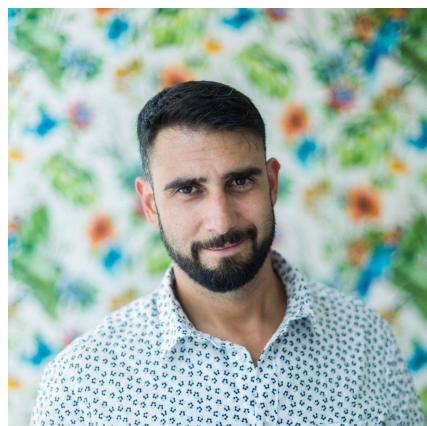


🧐 Добри практики в Responsive Web Design с Bootstrap 4



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Agenda

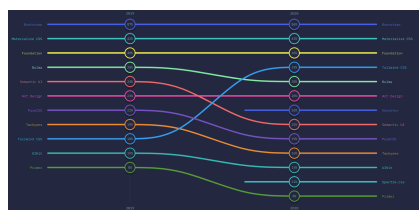
- Какво е Bootstrap?
- Какво е Responsive Web Design?
- Mobile first vs Desktop first подход
- Как работят responsive класовете в B4?
- Основни use cases и проблеми в responsive страниците
- Примери
- Q&A

? Какво е **Bootstrap**?

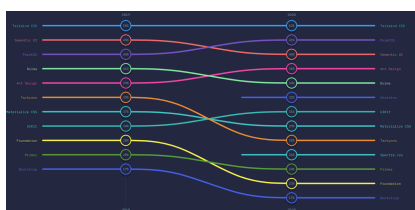
- Open-source библиотека от CSS класове и компоненти за създаване на уеб приложения
- Поддържана и създадена от Twitter през 2010г.
- С над 145 хиляди "звезди" влиза в класацията на един от най - популярните и използвани инструменти за разработване на web приложения.

- Последната стабилна версия към текущия момент е 4.5.3, като е налична и 5 бета версия.
 - [Migration guide](#)

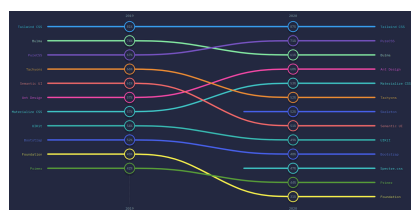
Usage, Interest & Satisfaction



Usage



Interest



Satisfaction

? Какво е **Responsive Web Design**?

- Понятието RWD се въвежда от [Ethan Marcotte](#) през 2010г.
- Идеята на RWD е да направи web приложенията достъпни за мобилни устройства - телефони и таблети по това време. Един web сайт да бъде достъпен и удобен за използване на различни резолюции, а не да се създават отделни сайтове за различните devices.

! 3 компонента:

- Fluid grid (мрежа) с елементи, които са оразмерени с релативни мерни единици (проценти, rem)
- Fluid-ни изображения
- Media queries - правила, които променят стиловете на елементите в зависимост от резолюцията, aspect ratio-то и device



Desktop first vs **Mobile first**

- Graceful degradation
- Progressive enhancement

```

/** Desktop first */
.parent-with-columns {
  display: flex;
}

.child-column {
  margin: 0 24px;
}

@media (max-width: 767.98px) {
  .parent-with-columns {
    display: block;
  }

  .child-column {
    margin: 0;
  }
}

```

```

/** Mobile first */
@media (min-width: 768px) {
  .parent-with-columns {
    display: flex;
  }

  .child-column {
    margin: 0 24px;
  }
}

```

- 📖 [Mobile first book](#) by [Luke Wroblewski](#)

? Как работают responsive класовете в B4?

