Computer Science 4:
Java for Video Games

www.cs.duke.edu/education/courses/spring06/cps004/

Instructors

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Introduction

- Administrative material
- Introduction thinking about games
- Webpage development
- First assignment (due **Tuesday**)

Administrative Material

- Course Webpage
- What you will learn?
- Is this course right for you?
- Structure of the course

What you will learn in this course

- Two primary goals are to teach
  1. Basic programming
  2. Basic computer science concepts
- To explore these topics we'll study
  - Video game design
  - Algorithms used in video games

What you won't learn in this course

- The same amount and type of programming as in CompSci 6 for majors
- Enough about Java or video games to market your own games
- Programming concepts that will only be useful using our video games package

Who should take this course ?

- Students with very little or no background in computer programming
- Students who want to learn something about computer programming and might want to take additional courses
- Prospective majors who feel they are not ready for CompSci 6
- Students who want to learn something new, interesting, and fun, that might actually be useful

Who should *not* take this course

- Computer Science Majors who already know how to program (in any language)
- Computer Programmers
- Students afraid of technology who want to get QS credit with as little pain a possible and who could never imagine taking another computer course (take CompSci 1 instead: it's a survey course with more general knowledge)

Structure of the Course

- Homeworks 50%
  - Weekly
  - Typically done in pairs
  - Build toward project
- Tests 30%
  - 2 Each 15% (no final: final period required for project presentations)
- Project 20%
  - Presentation is your final exam
  - Done in teams of 2 or 3

Web Page Development

- Where files should be placed
- How to create and use directories (folders)
- Using Windows Notepad
  - Can use almost any editor
  - Could use the one in Eclipse

Webpage Placement

- Your webpage is located in P:\public_html
- Your individual course webpage will be located in P:\public_html\cps4
- Your personal webpage is viewable from http://www.duke.edu/~yourlogin
- Your course webpage is viewable from http://www.duke.edu/~yourlogin/cps4

Creating Directories

- Double Click on My Computer (ICC229)
- Double Click on P drive (could also be indicated by your login)
- Double Click on public_html
- File->New->Folder
- Type in cps4 and Enter

Using Notepad

- Find and open up Notepad
- Type in

```
<html>
<head> </head>
<body>
<h1> Hello! </h1>
</body>
</html>
```

- File->Save as
- Select P:\public_html
- Select cps4
- Save as Hello.html

Netscape/Mozilla Composer

- In Netscape/IE/Firefox, go to http://www.duke.edu/~yourlogin/cps4/Hello.html
- Rename Hello.html to index.html and go to http://www.duke.edu/~yourlogin/cps4/
- index.html is searched for automatically if no file name is given
- Experiment on your own time with this web page to make more webpages and add links
- (Refer to resources on class web page for help with html)

First Assignment

- Visit the course website and complete the first assignment due on Tuesday

Today's In-Class Exercise

- Understanding and Mastering the game of Nim
  - See handout
- One heap game
  - Develop a strategy
- Two heap game
  - Extend your ideas
- Generalize to additional heaps
  - Extend your extensions