GENERAL ASSEMBLY

RESPONSIVE WEB DEVELOPMENT WORKSHOP

Amelia Schmidt
Lead front-end & UX developer,
Equiem

Responsive web development workshop

- What is responsive
- Responsive web design
- Media queries
- Grids
- Developing for devices
- Developing for older browsers
- Javascript libraries
- CSS preprocessors

You'll need:

- Sublime Text http://www.sublimetext.com/
- Xcode https://developer.apple.com/xcode/
- Git https://git-scm.com/
- Bundler http://bundler.io/
- VirtualBox https://www.virtualbox.org/
- Windows boxes https://dev.modern.ie/
- A positive attitude :)

About me

- I have been working as a web developer for four years
- I work at a tech startup called Equiem as Lead Front-end Developer & UX Developer
- I work with Drupal day to day
- I'm largely taught by my mentors and the internet

Workshop format

- This is an interactive workshop and you'll be completing tasks as we go along
- Please ask any questions, let's keep this a dialogue
- If you can't do something because of lack of installed programs or you don't have the skillz, that's cool, we can modify for different levels
- We'll start off beginner and move towards more advanced
- Don't worry, and have fun!

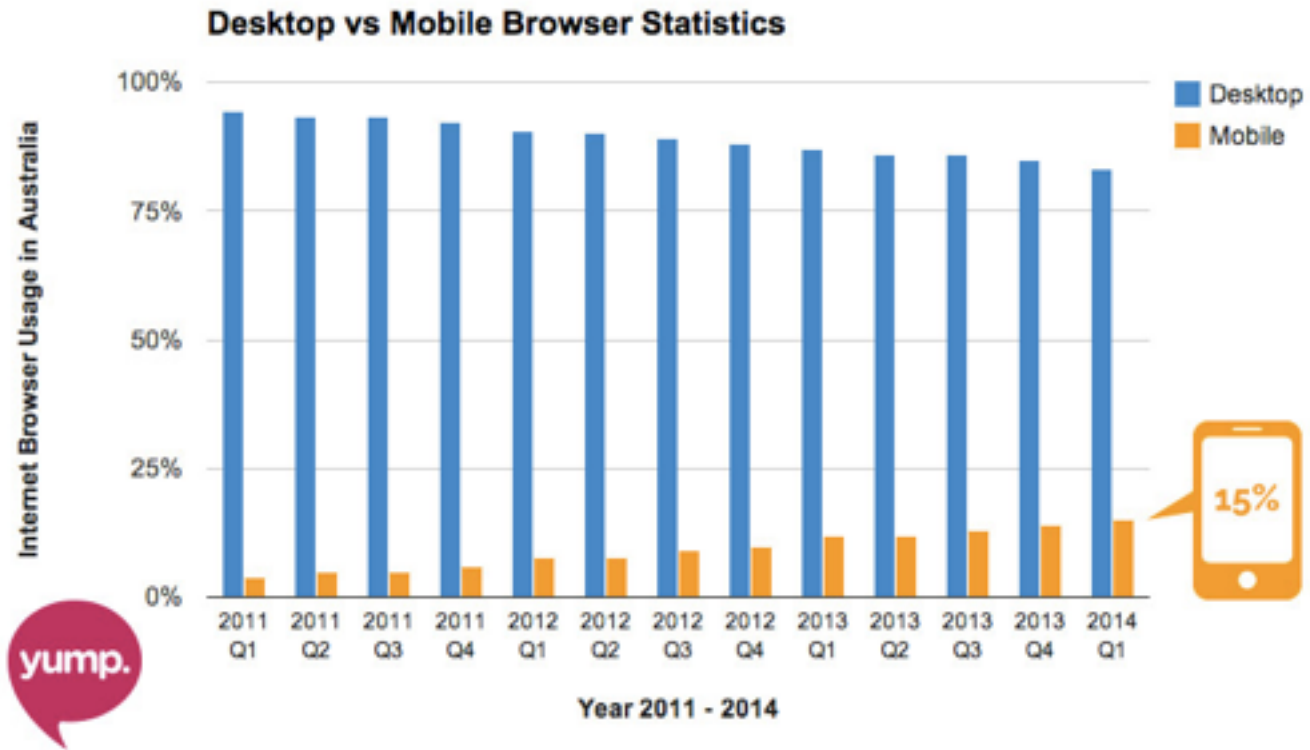
WHAT IS RESPONSIVE?

The world is changing

- 34% of smartphone users go online mostly using their phones, and not on a desktop, laptop, or other device
- People using a desktop computer to search online will increase from 1.4 billion to 1.6 billion users in 2015.
- People searching online using a smartphone will increase from 800 million to 1.9 billion users in 2015

https://www.bopdesign.com/bop-blog/2015/02/responsive-web-design-statistics/

Responsive is one method of making a single website that works across various screen sizes


Desktop vs Mobile Browser Statistics
Internet Browser Usage in Australia
100%
75%
50%
25%
0%
Desktop
Mobile
15%
2011 Q1
2011 Q2
2011 Q3
2011 Q4
2012 Q1
2012 Q2
2012 Q3
2012 Q4
2013 Q1
2013 Q2
2013 Q3
2013 Q4
2014 Q1
Year 2011 - 2014
yump.

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

WHAT IS RESPONSIVE?

- https://www.bostonglobe.com/

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STAN GROSSFELD/GLOBE STAFF

Flag football is growing as parents seek an alternative to tackle

There are no helmets, no pads, no blocking, or tackling, and a safety record that allows parents to sleep better at night. 3:30 pm

City to pay lawyer in Teamsters' case $625 an hour

DAVID L. RYAN/GLOBE STAFF/FILE

The defense attorney was hired by Mayor Walsh in a federal investigation of the union's alleged extortion scheme.

City employee awarded $10.9m in discrimination case

A woman with African-American and Haitian ancestry claimed she received fewer benefits and lower pay than white co-workers.

Opinion & Ideas

SCOT LEHIGH

The Benghazi circus keeps rolling

Even by the standards of today's hyperpartisan politics, Thursday's hearing was stunning.

MORE IN OPINION & IDEAS

Michael A. Cohen: House Benghazi Committee fails to reveal anything new

Opinion Reel: 'Southie Means Family,' a film by Padriac

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Brandon LaFell may return to Patriots on Sunday

The receiver, who is on the PUP list, was back at practice this week and could be active against the 4-1 Jets.

Family, friends hold vigil for Brighton slaying victim

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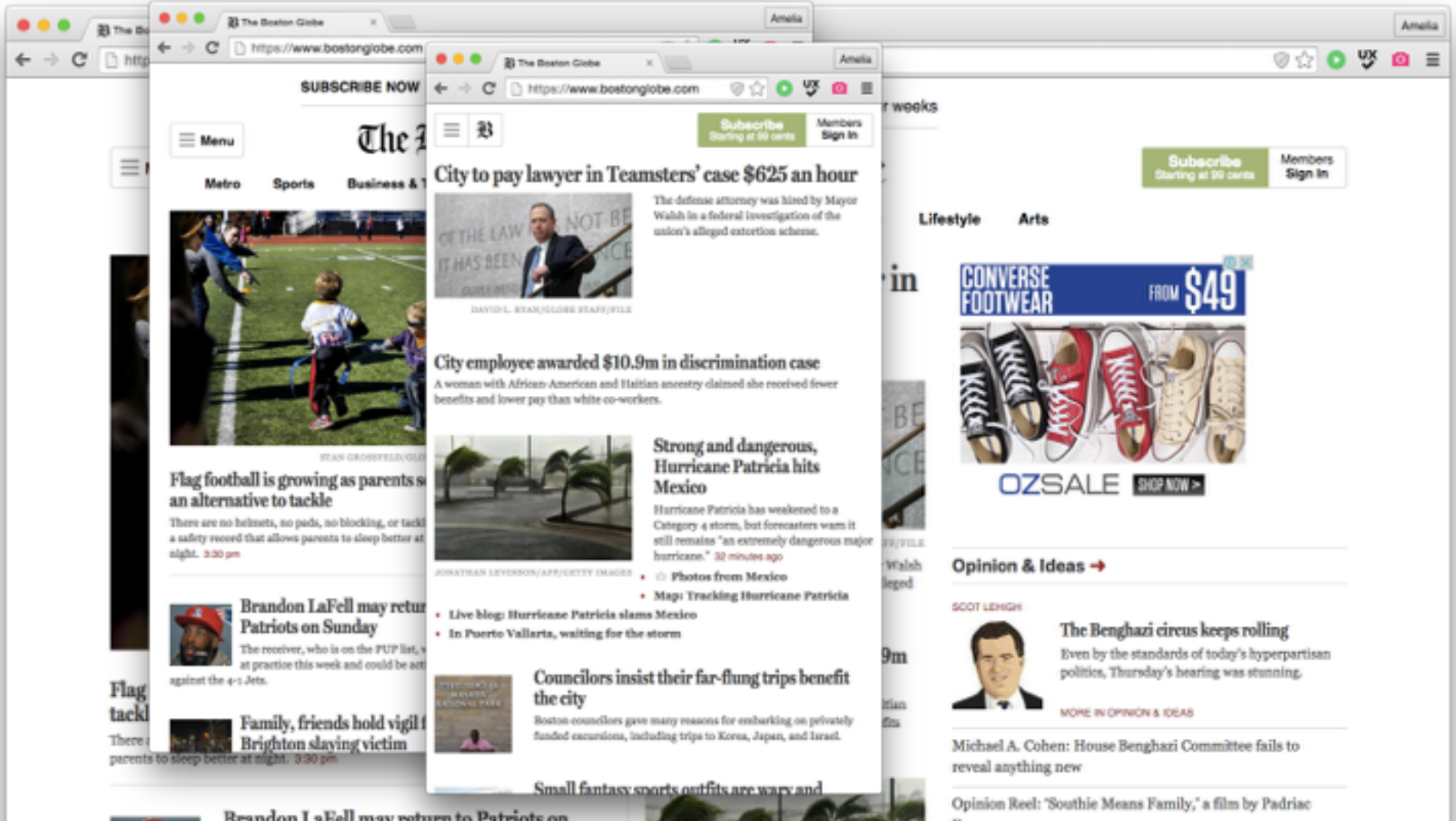
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Strong and dangerous, Hurricane Patricia hits Mexico
Hurricane Patricia has weakened to a Category 4 storm, but forecasters warn it still remains "an extremely dangerous major hurricane." 32 minutes ago
JONATHAN LEVINSON/AFP/GETTY IMAGES
Photos from Mexico
Map: Tracking Hurricane Patricia
Live blog: Hurricane Patricia slams Mexico
In Puerto Vallarta, waiting for the storm
Councilors insist their far-flung trips benefit the city
Boston councilors gave many reasons for embarking on privately funded excursions, including trips to Korea, Japan, and Israel.
Small fantasy sports outfits are wary and
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Arts
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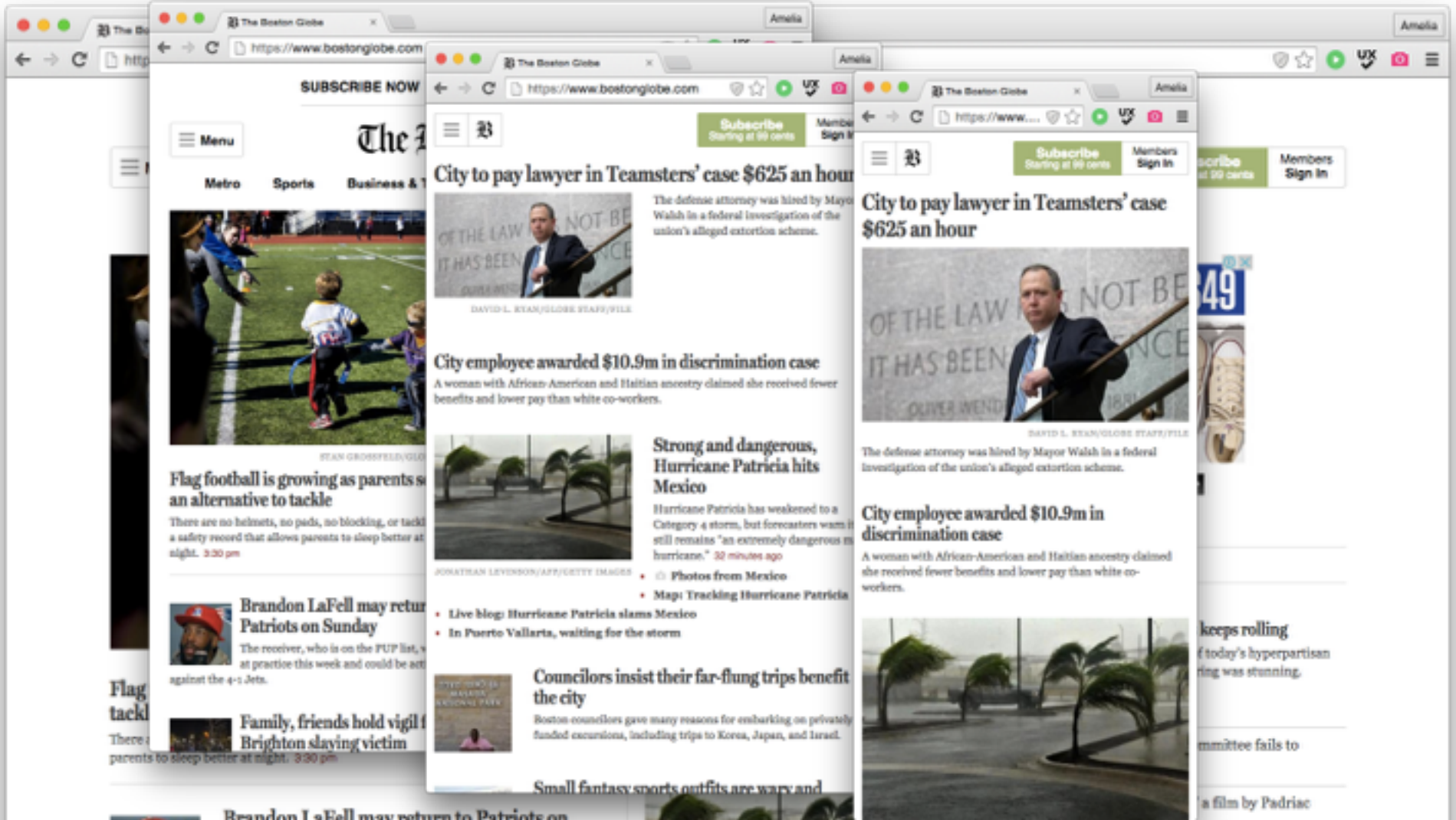
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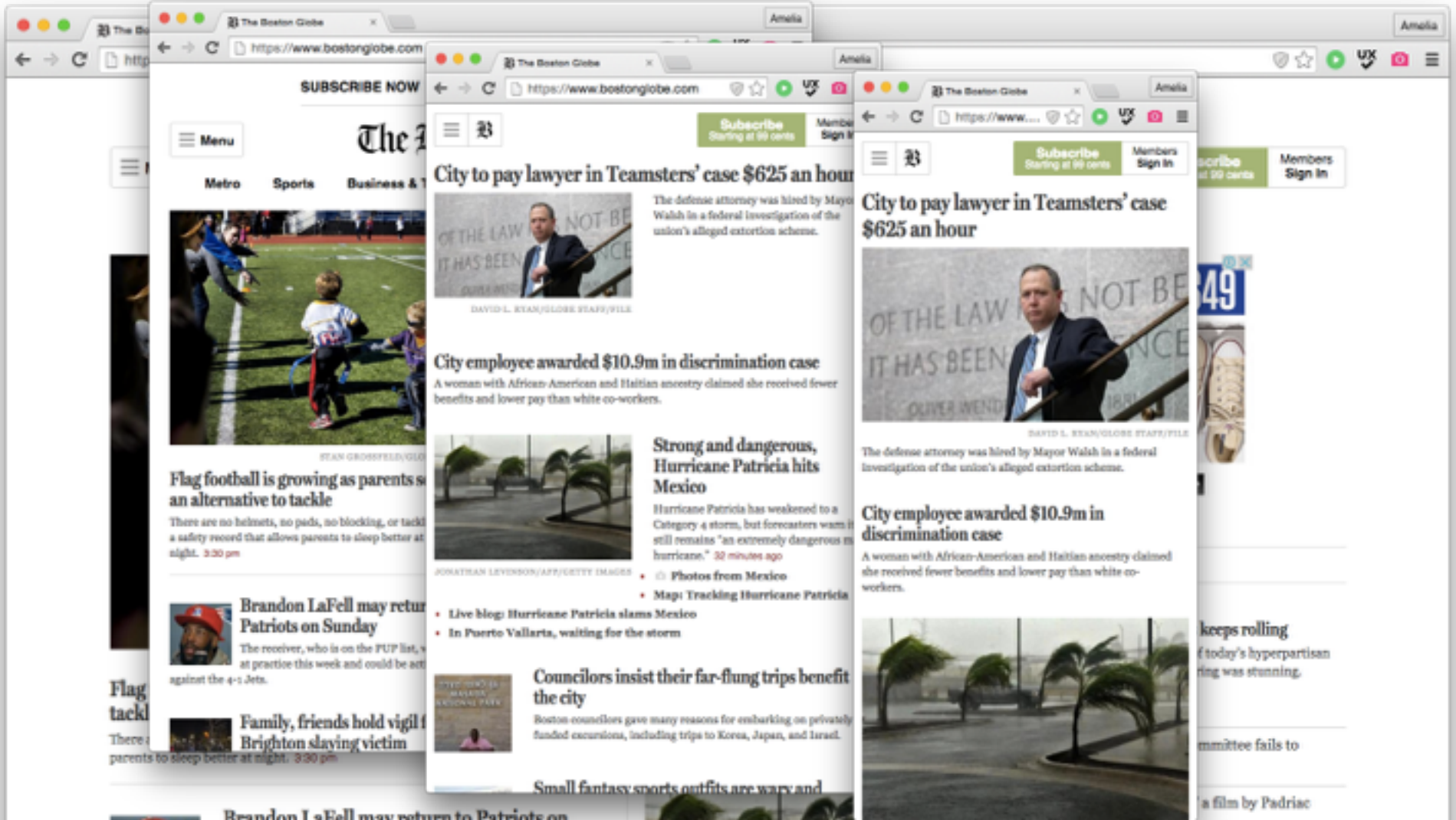
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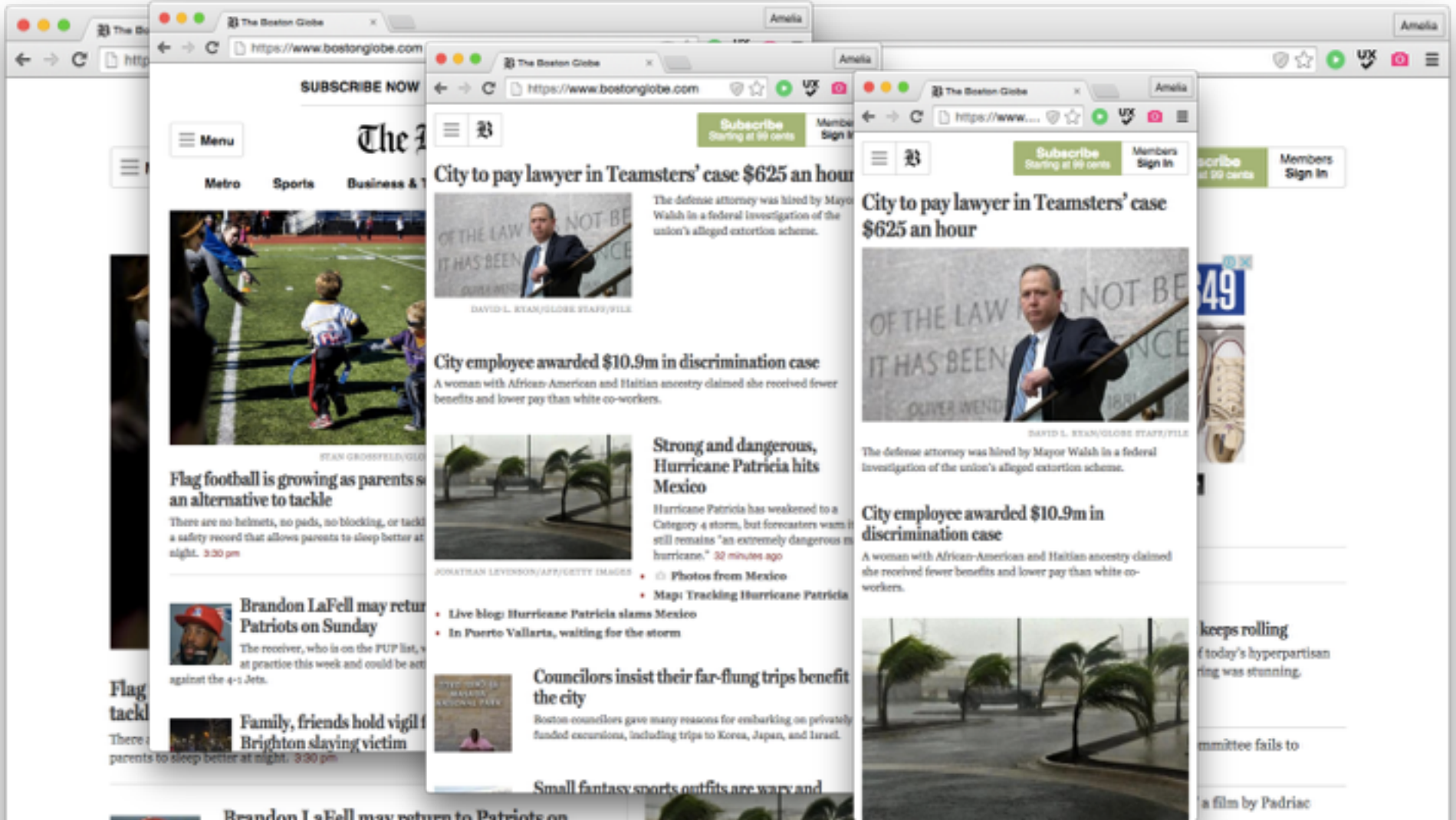
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What it's not:

- "m Dot" eg. http://m.theage.com.au/
- Adaptive
- Liquid
- Static (http://www.liquidapsive.com/)

Adaptive
Adaptive websites introduce media queries to target specific device sizes, like smaller monitors, tablets, and mobile.

Fixed
Fixed websites have a set width and resizing the browser or viewing it on different devices won't affect on the way the website looks.

Fluid
Fluid websites are built using % for widths. Columns are relative to one another and the browser can scale up and down fluidly.

"m dot"
m.website.com is a separate codebase with the same database, essentially an entirely different "skin" for a site built for mobile only.

