# Roll Your Own Responsive Design

https://github.com/jen4web

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"I need a website and I want responsive design. How much will that cost?"

RESPONSIVE DESIGN

I DO NOT THINK IT MEANS WHAT YOU THINK IT MEANS

memegenerator.net

# Responsive Design (Manager)



ᔥ Make it work on my iPhone!

ᔥ Make it work on my iPad!

ᔥ If the website knows what device I'm using, it's responding, right?
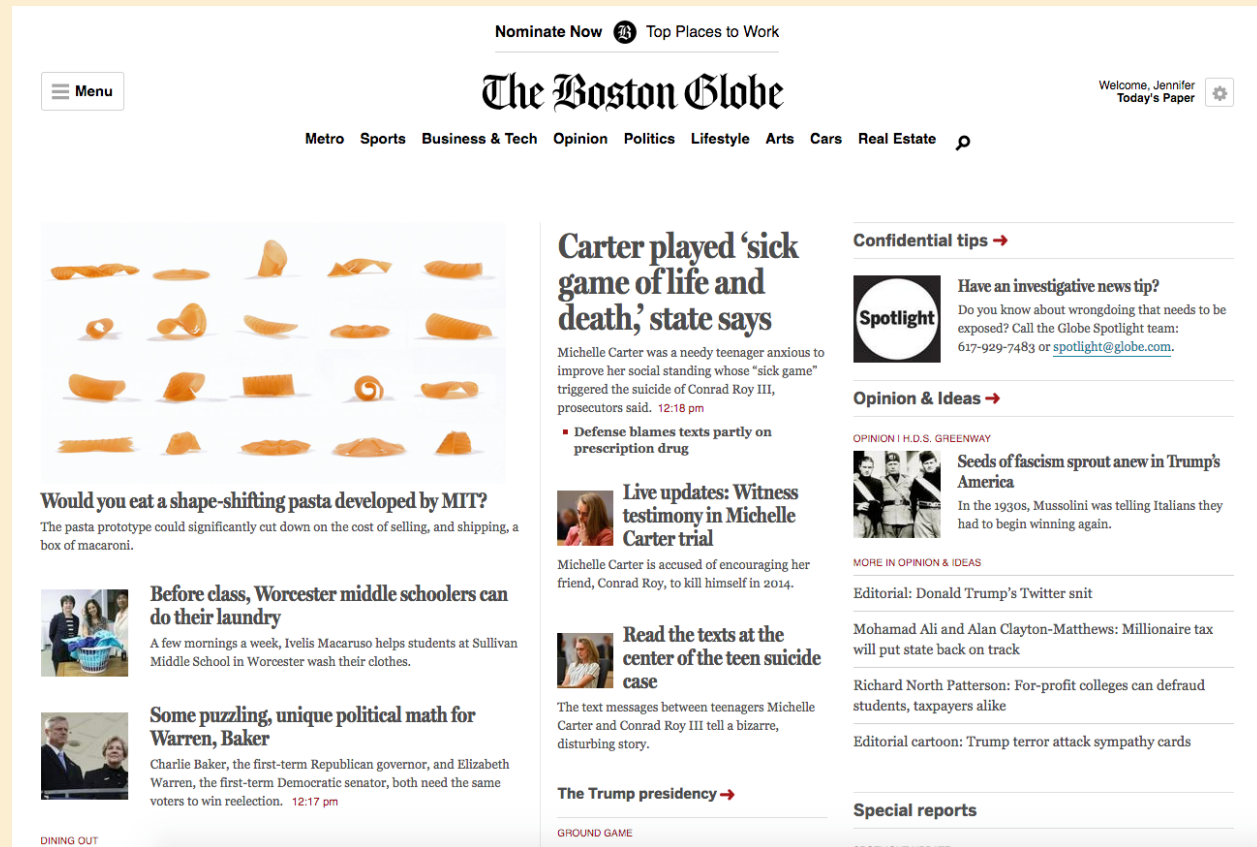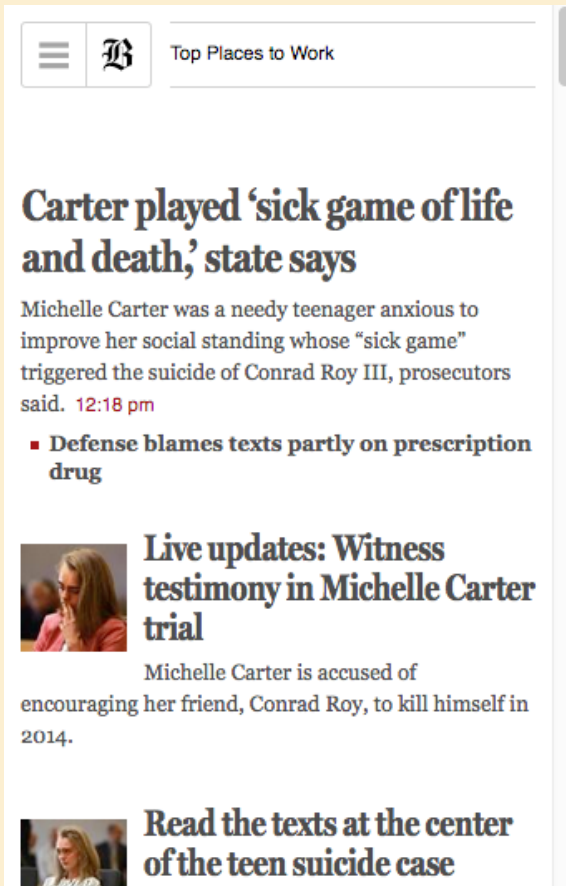
# Responsive Design (Geek)



