CSS - responsive design

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Responsive design principles

1. **Fluid grids and layout**
   a. use % for width
   b. Use float , grid , flex , responsive libraries (bootstrap , …)

2. **Responsive images**

3. **Media queries :** change style on breakpoints

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Mobile first vs desktop first

Desktop first

- start by doing ui for large screens e.g. for PC , then use media queries to fit for small screens
- Use max-width in media queries

Mobile first

- start by doing ui for small screens e,g, for mobile phone , then use media queries to fit for large screens
- Use min-width in media queries
- This force us to make the app with essential features only

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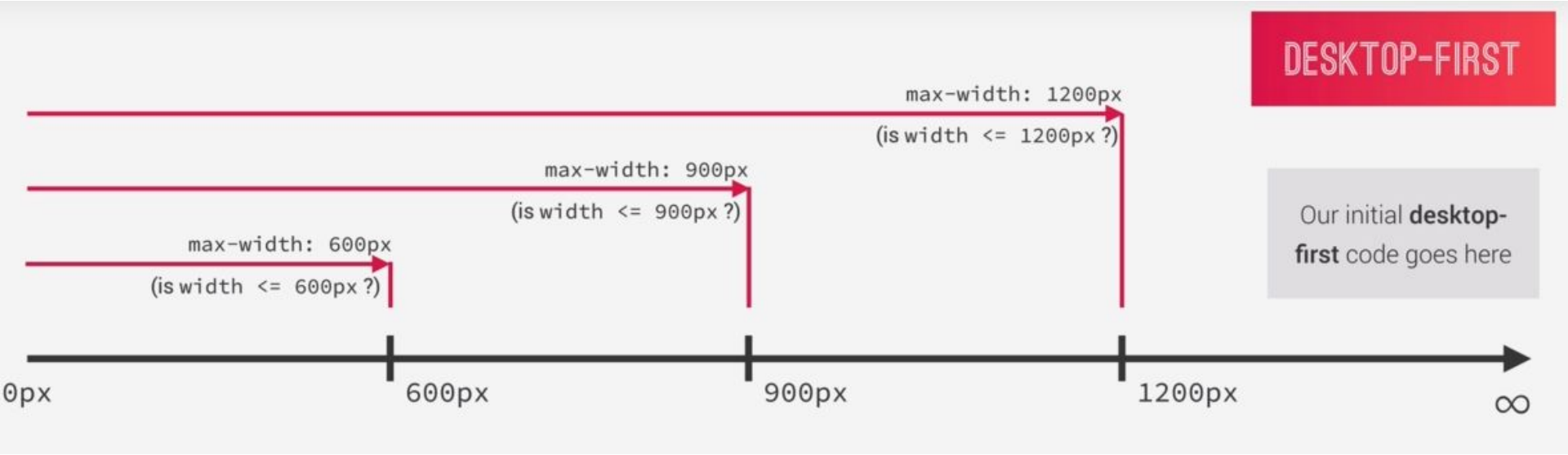
Desktop first - media queries (max-width)



עבור מסך ברוחב 500 פיקסלים יכולים להיות עיצובים שונים לפי ה breakpoint (כאן יש 3) אז מי גובר ? מי שרשום אחרון בcss וזה כללית נכון לכל property אחר בcss

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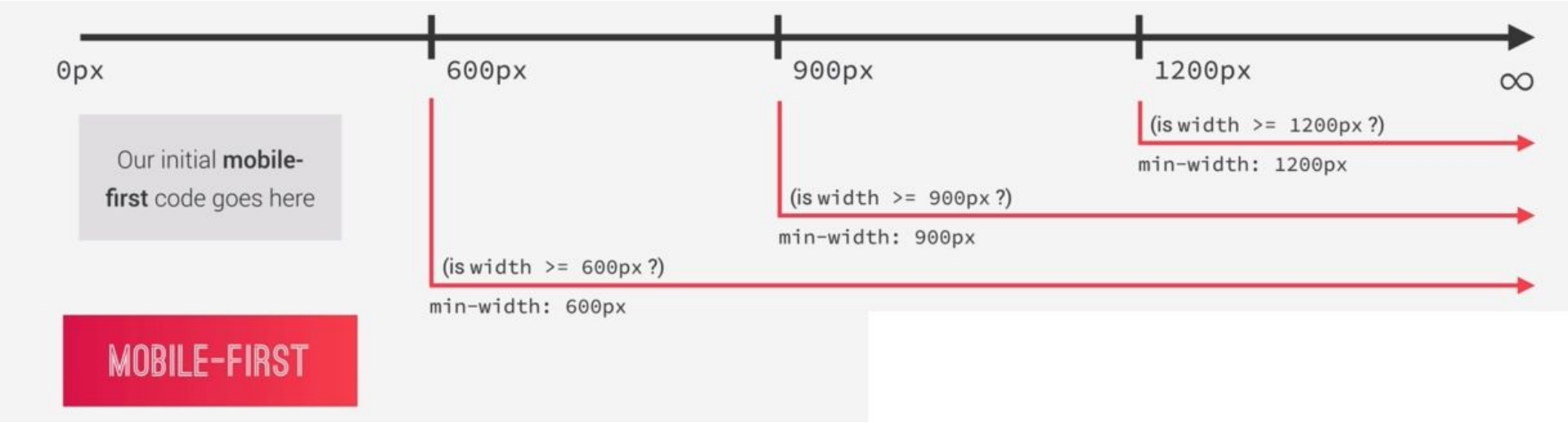
Mobile first - media queries (min-width)