Responsive is…

- The same website, the same code, the same database, but displayed differently on different screens due to the use of…
- …media queries, which can be leveraged in powerful ways via grid systems and breakpoints
- The idea that the web is not just one size, or three sizes, but any possible size on an ever-expanding set of devices, including the Internet Of Things revolution
- A design decision, a suite of web tools, a paradigm…

EXERCISE 1: SETUP

KEY OBJECTIVES

Download the base repo

AGENDA

5 minutes

1. Open up terminal
2. $ git clone git@github.com:meelijane/rwd.git
3. Open up index.html
4. View it in your browser

DELIVERABLE

The base repo appearing in your browser

RESOURCES

Sublime Text, a Github account, git for command line and a browser

RESPONSIVE WEB DESIGN

Start with the right tools

- Designing for multiple screen sizes means that static design deliverables will be hard to work with
- Client sign-off can get confusing with RWD
- Photoshop is a photo editing tool
- PSDs can make it hard to keep track of revisions
- Whether you're working Agile or Waterfall (and I recommend Agile), working with responsive design will require you to be fluid as well

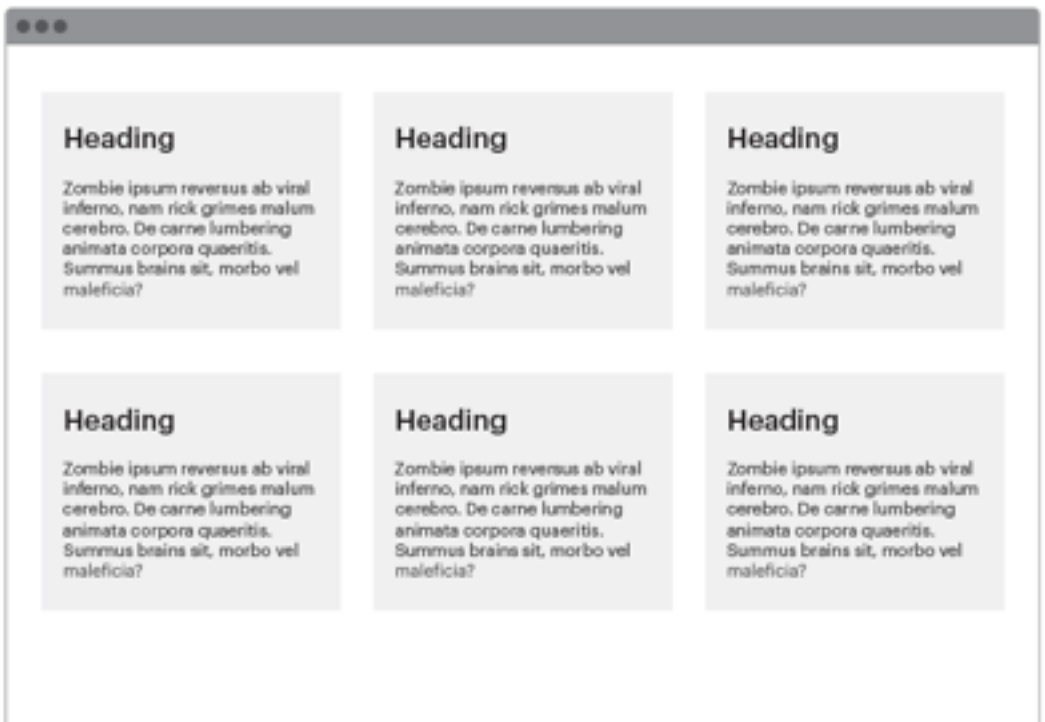
Start with the right ideas

- Style-guide driven design
- Component-based design
- Your designer will need to get familiar with responsive web concepts like HTML basics, CSS basics e.g. floats, web typography
- Prototype, prototype and prototype some more
- Design to a grid
- Webflow https://webflow.com/
- http://macaw.co/

Some things to watch out for

- Patterns taken from print design that might not work in a fluid context
- Client sign-off on static designs
- No content provided before designs start
- No context provided for designs eg. user research
- Using Lorem Ipsum in place of any real content

http://slides.com/equiem/red-flags#/


Heading
Zombie ipsum reversus ab viral inferno, nam rick grimes malum cerebro. De carne lumbering animata corpora quaeritis. Summus brains sit, morbo vel maleficia?
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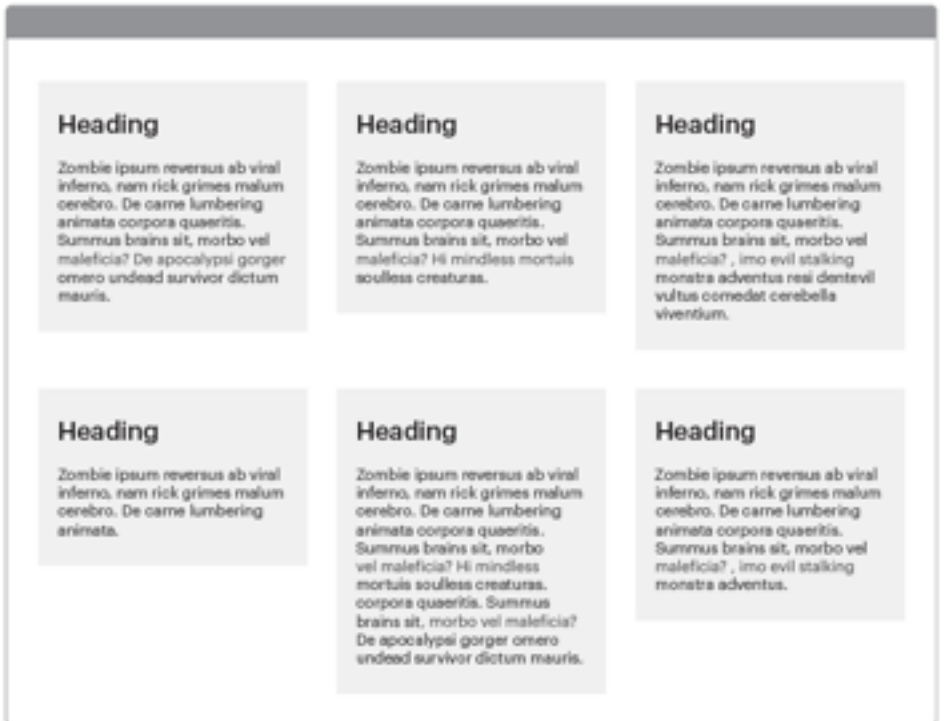
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Start with the content

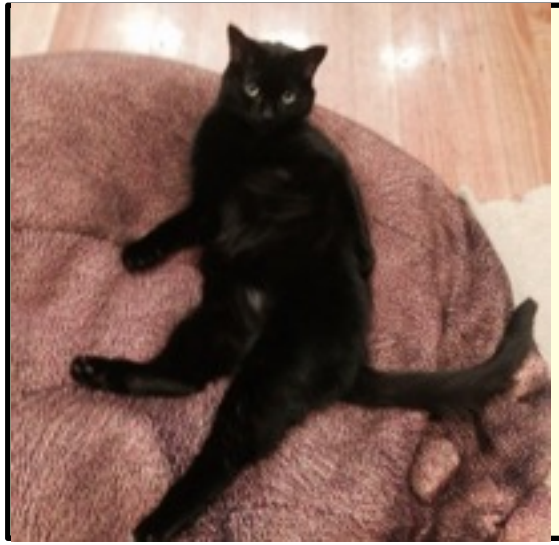
- You can’t build a responsive website without an understanding of its content
- Create a content strategy and/or obtain the actual content before you get started with visual design
- It’s important for responsive design, accessibility and SEO that your content is semantic and web-ready

“95% of the information on the web is written language. It is only logical to say that a web designer should get good training in the main discipline of shaping written information, in other words: Typography.”

Oliver Reichenstein

Cat on a bag

Here is a great teaser about this cat on a beanbag. The image has a fixed ratio (use the <img> tag) and there is just enough text in this box to fill up the available space. You can use lorem if you want.



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<h2>

<div>

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<h2>

<p>

Cat on a bag

Here is a great [illegible] about this cat on a beanbag. The image has a fixed ratio (use the <img> tag) and there is just enough text in this box to fill up the a[illegible] space. You can use lore[illegible] want.

EXERCISE: RESPONSIVE WEB DESIGN

KEY OBJECTIVES

Understand how responsive design can be incompatible with certain design patterns

DELIVERABLE

A text and image teaser in your browser

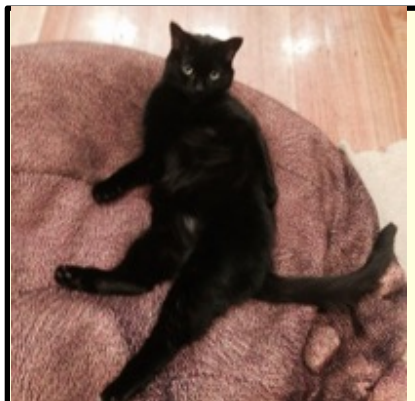
AGENDA

10 minutes

1. Create the markup to generate a text and image teaser where the image and text sit side by side, and the whole teaser is bounded by a box
2. Resize the browser and observe

RESOURCES

The repo from the last exercise



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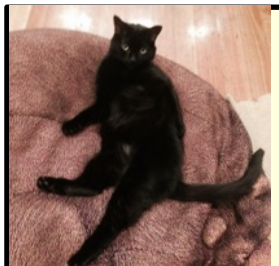

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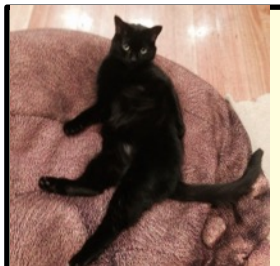

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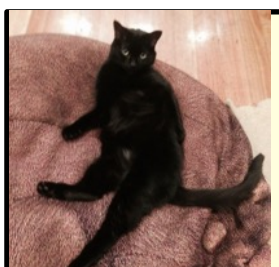

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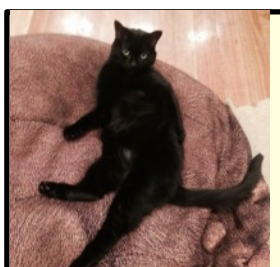

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MEDIA QUERIES

A media query consists of a media type and at least one expression that limits the style sheets' scope by using media features, such as width, height, and color. Media queries, added in CSS3, let the presentation of content be tailored to a specific range of output devices without having to change the content itself.

http://www.w3.org/TR/css3-mediaqueries/

https://developer.mozilla.org/en-US/docs/Web/CSS/Media_Queries/Using_media_queries

http://cssmediaqueries.com/overview.html

```
@media (min-width: 700px) {
  margin-bottom: 20px;
}
```

http://www.w3.org/TR/css3-mediaqueries/

https://developer.mozilla.org/en-US/docs/Web/CSS/Media_Queries/Using_media_queries

```
@media (min-width: 700px) and (orientation:
landscape) {
  margin-bottom: 20px;
}
```

http://www.w3.org/TR/css3-mediaqueries/

https://developer.mozilla.org/en-US/docs/Web/CSS/Media_Queries/Using_media_queries

```
@media screen and (device-aspect-ration:
16/9){
  margin-bottom: 20px;
}
```

http://www.w3.org/TR/css3-mediaqueries/

https://developer.mozilla.org/en-US/docs/Web/CSS/Media_Queries/Using_media_queries

EXERCISE: MEDIA QUERIES

KEY OBJECTIVES

Change elements on a web page by use of media queries

DELIVERABLE

A web page with a box that changes colour when the screen is less than 400px wide

AGENDA

5 minutes

1. Create a media query in the index.html file as <style> CSS
2. Inside the media query, target a div on the page and change its colour for < 400px screen width
3. Resize the window and check it out

RESOURCES

Sublime text, web browser

CSS PREPROCESSORS

CSS is like painting

- You apply rules to selectors individually
- Selectors and rules become deeply connected
- Every element on a page is individually themed
- CSS is supposed to add “optional” styles to HTML, which should really be completely usable on its own
- It’s easy and very simple…

CSS preprocessors are like… programming

- Variables
- Functions
- Parameters
- “Mixins” and “extends”
- Nesting
- Libraries
- DRY - don't repeat yourself

```
.teaser-box {
    background-color: grey;
    width: 100%;
}

.header-box {
    background-color: grey;
    width: 100%;
    border: 1px solid black;
    padding: 20px;
}

.sidebar-box {
    background-color: grey;
    border: 1px solid black;
    width: 100%;
}
```

MEDIA QUERIES


```
.teaser-box {
    background-color: grey;
    width: 100%;
}

.header-box {
    background-color: grey;
    width: 100%;
    border: 1px solid black;
    padding: 20px;
}

.sidebar-box {
    background-color: grey;
    border: 1px solid black;
    width: 100%;
}
```

```
@mixin grey-box {
     background-color: grey;
     width: 100%;
}

@mixin border {
     border: 1px solid black;
}

$inner-padding: 20px;

.teaser-box, .sidebar-box, .header-box {
     @include grey-box;
}

.sidebar-box, .header-box {
     @include border;
}

.header-box {
     padding: $inner-padding;
}
```

MEDIA QUERIES

```
@mixin grey-box {
     background-color: grey;
     width: 100%;
}

@mixin border {
     border: 1px solid black;
}

$inner-padding: 20px;

.teaser-box, .sidebar-box, .header-box {
     @include grey-box;
}

.sidebar-box, .header-box {
     @include border;
}

.header-box {
     padding: $inner-padding;
}
```

```
<div class="outer">
   <div class="inner">
      <h3>Title</h3>
      <p>Some text</p>
   </div>
</div>


.outer .inner p,
.outer .inner h3 {
   color: red;
}
```

```
<div class="outer">
   <div class="inner">
      <h3>Title</h3>
      <p>Some text</p>
   </div>
</div>


.outer .inner p,
.outer .inner h3 {
   color: red;
}
```

```
<div class="outer">
    <div class="inner">
        <h3>Title</h3>
        <p>Some text</p>
    </div>
</div>


.outer {
    .inner {
        p, h3 {
            color: red;
        }
    }
}
```

```
<div class="outer">
    <div class="inner">
        <h3>Title</h3>
        <p>Some text</p>
    </div>
</div>
```

```
.outer {
    .inner {
        p, h3 {
            color: red;
        }
    }
}
```

Some of the benefits

- Style-guide driven design
- Components and re-usable chunks
- More consistent look and feel, better browser compatibility
- Less repetition, less typing
- Time saved
- Better organised code
- Supercharged CSS with frameworks like Compass

Compass

- http://compass-style.org/
- http://compass-style.org/reference/compass/utilities/color/contrast/

```
// Required variables
$contrasted-dark-default: black;
$contrasted-light-default: white;

// Function
contrast-color($color, $dark, $light, $threshold);

//  Mixin
contrasted($background-color, $dark, $light, $threshold);
```

```
$contrasted-dark-default: black;
$contrasted-light-default: white;

.div {
   @include contrasted(#000000);
}

// Compiles as…
.div {
   background-color: #000000;
   color: #ffffff;
}
```

```
$contrasted-dark-default: black;
$contrasted-light-default: white;

.div {
   @include contrasted(#000000);
}

// Compiles as…
.div {
   background-color: #000000;
   color: #ffffff;
}
```

```
$contrasted-dark-default: black;
$contrasted-light-default: white;

.div {
   @include contrasted(#000000);
}

// Compiles as…
.div {
   background-color: #000000;
   color: #ffffff;
}
```

SCSS

COMPILED CSS

```
$contrasted-dark-default: black;
$contrasted-light-default: white;

.div {
   @include contrasted(#000000);
}

// Compiles as…
.div {
   background-color: #000000;
   color: #ffffff;
}
```

```
$contrasted-dark-default: black;
$contrasted-light-default: white;

.div {
   @include contrasted(#000000);
}

// Compiles as…
.div {
   background-color: #000000;
   color: #ffffff;
}
```

```
$contrasted-dark-default: black;
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.div {
   @include contrasted(#000000);
}

// Compiles as…
.div {
   background-color: #000000;
   color: #ffffff;
}
```

SCSS

COMPILED CSS

CSS PREPROCESSORS

```
$contrasted-dark-default: black;
$contrasted-light-default: white;

.div {
   @include contrasted(#000000);
}

// Compiles as…
.div {
   background-color: #000000;
   color: #ffffff;
}
```

SCSS

COMPILED CSS

Cool!

EXERCISE: COMPASS

KEY OBJECTIVES

Get Sass and Compass running, use a Compass function

DELIVERABLE

Working SASS code with use of one Compass function or mixin

AGENDA

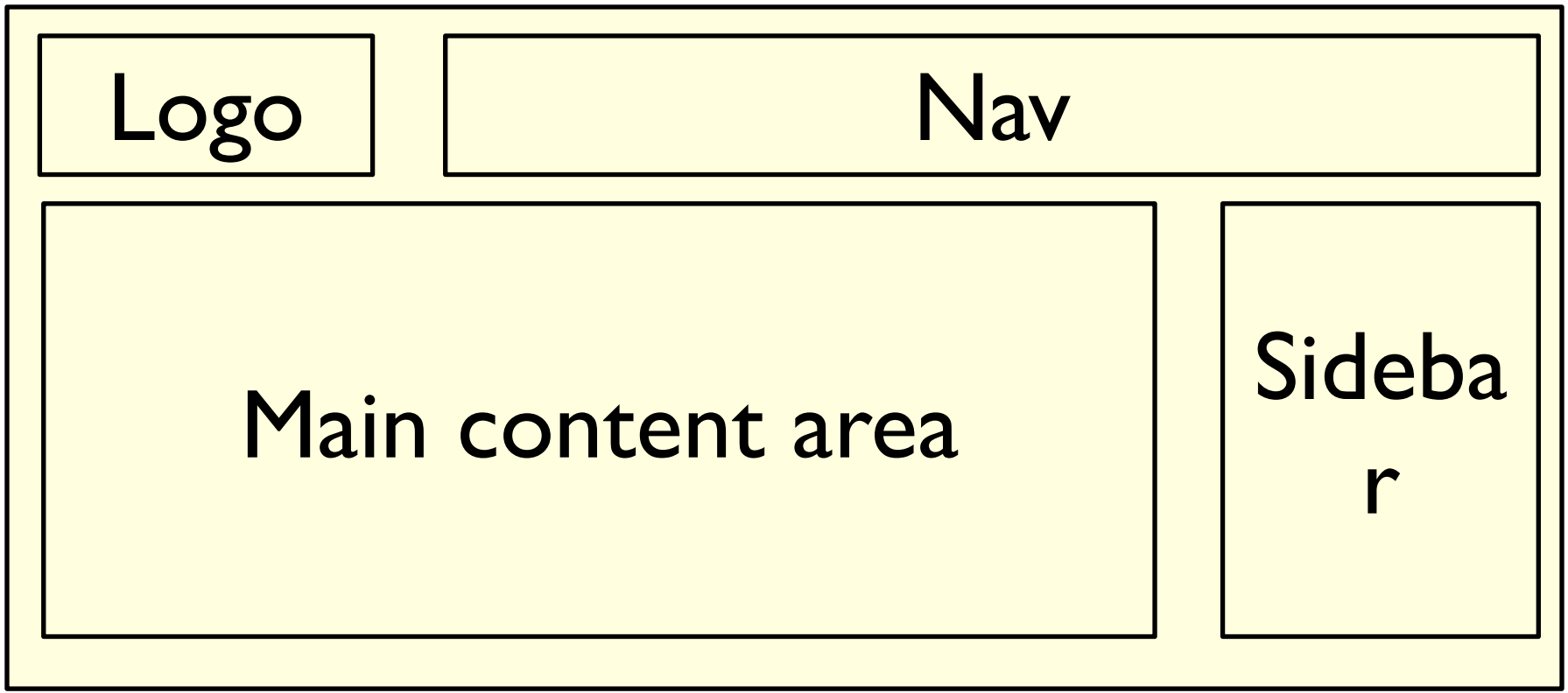
10 minutes

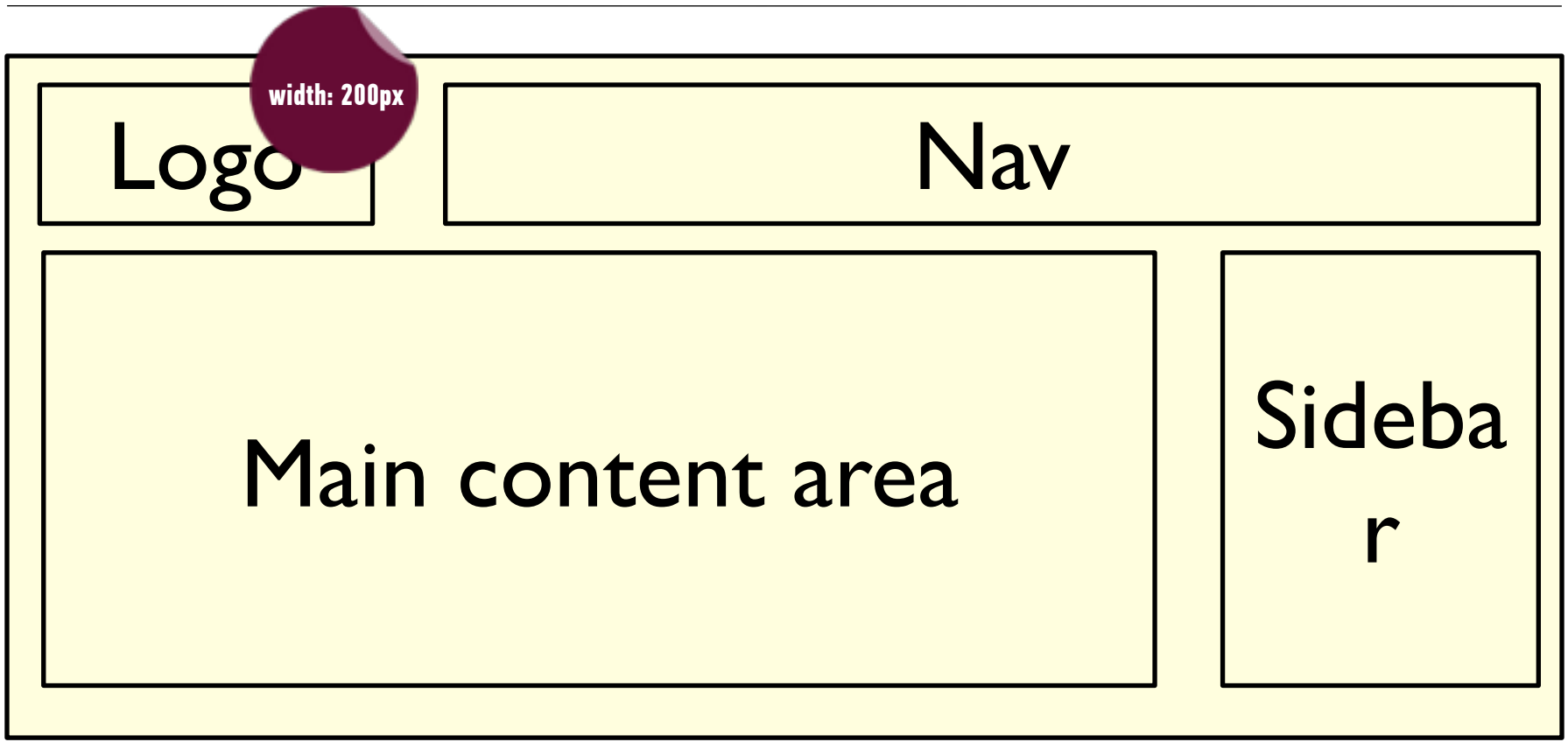
1. Open Terminal
2. $ gem install bundler
3. $ bundle install
4. bundle exec compass watch
5. Open “rwd” in Sublime
6. Edit style.scss

