

# W4D4 - Responsive Design

# AGENDA

What is responsive design

Relative units

Media queries

Responsive images

Font scale

Grid systems

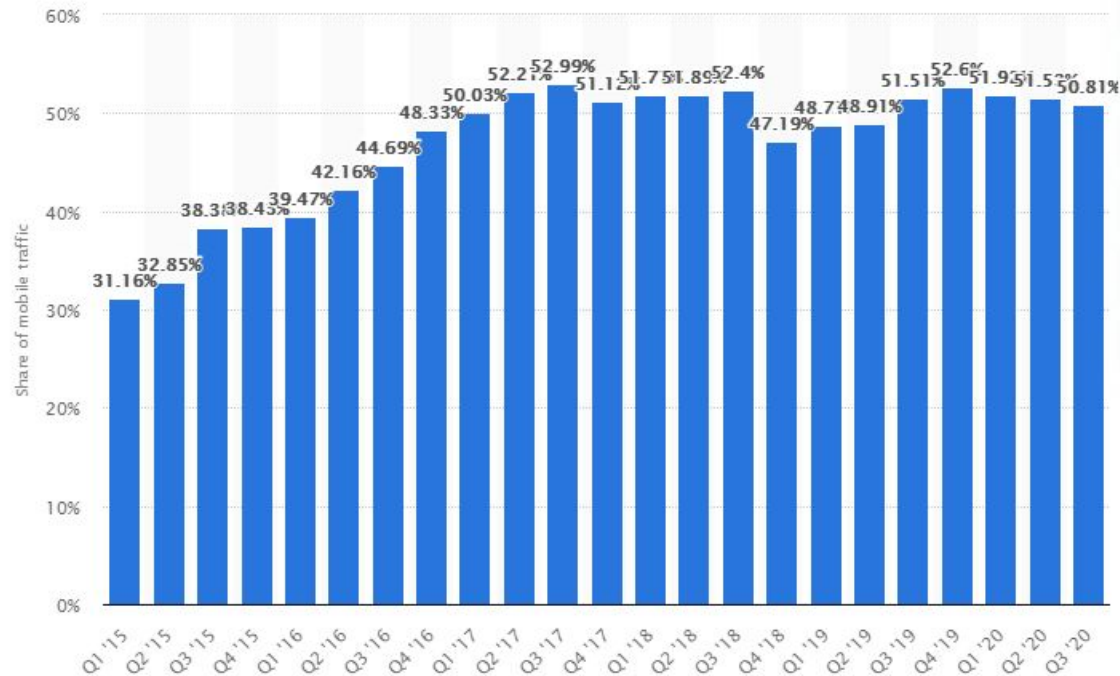
SASS

slido

What is the percentage of mobile device website traffic worldwide?

 Start presenting to display the poll results on this slide.

# Mobile accounts for 50.8% of traffic worldwide



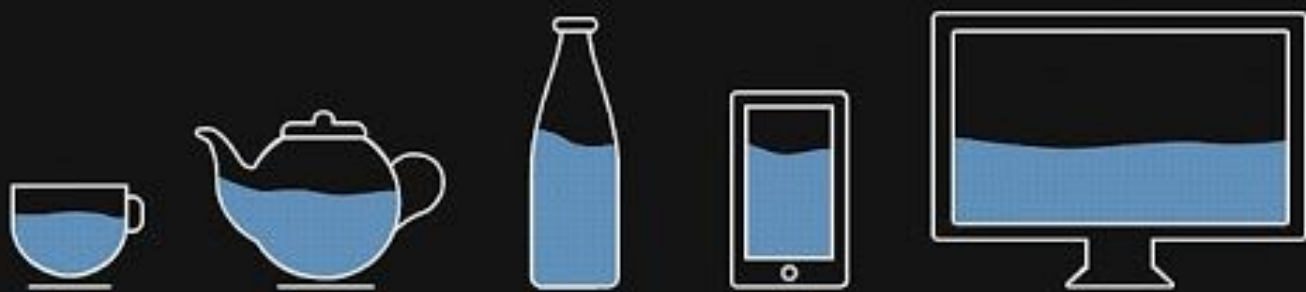
**RESPONSIVE DESIGN**

**IT'S KIND OF A BIG DEAL**

# What Is Responsive Design

- A **multitude of different screen sizes** exist across phones, "phablets," tablets, desktops, game consoles, TVs, and even wearables.
- Responsive design means that your Web app can **adapt to any screen size** and provide a **good user-experience**.
- With responsive web design the server always sends the **same HTML code to all devices**, and **CSS is used to alter the rendering** of the page on the device.

# CONTENT IS LIKE WATER



“ You put water into a cup it becomes the cup.  
You put water into a bottle it becomes the bottle.  
You put it in a teapot, it becomes the teapot. ”

Josh Clark (originally Bruce Lee) - Seven deadly mobile myths

Illustration by Stéphanie Walter

slido

# Who said "Be like water"

 Start presenting to display the poll results on this slide.





An example of what NOT to do.

