

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 as 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