RESOURCES

Sublime, Bundler, Compass, your browser

GRIDS


Logo
Nav
Main content area
Sideba
r


width: 200px
Logo
Nav
Main content area
Sideba
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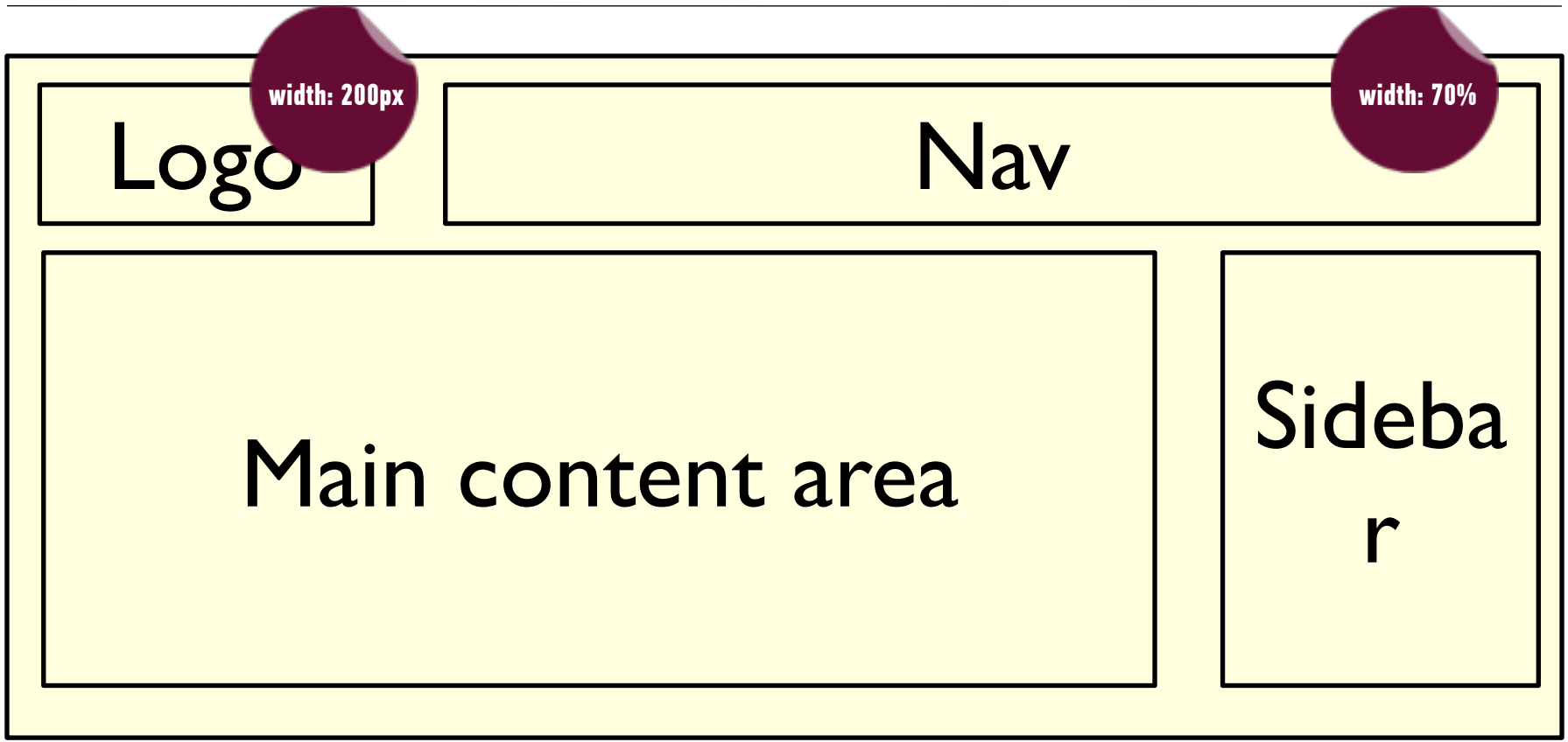
width: 200px
width: 70%
Logo
Nav
Main content area
Sideba
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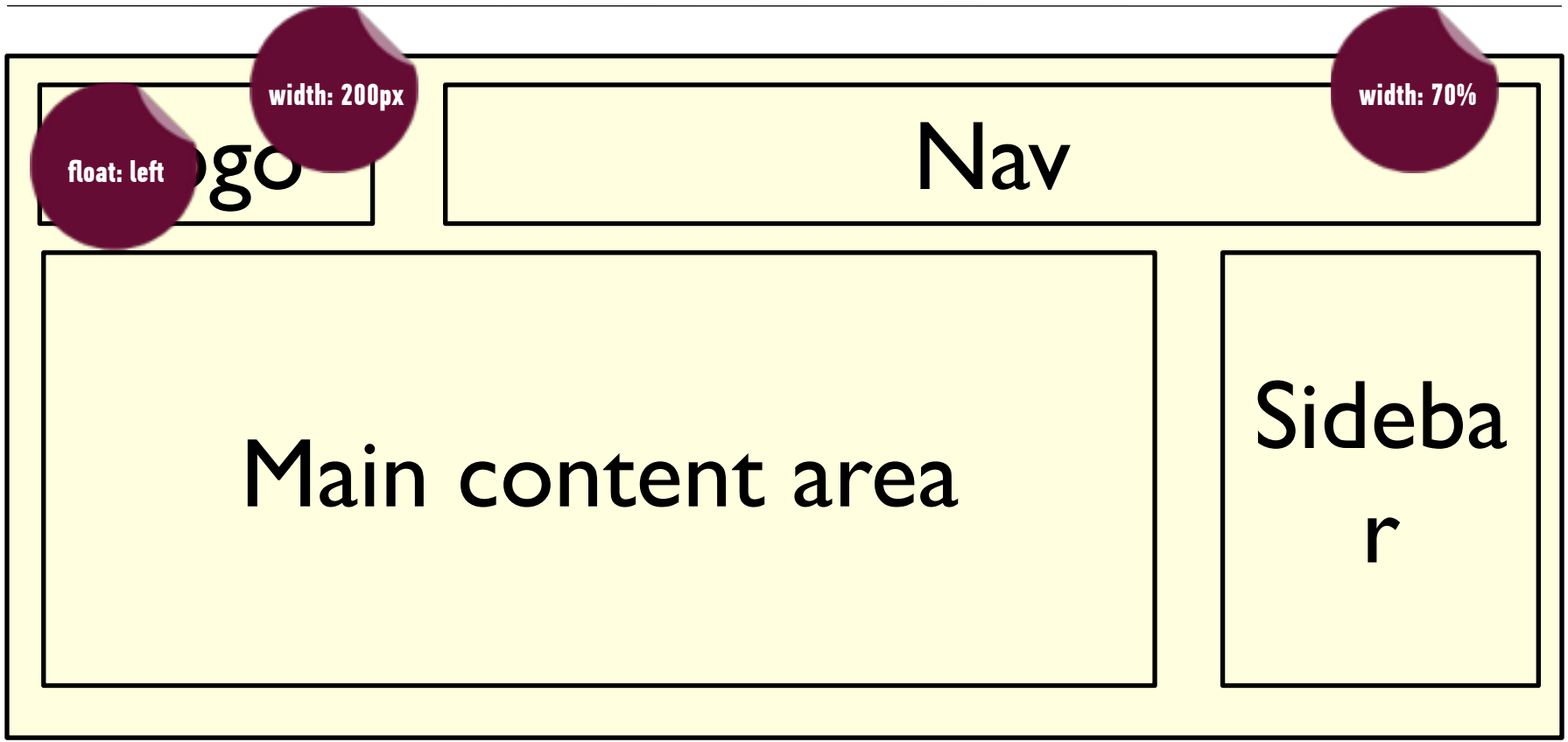
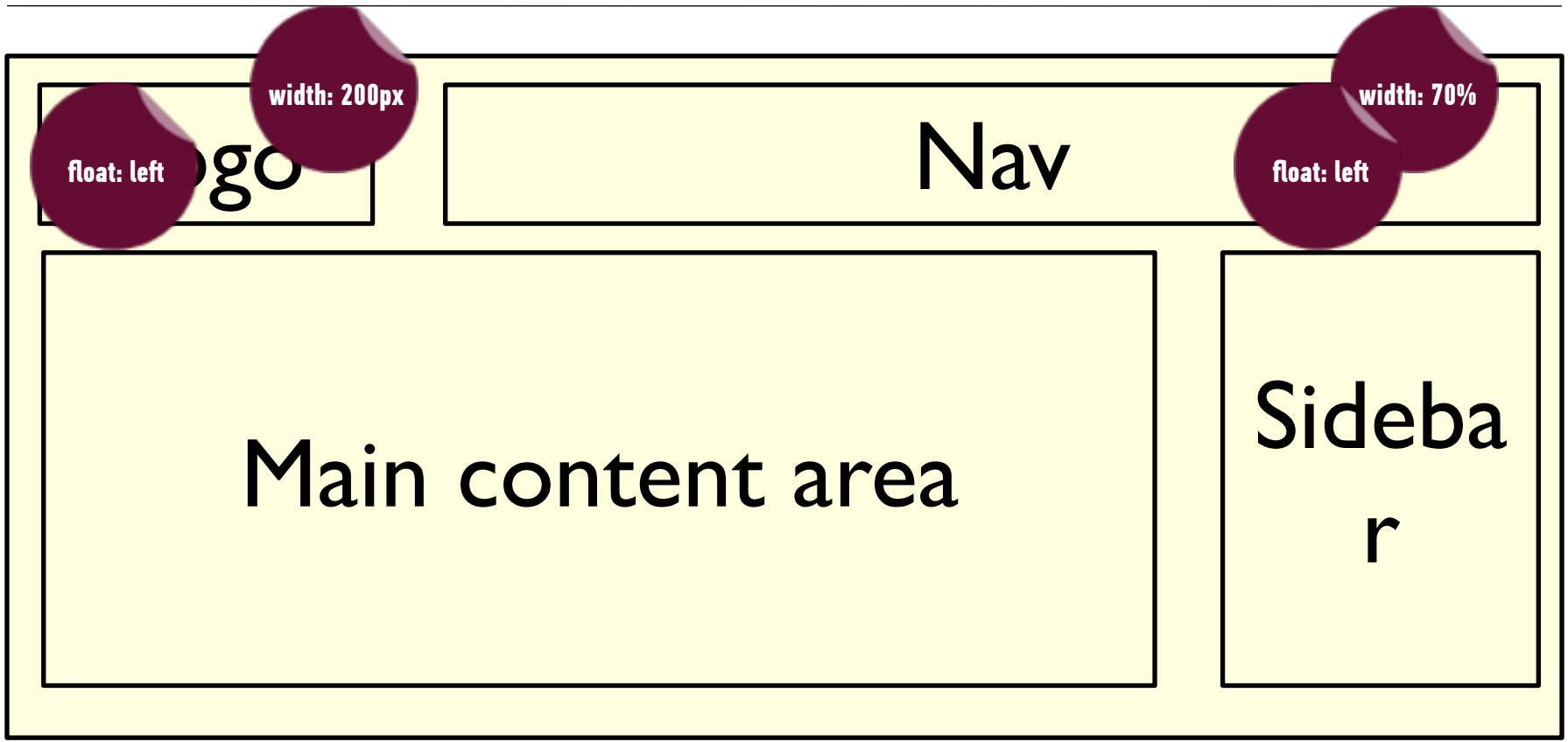
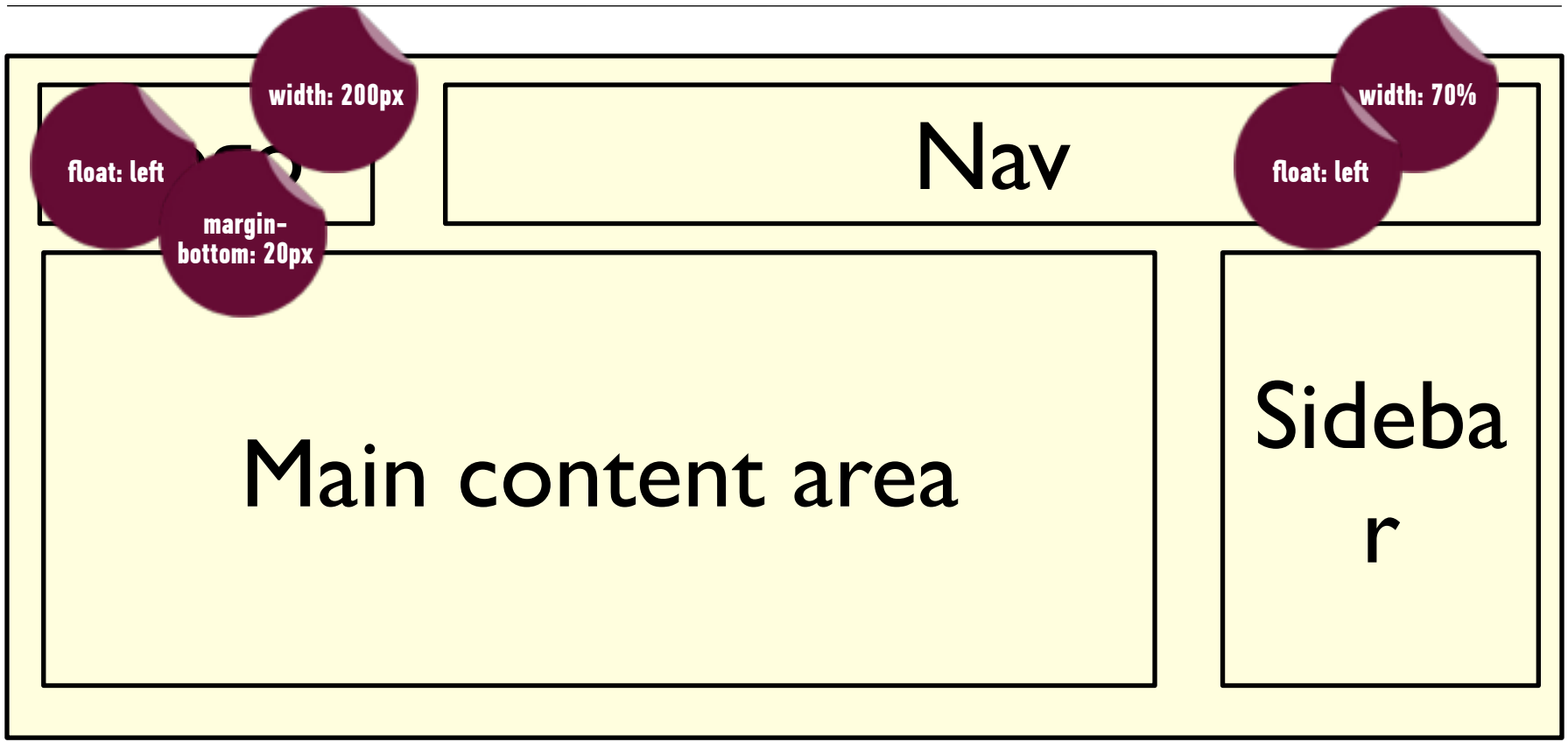
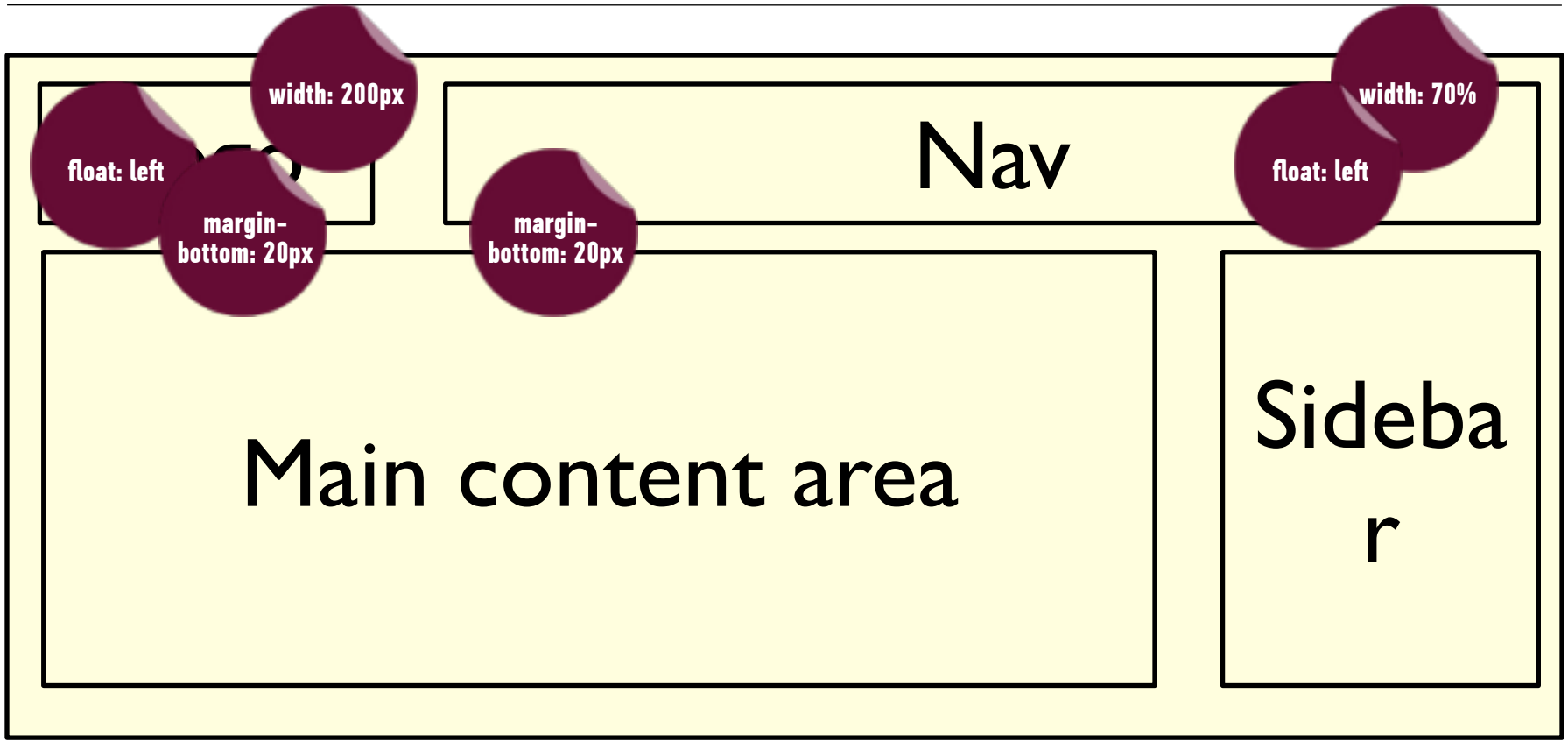
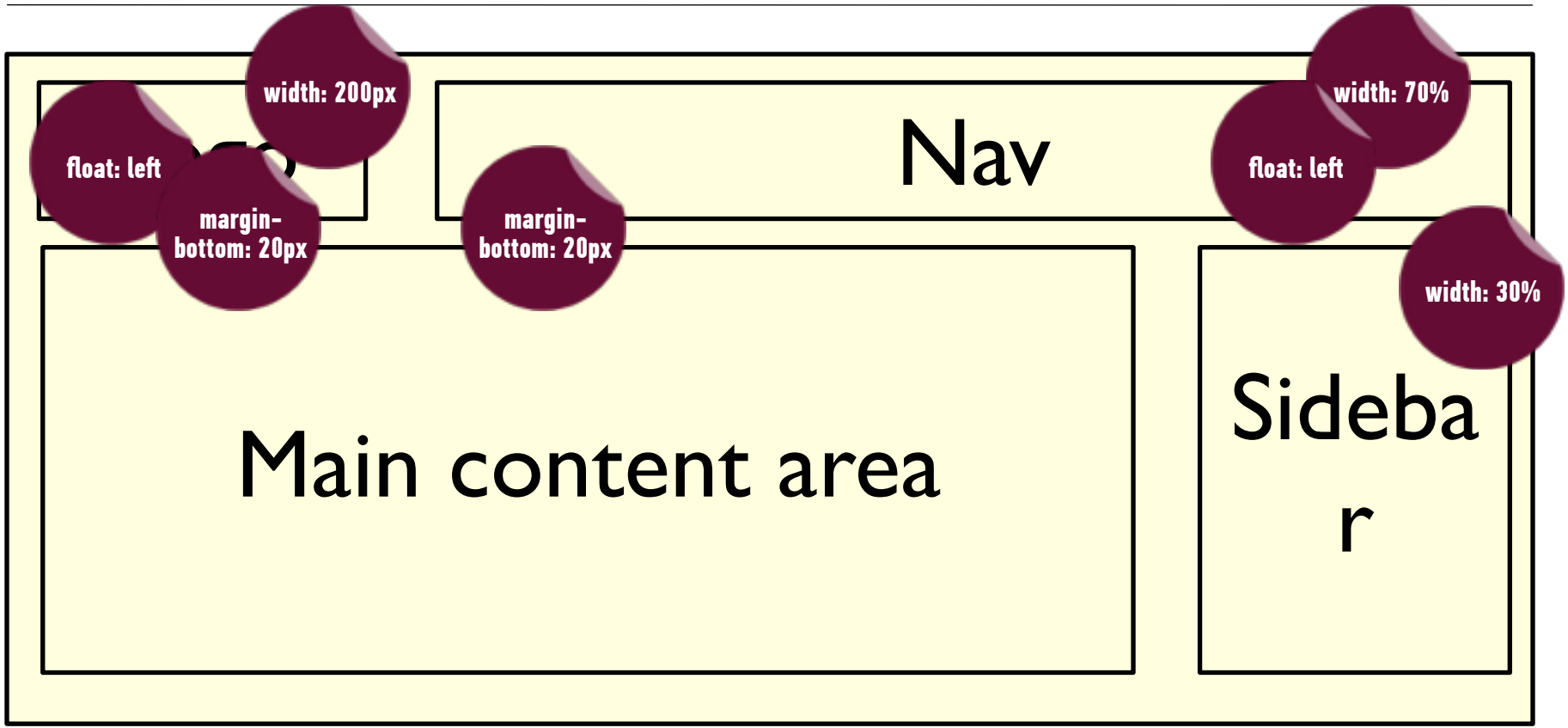
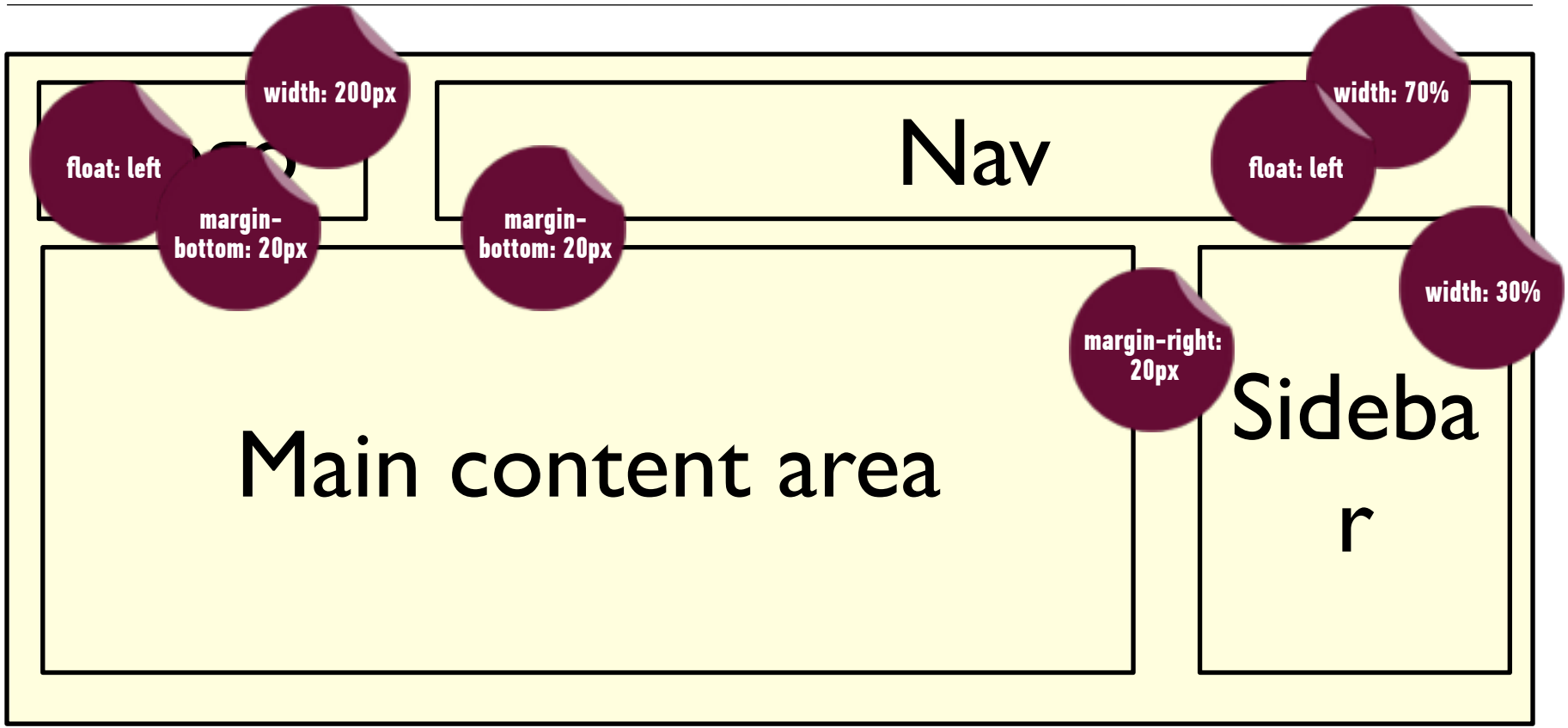

