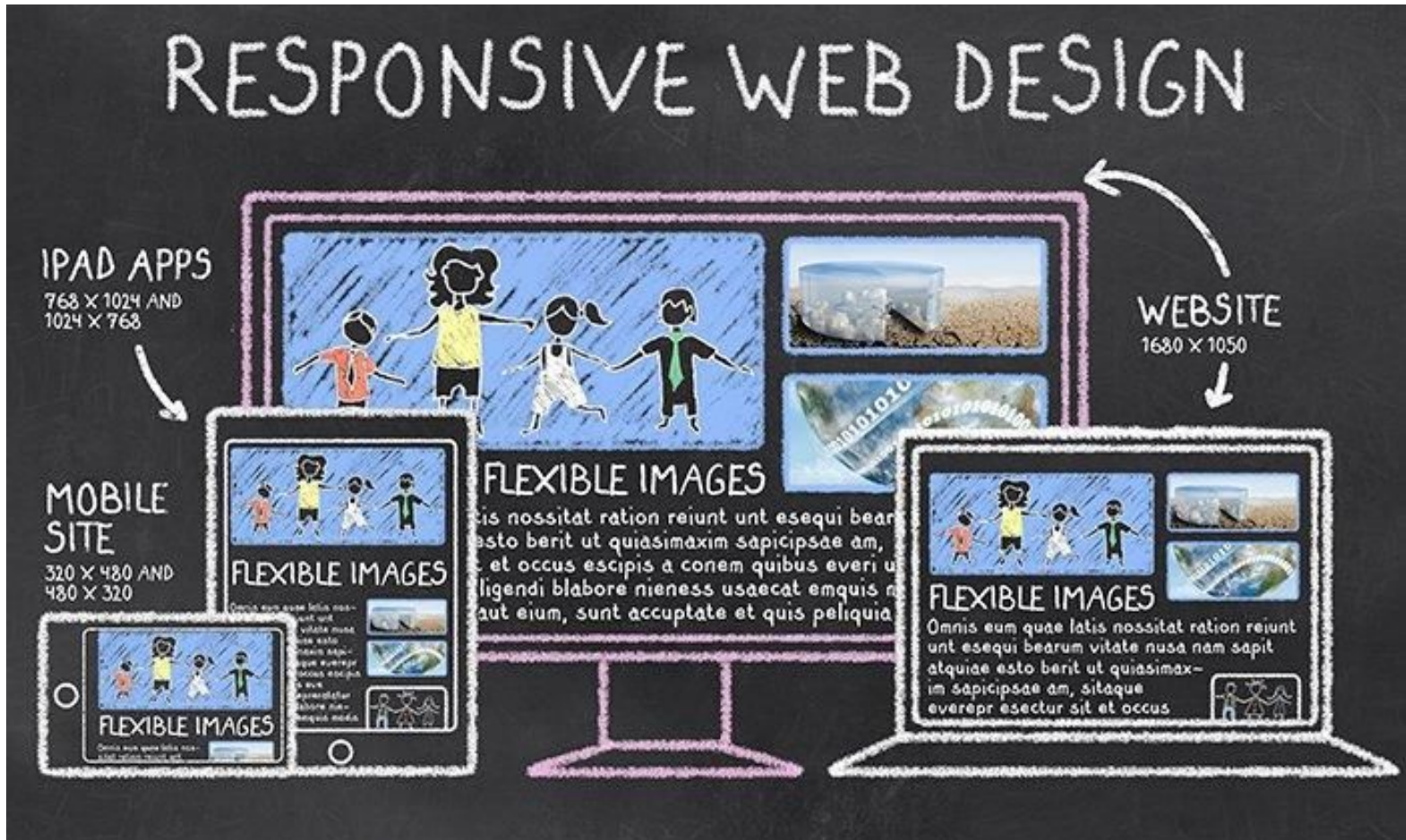- copy CSS code,copy JS code
    - CDN (Content Delivery Network)

https://getbootstrap.com/docs/4.1/getting-started/introduction/

    - Download and attach

https://getbootstrap.com/docs/4.1/getting-started/download/

- Whats there is all of them?