- Defined by three characteristics
  - Flexible grid-based layout
  - Images that resize
  - Media queries (CSS3)
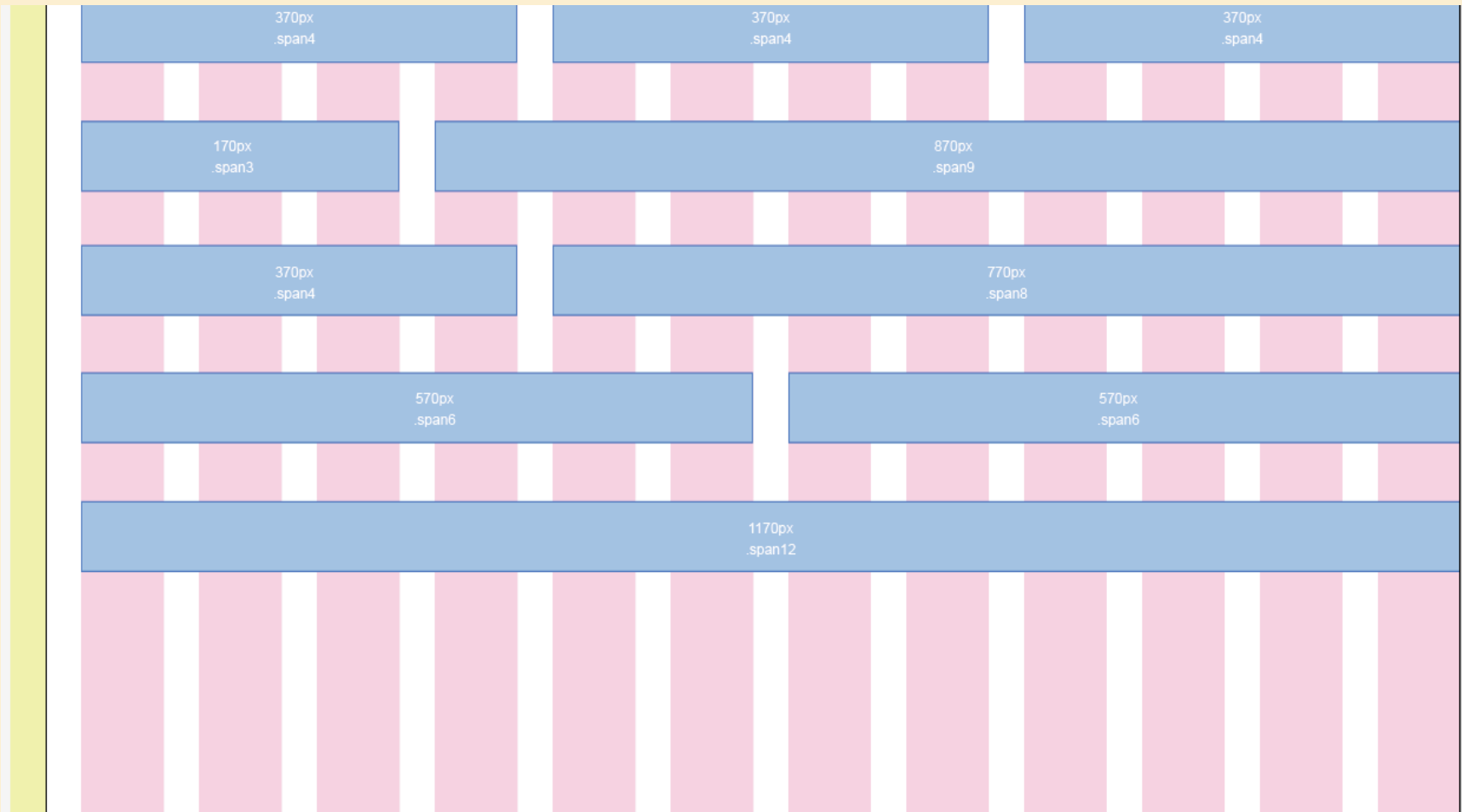- www.alistapart.com/articles/responsive-web-design/
- Example: Boston Globe

