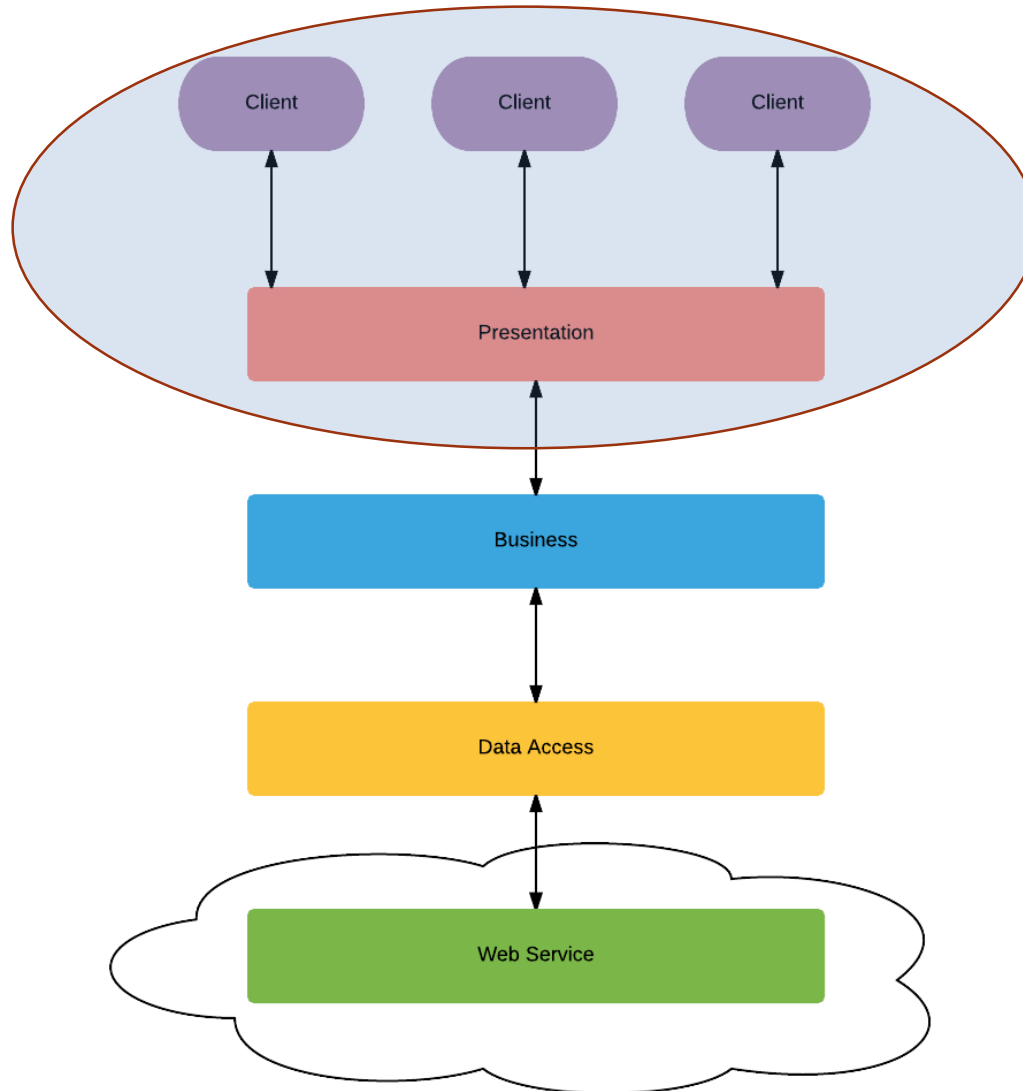


RAWDATA SECTION 4

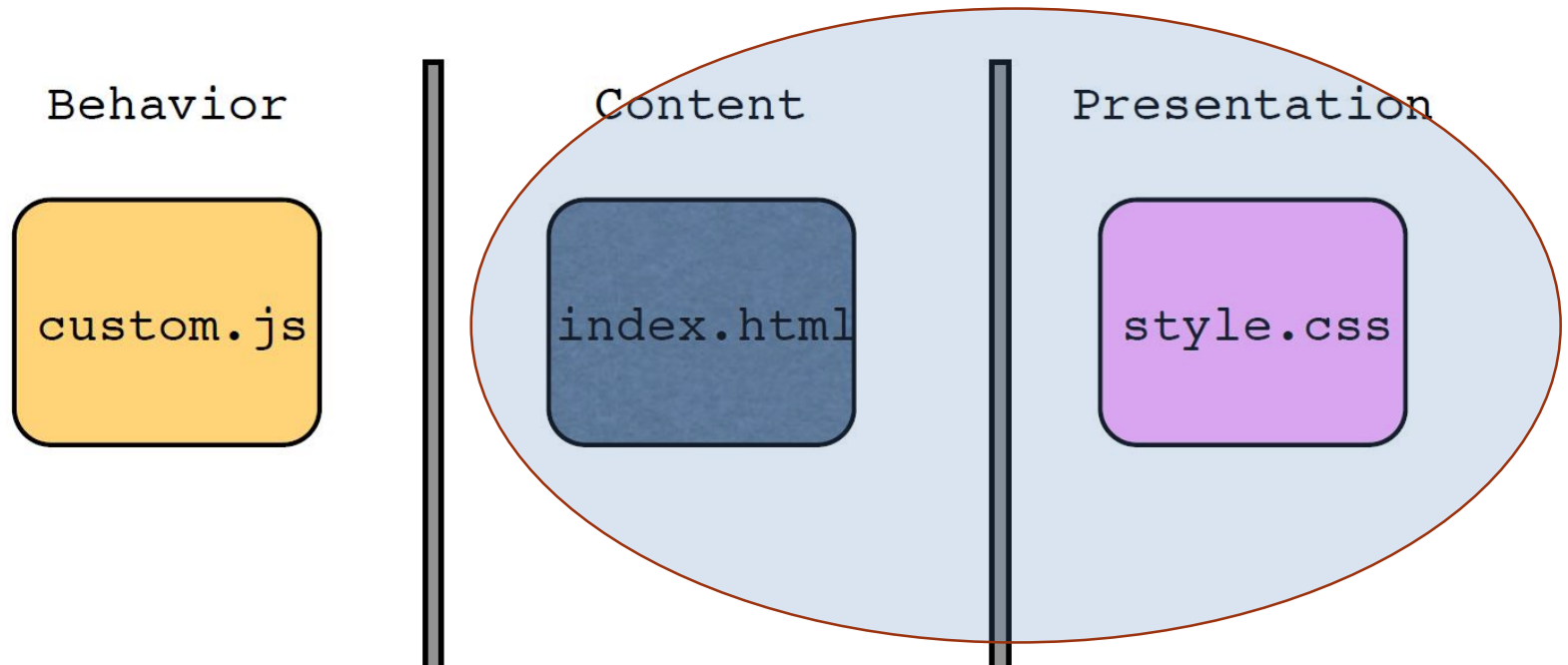
Troels Andreassen & Henrik Bulskov



SYSTEM DEVELOPMENT



UNOBTRUSIVE DESIGN



WHY WE NEED BOOTSTRAP!

- Programmers aren't designers!
 - <http://www.lingscars.com/>
 - <http://arngren.net/>
 - <http://heaven.internetarchaeology.org/heaven.html#bottom>

WHAT IS BOOTSTRAP

- Open Source Framework for Building Web Sites
 - A bit of CSS
 - A bit of JavaScript
 - Modular
 - Covers the 80% of the Metaphors

RESPONSIVE WEB DESIGN

Main CSS (Common Design)

960+ (Standard Browsers)

0-959 (Tablet Landscape)

0-767 (Mobile Sizes)

0-479 (Mobile Portrait)

480-767 (Mobile Landscape)

768-959 (Tablet Portrait and up)