https://getbootstrap.com/docs/4.1/getting-started/contents/
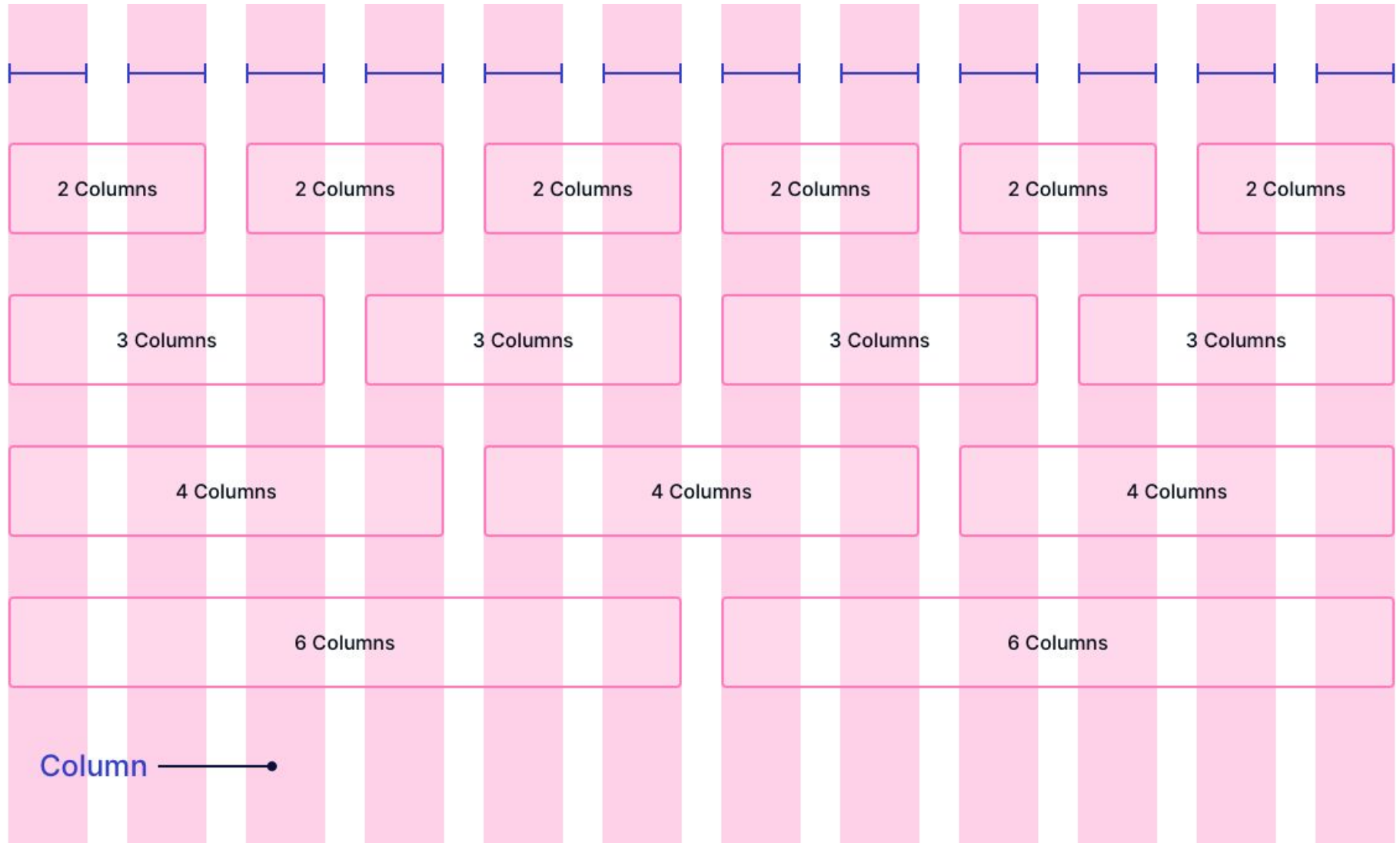
Responsive Web Design

- Earlier different websites for different devices

- New devices with new screen sizes are being developed every day, and each of these devices may be able to handle variations in size, functionality and even color.
- Some are in landscape, and others are portrait
- Responsive website is one that adapts to the screen size of the device where the website is being served.

- When the page resizes, the layout adjusts according to the fit of the screen.
- RWD allows you to design flexible screen resolution that is fluid and adapts to multiple screen sizes and is compatible with most popular browsers.
- A fluid grid is a way of defining a layout in terms of proportions. Thus, when the dimensions of a screen are shrunk, the layout with all elements will reduce in proportion.

Grid System

| 2 Columns | 2 Columns | 2 Columns | 2 Columns | 2 Columns | 2 Columns |

| 3 Columns | 3 Columns | 3 Columns | 3 Columns |

| 4 Columns | 4 Columns | 4 Columns |

| 6 Columns | 6 Columns |

Column

Header

Nav

Content

Footer

- The bootstrap grid systems consists of
  - Breakpoints
  - Container (Wrapper)
  - Row (is a div, having col)
  - Column
- Rows must be placed within a .container (fixed-width) or .container- fluid (full-width) for proper alignment and padding.

Container

	Extra small <576px	Small ≥576px	Medium ≥768px	Large ≥992px	X-Large ≥1200px	XX-Large ≥1400px
.container	100%	540px	720px	960px	1140px	1320px
.container-sm	100%	540px	720px	960px	1140px	1320px
.container-md	100%	100%	720px	960px	1140px	1320px
.container-lg	100%	100%	100%	960px	1140px	1320px
.container-xl	100%	100%	100%	100%	1140px	1320px
.container-xxl	100%	100%	100%	100%	100%	1320px
.container-fluid	100%	100%	100%	100%	100%	100%

- Use rows to create horizontal groups of columns.
- Grid columns are created by specifying the number of twelve available columns you wish to span. For example, three equal columns would use three .col-xs-4.
- Content should be placed within columns, and only columns may be immediate children of rows

- create gutters (gaps between column content) via padding.
- If more than 12 columns are placed within a single row, each group of extra columns will, as one unit, wrap onto a new line.

```
<div class="row">
<div class="coColumns l-md-4 col-xs-3">.col-md-4</div>
<div class="col-md-4">.col-md-4</div>
<div class="col-md-4">.col-md-4</div> </div>
```

- total column should not be more than 12
- Each div is 12 columns

- Bootstrap's grid system is responsive, and the columns will re-arrange automatically depending on the screen size.
- Bootstrap Breakpoints (col-<device>-*)

Breakpoint	Class infix	Dimensions
X-small	-	0px - 575px
Small	sm	576px - 767px
Medium	md	768px – 991px
Large	lg	992px – 1199px
Extra Large	xl	1200px – 1399px
Extra extra Large	xxl	>= 1400px

- beyond the breakpoint the rule remains applied unless the rule changes for higher breakpoints
- below the breakpoint the col would always be 12 col span uless new rules specified for smaller breakpoints

Classes

- img-fluid
- bg-*
- text-white
- p-*
- md-*

Components

- Form
- Input group
- button
- Nav bar
- breadcrumb
- Jumbotron