Challenge

Borders in Responsive Design

Web Coders Group
6/12/13
Goal

How do we make the columns below responsive?
The challenge

- A truly responsive layout uses only percentages
- CSS borders add to overall width of an element
- The border-width property in CSS does not allow percentages
A closer look at the layout

\[
(Margins \ 2\% \ * \ 4) + (Columns \ 23\% \ * \ 4) = 100\%
\]

We have no space left over for borders.
Option 1  **Negative space**

Create the borders through the gap between columns

```css
.wrap {
  width: 100%; background: black;
}
.column {
  width: 24.75%; float: left;
  margin: 0 .25% 0 0;
  background: #CCC;
}
```
Option 1 Negative space

http://dev.umkc.edu/ucomm/alia/borders/option1.html

Caveats:
• Sizing is inconsistent
• Requires a parent container with a background color
Option 2 CSS Outline

Outline will not add to the width of an element, so mixing pixels and % won’t matter.

```
.column {
  width: 23%;
  float: left;
  margin: 0 1% 0 1%;
  background: #CCC;
  outline: 2px solid black;
}
```
Option 2  CSS Outline

http://dev.umkc.edu/ucomm/alia/borders/option2.html

Caveats:
• Will not work in IE7 or earlier
• Interacts poorly with box-shadow in Firefox
• All or nothing: You can’t apply selectively to individual sides (top, right, bottom, left)
Option 3 Nested divs

Apply the border to the inner div and apply the margin and width to a wrapper div for each column

```css
.wrap {
  width: 23%;
  float: left;
  margin: 0 1% 0 1%;
  background: #CCC;
}
.column {
  border-right: 2px solid black;
}
```
Option 3 Nested divs

http://dev.umkc.edu/ucomm/alia/borders/option3.html

Caveats:

• Complicates the layout by creating more divs
Option 4 **Box-sizing: border-box**

This changes padding and borders to be inside of the specified height and width of the element.

```css
.column {
  width: 23%;
  float: left;
  margin: 0 1% 0 1%;
  background: #CCC;
  border-right: 2px solid black;
  -webkit-box-sizing: border-box;
  -moz-box-sizing: border-box;
  box-sizing: border-box;
}
```
Option 4 Box-sizing: border-box

http://dev.umkc.edu/ucomm/alia/borders/option4.html

Caveats:

- Layout will fail in IE7 or earlier
Can you think of another option?
Related articles

http://www.w3schools.com/css/css_border.asp

http://designshack.net/articles/css/beating-borders-the-bane-of-responsive-layout/

http://palantir.net/blog/responsive-design-s-dirty-little-secret
Next challenge?