RESPONSIVE DESIGN

- Media Queries
 - Works because of cascading rules
 - Later rules over-rule (pun!) earlier rules
 - More specific rules overrule earlier rules

```
// your.css
#main { width: 989px; }

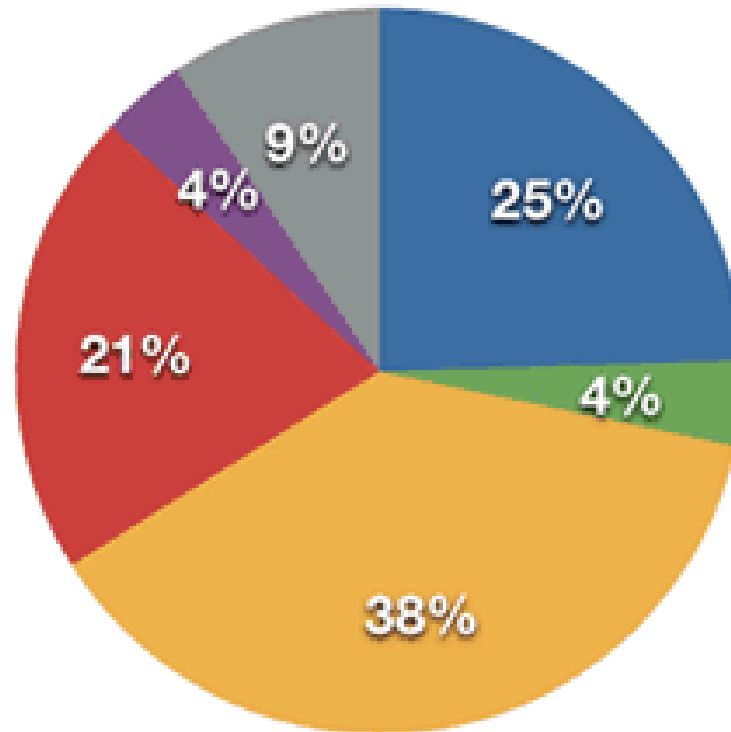
@media only screen and (min-width: 768px) and (max-width: 959px) {
  #main { width: 760px; }
}

@media only screen and (max-width: 767px) {
  #main { width: 470px; }
}
```

PROBLEMS...

- Subtractive solution means too many resources
- All JS code is running
 - On Platform that is least suited to handle it
- Images are loaded but hidden

COMPARISON OF MOBILE AND DESKTOP VIEWS



- Mobile is Larger
- Less than 10% Savings
- 51% to 100% Savings
- Same Size
- 11 to 50% Savings
- Greater than 100% Savings

MOBILE FIRST RESPONSIVE DESIGN

- Philosophy created by Luke Wroblewski*
 - Focuses on Progressive Enhancement
 - Where RWD is typically Graceful Degradation
 - Scales Up...not down

*<http://www.lukew.com>

MOBILE FIRST RESPONSIVE WEB DESIGN

Main CSS (Common Design) (0-480)

> 480px

> 768px

> 992px

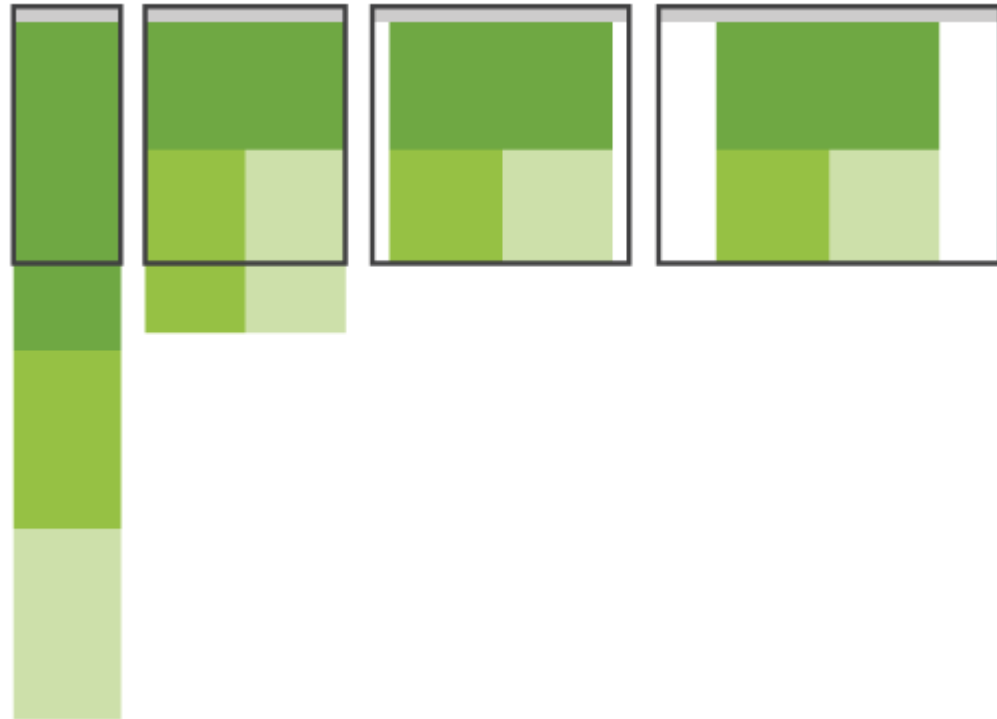
> 1200px

MULTI-DEVICE LAYOUT PATTERNS

- Mostly Fluid
- Column Drop
- Layout Shifter
- Content reflow
- Responsive patterns examples
 - <https://bradfrost.github.io/this-is-responsive/patterns.html>