width: 200px
float: left
ogo
Nav
width: 70%
Main content area
Sideba
r

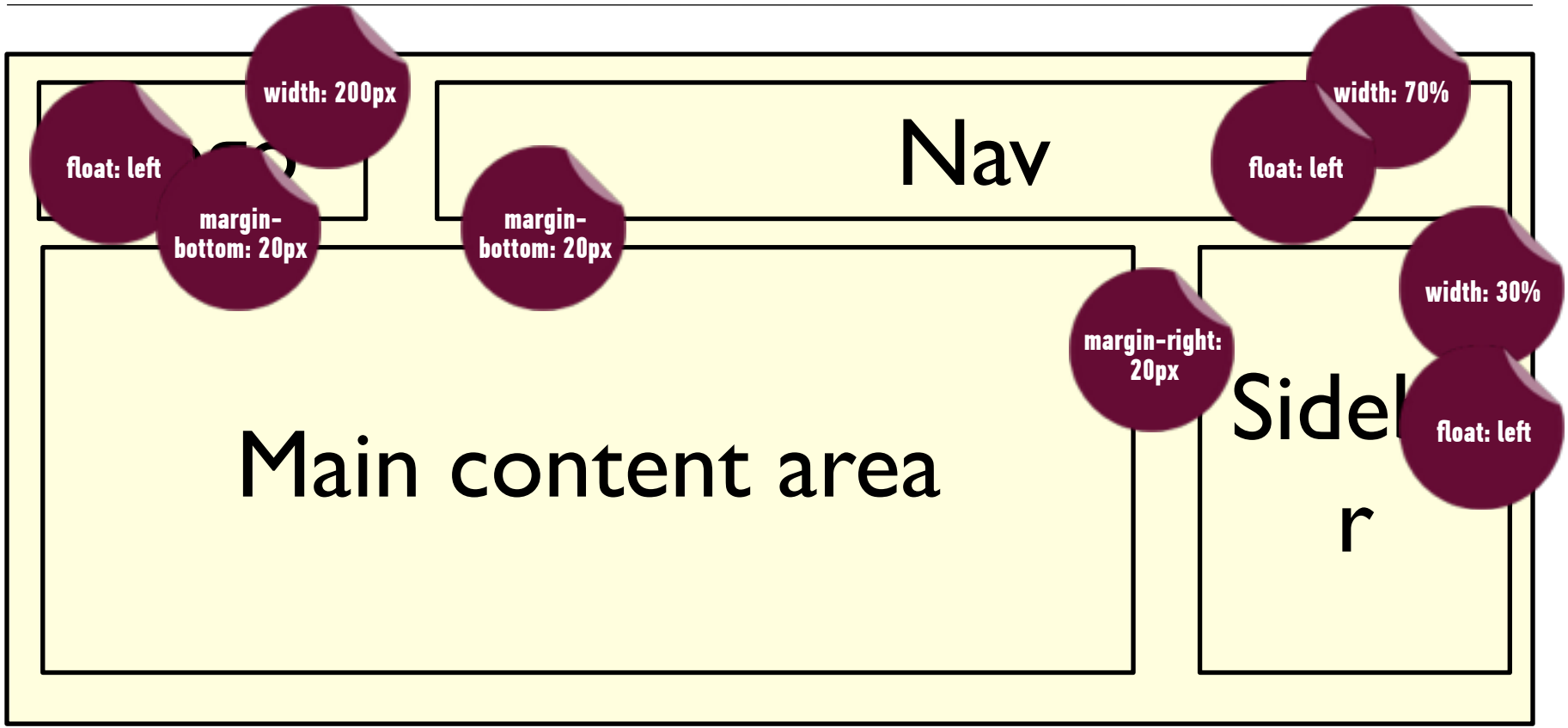

width: 200px
float: left
Nav
width: 70%
float: left
Main content area
Sideba
r

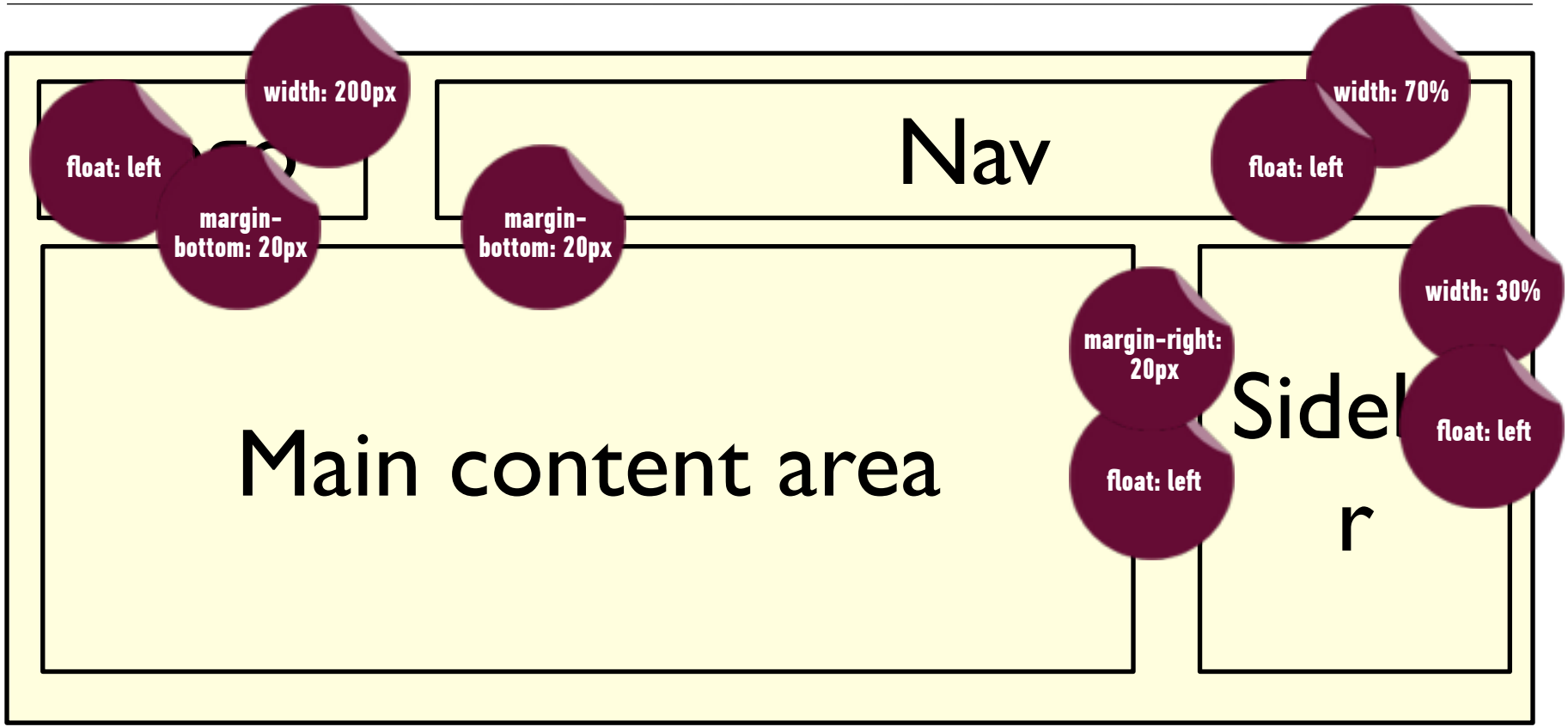

width: 200px
float: left
margin-bottom: 20px
Nav
width: 70%
float: left
Main content area
Sideba
r

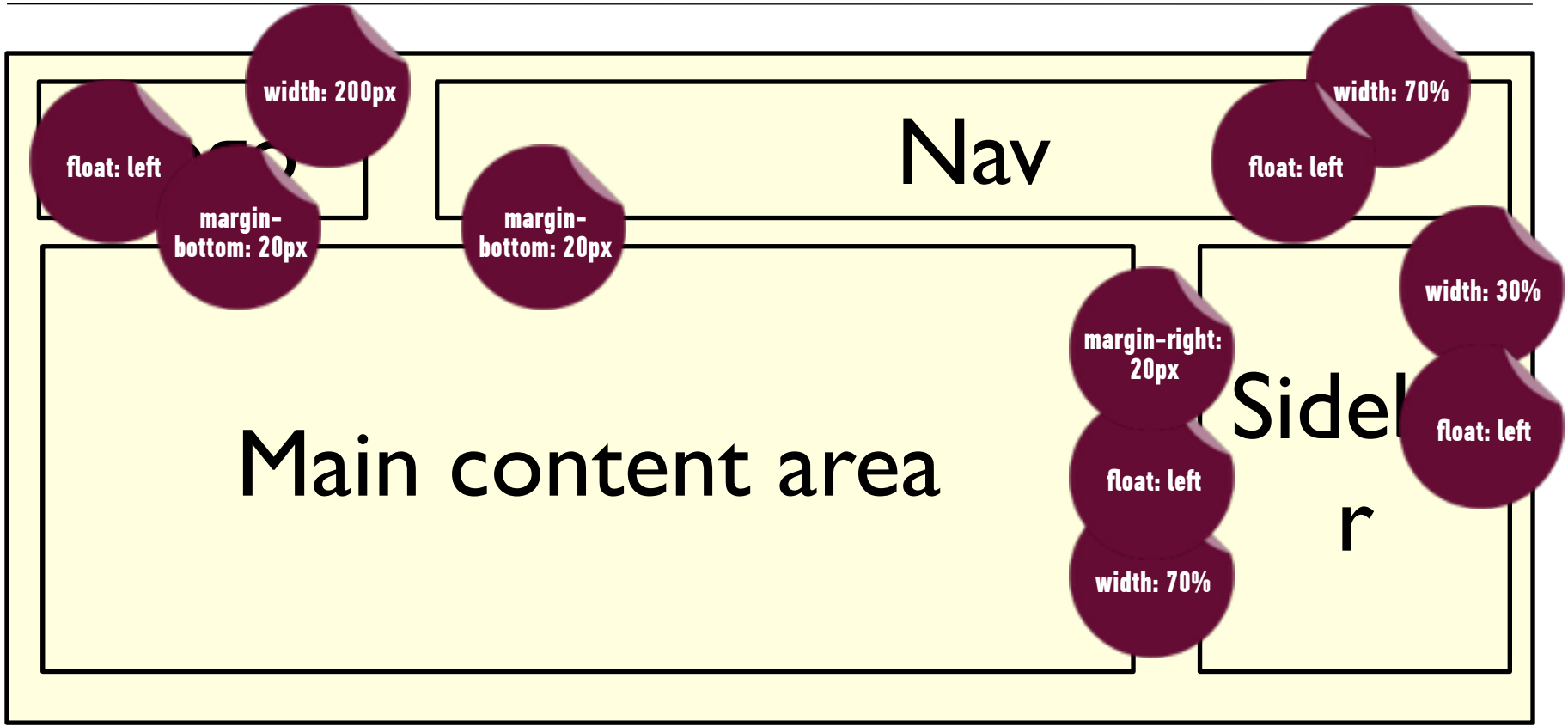

width: 200px
float: left
margin-bottom: 20px
Nav
margin-bottom: 20px
width: 70%
float: left
Main content area
Sideba
r

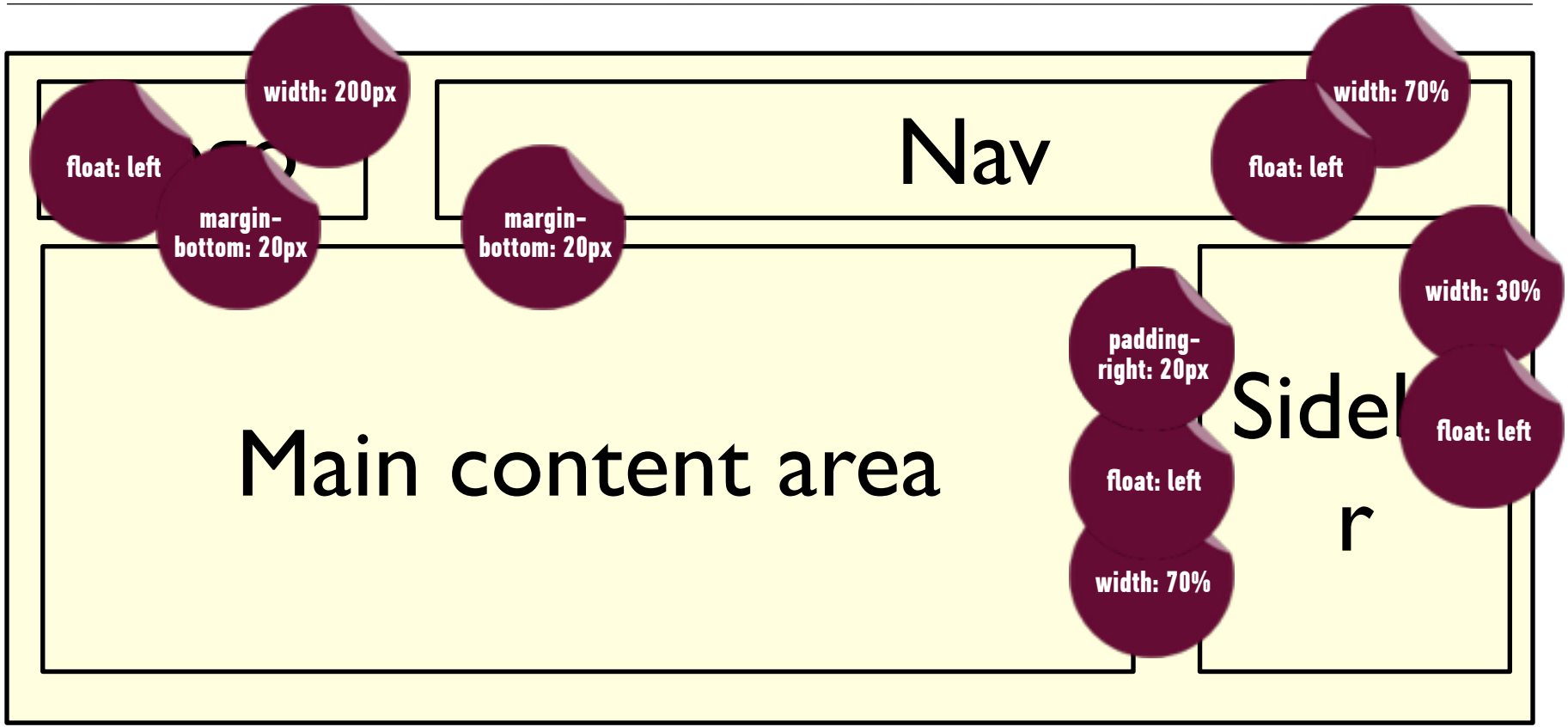

width: 200px
float: left
margin-bottom: 20px
Nav
margin-bottom: 20px
width: 70%
float: left
width: 30%
Main content area
Sideba
r

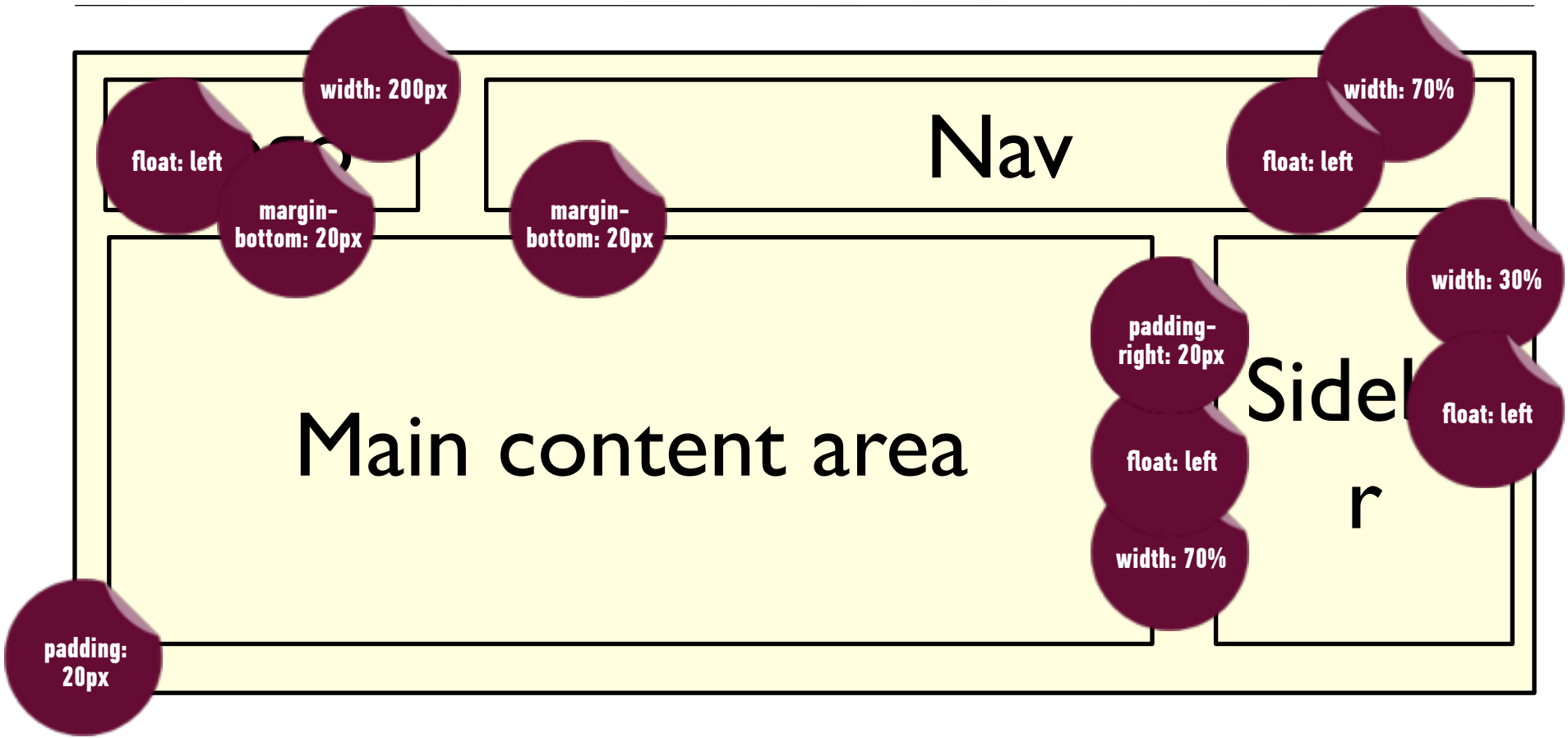

width: 200px
float: left
margin-bottom: 20px
Nav
margin-bottom: 20px
width: 70%
float: left
width: 30%
margin-right: 20px
Main content area
Sideba
r

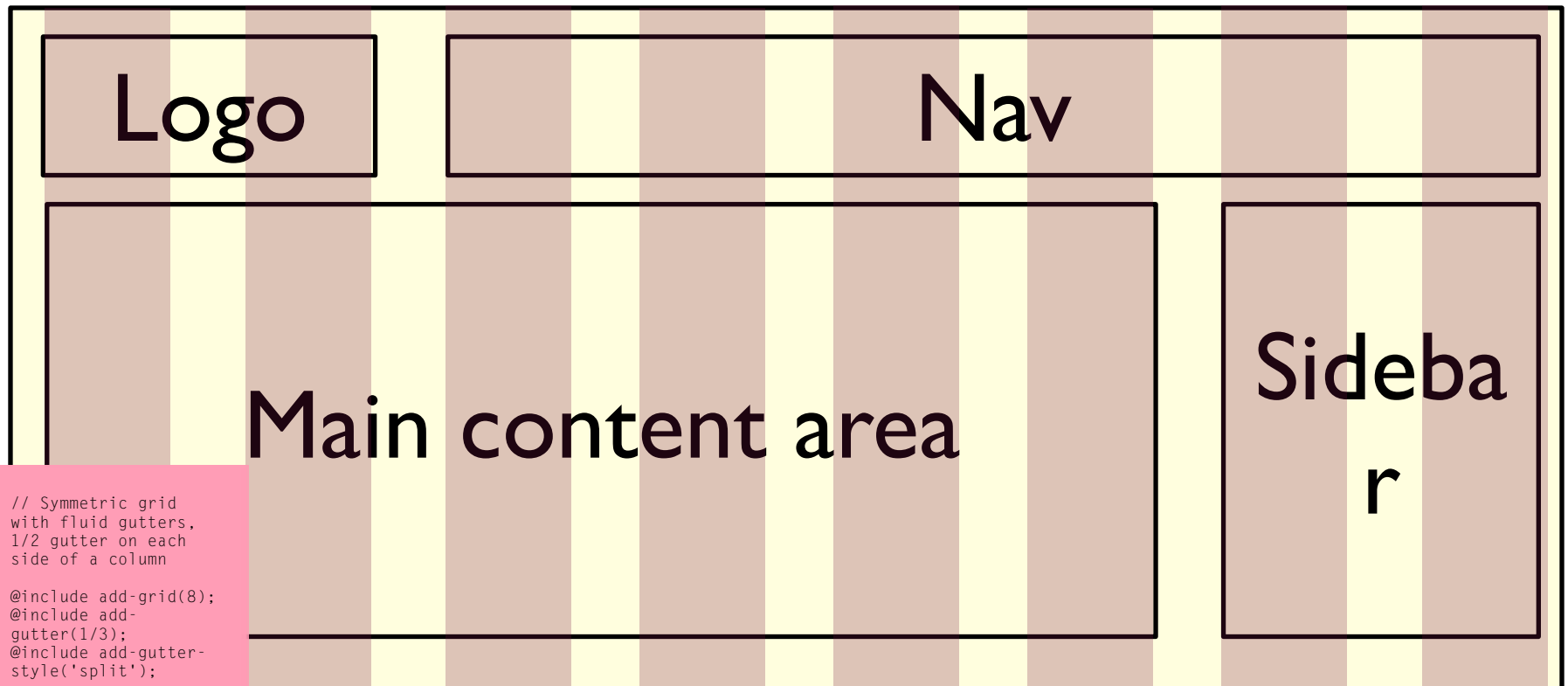

width: 200px
float: left
margin-bottom: 20px
Nav
margin-bottom: 20px
width: 70%
float: left
margin-right: 20px
width: 30%
float: left
Main content area
Sidebar


width: 200px
float: left
margin-bottom: 20px
Nav
width: 70%
float: left
margin-bottom: 20px
margin-right: 20px
float: left
Main content area
width: 30%
float: left
Sidebar


width: 200px
float: left
margin-bottom: 20px
Nav
margin-bottom: 20px
width: 70%
float: left
Main content area
margin-right: 20px
float: left
width: 70%
Sidebar
width: 30%
float: left