עבור מסך ברוחב 1300 פיקסלים יכולים להיות עיצובים שונים לפי ה breakpoint (כאן יש 3) אז מי גובר ? מי שרשום אחרון בcss וזה כללית נכון לכל property אחר בcss

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Mobile first vs Desktop first

- 100% optimised for the mobile experience;
- Reduces websites and apps to the absolute essentials;
- Results in smaller, faster and more efficient products;
- Prioritizes content over aesthetic design, which may be desirable.

- The desktop version might feel overly empty and simplistic;
- More difficult and counterintuitive to develop;
- Less creative freedom, making it more difficult to create distinctive products;
- Clients are used to see a desktop version of the site as a prototype;
- Do your users even use the mobile internet? What's the purpose of your website?

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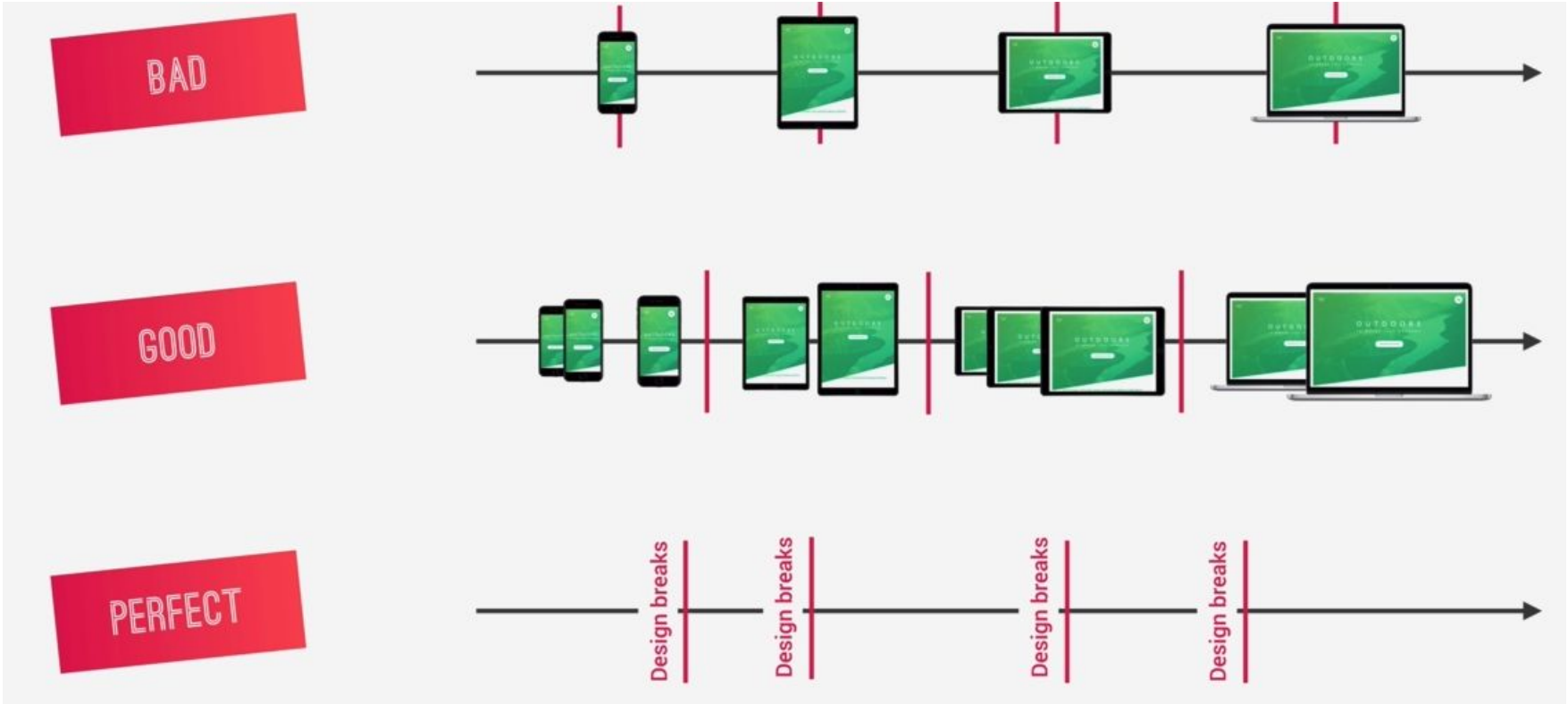
Breakpoints