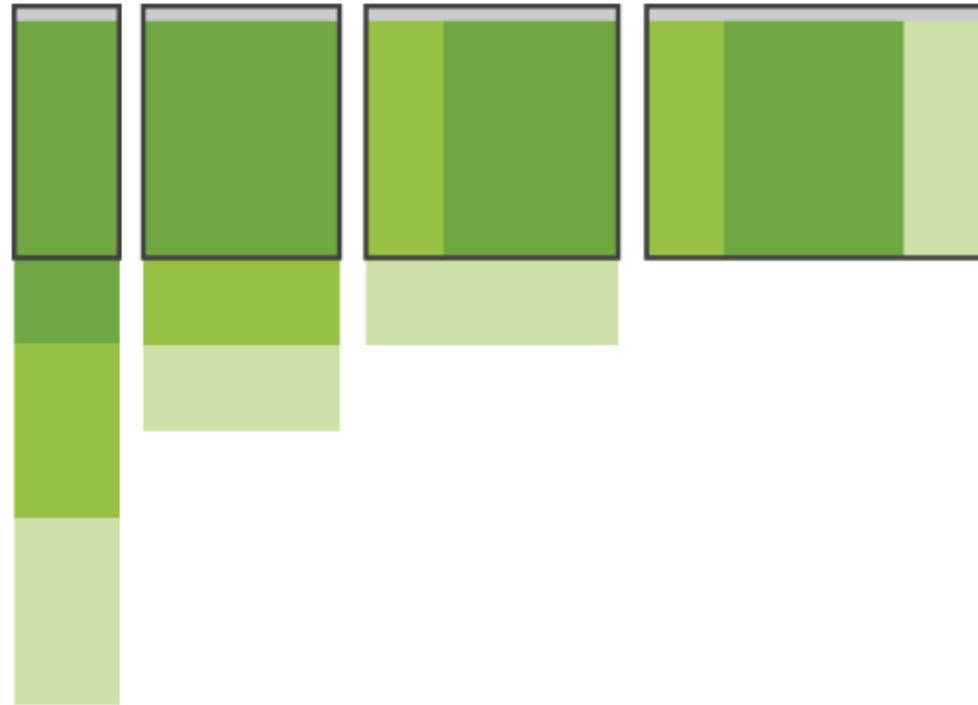
MOSTLY FLUID

- The most popular pattern
- introduces larger margins on big screens
- fluid grids and images to scale
- stacks columns vertically



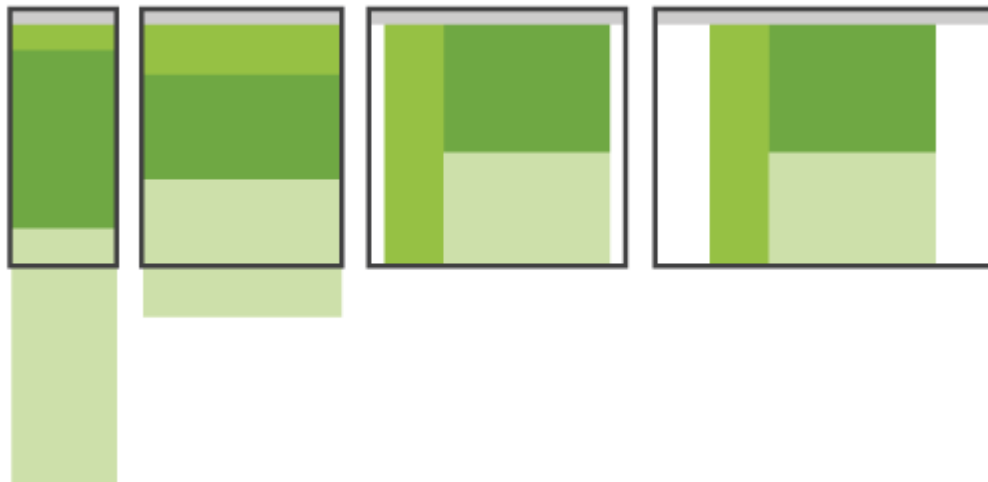
COLUMN DROP

- starts with a multi-column layout
- ends up with a single column layout
- dropping columns along the way
- overall size of elements tend to stay consistent
- stacking columns

