

HTML

LBSC 690: Jordan Boyd-Graber

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COLLEGE OF
INFORMATION
STUDIES

Goals

- Review Assignment 1
- Assignment 2 and Midterm
- Hands on HTML

Outline

1 Homework and Midterm

2 HTML

Midterm

- Midterm will be in class in four weeks, October 29
- Calculator okay, but not needed
- Closed book
- Like assignment 1, but cumulative
- More conceptual questions
- You'll have whole class
- Should only take an hour

Assignment 2

- Make a website with a number of pages
- Must be done by hand
- No sharing of HTML
- E-mail links to page with CSS and without

Outline

1 Homework and Midterm

2 HTML

Hexadecimal

- 1 Base 16
- 2 Four binary numbers correspond to a Hex character
- 3 To convert decimal to hex, first write in binary
- 4 Then convert each block of four bits
- 5 Example: 1701

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Hexadecimal

- 1 Base 16
- 2 Four binary numbers correspond to a Hex character
- 3 To convert decimal to hex, first write in binary
- 4 Then convert each block of four bits
- 5 Example: 1701 in decimal is 0b11010100101 in binary
- 6 In hex, it's 0x6A5

Hex	Binary	Decimal
0	0000	0
1	0001	1
2	0010	2
3	0011	3
4	0100	4
5	0101	5
6	0110	6
7	0111	7
8	1000	8
9	1001	9
A	1010	10
B	1011	11
C	1100	12
D	1101	13
E	1110	14
F	1111	15

Why does this matter for HTML?



```
<HTML>
  <HEAD>
    <TITLE>Example HTML</TITLE>
  </HEAD>

  <BODY BGCOLOR="#FF0000">
    Hello world!
  </BODY>
</HTML>
```

HTML Colors

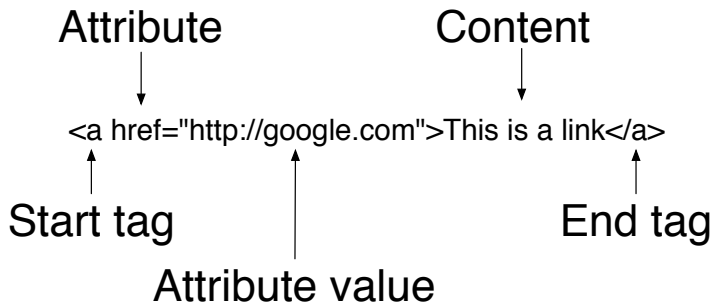
- First two hex digits are red, next two are green, final two are blue
- Go from 00 to FF
- Some written colors also work (try "blue")
- Hex colors give you more control

HTML

- Every tag has beginning and end (with a couple of exceptions)
- This is the **markup**
- Not case sensitive (but will expect lowercase in the future)
- Browsers try to do the best they can with ill-formed HTML

HTML

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- This is the **markup**
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- Review of the tags we've learned / seen so far
- HTML, BODY, HEADER, TITLE

Adding Links

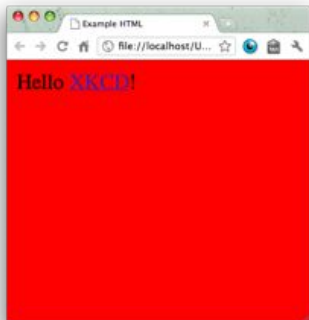
From a file called “index.html” in a directory called “awesome”.

- This is the **hypertext**
- Local: “foo.html” (both foo.html and index.html are “awesome”)
- Relative: “stuff/foo.html” (stuff is a subdirectory in “awesome”)
- Relative: “../foo.html” (foo.html is in the directory above “awesome”)
- Absolute: “http://www.google.com” (fully formed address)
- E-mail: “mailto:jbg@ugcs.caltech.edu”

This seems complicated ...

Don't be tempted to just put everything in a single directory. It gets confusing. Use subdirectories for related pages, all images, and hierarchical pages.

Adding links



```
<HTML>
  <HEAD>
    <TITLE>Example HTML</TITLE>
  </HEAD>

  <BODY BGCOLOR="#FF0000">
    Hello <A HREF="http://xkcd.com">XKCD</A>!
  </BODY>
</HTML>
```


Formatting



```
<HTML>
  <HEAD>
    <TITLE>Example HTML</TITLE>
  </HEAD>

  <BODY BGCOLOR="#FF0000">
    <B>Bold</B> and <I>italic </I>
  </BODY>
</HTML>
```

Formatting: Logical Headers

- H1, H2, H3, H4
- Smaller and smaller titles
- Useful for organizing long documents
- Resist the urge to create *ad hoc* fonts
- We'll learn how to customize with CSS soon

Formatting: Whitespace



```
<HTML>
```

```
<HEAD>
```

```
<TITLE>Example HTML</TITLE>
```

```
</HEAD>
```

```
<BODY BGCOLOR="#FF0000">
```

```
The Harvard University Library system  
comprises about 90 libraries , with more  
than 15 million volumes. It is the oldest  
library system in the United States , the  
second largest academic.
```

```
The largest and best-known library  
building at Harvard is the Widener  
Library in Harvard Yard , Cambridge ,  
Massachusetts.
```

```
</BODY>
```

```
</HTML>
```

Formatting: Whitespace



```
<HTML>
```

```
<HEAD>
```

```
<TITLE>Example HTML</TITLE>
```

```
</HEAD>
```

```
<BODY BGCOLOR="#FF0000">
```

```
<P>The Harvard University Library system  
comprises about 90 libraries , with more  
than 15 million volumes. It is the oldest  
library system in the United States , the  
second largest academic.</P>
```

```
<P>The largest and best-known library  
building at Harvard is the Widener  
Library in Harvard Yard, Cambridge,  
Massachusetts.</P>
```

```
</BODY>
```

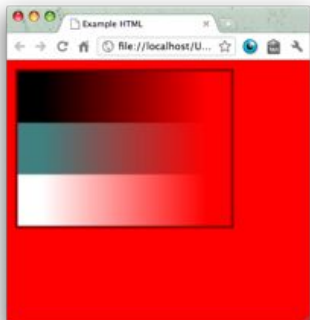
```
</HTML>
```

Formatting: Whitespace

Other ways of breaking text.

