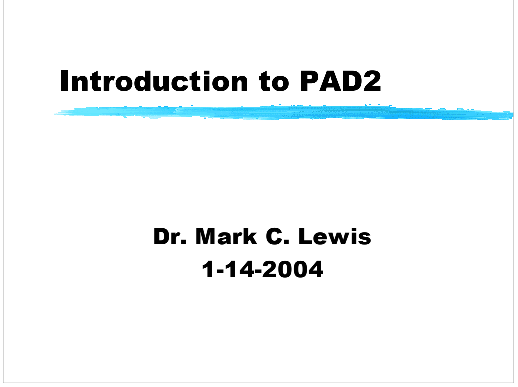
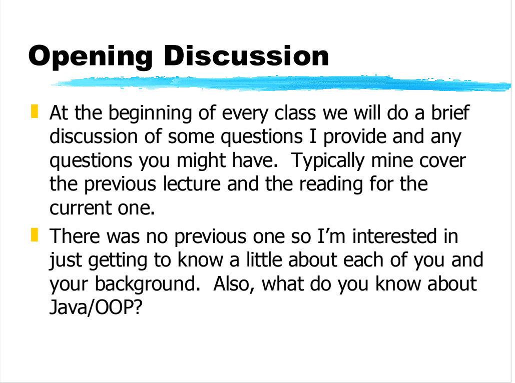


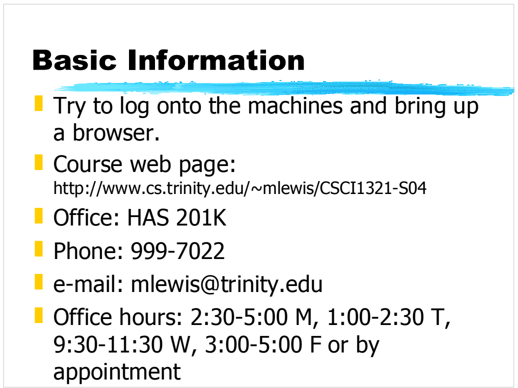
Introduction to PAD2

Dr. Mark C. Lewis
1-14-2004



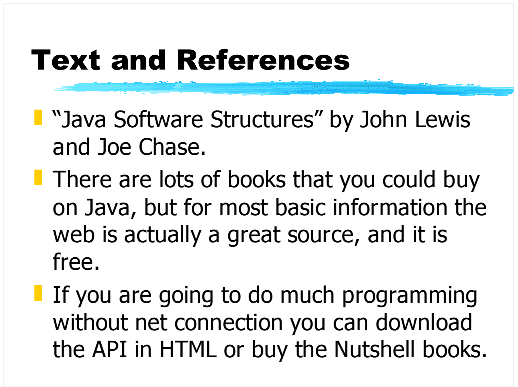
Opening Discussion

- At the beginning of every class we will do a brief discussion of some questions I provide and any questions you might have. Typically mine cover the previous lecture and the reading for the current one.
- There was no previous one so I'm interested in just getting to know a little about each of you and your background. Also, what do you know about Java/OOP?



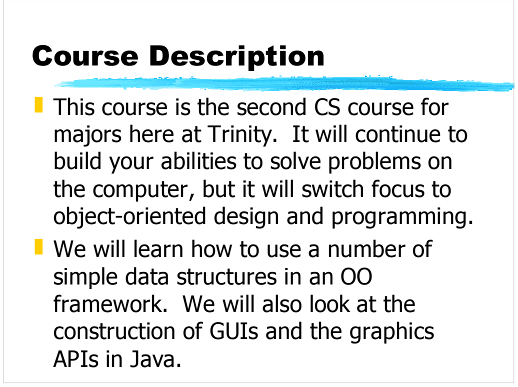
Basic Information

- Try to log onto the machines and bring up a browser.
- Course web page: http://www.cs.trinity.edu/~mlewis/CSCI1321-S04
- Office: HAS 201K
- Phone: 999-7022
- e-mail: mlewis@trinity.edu
- Office hours: 2:30-5:00 M, 1:00-2:30 T, 9:30-11:30 W, 3:00-5:00 F or by appointment