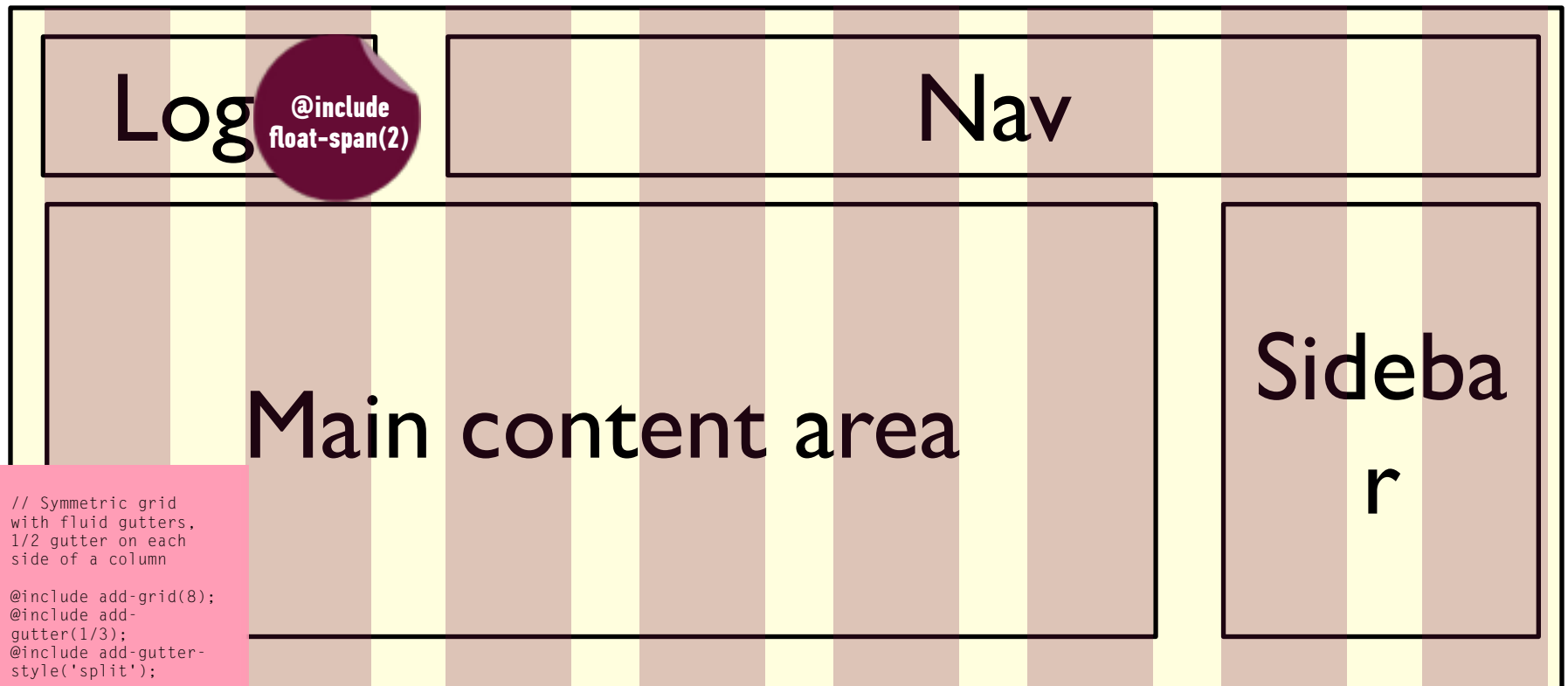

width: 200px
float: left
margin-bottom: 20px
Nav
margin-bottom: 20px
width: 70%
float: left
Main content area
padding-right: 20px
float: left
width: 70%
Sidebar
width: 30%
float: left


width: 200px
float: left
margin-bottom: 20px
Nav
margin-bottom: 20px
width: 70%
float: left
Main content area
padding-right: 20px
float: left
width: 70%
Sidebar
width: 30%
float: left
padding: 20px




```
// Symmetric grid
with fluid gutters,
1/2 gutter on each
side of a column

@include add-grid(8);
@include add-
gutter(1/3);
@include add-gutter-
style('split');
```




```
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@include add-grid(8);
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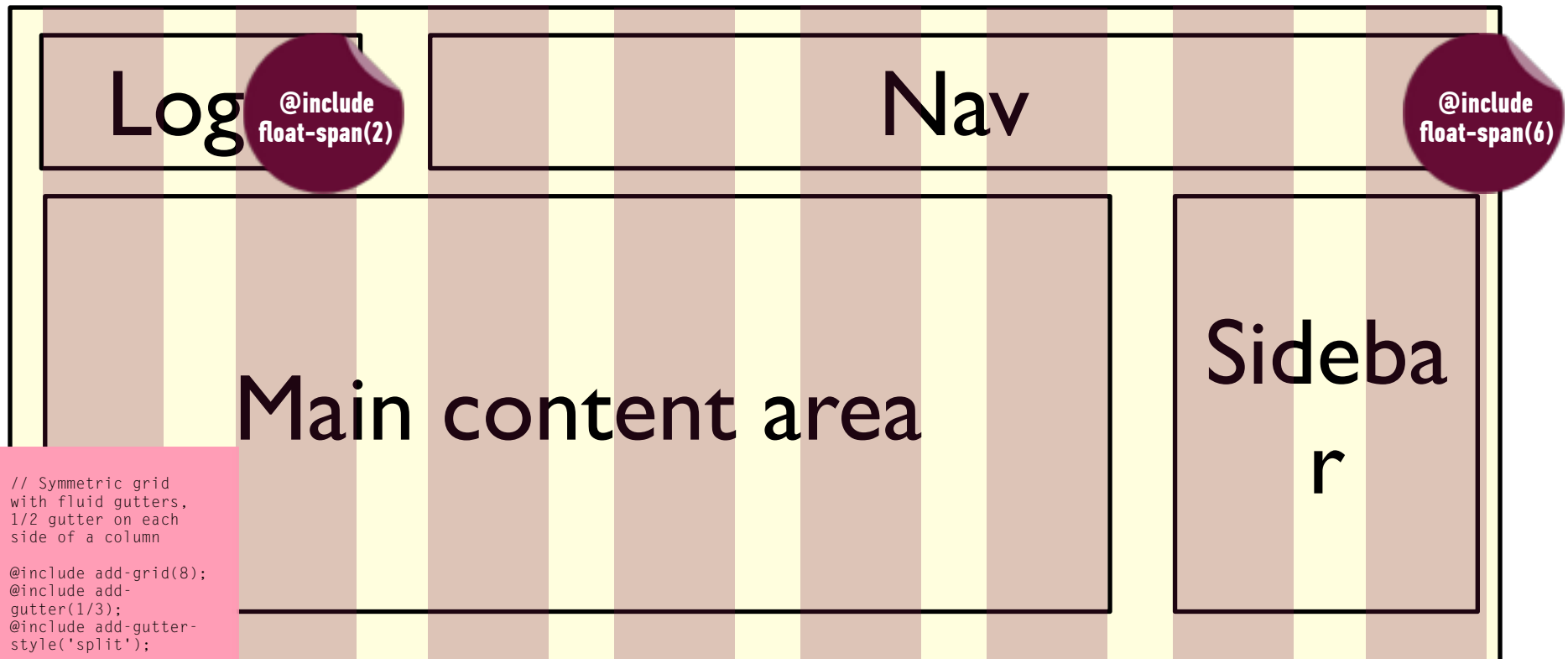


```
// Symmetric grid
with fluid gutters,
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side of a column

@include add-grid(8);
@include add-
gutter(1/3);
@include add-gutter-
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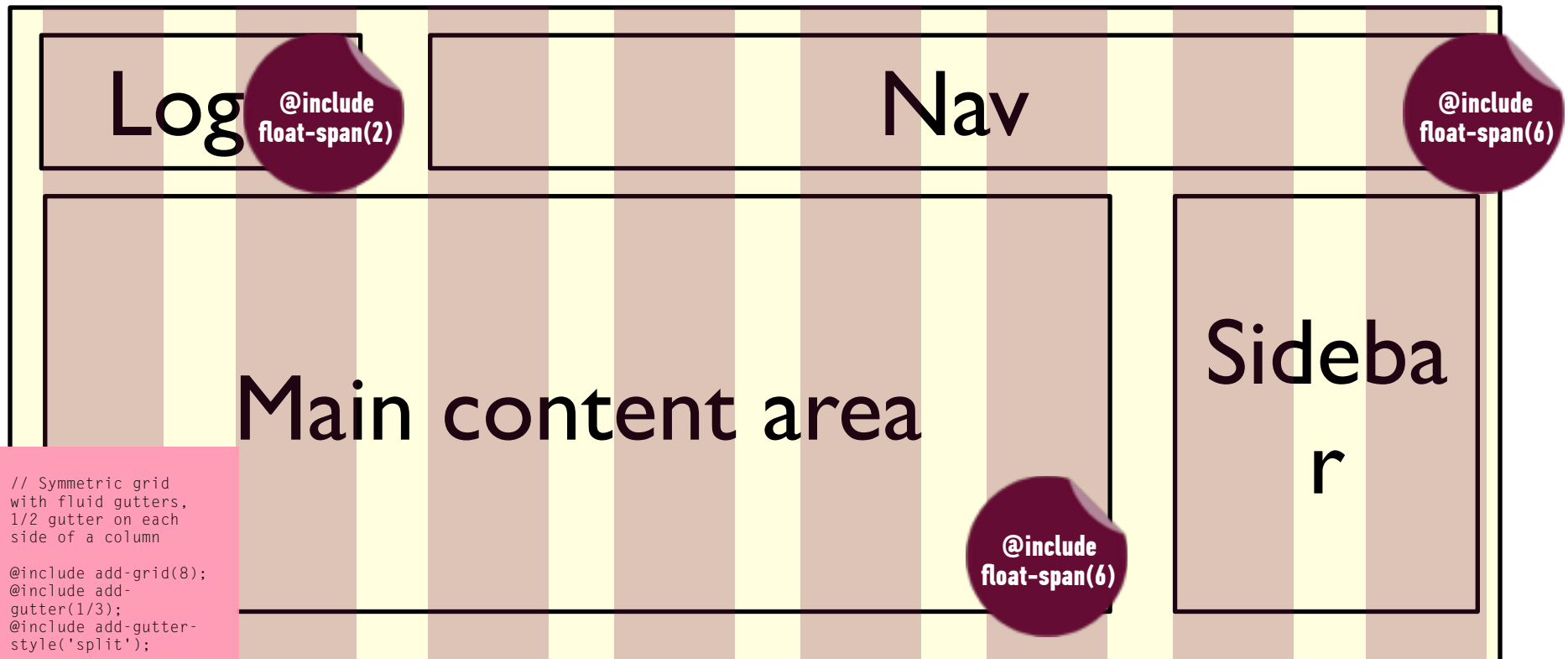
```




```
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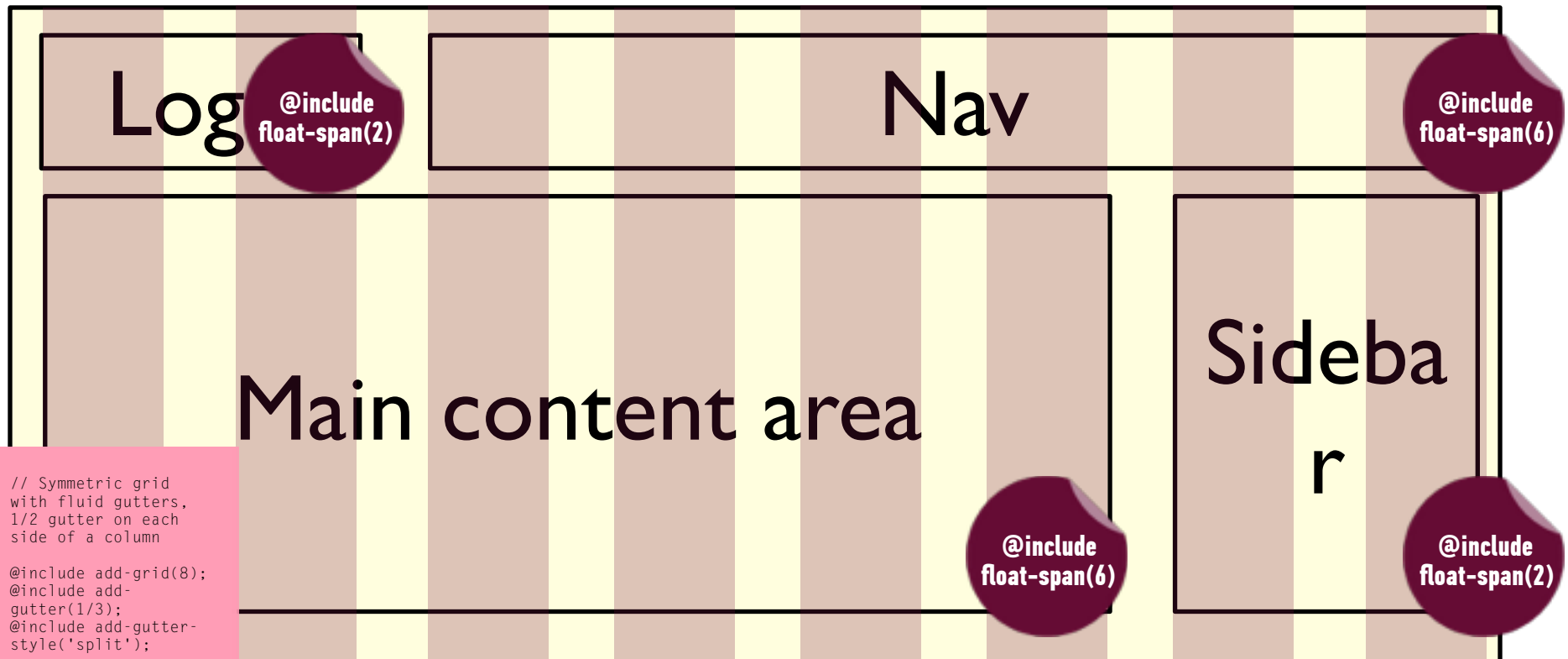
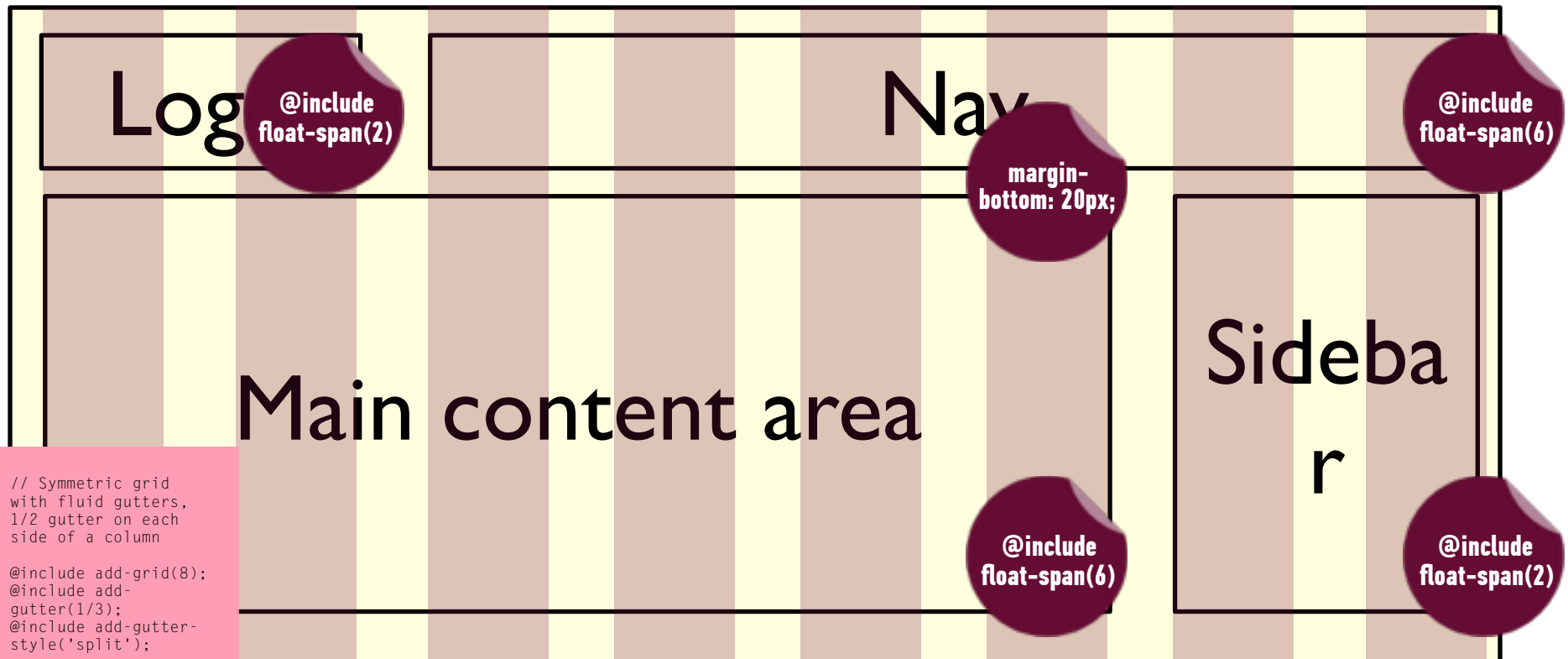
side of a column

@include add-grid(8);
@include add-
gutter(1/3);
@include add-gutter-
style('split');
```




```
// Symmetric grid
with fluid gutters,
1/2 gutter on each
side of a column

@include add-grid(8);
@include add-
gutter(1/3);
@include add-gutter-
style('split');
```