# Responsive design is client side



www.bostonglobe.com

# Grid-based layout

# Grid-based layout

# CSS3 Media Queries

- Browser reports screen resolution

- Based on current width, serve a stylesheet with layout for that width

- <u>No JavaScript involved</u>

# Images that resize

- Images should change size, based on screen resolution

- Solutions are still being developed, but they are:
  - Client-side
  - Server-side
  - 3rd party
  - Free
  - Paid

# Responsive design is friends with…

- Static HTML

- Content management systems

- Server-side technologies

- Basically, any way you can build a site

# Responsive Design Frameworks

Recently published in **Smashing Magazine**

2013:
[Responsive Design Frameworks: Just Because You Can, Should You?](#)

2017:
[Which Responsive Design Framework Is Best? Of Course, It Depends.](#)

Next up

# FLEXBOX

# FLEXBOX

- The first layout elements – but not designed to lay out whole web pages

- Features flex-containers (row) and flex-items (cells). Both are required to work.

- Excels at vertical centering and equal heights

- Very easy to reorder boxes

- Major disadvantages:

  - Wasn't designed to be locked down for layouts! Works in 1 dimension only.

  - Browser support and syntax is challenging.

# Three versions of Flexbox

2009: display: box;

2011: display: flexbox; ("tweener" syntax)

2016: display: flex;

Prefixing may still be required depending on browser support desired

# Current support

Internet Explorer

  <= IE 9: not supported

  IE 10 supports "tweener" syntax (-ms- prefix)

  IE 11, Edge: Full support (though buggy in IE 11)

Safari 7.1/8, iOS Safari 7/8 require webkit prefix

Others support current syntax (including Opera!)

http://caniuse.com/#feat=flexbox

```
<div class="row">
     <div class="col-1"></div>
     <div class="col-1"></div>
     <div class="col-1"></div>
     <div class="col-1"></div>
</div>
```

```
.row {
        display: flex;
        flex: 0 1 auto;
        flex-flow: row wrap;
        justify-content: center;
}
```

Change flex-flow to other values to change
direction of rows – row reverse, column
reverse, no wrap

```
flex: 0 0 24%; /* desktop */

flex: 0 0 48%; /* tablet */

flex: 0 0 98%; /* phone */
```

To change widths on .col-1, change the
flex-basis property. This is more flexible than
width.

```css
/* rearranging the columns */

.col-push-1 {
    order: 2;
}


.col-pull-3 {
    order: 1;
}
```

# Questions?

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