<https://montreal.craigslist.org/>

# Mobile-First Design

- Create the layout for mobile first (more restrictions)
- Extend the layout for larger screen after

# Responsive Design Tools

- Relative units
- Media queries
- Responsive images
- Font scale
- Flexible grid-based layout

# View Port and Units

# View Port

- The meta **viewport** tag instructs the browser *how to adjust the page* to the width of each device.
- When the meta viewport element is absent, mobile browsers will display web pages with **default desktop settings**. This results in a seemingly zoomed out, unresponsive experience.

```
<head>
  <meta charset="UTF-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <title>What is The View Port</title>
</head>
```

# Units - Absolute Units

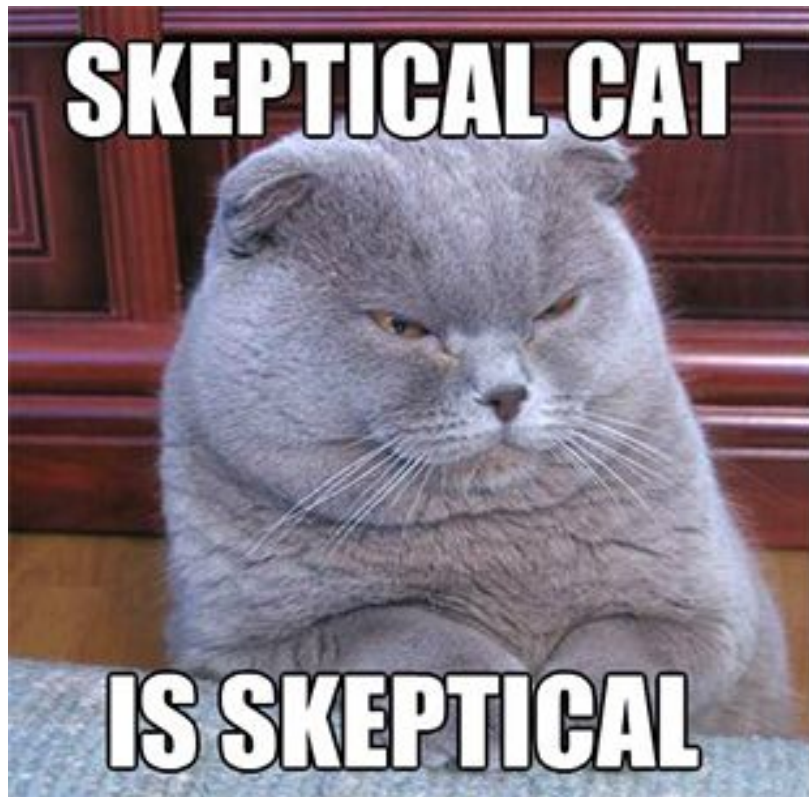
| Unit | Name        |
|------|-------------|
| cm   | centimeters |
| mm   | millimeters |
| in   | inches      |
| pt   | points      |
| px   | pixels      |

# Units - Relative Units

| Unit | Relative To                                              |
|------|----------------------------------------------------------|
| em   | Size of the parent                                       |
| rem  | Size of the root element                                 |
| vw   | 1% of the viewport width                                 |
| vh   | 1% of the view port's height.                            |
| %    | Percentage of the parent size (width, height, font-size) |

em vs rem example: <https://codepen.io/DominicTremblay/pen/qBORmme>

## Media Queries





# Media Queries

- Media queries will allow you to use **different CSS style rules** according to various screen sizes

**@media only screen and (max-width: 600px) {...}**

**@media only screen and (min-width: 600px) {...}**

**@media only screen and (max-width: 600px) and (min-width: 400px) {...}**

Media Query Example: <https://codepen.io/DominicTremblay/pen/pojReMW>

Media Queries for Standard Devices:

<https://css-tricks.com/snippets/css/media-queries-for-standard-devices/>

# Responsive Images

# Responsive Images

Images should change sizes according to screen resolution.

- image tags
- background images

# Picture Tag

Loading only the appropriate image size

```
<picture>
```

```
<source srcset="./images/cats_200.jpg" media="(max-width: 200px)">
```

```
<source srcset="./images/cats_400.jpg" media="(max-width: 400px)">
```

```
<source srcset="./images/cats_600.jpg" media="(max-width: 600px)">
```

```
<source srcset="./images/cats_800.jpg" media="(max-width: 800px)">
```

```
<source srcset="./images/cats_1000.jpg" media="(max-width: 1000px)">
```

```

```

```
</picture>
```

# Media Queries With Background Images

```
@media only screen and (max-width: 200px) {  
  #bgimage {  
    background-image: url('./images/cats_200.jpg');  
  }  
}
```

# Type Scale

# Type Scale

- A type scale is a collection of carefully picked font sizes that we use to represent different text elements in order to establish a balanced and harmonious composition in our products.
- By consistently using the same font sizes from our own type scale, we can automatically instill uniformity in our design and avoid a product that looks all over the place in terms of hierarchy and prioritizes

# Grid Systems





**DEVELOPER: \*USES BOOTSTRAP\***

**YOU KNOW, I'M SOMETHING OF A DESIGNER MYSELF**

# Bootstrap Grid System

- The Bootstrap grid system is using Flexbox
- The Bootstrap 4 grid system has five classes:
  - .col- (extra small devices - screen width less than 576px)
  - .col-sm- (small devices - screen width equal to or greater than 576px)
  - .col-md- (medium devices - screen width equal to or greater than 768px)
  - .col-lg- (large devices - screen width equal to or greater than 992px)
  - .col-xl- (xlarge devices - screen width equal to or greater than 1200px)

# SASS

# SASS

- Allows for more efficient CSS
- Add features like the following:
  - Variables
  - Nesting
  - Partials
  - Mixins
  - Extend/Inheritance

Sass Demo - <https://codepen.io/DominicTremblay/project/editor/ArwxLr>

Sass Guide - <https://sass-lang.com/guide>

# Questions?