```
// Symmetric grid
with fluid gutters,
1/2 gutter on each
side of a column

@include add-grid(8);
@include add-
gutter(1/3);
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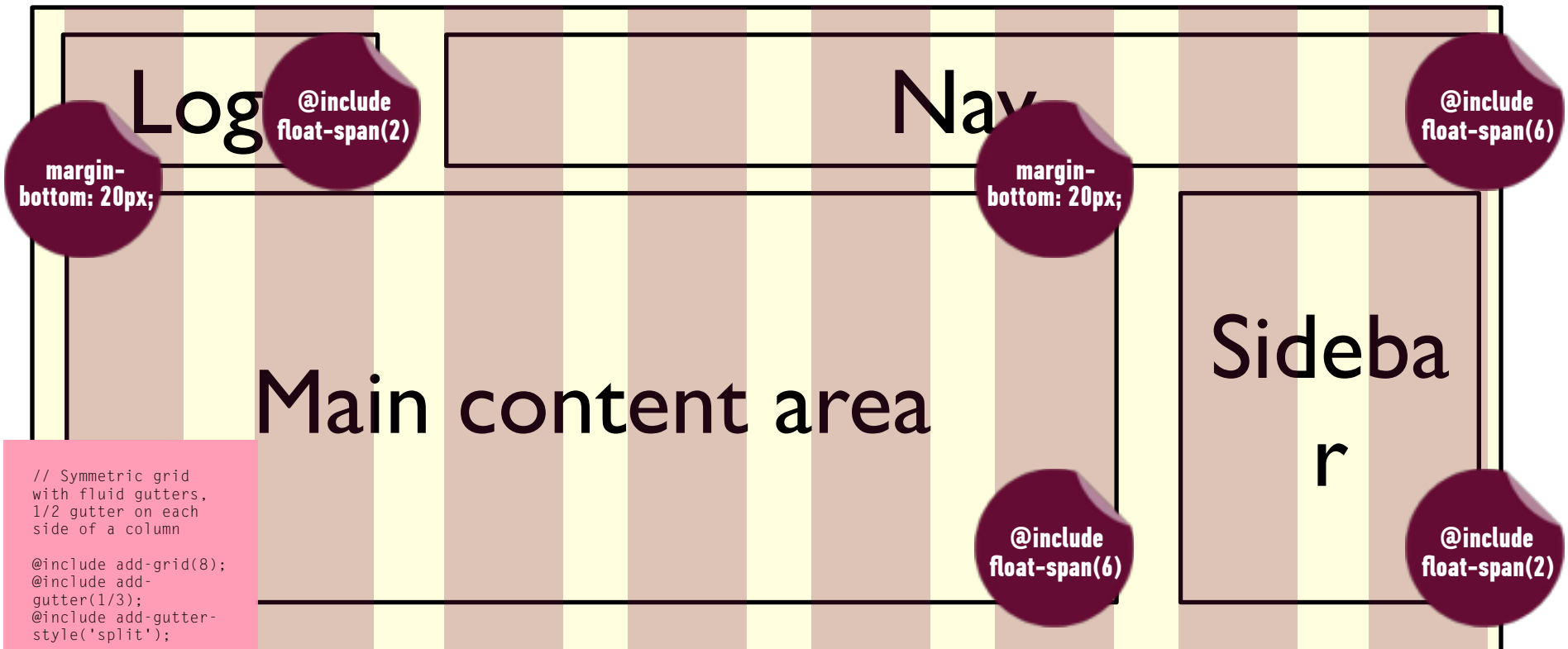
```

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@include add-grid(8);
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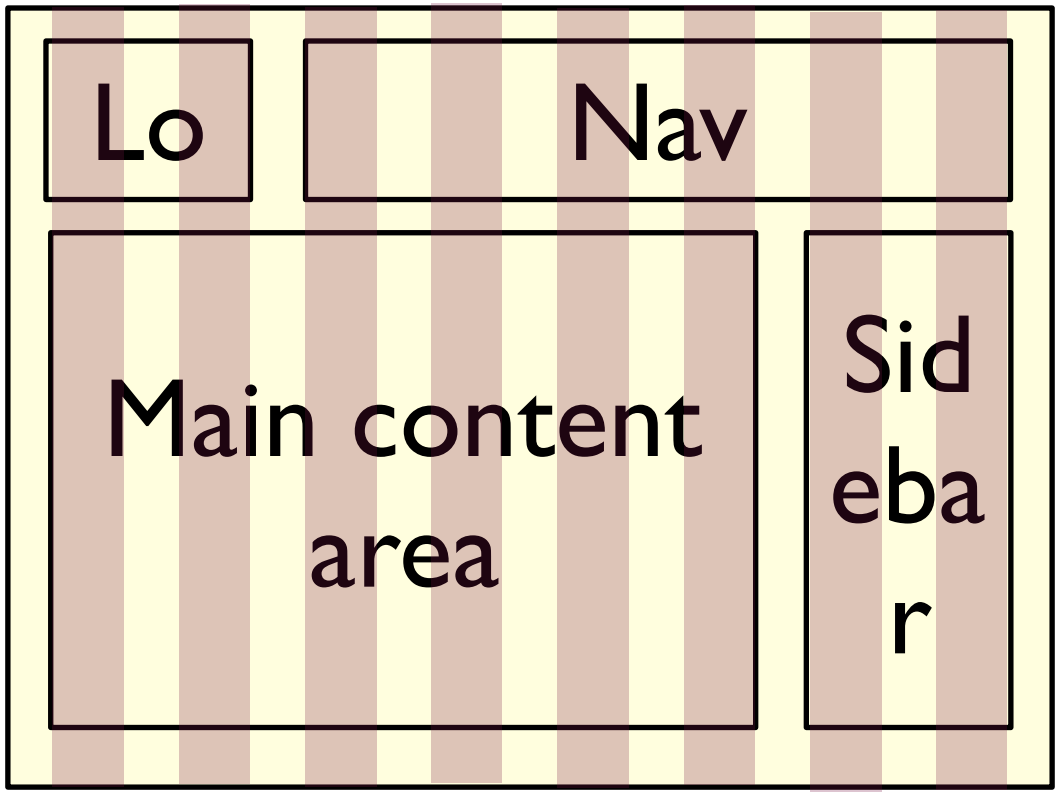
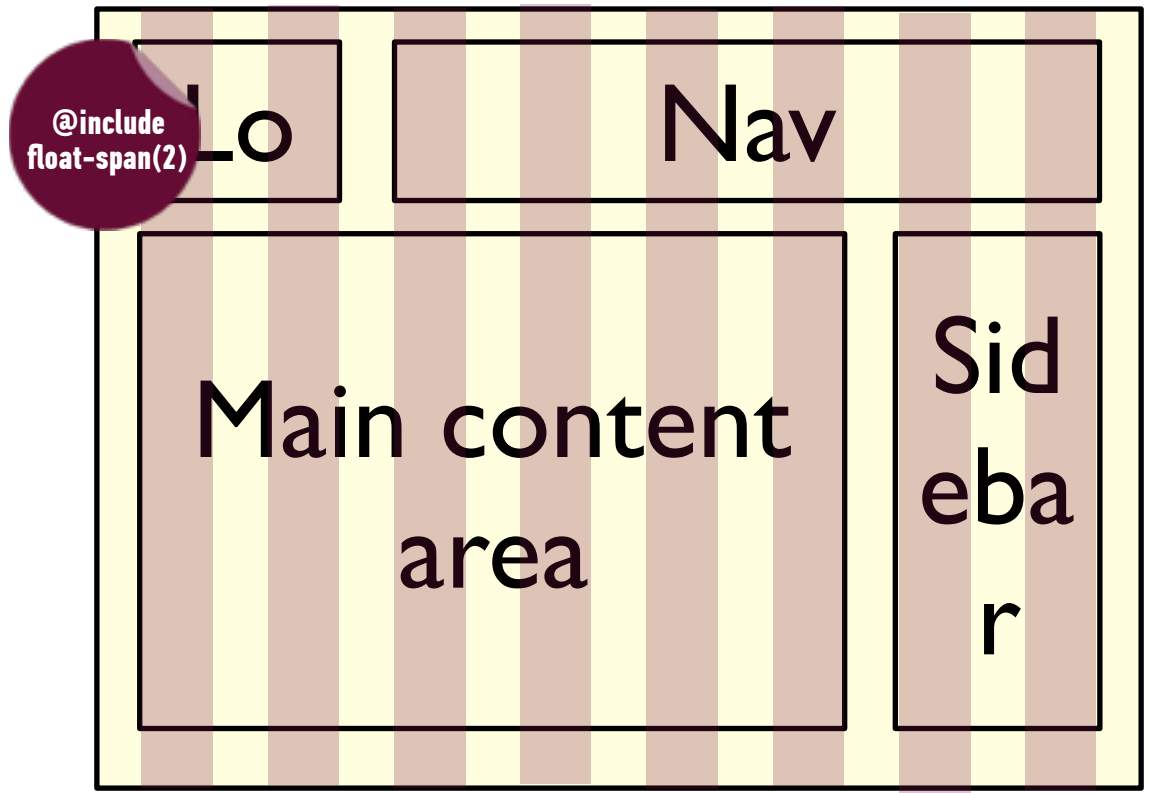
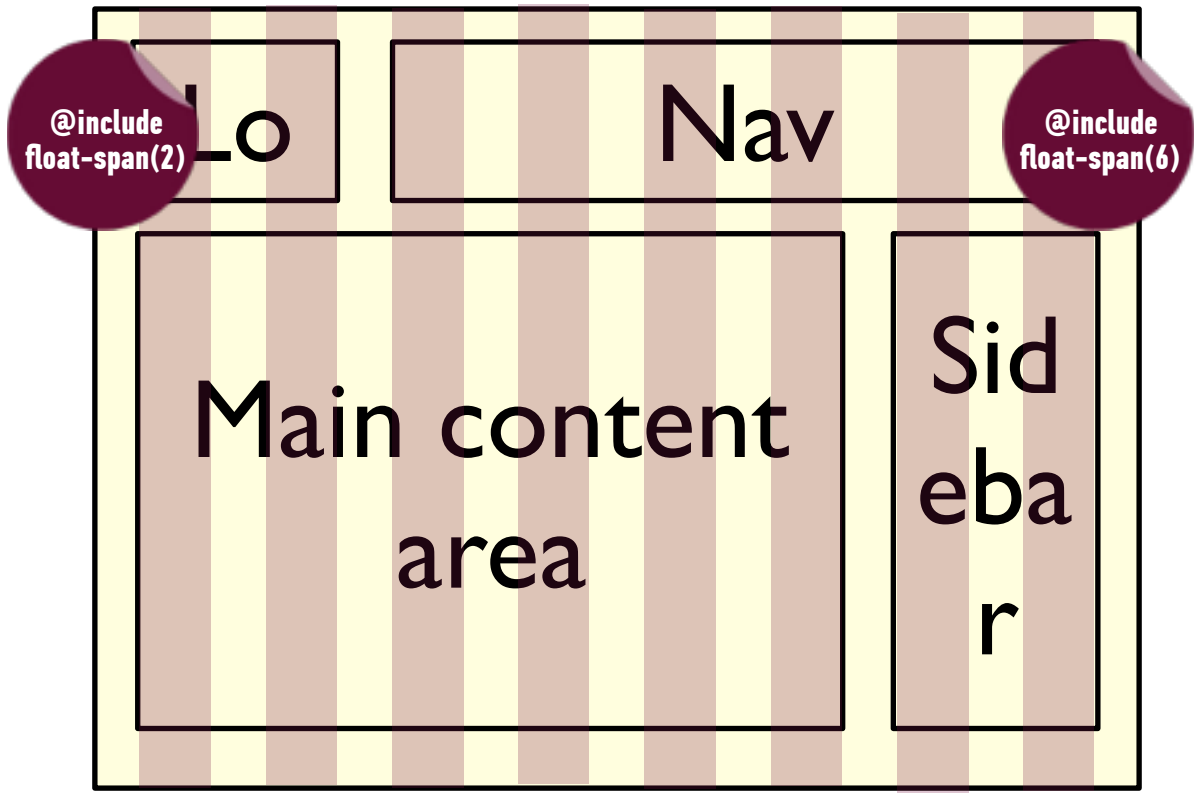
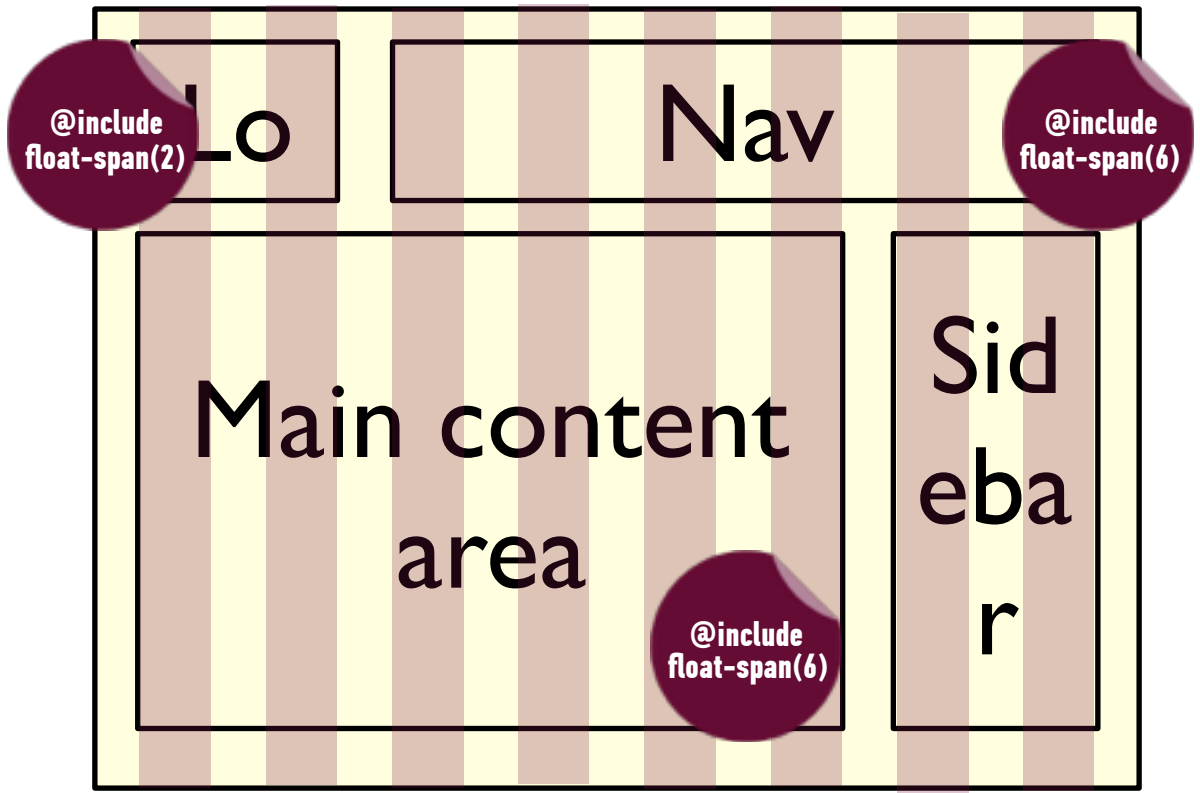
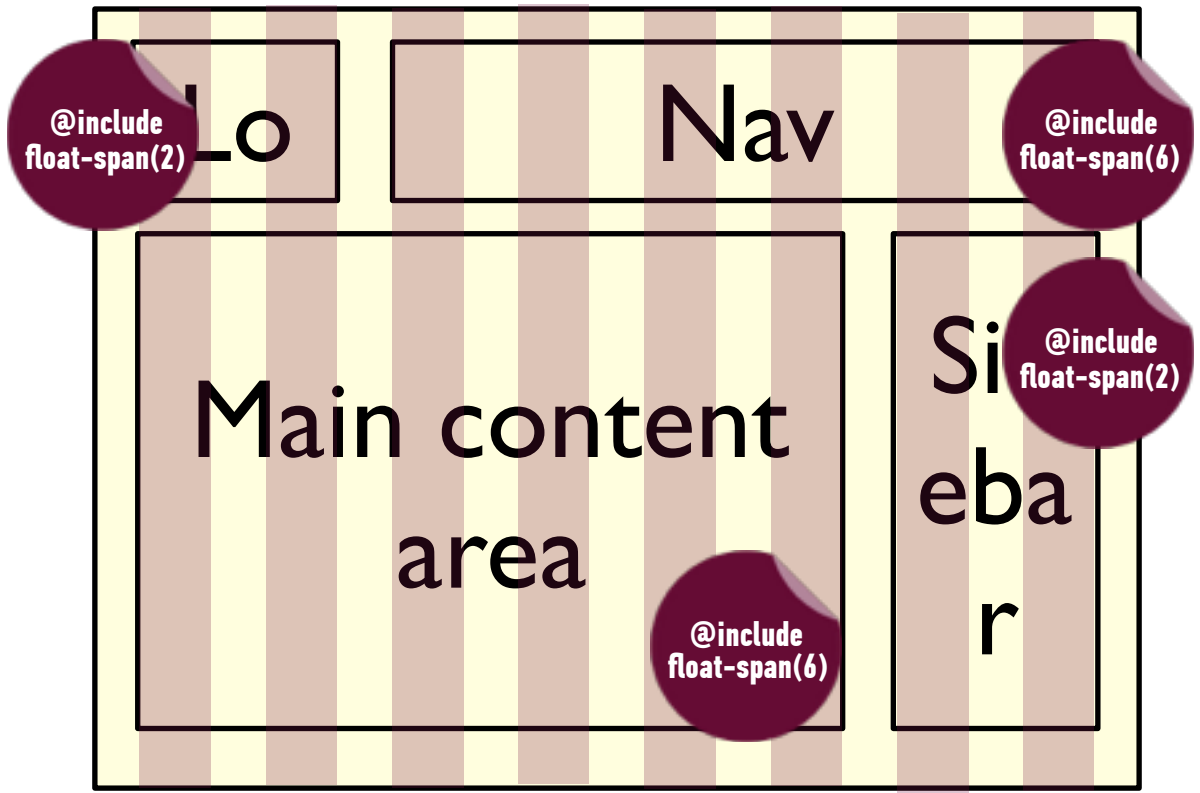
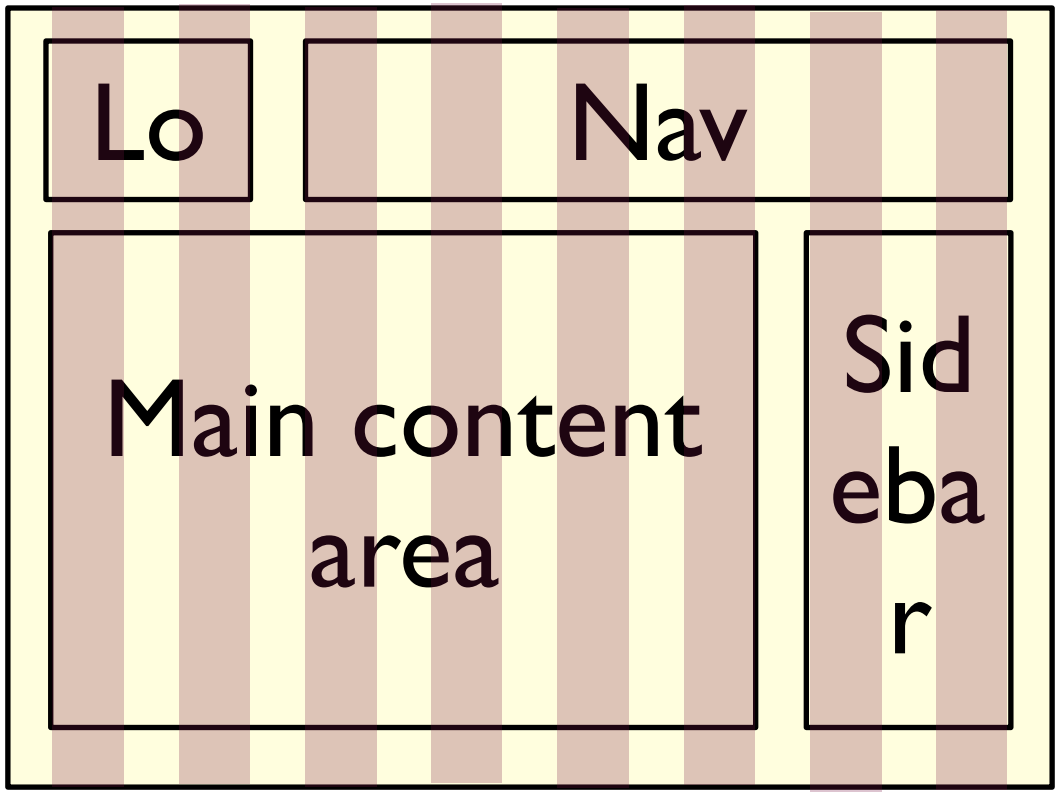

Lo
Nav
Main content area
Sid eba r

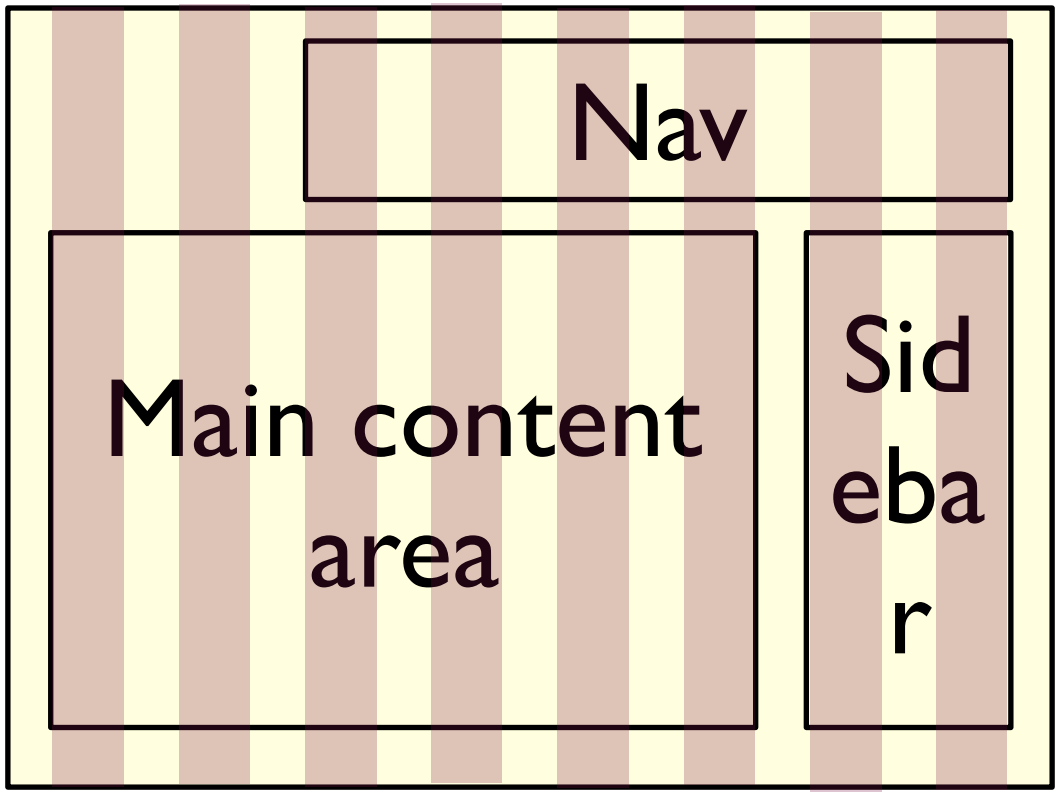

@include
float-span(2)
Lo
Nav
Main content
area
Sid
eba
r

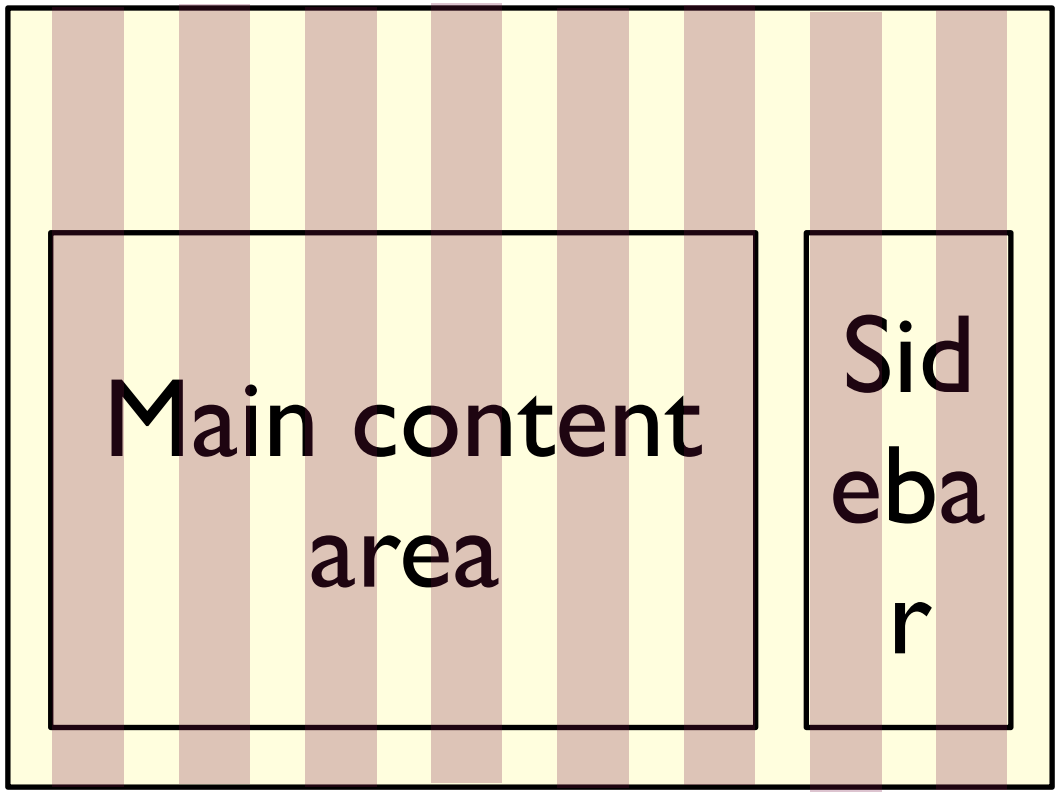

@include float-span(2)
Lo
Nav
@include float-span(6)
Main content area
Sid eba r

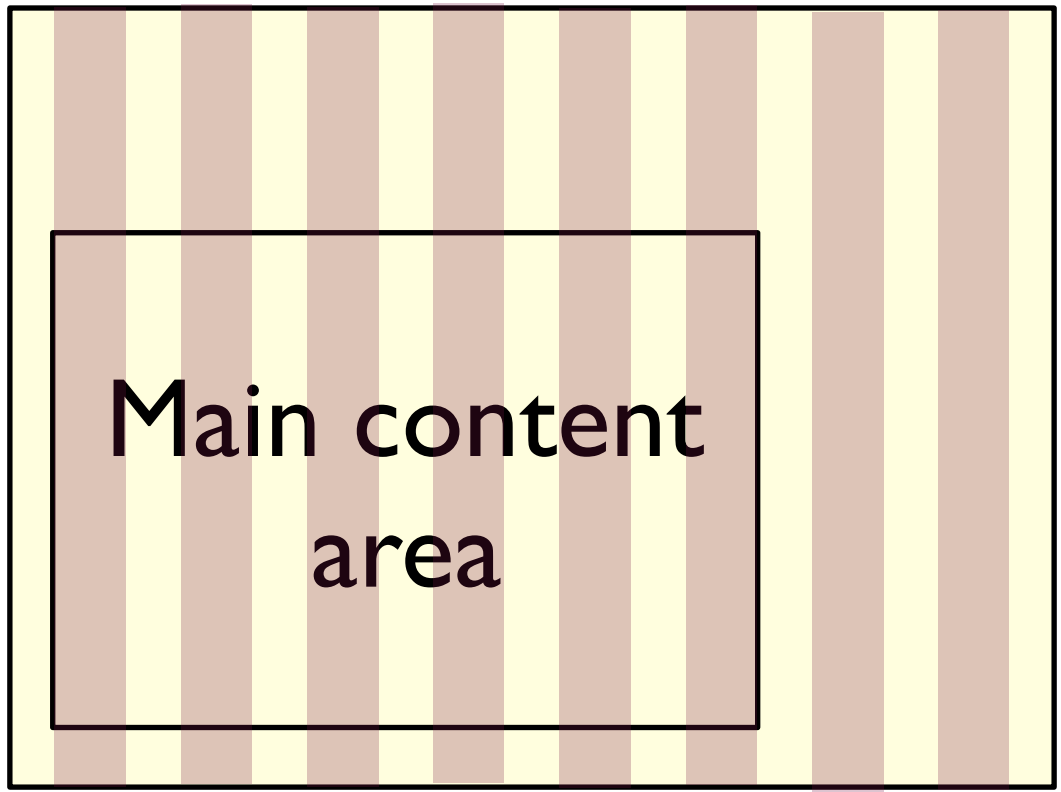

@include float-span(2)
Lo
Nav
@include float-span(6)
Main content area
@include float-span(6)
Sid eba r

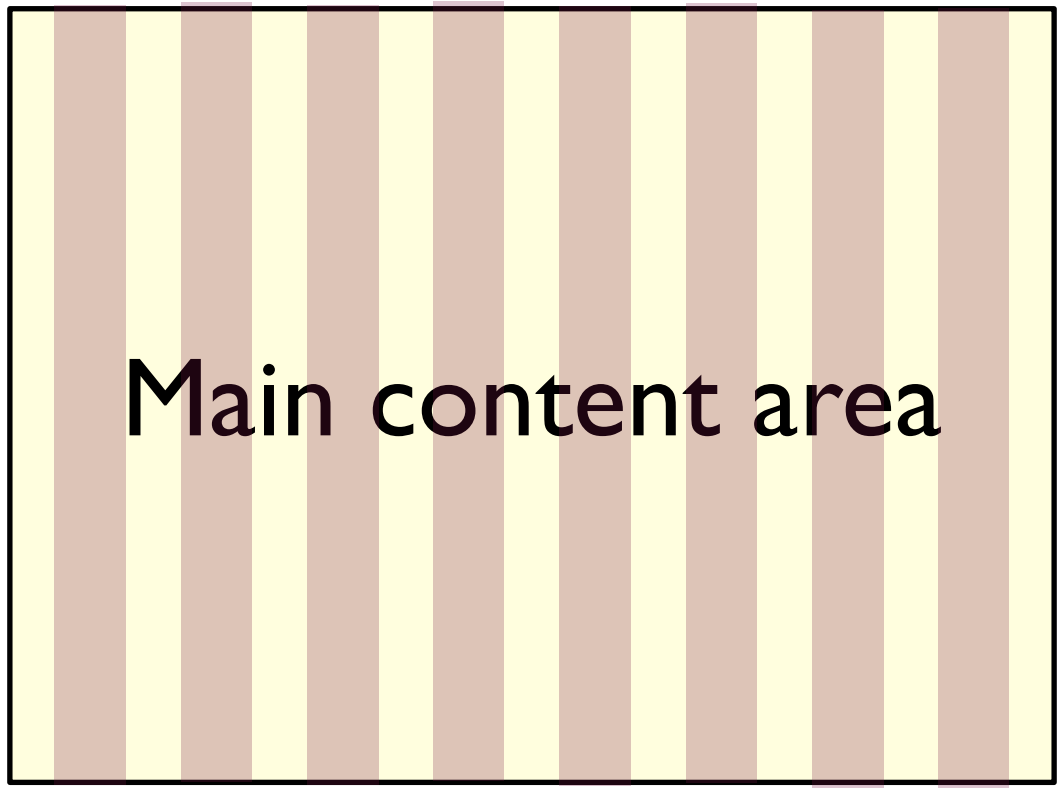

@include float-span(2)
Lo
Nav
@include float-span(6)
Main content area
@include float-span(6)
Si eba r
@include float-span(2)


Lo
Nav
Main content area
Sid eba r