- Horizontal rule (HR)
- Line break (BR)
- No close tag, just like images
- Consequently, valid HTML should have `< BR / >` to show it's its own end tag

Images



```
<HTML>

  <HEAD>
    <TITLE>Example HTML</TITLE>
  </HEAD>

  <BODY BGCOLOR="#FF0000">
    <IMG SRC="flag.png" WIDTH="200" ALT="Flag">
  </BODY>

</HTML>
```

Download

from <http://goo.g1/2d0w3>

Images

- HEIGHT and WIDTH attributes allow you to adjust size (if only one is specified, scale is proportional)
- If attribute ends with percentage sign (%), then image is scaled by that percent
- Otherwise, dimensions are pixels
- GIF and PNG images can be transparent (this is a property of the file)
- Not all browsers display all images or display them the same way
- Use ALT tag, and don't use to display text
 - ▶ Translation
 - ▶ Screen readers for blind
 - ▶ Mobile devices

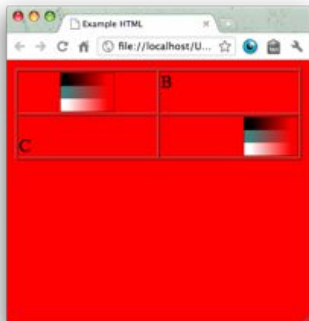
How Big is Okay?

- These days, it's safe to assume 800 wide, 500 high (minus browser) monitors.
- Make sure your page looks reasonable for many different sizes
- Even if your files look okay locally, make sure you try loading it over Internet
- Make sure your page is the right size in terms of filesize: don't use big files when small ones work

Tables

- Often used to create grid layout on webpages (alternative is DIV or FRAME)
- Three levels of nesting: TABLE, TR (row), TD (data / cell)
- Both TABLE and TD can have widths
- TD also allows you to align contents vertically and horizontally
- Your responsibility to get number of columns right

Tables



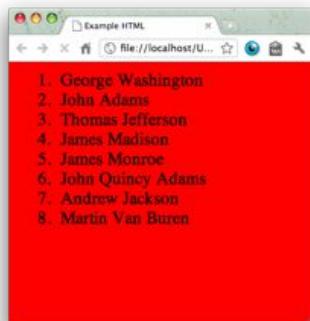
```
<HTML>

  <HEAD>
    <TITLE>Example HTML</TITLE>
  </HEAD>

  <BODY BGCOLOR="#FF0000">
    <TABLE WIDTH="100%" BORDER="1">
      <TR>
        <TD ALIGN="CENTER">
          <IMG SRC="flag.png" WIDTH="50">
        </TD>
        <TD VALIGN="TOP">
          B
        </TD>
      </TR>
      <TR>
        <TD VALIGN="BOTTOM">
          C
        </TD>
        <TD ALIGN="RIGHT">
          <IMG SRC="flag.png" WIDTH="50">
        </TD>
      </TR>
    </TABLE>
  </BODY>

</HTML>
```

Lists



```
<HTML>
```

```
<HEAD>
```

```
<TITLE>Example HTML</TITLE>
```

```
</HEAD>
```

```
<BODY BGCOLOR="#FF0000">
```

```
<OL>
```

```
<LI>George Washington</LI>
```

```
<LI>John Adams</LI>
```

```
<LI>Thomas Jefferson</LI>
```

```
<LI>James Madison</LI>
```

```
<LI>James Monroe</LI>
```

```
<LI>John Quincy Adams</LI>
```

```
<LI>Andrew Jackson</LI>
```

```
<LI>Martin Van Buren</LI>
```

```
</OL>
```

```
</BODY>
```

```
</HTML>
```

Lists

- Also an unordered list (UL)
- Lists can be nested
- You can change bullet / numbering (but don't ask me how)

Forms



```
<HTML>
```

```
<HEAD>
```

```
<TITLE>Example HTML</TITLE>
```

```
</HEAD>
```

```
<BODY>
```

```
<FORM ACTION="nothing.php" METHOD="get">
```

```
<TEXTAREA NAME="patter" ROWS="5" COLS="30">
```

```
    I am the very model of a modern major general.
```

```
</TEXTAREA>
```

```
<HR />
```

```
<INPUT TYPE="radio" NAME="said" VALUE="orphan">  
    Orphan </INPUT> <BR />
```

```
<INPUT TYPE="radio" NAME="said" VALUE="often">  
    Often </INPUT> <BR />
```

```
<INPUT TYPE="submit" VALUE="Submit" />
```

```
</FORM>
```

```
</BODY>
```

```
</HTML>
```

Forms

- Allow information to be sent back to server
- All input fields need to be inside a FORM tag
- Tells where data should be sent (take INFM 743)
- Types
 - ▶ text
 - ▶ password
 - ▶ radio
 - ▶ checkbox
 - ▶ subset
- Each form has **name** and **value**.

Hints

- Google “HTML + thing you want to do”
- Look at the source code of pages you like
- Start outward and work your way in
- Check frequently
- Add comments

<!-- This text will not display in a browser -->

Recap

- Hexadecimal
- Editing and Uploading
- HTML

Next ...

Discussion, special requests, hands on creation of pages.