- Utility first approach
- [Breakpoints](#) & [media queries](#)

	Extra small <576px	Small ≥576px	Medium ≥768px	Large ≥992px	Extra large ≥1200px
<code>.container</code>	100%	540px	720px	960px	1140px
<code>.container-sm</code>	100%	540px	720px	960px	1140px
<code>.container-md</code>	100%	100%	720px	960px	1140px
<code>.container-lg</code>	100%	100%	100%	960px	1140px
<code>.container-xl</code>	100%	100%	100%	100%	1140px
<code>.container-fluid</code>	100%	100%	100%	100%	100%

Breakpoints

```
// Extra small devices (portrait phones, less than 576px)
// No media query for `xs` since this is the default in Bootstrap

// Small devices (landscape phones, 576px and up)
@media (min-width: 576px) { ... }

// Medium devices (tablets, 768px and up)
@media (min-width: 768px) { ... }

// Large devices (desktops, 992px and up)
@media (min-width: 992px) { ... }

// Extra large devices (large desktops, 1200px and up)
@media (min-width: 1200px) { ... }
```

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Since we write our source CSS in Sass, all our media queries are available via Sass mixins:

```
// No media query necessary for xs breakpoint as it's effectively `@media (min-width: 0) { ... }`
@include media-breakpoint-up(sm) { ... }
@include media-breakpoint-up(md) { ... }
@include media-breakpoint-up(lg) { ... }
@include media-breakpoint-up(xl) { ... }

// Example: Hide starting at `min-width: 0`, and then show at the `sm` breakpoint
.custom-class {
  display: none;
}
@include media-breakpoint-up(sm) {
  .custom-class {
    display: block;
  }
}
```

[Copy](#)

Media queries

- Grid

	Extra small <576px	Small ≥576px	Medium ≥768px	Large ≥992px	Extra large ≥1200px
Max container width	None (auto)	540px	720px	960px	1140px
Class prefix	.col-	.col-sm-	.col-md-	.col-lg-	.col-xl-
# of columns	12				
Gutter width	30px (15px on each side of a column)				
Nestable	Yes				
Column ordering	Yes				

Columns

- Images

```

```

- Utilities
 - Display

As such, the classes are named using the format:

- `.d-{value}` for `xs`
- `.d-{breakpoint}-{value}` for `sm`, `md`, `lg`, and `xl`.

Where *value* is one of:

- `none`
- `inline`
- `inline-block`
- `block`
- `table`
- `table-cell`
- `table-row`
- `flex`
- `inline-flex`

Screen Size	Class
Hidden on all	<code>.d-none</code>
Hidden only on xs	<code>.d-none .d-sm-block</code>
Hidden only on sm	<code>.d-sm-none .d-md-block</code>
Hidden only on md	<code>.d-md-none .d-lg-block</code>
Hidden only on lg	<code>.d-lg-none .d-xl-block</code>
Hidden only on xl	<code>.d-xl-none</code>
Visible on all	<code>.d-block</code>
Visible only on xs	<code>.d-block .d-sm-none</code>
Visible only on sm	<code>.d-none .d-sm-block .d-md-none</code>
Visible only on md	<code>.d-none .d-md-block .d-lg-none</code>
Visible only on lg	<code>.d-none .d-lg-block .d-xl-none</code>
Visible only on xl	<code>.d-none .d-xl-block</code>

- Flex

Responsive variations also exist for `.d-flex` and `.d-inline-flex`.

- `.d-flex`
- `.d-inline-flex`
- `.d-sm-flex`
- `.d-sm-inline-flex`
- `.d-md-flex`
- `.d-md-inline-flex`
- `.d-lg-flex`
- `.d-lg-inline-flex`
- `.d-xl-flex`
- `.d-xl-inline-flex`

Responsive variations also exist for `flex-direction`.

- `.flex-row`
- `.flex-row-reverse`
- `.flex-column`
- `.flex-column-reverse`
- `.flex-sm-row`
- `.flex-sm-row-reverse`
- `.flex-sm-column`
- `.flex-sm-column-reverse`
- `.flex-md-row`
- `.flex-md-row-reverse`
- `.flex-md-column`
- `.flex-md-column-reverse`
- `.flex-lg-row`
- `.flex-lg-row-reverse`
- `.flex-lg-column`
- `.flex-lg-column-reverse`
- `.flex-xl-row`
- `.flex-xl-row-reverse`
- `.flex-xl-column`
- `.flex-xl-column-reverse`

Responsive variations also exist for `justify-content`.

