CompSci 4
HTML
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CompSci 4

• Last time
  – How to start a web page, copy files to Duke account
• Assignment 1 due Friday, Assignment 2 out
• Today – Learn HTML
  – Use laptop cart
  – bring laptop if can
• start Alice next week
  – Read Chapter 1
  – Do reading quiz on blackboard
    • Multiple attempts
    • Must do before next class period starts
Browsers on the Web

• First browser called “WorldWideWeb”
  – Hypertext browser/editor
  – Created in 1990 by Tim Berners-Lee at CERN
  – 1991 available on internet

• Lynx
  – Textual browser, 1992, history
  – Lou Montulli, Charles Rezac, Michael Grobe
CompSci 4 Web page in Lynx

CPS 004, FALL 2006

Introduction to Programming via Animation and 3D Virtual Worlds

Course Announcements

* Class starts on Tuesday, Aug. 29.

old announcements

Course Description:

CompSci 4 is an introductory programming course that teaches fundamental computer science concepts. This version of CompSci 4 uses the tool Alice to create 3-D virtual worlds. You will learn

-- press space for next page --

Arrow keys: Up and Down to move. Right to follow a link; Left to go back.

H)elp O)ptions P)rint G)o M)ain screen Q)uit /=search [delete]=history list

Connected to login.cs.duke.edu
Other Browsers

- **Mosaic**
  - 1993, Univ of Illinois Urbana-Champaign
  - Last version in 1997

- **Netscape**
  - 1994 by Jim Clark and Marc Andreessen
  - Hired most of Mosaic Engineers and Montulli (lynx)
    - [history](#)

- **Internet Explorer**
  - 1995, first version attached to Windows 95, not very popular
    - [history](#)
How do These Browsers view the same info?

• Standards
  – Html
  – Figure formats (gif, jpeg, tiff)
  – Scripts (javascript, cgi)

• Plug-ins
  – Program provided by companies that are run when specific file is downloaded
URLS

http://www.cs.duke.edu/courses/fall06/cps004/

• Uniform Resource Locator
• Address of location of a web site or other Internet service
• Organized first by protocol
  – http, mailto, ftp, file
• Organized next by domains
  – .com, .edu, .org, country (.it, .fr, .de)
• Organized finally by directory on specific machine
An HTML file

• Write HTML commands in a text file
  – use Notepad
  – save as .txt file
• File should have .html extension
• View file with browser
  – Save file and check often
HTML tags

• First tag “< >“ says, “Begin Mode”
• Second tag “</ >” says “End Mode”
  – note the “/”
• Example
  – <title>Flavor of the Week </title> means
    • Begin title mode
    • “Flavor of the Week” is in title mode
    • End title
  – Can nest several modes
HTML

• Some General HTML rules
  – For tags, case doesn’t matter
    • `<html>` is equal to `<HTML>`
  – In the text, spaces don’t matter (free format)
  – `<br>` starts a new line

• Headings
  – Use `<h$n>` for heading size, the smaller $n$, the larger the heading
  – `<h1> … </h1>` is largest heading
  – `<h4> … </h4>` is minor heading
HTML –
Basic Page Structure

<html>
<head>
<title> Susan’s Web Page </title>
</head>
<body bgcolor="white">
<center>
<h1> Susan’s Web Page </h1>
</center>
<p> I love to bake cookies and cakes! </p>
</body>
</html>
HTML

• Add links

\[
\text{<a HREF=\text{http://www.duke.edu}>}
\text{The Duke web page </a>}
\]

• Italics or emphasis

- \text{<i> or <em>}

• Darker or bold use

- \text{<strong> or <b>}

• Text space exactly as typed

- \text{<pre>
HTML – specifying colors

- Can be specified in different ways
- Standard colors, “white” or “red”
- Arbitrary colors, specify amount of red, blue and green involved (RGB)
- Uses base 16 arithmetic: 0, 1, …, 9, a, b, ..f
  Red: ff0000    Green 00ff00    Blue 0000ff
  Yellow: ffff00  Gray 7f7f7f    White ffffff
  Black 000000    Orange ff7f00  Purple c000e0

Can experiment! See html-color-codes.com
HTML - Lists

• Bulleted list (unordered list)
  <ul>
    <li> item in list
  </ul>

• Ordered list
  <ol>
    <li> first item in list
    <li> second item in list
  </ol>

• Can nest arbitrarily deep – lists within lists
HTML – Tables and Images

- Tables – produces simple table
  
  ```html
  <table border=1>
    <tr>
      <td> cell 1 </td>
      <td> cell2 </td>
    </tr>
    <tr>
      <td> cell 3 </td>
      <td> cell 4 </td>
    </tr>
  </table>
  ```

- Images – displays an image
  
  ```html
  <img src=http://www.cs.duke.edu/~rodger/shrfun.gif>
  ```
Frames – CompSci 4 web page

• 3 web pages for frames with two columns
  – The one below (the one that displays the page)
  – Links to an index and body page

```html
<HTML>
  <HEAD>
    <TITLE>CompSci 4 : Fall 2006</TITLE>
  </HEAD>

  <FRAMESET COLS="22%,*" BORDER=0>
    <FRAME SRC="frameindex.html", name="list">
    <FRAME SRC="framebody.html", name="main">
  </FRAMESET>

  <noframes>
    <A HREF="frameindex.html"> no frames link to programs </A>
  </noframes>
</HTML>
```
Classwork - Create a Web page

- Create a web page – complete by Sept. 7
- Work in pairs
- Use notepad to create file with HTML
- Look at file with browser
- Copy file to your Duke OIT account
- View your file on the web