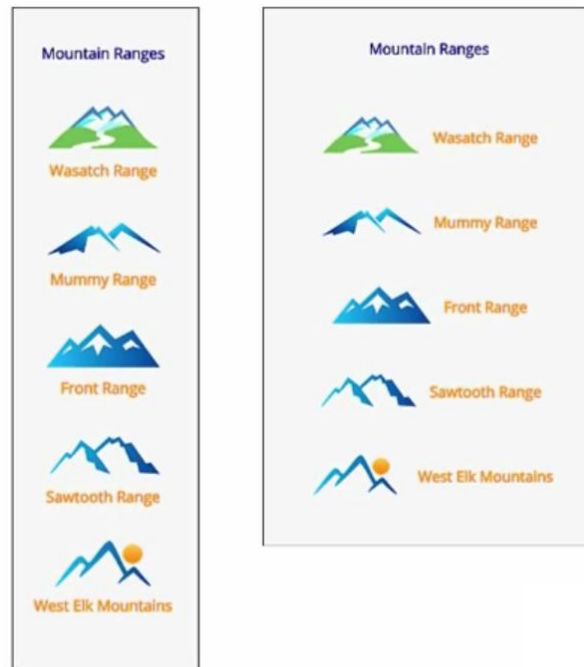


LAYOUT SHIFTER

- different layouts are used on large, medium, and small screens
- Using @media queries



CONTENT REFLOW



- <http://codepen.io/ramonlapenta/full/nhlqg>

THE BOOTSTRAP GRID SYSTEM

.col-xx-6						.col-xx-6					
.col-xx-4				.col-xx-4				.col-xx-4			
.col-xx-3			.col-xx-3			.col-xx-3			.col-xx-3		
.col-xx-2		.col-xx-2		.col-xx-2		.col-xx-2		.col-xx-2		.col-xx-2	

MULTIPLE GRIDS

	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				

THEMING BOOTSTRAP

- You can easily change your page by use of themes
 - e.g. <https://bootswatch.com/>

BOOTSTRAP BASICS

- Typography
- Buttons
- Navs & NavBars
- Lists
- Tables
- Forms

TYPOGRAPHY

- Headings
- Lead
- Alignment
 - text-left, text-right ...
- Transformation
 - text-lowercase, text-capitalize
- Code
- Contextual colors (Helper classes)
 - text-muted, text-primary, ...

<https://getbootstrap.com/docs/4.0/content/typography/>
<https://getbootstrap.com/docs/4.0/content/code/>

BUTTONS

- Button
 - btn class
 - btn-default, btn-primary ...
 - btn-sm, btn-lg ...

<https://getbootstrap.com/docs/4.0/components/buttons/>

NAVS & NAVBARS

- navbar
 - navbar-default, ...
 - navbar-fixed-top ... (need to add body top margin)
- navbar-header
 - Button
 - navbar-toggle
 - data-toggle=collapse
 - data-target .navbar-collapse
- navbar-collapse
 - collapse
- navbar-nav
 - navbar-right ...
 - nav, active

LISTS

- list-unstyled, list-inline
- list-group, list-group-item
 - Badges
 - Linked items
 - Disabled
 - Contextual classes

TABLES

- table
 - table-stribed
 - table-bordered
 - table-hover

FORMS

- form-group
 - form-control
 - btn
- form-vertical
- form-inline
- form-horizontal

BOOTSTRAP COMPONENTS

- Page header & breadcrumbs
- Button Groups
- Dropdowns
- Button Dropdowns
- Input Groups
- Pagination

BUTTON GROUPS

- `btn-group`
 - `btn-group-vertical`
 - `btn-group-sm ...`
- Toggles
 - `data-toggle="buttons"`
 - Use labels instead of buttons and add either checkboxes or radio inside

<https://getbootstrap.com/docs/4.0/components/>

DROPDOWNS

- `div.dropdown`
 - button with `data-toggle='dropdown'` (sibling)
 - e.g. use caret span
 - `ul.dropdown-menu`
 - a `href='#'` and `tabindex='-1'`
- Add to form data
 - Hidden select or field you set value on (js)

BOOTSTRAP PLUGINS

- Tooltips
- Alert
- Carousel
- ...

WORD CLOUD



JQCLOUD

- Is a jquery extension
- How to use that with require?
 - Add the jqcloud2 js lib
 - Add information in `require.config.paths`
 - Add information about the dependency to jquery by use of `require.config.shim`

JQCloud & KNOCKOUT

- You can simply use it as the examples show in <http://mistic100.github.io/jQCloud/demo.html>
- You can extend knockout and create your own binding, e.g. `data-bind="cloud: words"`