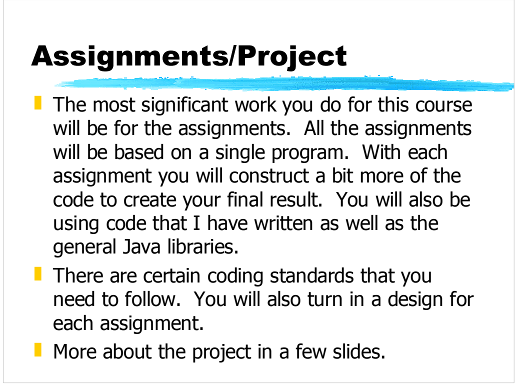
Text and References

- "Java Software Structures" by John Lewis and Joe Chase.
- There are lots of books that you could buy on Java, but for most basic information the web is actually a great source, and it is free.
- If you are going to do much programming without net connection you can download the API in HTML or buy the Nutshell books.



Course Description

- This course is the second CS course for majors here at Trinity. It will continue to build your abilities to solve problems on the computer, but it will switch focus to object-oriented design and programming.
- We will learn how to use a number of simple data structures in an OO framework. We will also look at the construction of GUIs and the graphics APIs in Java.



Assignments/Project

- The most significant work you do for this course will be for the assignments. All the assignments will be based on a single program. With each assignment you will construct a bit more of the code to create your final result. You will also be using code that I have written as well as the general Java libraries.
- There are certain coding standards that you need to follow. You will also turn in a design for each assignment.
- More about the project in a few slides.

Grades

- Your grade in this class is determined by a combination of 4 parts.

Assignments (8)	50%
Tests (2)	30%
Quizzes (6 drop 1)	10%
Class Participation	10%

Extra Credit

- You can also receive extra credit in this course in a number of ways.
  - Quizzes and tests will almost all contain extra credit questions. These will typically be more challenging than the normal questions.
  - You can send me links to information you find that demonstrates that you have been thinking about course material outside of class.
  - Do some competitions at TopCoder.com.

Lectures/Schedule

- The web page also has a schedule for the entire semester. It includes not only the topics, but also readings and due dates for everything that receives a grade.
- On this page I will also provide links to the notes I put on in PDF format. I do this at least the night before class. I do this because you should never feel like you have to write down what is on the slides. Focus on listening so you can "grok" the material and take notes on interesting points not in the slide text.

Think More - Work Less

- For those of you who don't know this yet, my overriding objective in this class is to get you to think. During the course of the semester several lights should come on in your head as different ideas start to make sense. Object-orientation is not just a minor modification of the imperative style you learned last semester.
- The more you think through assignments the less time you will spend coding.

More on the Project

- The project that you will be doing for the semester is a game. Exactly what type of game it is will be up to you. There are certain restrictions on what you can produce though.
- Your game will have a player character that can navigate through many different "screens". Each screen is a grid of "blocks" and can have a number of "entities" on it the player can interact with.

Project Ideas

- There are many, many different games that could be written using this basic model and I want you to use your imagination in coming up with an idea.
- Two broad categories that fit this model are games similar to the "side scroller" or top-down view games like older RGPs. Even Pac-Man can be written using this model. Civ is a stretch, but not impossible.

Together IDE and UML

- As part of your introduction to OOP, you will also be introduced to UML as a way of designing object oriented code.
- To help facilitate with this, we will use the an Integrated Development Environment called Together. This environment allows you to draw UML diagrams and stubs out code as you do it.

Example Coding

- For fun, we will now write some code in Java using Together. The next two days we will look more at object orientation and Java and the things I write now will make more sense.

Minute Essay

- At the end of every class I will have you write me a “minute essay”. This is a few sentences that shouldn’t take you much more than a minute. I will typically ask some type of question for you to answer. You can also provide any form of feedback on anything from the class you want to. Make sure your names are always on these as I use them for attendance and feedback.
- What are your thoughts on the class description? What do you want to get from this course?