Introduction to CS1 Java Programming

cs163: No prior programming experience

Introduction to CS1 Java Programming

Why Computer Science?
- It's exciting
- It's lucrative
- It's fun (sometimes!)

Introduction to CS1 Java Programming

Instructor
Benjamin Say
- cs163, Section 001, MWF 12:00 - 12:50pm, Scott Bioengineering 101
- cs163, Section 002, MWF 4:00-4:50pm, Clark A201

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Office hours are posted on syllabus.
Teaching assistants on syllabus.

Introduction to CS1 Java Programming
Curriculum

- C1: Languages, Computers, Operating Systems
- C2: Identifiers, Variables, Expressions, Operators
- C3: Conditionals, Booleans, Logical Operators
- C4: Math Functions, Characters, Strings
- C5: Loops: while, do/while, for
- C6: Methods: Parameters, Return Values
- C7, C8: Single and Multidimensional Arrays
- C9: Objects and Classes
- C12: Exceptions and File Input/Output
- C13: Interfaces
- C18: Recursion
- C20: Lists, Collections, Iterators
- C22, C23: Algorithms, Complexity, Sorting

Java Programming

Resources: Java Textbook

Introduction to Java Programming – Daniel Liang, 10th or 11th Edition
Resources: zyBooks

- Setup instructions on syllabus
- Activities are graded!

Resources: iClickers

- Register your clicker on Canvas by August 23
- Bring your clicker to every lecture!

Grading Criteria

- Your grade will be based on:
  - Exams: 60%
    - 1st midterm: 15%
    - 2nd midterm: 15%
    - 3rd midterm: 15%
    - Final exam: 15%
  - Programming Assignments: 10%
  - Programming Quizzes: 10%
  - Labs: 10%
  - Activities (zyBooks, iClicker): 10%
Grading Policy

- If you think you have been graded unfairly, visit the cs163 help desk for an explanation.
- If you cannot resolve the problem, email the instructor / teaching assistant.
- All grades and exams are returned within one week of the due date (usually even faster).
- Complaints about grades must be made within two weeks of when the grade is released.

Communications

- Talk with your teaching assistant before or after labs, at help desk, or during lab hours.
- Talk with your instructor before or after lectures or during office hours.
- Email your instructor directly only if privacy is needed (health issue, staff complaint, etc.)
- Do not attach comments to Canvas, use the Piazza bulletin board instead.
  - Piazza is in Canvas modules.
  - Topics for assignments, grading concerns, ...

Late Policy

- Every assignment lists a due date
  - Almost always on Mondays at 6pm
  - Full credit requires meeting this deadline
- Every assignment lists a late date
  - Late submissions have 20% penalty
  - After this deadline, no credit is given
- Exceptions only for excused absences
  - Medical emergencies, family emergencies, with documentation
  - If an emergency happens, email your instructor right away
- Do not miss in-class quizzes!
  - Very hard to get right without group help
Getting Help

- Web Sites:
  - www.cs.colostate.edu/~cs163
- Lectures, Recitations, Lab Hours, Help Desk
- Lab operators (general questions)
- Office Hours (see syllabus)
- Tutors, Friends, Consultants (be careful)
- Textbook, Internet

Academic Integrity

- All assignments, labs, quizzes, exams are solo
  - Unless otherwise specified
  - No notes, books, internet, other people
  - You may get help from course instructors and TAs
  - You may discuss concepts with other students, but:
    - Never share code with another student
    - Never copy code from another student
    - Never let anyone else type in code for you
  - Know the department academic honesty code!

Lecture Expectations

- Come to class
  - Attendance predicts success
- Be active, not passive:
  - Take notes, Ask questions
- Be prepared
  - Do reading assignments before the lecture
- Be on time
  - Lectures start and end on time
Lecture Expectations
- Cell phones off or on vibrate-only
  - If you need to answer, leave the room first
- Laptops for note taking or coding!
  - No games, audio, video, inappropriate websites
- Respect your colleagues
  - No snide or rude comments
  - No comments on abilities
  - No extended conversations

Lab Expectations
- Use the Linux Lab – COMSC 120
  - Not the Windows Lab – COMSC 110
  - No uncovered drinks and no food
- Lab operator on duty during day
  - You can ask them general questions
- Treat the lab as a professional workplace
  - No disparaging comments
  - No loud/rude/distracting behavior
  - Professional comportment at all time
  - No sexual harassment of any sort, not ever!

Practical Matters
As a student in this class...
- You have CS department email:
  - Your address is eid@cs.colostate.edu
  - Automatically forwarded to CSU email
  - You should read this mail regularly
- You have an account of CS systems:
  - CS systems not the same as ACNS machines
  - Your RamCard provides access to Linux lab
  - Same as the EID that you use to login to RamWeb
  - Password is your CSU ID, you should change it!
Motivation

A student asks a roommate, “Could you please go shopping for us and buy one carton of milk and, if they have avocados, get six.” A short time later, the roommate returns with six cartons of milk. “Why did you buy six cartons of milk?” asks the student. The reply: “They had avocados.”

Reader’s Digest, September 2013

This is exactly what your Java program will do, because computers do what you ask them to do, not what you want them to do!
Motivation

![Average U.S. Tech Salary 5-Year Trend]

<table>
<thead>
<tr>
<th>Year</th>
<th>Salary</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
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<td>$66,600</td>
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<td>Growth Rate</td>
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<td>24.4%</td>
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<td>7.7%</td>
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Source: ONS Tech Salary Survey