Nav
Main content area
Sid eba r


Main content area
Sid eba r

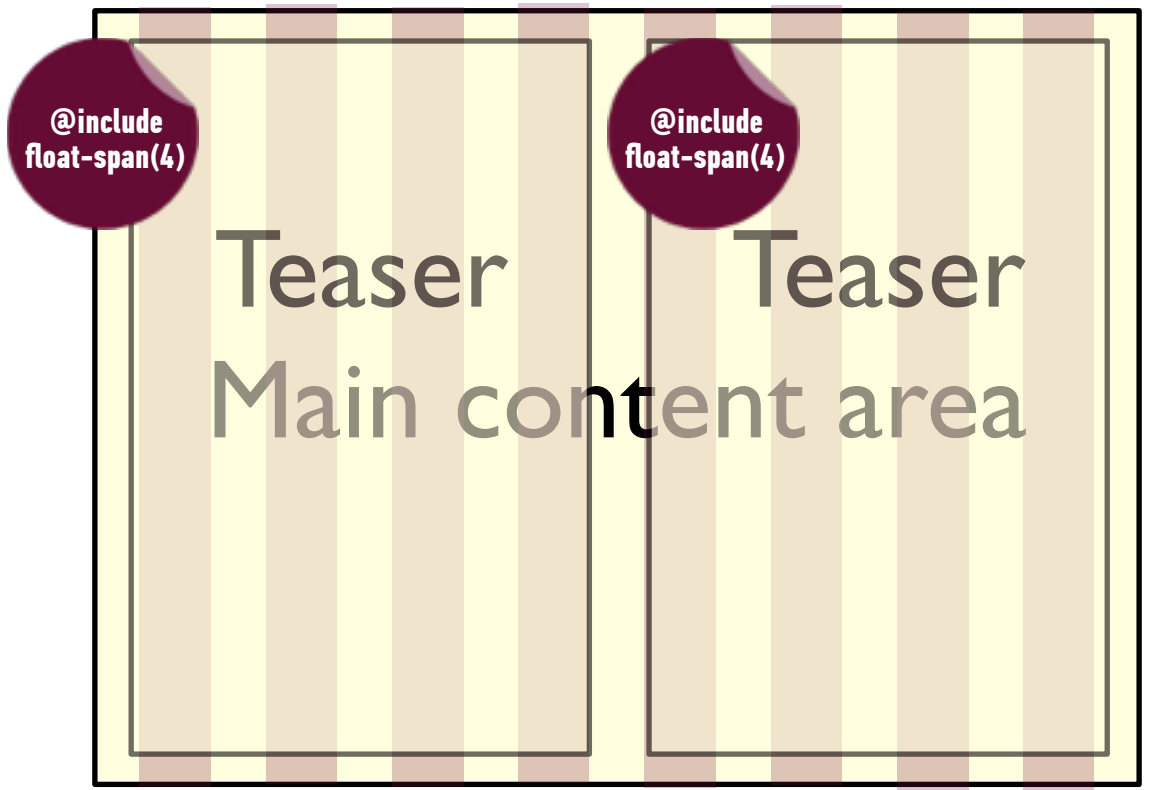

Main content
area

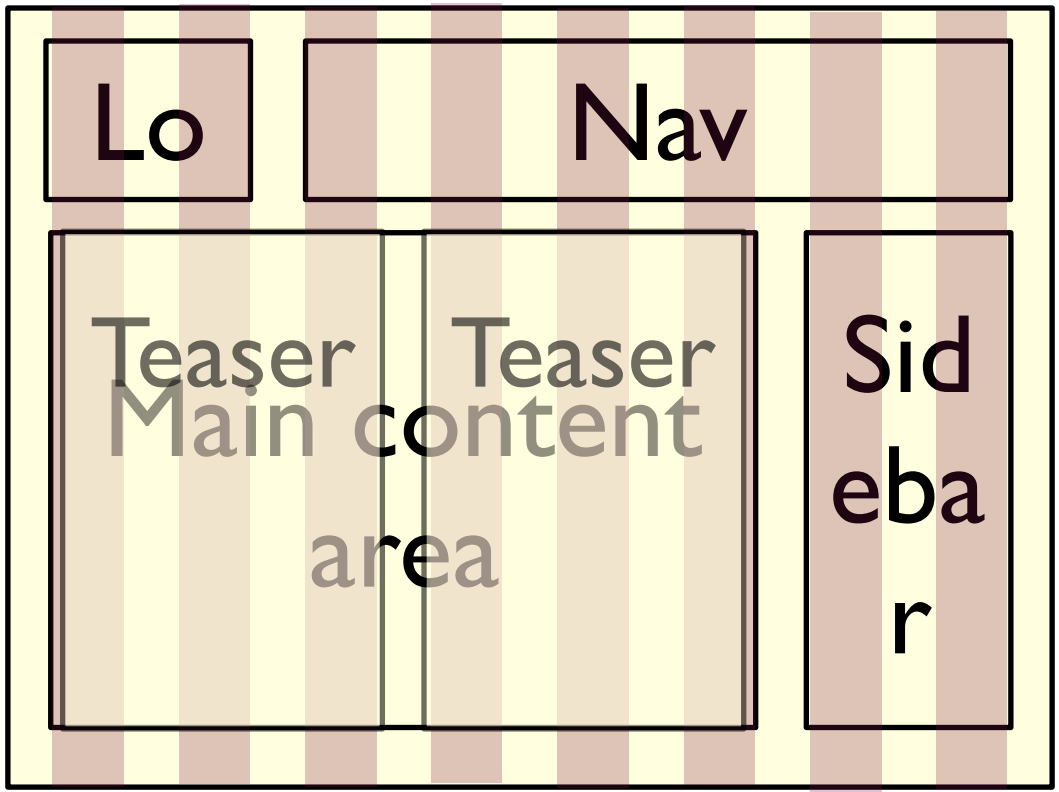

Main content area

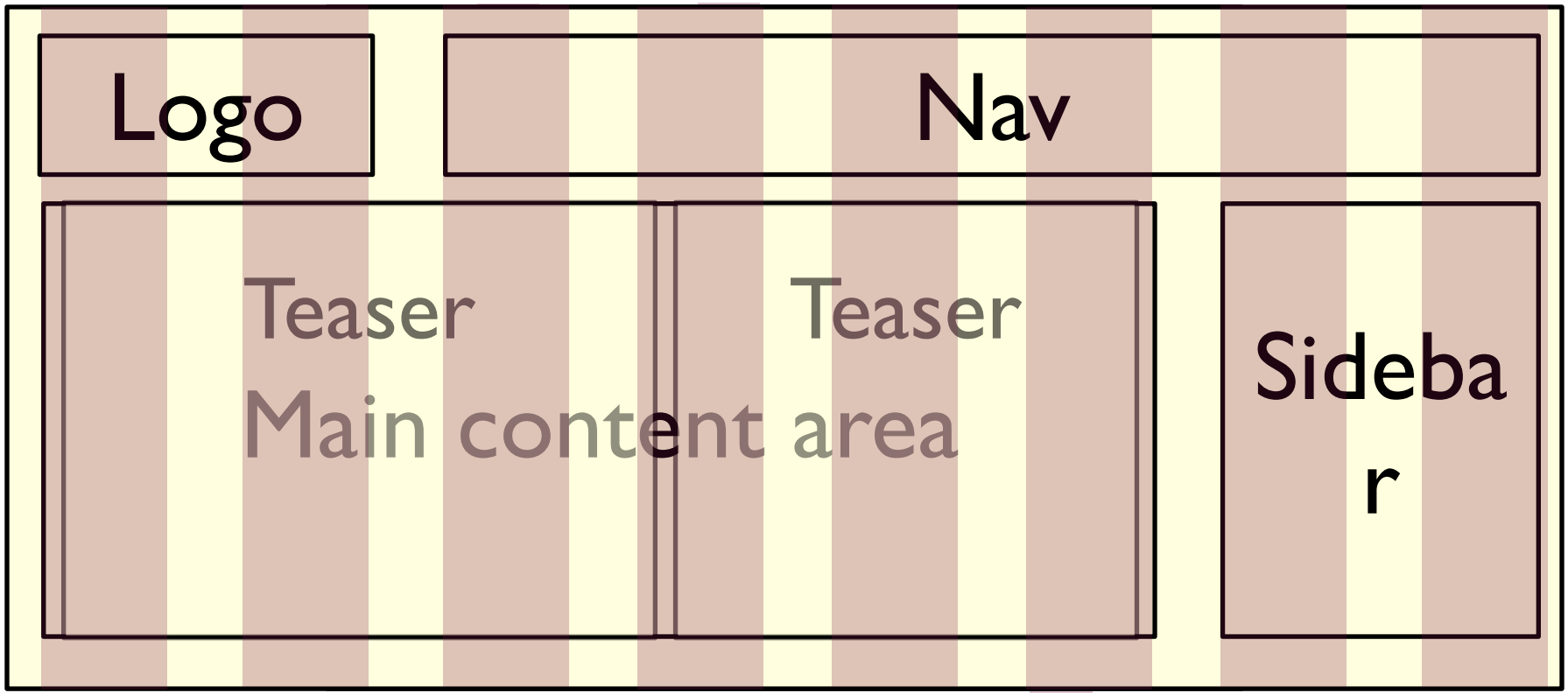
Teaser
Main content area

@include
float-span(4)
Teaser
Main content area

@include
float-span(4)
Teaser
Teaser
Main content area


@include
float-span(4)
@include
float-span(4)
Teaser
Teaser
Main content area

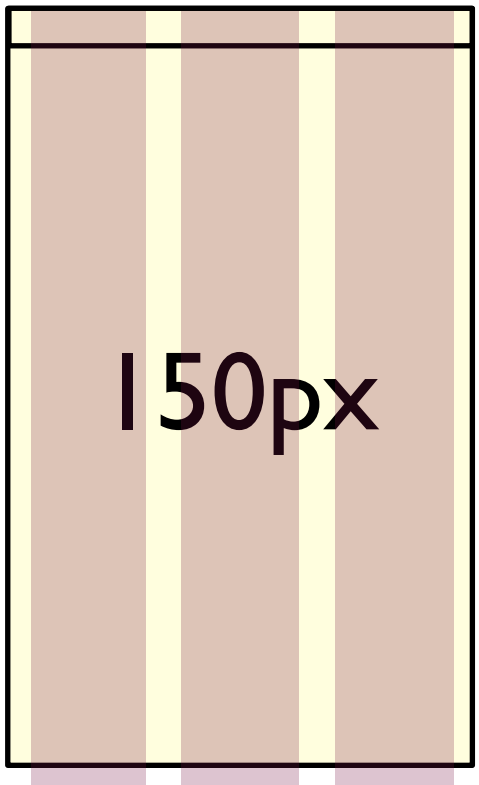

Lo
Nav
Teaser
Teaser
Main content area
Sid eba r

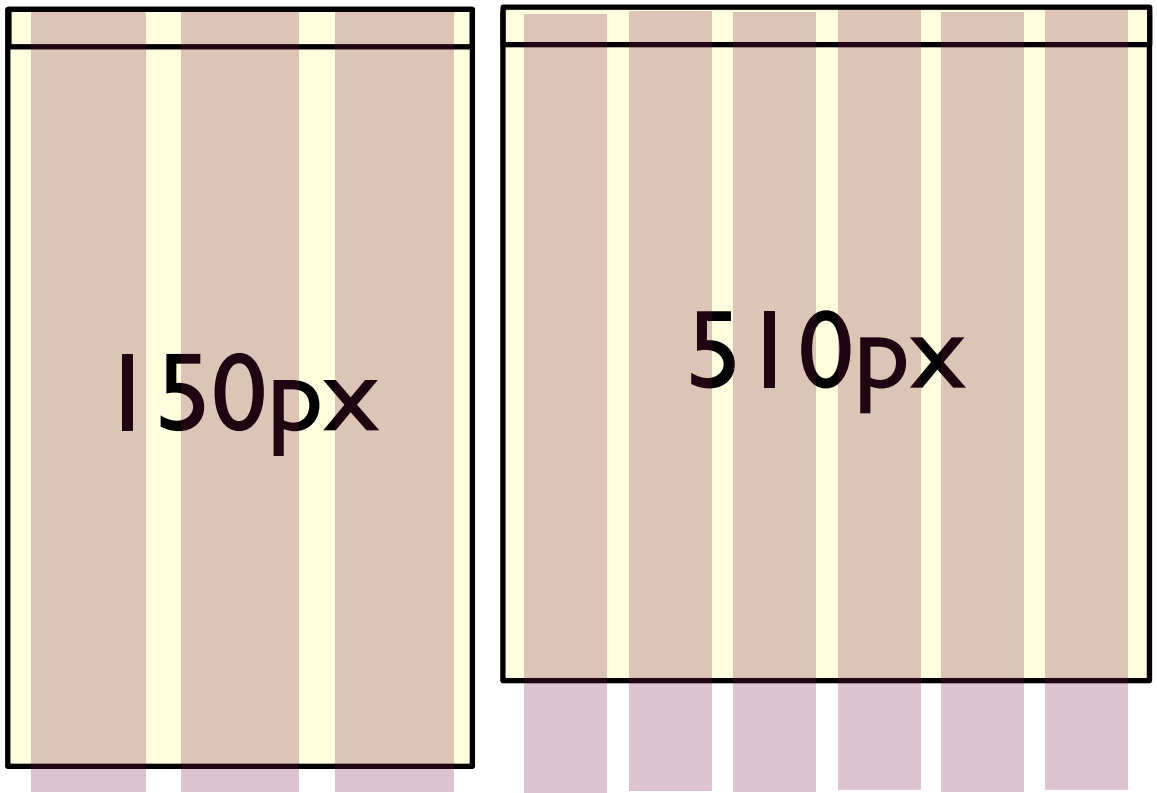

Logo
Nav
Teaser
Teaser
Main content area
Sideba
r

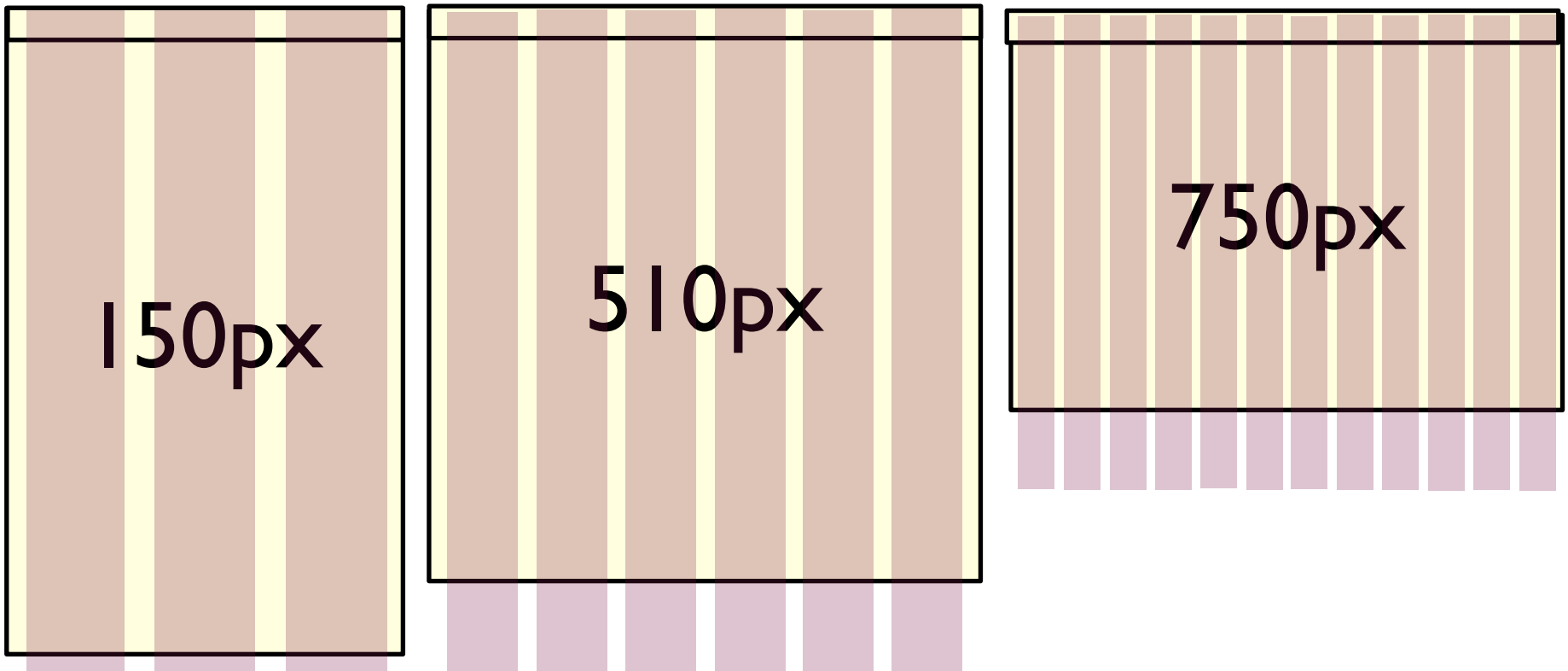
Get on the grid!

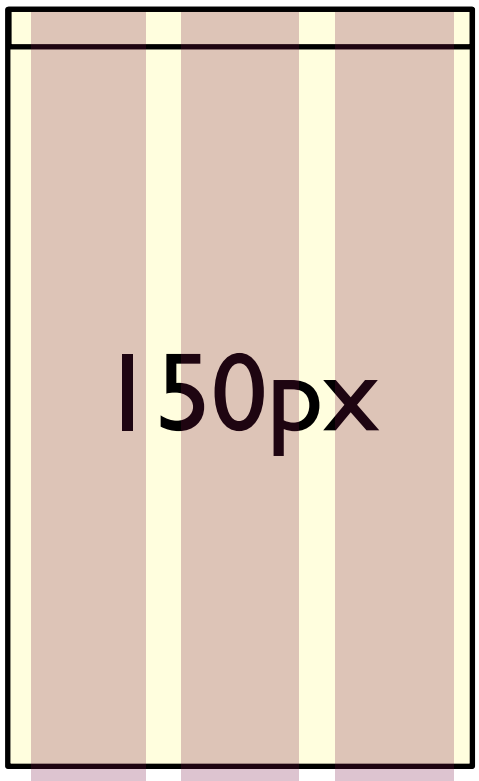
- Consistency in element sizing and spacing between elements
- Fixes rounding errors for you
- Float-based grids or absolutely positioned with margins
- Asymmetric, symmetric or arbitrarily organised grids
- Grids inside each element
- No need for fixed pixel width measurements
- Different grids can be defined for different breakpoints

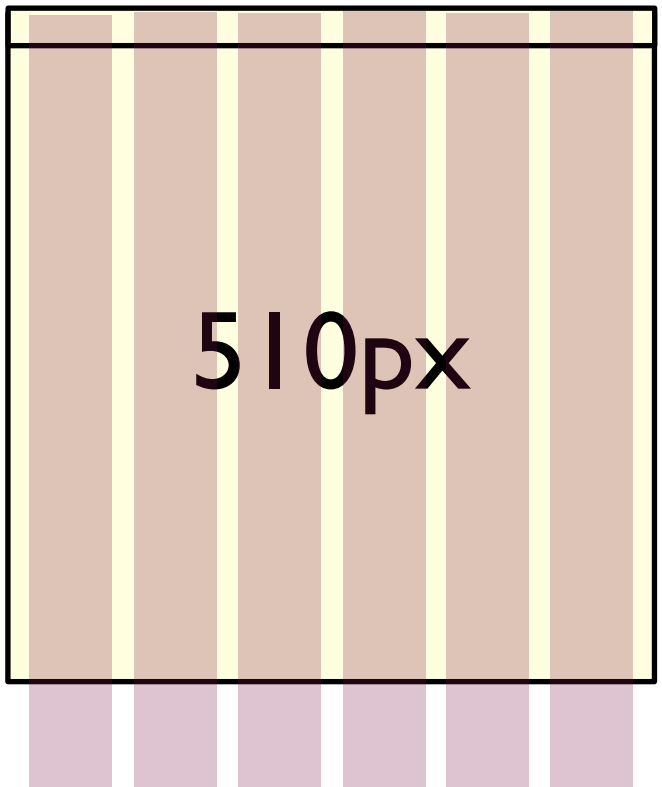
MEDIA QUERIES

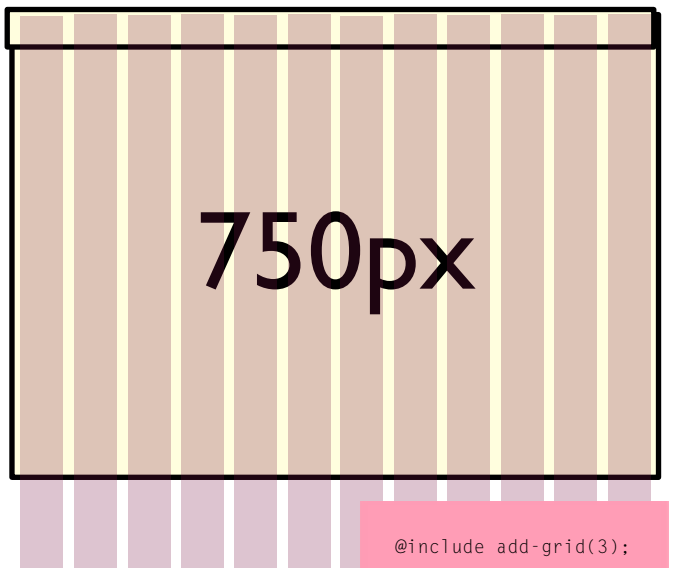

150px


150px
510px


150px
510px
750px








