CompSci 94
HTML
Aug 29, 2013

CompSci 94
Fall 2013
Home

Course Announcements

- August 27, 2013 is the first day of class. NOTE THE ROOM CHANGED and is now in LSRC D106.
- You will need to bring a laptop to class and install Alice version 2.3 by August 27 if possible. (NOTE, There are two versions of Alice that are quite a bit different. We will be using Alice 2.3 to start with, and later use Alice 3.1. DO NOT use the CD that comes with the book, but instead follow instructions on the Resources page)

CompSci 94
Introduction to Programming
Via Animation and 3D Virtual Worlds

CompSci 94 is an introductory programming course that teaches fundamental computer science concepts. This version of CompSci 94 uses the tool Alice to create 3-D virtual worlds. You will learn programming constructs such as looping, selection, and data structures, along with how to control objects (raise hands, flap wings, move, turn, spin, walk, etc.).

This is a hands-on course. During class we will be writing programs with partners, designing 3-D virtual worlds. Outside of class projects will be done alone, unless otherwise stated.

- ATTENDANCE REQUIRED: Class attendance is REQUIRED since we program in class everyday. I need to know in advance if you have an excused absence for not attending class.

LAPTOP: If you have your own laptop, bring it to class. It will be much easier to keep all your work on your own laptop. There may be a few laptops you can borrow during class only. We use laptops everyday. For outside of class, Alice is installed on the computer clusters around campus, but there is probably an old version of Alice there. Since we are using new software that has regular updates it is better that you put it on a computer and update it
CompSci 94

• Last Tuesday
  – How to start a web page, copy files to Duke account

• Assignments out
  – Assignment 1 due Sept 3
  – Assignment 2 due Sept 10

• Today’s Classwork – Learn HTML
  – bring laptop to class
  – Classwork not finished is homework, many classworks become homework!

• Start with Alice Tuesday
  – Read Chapter 1
  – Do reading quiz on Sakai by Tuesday 8:30am!
    • Take the quiz as many times as you want
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, Fall 2010

Course Announcements

* You will need to put Alice 2.2 on your laptop by Thursday, Sept. 2.
* August 31 is the first day of class.

CompSci 4
Introduction to Programming
Via Animation and 3D Virtual Worlds

-- press space for next page --
What it looks like in Firefox:

CompSci 4, Fall 2010
Home

Course Announcements

- You will need to put Alice 2.2 on your laptop by Thursday, Sept. 2.
- August 31 is the first day of class.

CompSci 4
Introduction to Programming
Via Animation and 3D Virtual Worlds

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 programming constructs such as looping, selection, and data structures, along with how to control objects.
CompSci 4 Fall 2009 web page in Netscape – html with frames, no css
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 (pdf)

• Internet Explorer
  – 1995, first version attached to Windows 95, not very popular
  – History (pdf)

• More recent: FireFox, Safari, Chrome
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

www.cs.duke.edu/courses/fall13/compsci094/

• 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 on PC, use textedit on Mac (see note)
  – save as .txt file type

• 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 (doesn’t need end tag)

• Headings
  – Use <hn> 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
  \[<a \text{ HREF=“http://www.duke.edu”}> The Duke web page </a>\]

• Italics or emphasis
  \[–<i> \text{ or } <em>\]

• Darker or bold use
  \[–<strong> \text{ or } <b>\]

• Text exactly as typed with spaces
  \[–<pre>\]
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 ffffffff  
  Black 000000  Orange ff7f00  Purple c000e0

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

• Bulleted list (unordered list)
  
  \[
  \text{<ul>}
  \text{  <li> item in list </li> }
  \text{</ul>}
  \]

• Ordered list
  
  \[
  \text{<ol>}
  \text{  <li> first item in list </li> }
  \text{  <li> second item in list </li> }
  \text{</ol>}
  \]

• 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.duke.edu/~rodger/shrfun.gif">
  Or  <img src="shrfun.gif">
  ```
  if the file is in the same folder as this web page
We are NOT doing

- Fancier web pages with
  - Frames - older
  - CSS - newer
  - There is an optional tutorial for this on the resources page if you want to learn how to do this.
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>
```

Don’t need to know this!
Classwork - Create a Web page

• Create an animal web page – complete by Sep 10 (when assignment 2 is due)
• Work in pairs
• Use notepad to create text file with HTML
• Look at file with browser
• Copy file to your Duke web space account
• View your file on the web