

CS61B Summer 2006

Instructor: Erin Korber

Lecture 1, 26 June

Reading for tomorrow: Sierra and Bates, Chapter 1 and 2

## 1 Course Overview

- Main Purpose: To learn *programming*
  - Best way to learn programming is by doing it
  - Need a language to do it in, so will learn some Java also
  - Learning how to learn a new language efficiently
  - Programming principles are language-independent
- Data structures and algorithms
  - Fundamental parts of any significant program
  - Choosing the right one to use
- Software engineering - the design and implementation of large programs
  - Emphasis on *design*
  - Impossible to implement the solution to a problem without knowing how to solve it!
  - Choosing the right language for the job

## 2 Course Details and Administrative Issues

- This is all in the syllabus - read it!
- Course webpage
  - Instructor/TA contact info
  - Labs, HWs, projects, etc.
- Projects
  - code early, code often
  - Know what to write before you write it

- Pencil and paper can be valuable
- Getting Help
  - Newsgroup: `ucb.class.cs61b`
  - Office hours - please come! We are there to help you!
  - Personal email
- Cheating and Plagiarism
  - Don't. Will make things easier on us all.
  - Policy in the syllabus
  - Get help before you get hopelessly behind
- Enrollment
  - Go to your assigned lab, at least for this week.
  - See me after lecture sometime this week if you have a specific problem.

## 3 Java

Chapter 1 in the textbook is a more detailed explanation of the information from this section.

### 3.1 Object-oriented

So you've heard that Java is *object-oriented*. What does this actually mean?

- This should be a review of CS61A.
- Something that we will return to and flesh out many times over the course of the semester.
- The basic idea:
  - Multiple agents, called *objects*, that know how to do things (*methods*), and some information about themselves (*instance variables*)

## 3.2 How Java Works

- write source code
- compile into *bytecode*
- run on a JVM

## 3.3 A small first Java program

- `main` is special
- printing

## 3.4 Looping and conditionals