```
@include add-grid(3);

@include add-grid(6
at 500px);

@include add-grid(12
at 700px);
```

Breakpoints

- http://breakpoint-sass.com/
- Setting breakpoints allows you to create “really simple, organised media queries with Sass”
- Use breakpoints inside elements or outside of them
- Give media queries meaningful names
- Simplified syntax for media queries
- Flexible and works with various different approaches

```
// Set up breakpoints
$smallish: 500px;

.cool-div {
  @include breakpoint($smallish) {
    background-color: blue;
  }
}
```

```
// Set up breakpoints
$smallish: 0px 500px;
$largeish: 501px 1200px

.cool-div {
   @include breakpoint($smallish) {
      background-color: blue;
   }
   @include breakpoint($largeish) {
      background-color: red;
   }
}
```

```
// Set up breakpoints
$smallish: 0px 500px;
$largeish: 501px 1200px

.cool-div {
   @include breakpoint($smallish) {
      background-color: blue;
   }
   @include breakpoint($largeish) {
      background-color: red;
   }
}
```

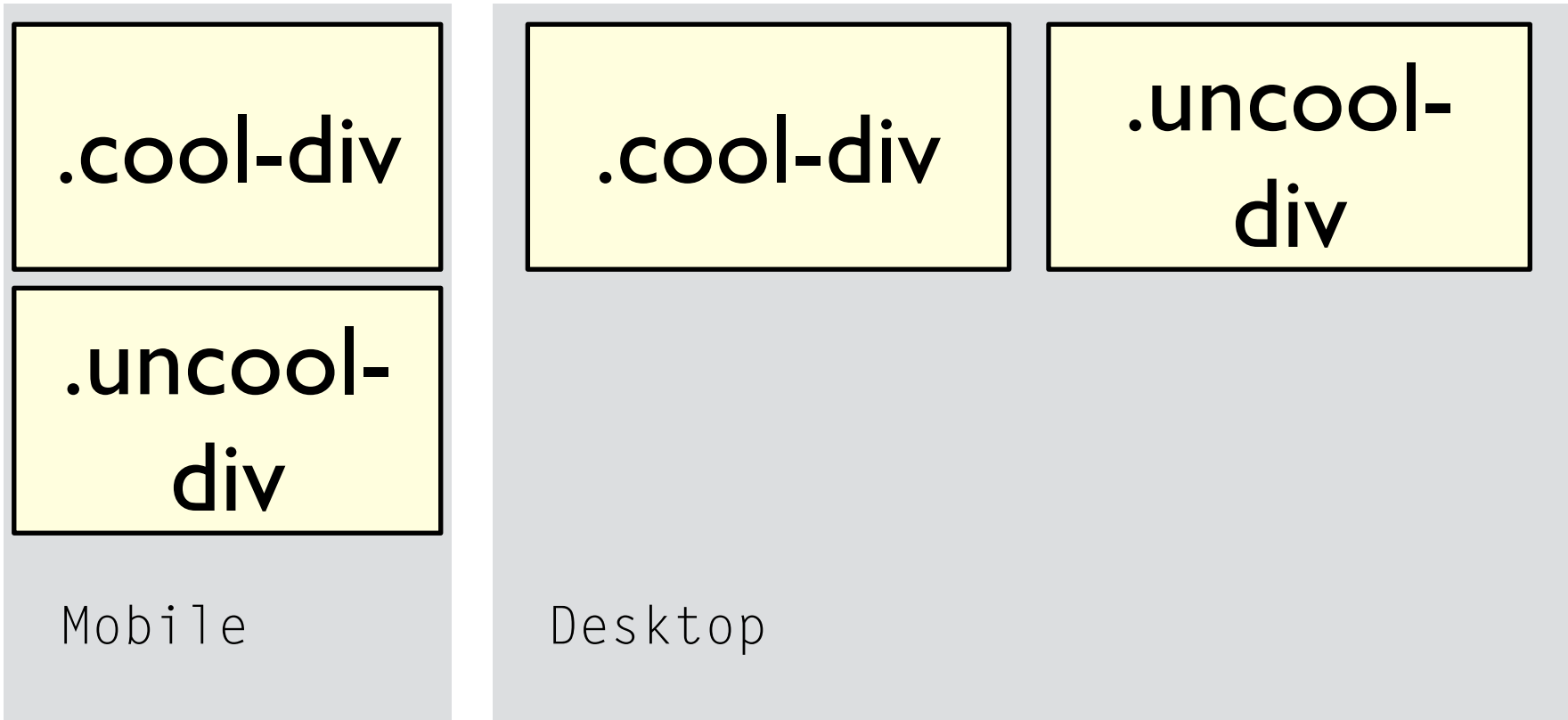
Set breakpoints as ranges

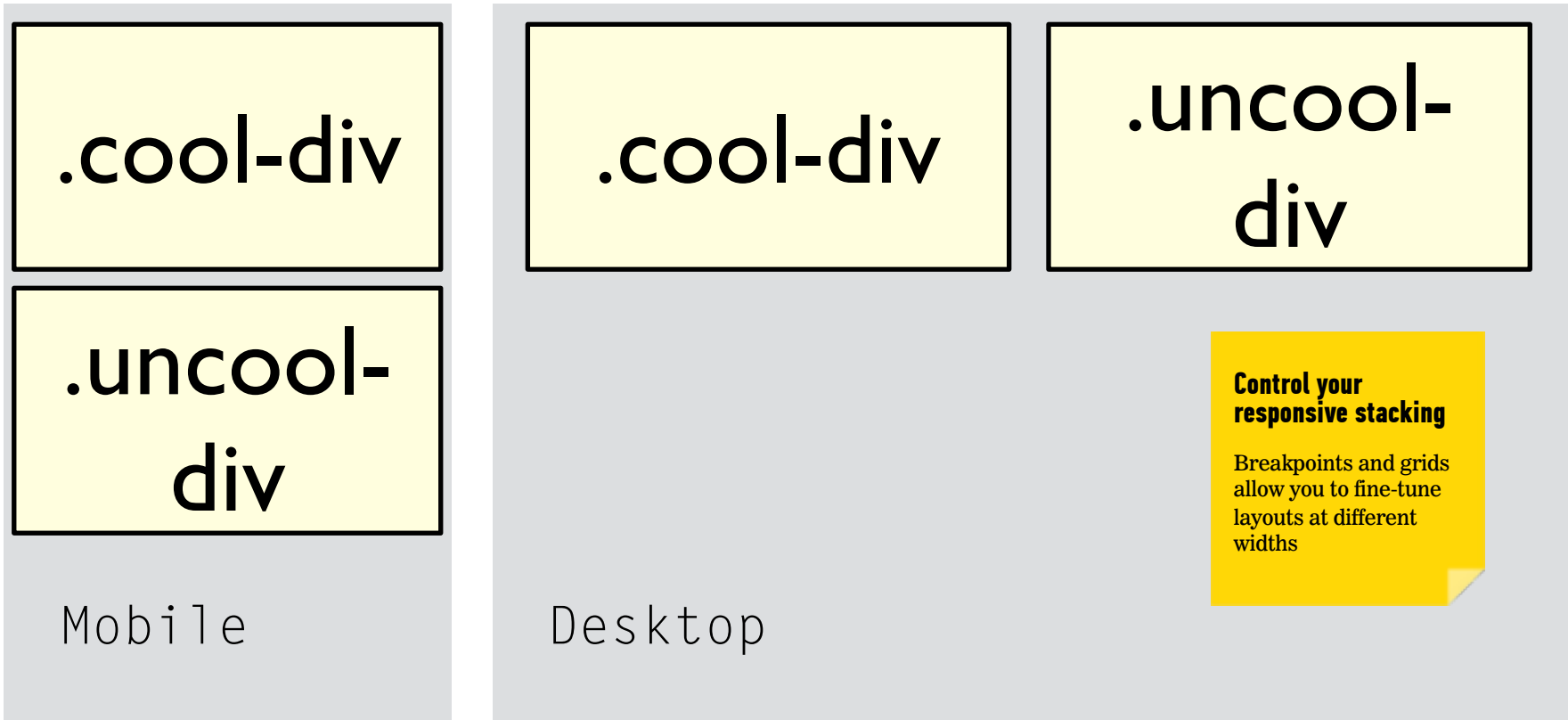
Leverage breakpoints to create "ranges" where your styles apply

```
// Set up breakpoints
$smallish: 0px 500px;
$largeish: 501px 1200px

.cool-div, .uncool-div {
   @include
   breakpoint($smallish) {
      @include float-span(8);
   }
   @include
   breakpoint($largeish) {
      @include float-span(4);
   }
}
```

```
<div
class="wrapper">
  <div class="cool-
  div"></div>
  <div
  class="uncool-
  div"></div>
</div>
```


.cool-div
.uncool-div
Mobile
.cool-div
.uncool-div
Desktop


.cool-div
.uncool-div
Mobile
.cool-div
.uncool-div
Desktop
Control your responsive stacking
Breakpoints and grids allow you to fine-tune layouts at different widths

web
web
web
web
web
web
web
web
web
web
web
web

Use breakpoints where appropriate
Screens aren't all the same size. More screens exist than Apple screens. Change your layout where it breaks, not where screens start and end.

EXERCISE: GRIDS

KEY OBJECTIVES

Install a simple grid system for your web page

AGENDA

10 minutes

1. Set up a simple grid with Singularity
2. Make some divs and position them with @include float-span
3. Set up some breakpoints
4. Change the float-spans at a different breakpoint

DELIVERABLE

Insert deliverable/outcome

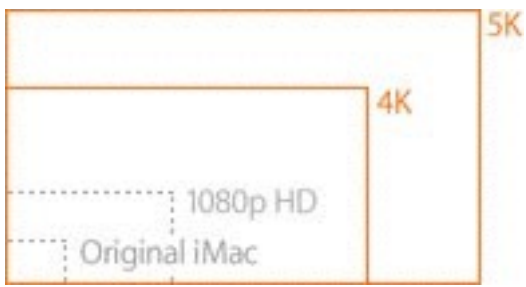
RESOURCES

Sublime, browser

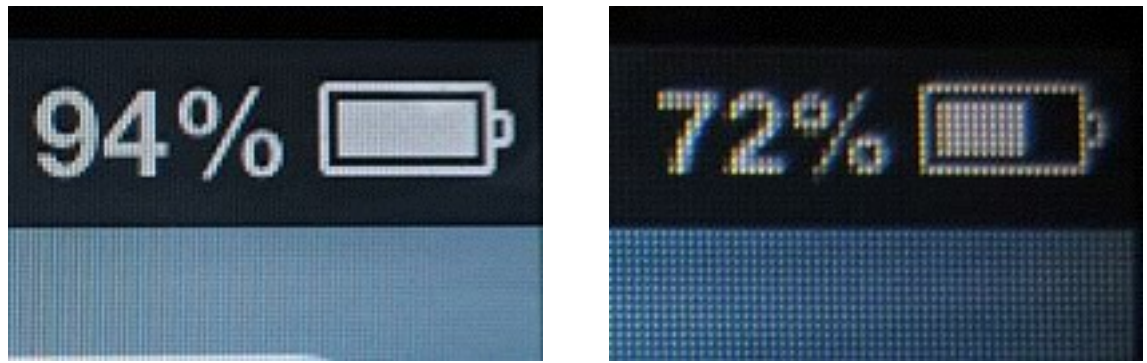
DEVELOPING FOR DEVICES

Retina support

- “Retina Display” is a brand used by Apple that have higher pixel density than previous models. But high density screens aren’t just Apple.
- iPhone 4 and above
- iPad 3 and above
- A whole bunch of Android devices
- Macbook Pro w/ Retina
- 4k and 5k iMacs now exist



Retina support



Retina support – what does it mean?

- Images are doubled in height and width to compensate for smaller pixels
- If you have an image that has a low resolution suitable for non-retina screens, it will look crap on a retina screen
- Various workarounds exist for this, including <img srcset> and various Javascript libraries
- For a lot of images, the best solution is to just double it up and reduce the JPG quality
- http://www.netvlies.nl/blog/design-interactie/retina-revolution

Retina images look better for everyone

Retina images look better for everyone

Retina images look better for everyone

Retina images look better for everyone

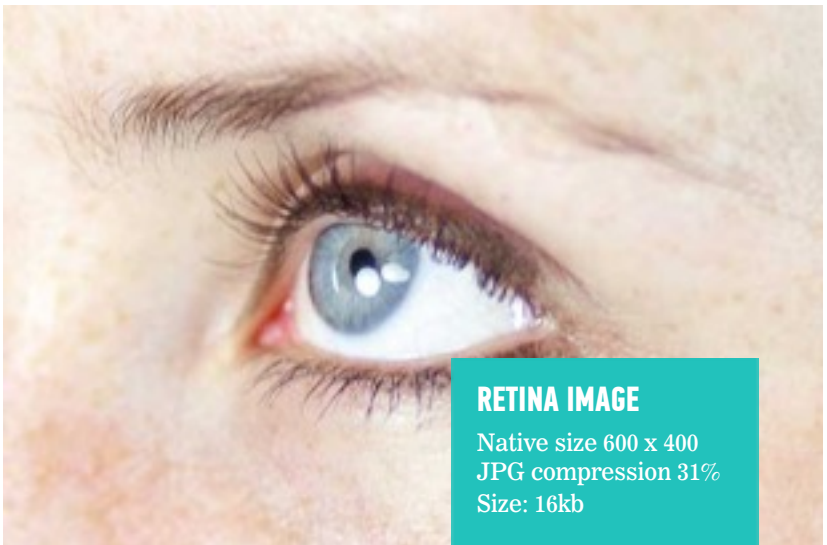
NON-RETINA IMAGE

Native size 300 x 200
JPG compression 80%
Size: 21kb

Retina images look better for everyone

NON-RETINA IMAGE

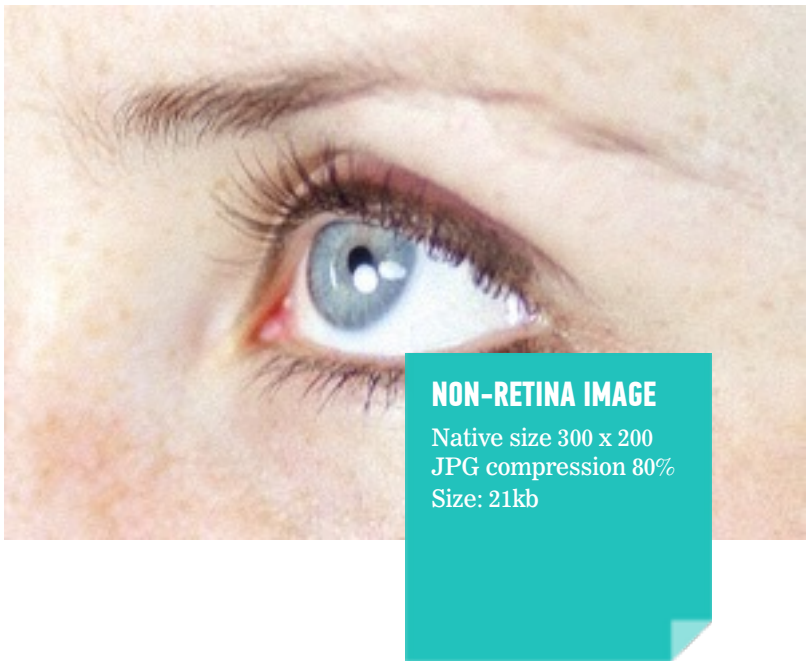
Native size 300 x 200
JPG compression 80%
Size: 21kb

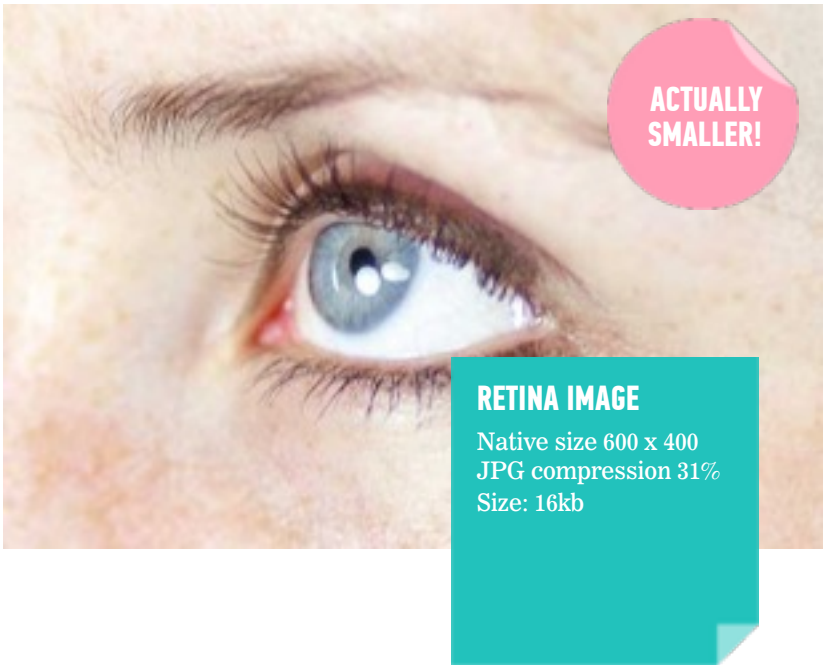


RETINA IMAGE

Native size 600 x 400
JPG compression 31%
Size: 16kb

Retina images look better for everyone



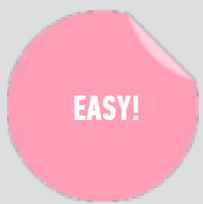


Retina images look better for everyone

```
<img src="retina-eye600x400.jpg" width="300"
height="150">
```

Retina images look better for everyone

```
<img src="retina-eye600x400.jpg" width="300"
height="150">
```



Retina images look better for everyone

```
<img src="retina-eye600x400.jpg" width="300"
height="150">
```

EASY!

ONLY ONE IMAGE!

Retina images look better for everyone

```
<img src="retina-eye600x400.jpg" width="300"
height="150">
```

Retina images look better for everyone

```
<img src="retina-eye600x400.jpg" width="300"
height="150">
```

EASY!

SMALLER FILE SIZE!

ONLY ONE IMAGE!

<IMG> only

It’s not just for those types of images…

- We use images for all kinds of things including decoration, illustration, logos and icons
- Icons particularly start looking bad without retina support - pixelated, sometimes unrecognisable
- SVG to the rescue!

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- SVG to the rescue!

SVG?

- “Scalable Vector Graphics (SVG) is an XML-based vector image format for two-dimensional graphics with support for interactivity and animation.”
- Small file size, compresses well and scales to ANY SIZE without losing clarity
- Looks great on retina
- You can even control it via CSS including colours, filters and even animation
- https://css-tricks.com/using-svg/

SVG icons in Icon Fonts

- Remember wingdings? Icon fonts are actual fonts that have icons instead of letters… designed by you!
- Icon fonts use SVG with fallbacks to normal fonts like .otf
- Font Awesome (fortawesome.github.io) is the original
- I like to use a tool called Icomoon https://icomoon.io/
- When your icons are SVG, they look great on all devices!
- Make sure you have a fallback in place - Filament Group suggest unicode or emoji!
- https://www.filamentgroup.com/lab/bulletproof_icon_fonts.html

http://fortawesome.github.io/Font-Awesome/icon/bars/

Testing, testing and more testing

- Nothing beats testing on an actual device
- http://melbourne.opendevicelab.com.au/
- If you've got iOS devices, you can plug them in to your computer and use Safari
- Xcode's device emulator supports SDKs for various iOS devices
- Google Chrome's emulator gives you a sense for different devices, screen sizes, pixel densities and more
- Don't forget about retina!

EXERCISE: DEVELOPING FOR DEVICES

KEY OBJECTIVES

Demonstrate ability to create websites for devices with Retina support

DELIVERABLE

Some images that are Retina friendly

AGENDA

15 minutes

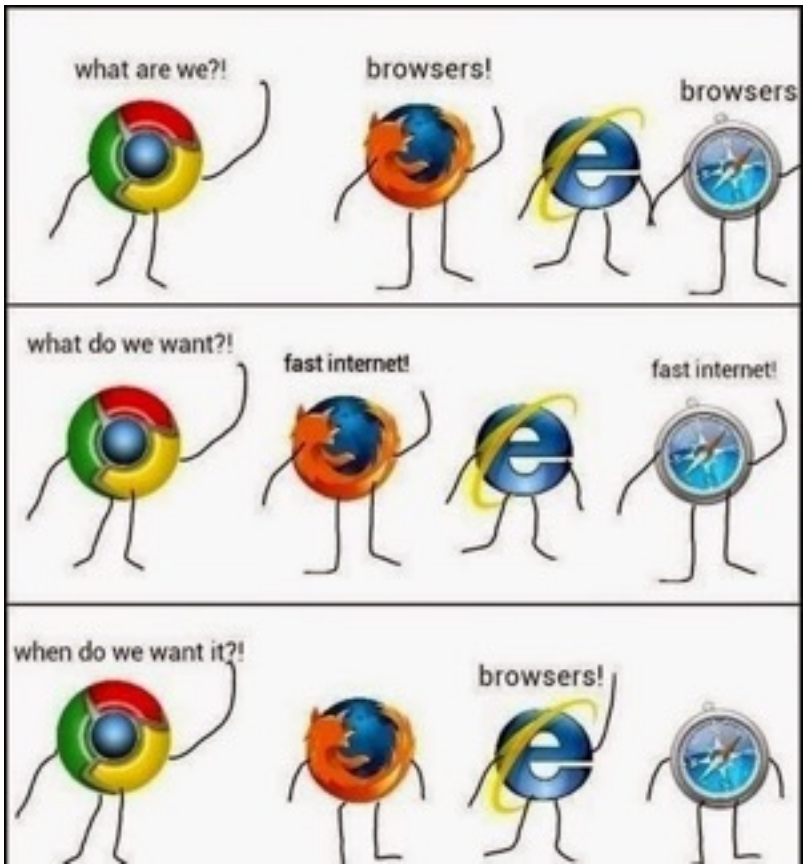
1. Create a double-up image using the JPG compression method and HTML size attributes
2. Implement an icon font and show an icon on the page
3. If you have it, bring up the xCode device emulator and open a site in it

RESOURCES

Sublime text, an image from Google, Font Awesome https://fortawesome.github.io/Font-Awesome/

DEVELOPING FOR OLDER BROWSERS

DEVELOPING FOR DEVICES



Devices	
desktop	67.5%
mobile	24.9%
tablet	7.6%

Browsers	
Chrome	34.7%
Internet Explorer	28.3%
11.0	14.8%
9.0	5.5%
8.0	3.3%
10.0	3%
7.0	1.7%
6.0	< 0.1%
Other	< 0.1%
Safari	20.3%
Firefox	11%
Android Browser	3.3%
Other	2.3%

People still use IE7

- People still use old browsers and that's just reality
- That said you probably don't need to stress over IE7 and IE6 anymore
- But that depends entirely on your context and audience…
- IE8 is having its support deprecated by Microsoft early next year
- IE9 almost behaves like a normal browser
- That said, you can't make assumptions and for various reasons you should consider how your responsive site will fare with the older IEs

Progressive enhancement

- Focuses on accessibility and semantic HTML
- Graceful degradation where cool things aren't supported
- This also takes in to account screen readers and other devices that might not have the cool tricks we use for Chrome and Firefox
- Your site should be usable without CSS or Javascript turned on at all!

Progressive enhancement

- Create fallbacks for icon fonts
- Use the Yep/Nope Javascript library
- KISS - keep it simple, stupid!
- Remember that IE8 doesn't support media queries so you'll need to make sure it doesn't go haywire
- IE9 and IE8 both have limits including maximum selectors, maximum fonts and just general sluggishness
- There's always http://outdatedbrowser.com/

Don’t make assumptions – test!

- Microsoft know that people need special tools to develop for their browsers
- https://dev.modern.ie/ + https://www.virtualbox.org/ = you can open up a Windows computer as a program running on your Mac
- Remember that various different IE versions require various different Windows versions. You can download them individually at modern.ie or more tech savvy can get them all with https://github.com/xdissent/ievms
- https://saucelabs.com/ is another option but much slower and harder to debug

Compass has lots of options to help

- When you get to actually fixing bugs and writing code that is cross-browser compatible, Compass is really useful
- http://compass-style.org/reference/compass/support/
- Takes care of vendor prefixing, fallbacks and is configurable so you can choose what and what not to support

EXERCISE: DEVELOPING FOR OLDER BROWSERS

KEY OBJECTIVES

Open a website up on a Virtualbox Windows Machine

DELIVERABLE

VirtualBox X-browser testing setup

AGENDA

10 minutes

1. Download a VM from modern.ie
2. Install it on Virtualbox
3. Run IE and open Developer Tools to inspect markup

RESOURCES

VirtualBox, modern.ie

USEFUL JAVASCRIPT LIBRARIES

There are amazing things made to help you!

- jQuery MatchHeights http://brm.io/jquery-match-height/
- Backstretch http://srobbin.com/jquery-plugins/backstretch/
- Fitvids http://fitvidsjs.com/
- Swiper http://www.idangero.us/swiper/
- Mmenu http://mmenu.frebsite.nl/
- Dot Dot Dot http://dotdotdot.frebsite.nl/
- Waypoints http://imakewebthings.com/waypoints/
- Find more at http://www.jqueryrain.com/

Be careful

- Remember that Javascript adds performance overheads so use it sparingly
- Run Javascript only on Desktop if possible, and make sure you aren't triggering it unnecessarily on mobile devices
- But also - when optimising for performance, make sure you are testing and not assuming!

EXERCISE 7

KEY OBJECTIVES

Install a Javascript library and have a play

AGENDA

Whatever remains…

1. Download one of the libraries from the previous slide
2. Create applicable markup
3. Trigger the library's support

DELIVERABLE

Insert deliverable/outcome

RESOURCES

Javascript libraries, your project, Sublime

DISCUSSION TIME

THANKS!

equiem.com.au

meeli.jane@gmail.com