- `.justify-content-start`
- `.justify-content-end`
- `.justify-content-center`
- `.justify-content-between`
- `.justify-content-around`
- `.justify-content-sm-start`
- `.justify-content-sm-end`
- `.justify-content-sm-center`
- `.justify-content-sm-between`
- `.justify-content-sm-around`
- `.justify-content-md-start`
- `.justify-content-md-end`
- `.justify-content-md-center`
- `.justify-content-md-between`
- `.justify-content-md-around`
- `.justify-content-lg-start`
- `.justify-content-lg-end`
- `.justify-content-lg-center`
- `.justify-content-lg-between`
- `.justify-content-lg-around`
- `.justify-content-xl-start`
- `.justify-content-xl-end`
- `.justify-content-xl-center`
- `.justify-content-xl-between`
- `.justify-content-xl-around`

Responsive variations also exist for `align-items`.

- `.align-items-start`
- `.align-items-end`
- `.align-items-center`
- `.align-items-baseline`
- `.align-items-stretch`
- `.align-items-sm-start`
- `.align-items-sm-end`
- `.align-items-sm-center`
- `.align-items-sm-baseline`
- `.align-items-sm-stretch`
- `.align-items-md-start`
- `.align-items-md-end`
- `.align-items-md-center`
- `.align-items-md-baseline`
- `.align-items-md-stretch`
- `.align-items-lg-start`
- `.align-items-lg-end`
- `.align-items-lg-center`
- `.align-items-lg-baseline`
- `.align-items-lg-stretch`
- `.align-items-xl-start`
- `.align-items-xl-end`
- `.align-items-xl-center`
- `.align-items-xl-baseline`
- `.align-items-xl-stretch`

- Spacing

The classes are named using the format `{property}{sides}-{size}` for `xs` and `{property}{sides}-{breakpoint}-{size}` for `sm`, `md`, `lg`, and `xl`.

Where *property* is one of:

- `m` - for classes that set `margin`
- `p` - for classes that set `padding`

Where *sides* is one of:

- `t` - for classes that set `margin-top` or `padding-top`
- `b` - for classes that set `margin-bottom` or `padding-bottom`
- `l` - for classes that set `margin-left` or `padding-left`
- `r` - for classes that set `margin-right` or `padding-right`
- `x` - for classes that set both `*-left` and `*-right`
- `y` - for classes that set both `*-top` and `*-bottom`
- blank - for classes that set a `margin` or `padding` on all 4 sides of the element

Where *size* is one of:

- `0` - for classes that eliminate the `margin` or `padding` by setting it to `0`
- `1` - (by default) for classes that set the `margin` or `padding` to `$spacer * .25`
- `2` - (by default) for classes that set the `margin` or `padding` to `$spacer * .5`
- `3` - (by default) for classes that set the `margin` or `padding` to `$spacer`
- `4` - (by default) for classes that set the `margin` or `padding` to `$spacer * 1.5`
- `5` - (by default) for classes that set the `margin` or `padding` to `$spacer * 3`
- `auto` - for classes that set the `margin` to `auto`

- Text

```
<p class="text-left">Left aligned text on all viewport sizes.</p>
<p class="text-center">Center aligned text on all viewport sizes.</p>
<p class="text-right">Right aligned text on all viewport sizes.</p>

<p class="text-sm-left">Left aligned text on viewports sized SM (small) or wider.</p>
<p class="text-md-left">Left aligned text on viewports sized MD (medium) or wider.</p>
<p class="text-lg-left">Left aligned text on viewports sized LG (large) or wider.</p>
<p class="text-xl-left">Left aligned text on viewports sized XL (extra-large) or wider.</p>
```

- Embed



Основни use cases и проблеми в responsive страниците

- Типография

- Промени в font-size
- Промени в text-align
- Отстояния
 - Padding на sections
 - Margin на елементи
- Подредба на елементите
 - Промени във display, flex
- Промени в лейаута
 - Колони
 - Размествания
- Responsive media
 - Изображения
 - Видео
- Промени в размерите на елементите
 - Бутони
 - Иконки

Пример

- <https://github.com/RAMTO/rwd-with-bootstrap4>