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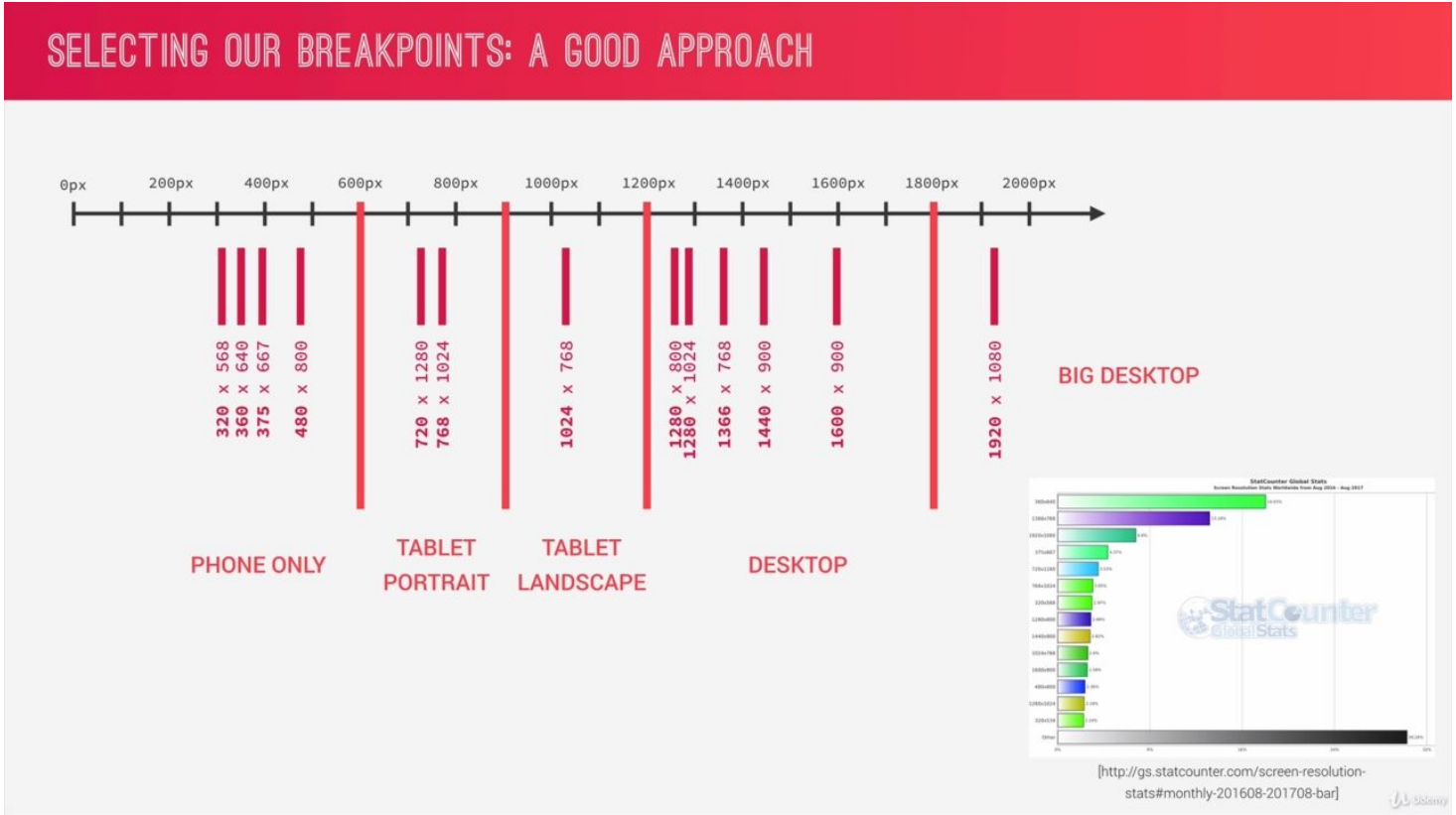
Select breakpoints



