

# Optimizations

- Optimizing Screen Sizes
- Cross-Browser Support

**I heard you want to be a web developer**



**Here are a few devices to test your site**

# Breakpoint Examples

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3 main devices to consider:



width > 1024px



1024px > width > 480px



480px > width > 250px

# Breakpoint Examples

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Can be reduced down to 2:



width > 780px



780px > width > 250px

# Breakpoint Examples

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Example of how bootstrap sets breakpoints:

## c) The Standard Bootstrap 3.x Breakpoints

```
@media all and (max-width: 991px) { ... }  
@media all and (max-width: 768px) { ... }  
@media all and (max-width: 480px) { ... }
```

## d) The Standard Bootstrap 4.x Breakpoints

```
@media all and (max-width: 1199px) { ... }  
@media all and (max-width: 991px) { ... }  
@media all and (max-width: 768px) { ... }  
@media all and (max-width: 575px) { ... }
```

## e) The Material Design Lite (MDL) Breakpoints

```
@media all and (max-width: 1024px) { ... }  
@media all and (max-width: 839px) { ... }  
@media all and (max-width: 480px) { ... }
```

src: <https://medium.com/@uiuxlab/the-most-used-responsive-breakpoints-in-2017-of-mine-9588e9bd3a8a>

# Media Queries

Executes code in brackets if width  $\leq$  max-width

```
@media (max-width: 1000px) { ... }
```

Executes code in brackets if width  $\geq$  max-width

```
@media (min-width: 1000px) { ... }
```

@media queries can check:

- Screen widths and heights
- Screen resolutions
- Orientation

# Setting Breakpoints

Sets CSS properties for different screen widths:



*(Regular CSS...)*



**@media** (max-width: 1024px) {      Only executed if width < 1024

*(Tablet CSS...)*

}



**@media** (max-width: 480px) {      Only executed if width < 480

*(Phone CSS...)*

}



# Setting Breakpoints

What is the font size on a **1920x1080 display**? On a **720x480 display**?



```
p { font-size: 18px; }
```

**1920x1080**



```
@media (max-width: 1024px) {
```

```
  p { font-size: 14px; }
```

**720x480**

```
}
```



```
@media (max-width: 480px) {
```

```
  p { font-size: 12px; }
```

```
}
```

• ~~Optimizing Screen Sizes~~

• Cross-Browser Support

# Fallback Support

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- Not all browsers share the same modern-day HTML features

CSS features

JQuery features

- You can set fallback behaviors such as displaying text or images in place of failed-to-load content
- The default fallback is to not display at all (skip over the element)

# CSS in Various Browsers

Each browser uses their own kit for transformations:

```
.move-me:hover {
```



```
-ms-transform: translate(0%, 42%);
```



```
-webkit-transform: translate(0%, 42%);
```



```
-moz-transform: translate(0%, 42%);
```



```
-o-transform: translate(0%, 42%);
```

```
}
```

# CSS in Various Browsers

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How to tell if a browser has a specific CSS property tag?

Try the default tag.

Test in every browser.

If it fails in one browser, google the tag and the browser name followed by 'not working'.

Stack Overflow and similar sites will tell you how to fix it.

# Homework Ideas

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- ❑ Test site across multiple browsers and devices.
- ❑ Correct cross-browser errors (usually by searching them).
- ❑ Add media queries to set breakpoints for CSS properties.

# Live Demo