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More about media queries

My slides

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How we check if the design is responsive

Simply check all pages using “Test media queries” - see few slides before and see that it behaves good for all pixel spectrum

Use media queries when it does not looks good e.g change :

- font-size
- letter-spacing
- Padding
- Make grid col occupy 50% width of row
- ……..

Check here

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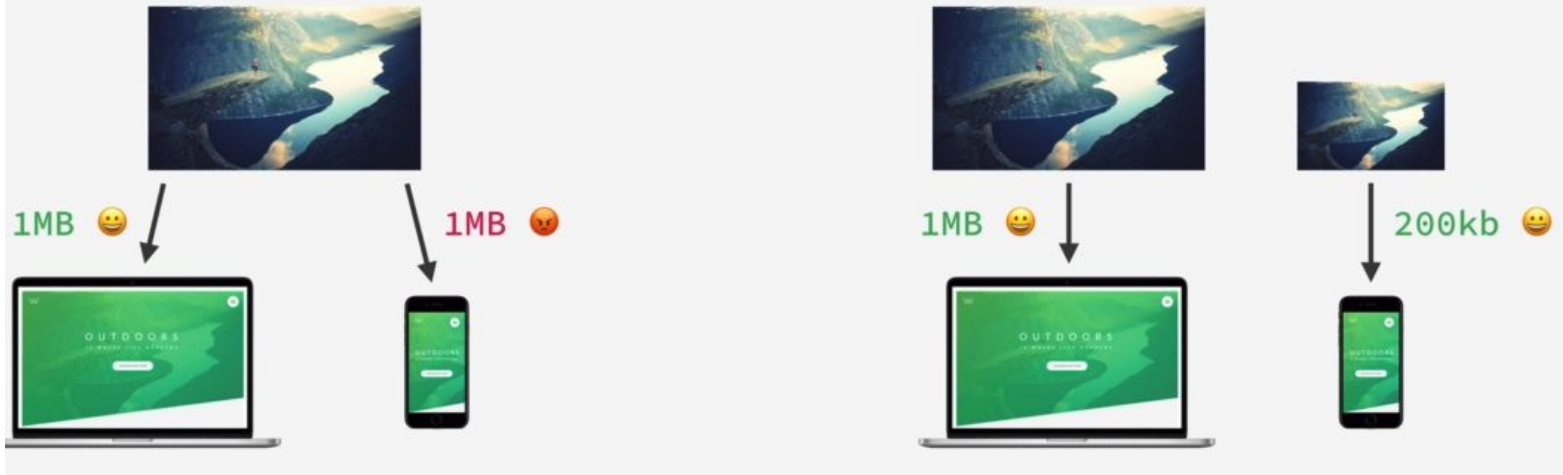
Responsive image

The goal of responsive images is to serve the **right image** to the **right screen size** and device, in order to avoid downloading unnecessary large images on smaller screens.



Check also my blog post

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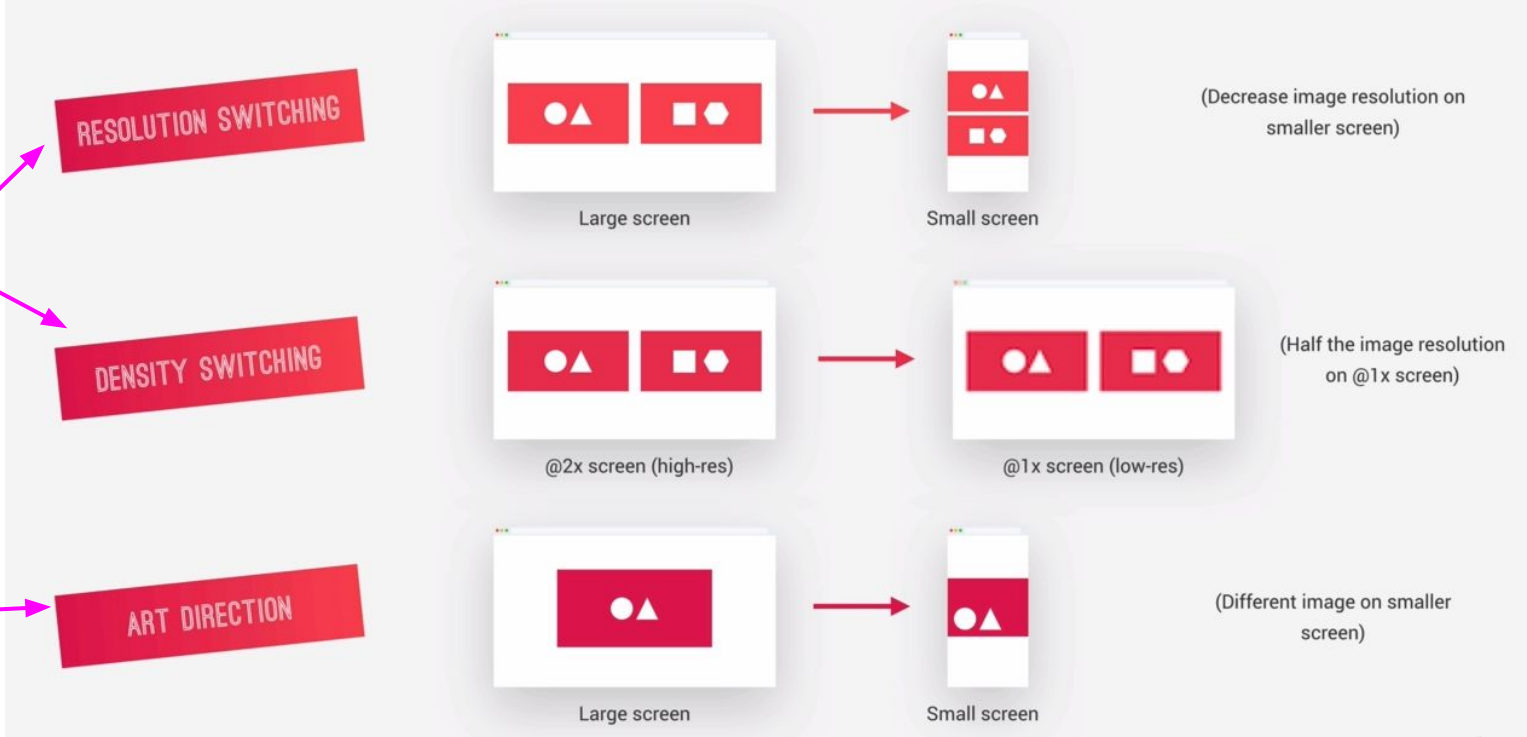
When to use responsive image

Serve the same image with different resolution

Serve cropped image or smaller image for smaller screen



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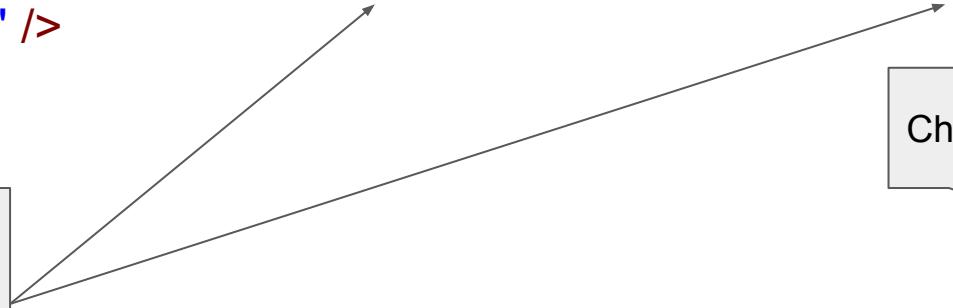
srcset attribute - density switching using html

```
<img srcset="img/logo-green-1x.png 1x , img/logo-green-2x.png 2x" alt="Full logo"
class="footer__logo" />
```



Check here

. The browser will choose the correct density automatically descriptors according to device resolution screen

In general this will choose the low resolution file for low resolution

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picture element - art direction using html

```
<picture class="footer__logo">
        <!-- 37.5em relate to 600px - phone -->
        <source
        srcset="img/logo-green-small-1x.png 1x, img/logo-green-small-2x.png 2x"
        media="(max-width : 37.5em)"
      />
      <img
        srcset="img/logo-green-1x.png 1x, img/logo-green-2x.png 2x"
        alt="Full logo"
      />
</picture>
```

This will be used for screen width <= 600px

This will be used for screen width > 600px

This is the first time i see media queries used in html and not css

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