CSCI455: Introduction to Programming System Design

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http://scf.usc.edu/~csci455/
Today’s topics

• Course overview and logistics
• Academic integrity
• Java naming conventions
Announcements

• For initial announcements see course webpage:  
  http://scf.usc.edu/~csci455/

• Please mark down exam dates

• non-DEN students: look out for email from DEN about how to get on DEN d2l.

• if you are not officially enrolled yet, please see me after class.

• Policy for new MS students
Where to find course materials

• Course web page: http://scf.usc.edu/~csci455/

• Den d2l course management system only for
  – Videos of lectures
  – Grades

• Piazza for discussion boards
  – Discussion boards
    • Use this to ask us / each other questions about course material, assignments – not email.
CS 455 Syllabus

• we'll go over highlights here: syllabus is required reading

• CS 455 goals
  – learn scalable development techniques
  – programming in an OO language (Java)
  – programming with linked lists/dynamic data in C++
  – using Unix environment
  – learn some data structures and algorithm analysis
Prerequisites

• You should have a working knowledge of the following ideas:
  – variables
  – assignment statements and expressions
  – if statements
  – loops
  – functions with parameters (calling and writing)
• No prev experience? See me.
Textbook

• required textbook for Java:
  *Big Java, 6th ed., by Cay Horstmann, Wiley 2016*
  (e-book rental version: ~$50 – see announcements on web page)

• for C++ we'll use web-based material
Computing environment

• Unix Solaris timeshare (aludra.usc.edu)
• Unix shell, emacs, javac, g++
• If you install your own IDE make sure it's using version 1.7 (7.0) of Java compiler, runtime system, and API.
• Documentation section of web page has some tutorials and command summaries.
Coursework

• Lectures / Readings

• Exams (60%)
  – MT 1 (10%)  
  – MT 2 (20%)  
  – Final (30%)  
  See week-by-week schedule for exam dates.

• Programming assignments (30%)
  – 4 – 6 total (30% total)
  – important learn-by-doing for development techniques

• Labs (10%)…
Labs

- 2 hour lab session – not optional
- allowed to work on it ahead of time, but work is due in your lab section.
- pair-programming
- only 80% of lab points count for grade
- DEN students:
  - complete on your own time (due Sun night)
  - no partners
  - get lab assistant help by phone / email / videoconferencing (BlueJeans) DEN office hours
Grading

• Fixed-scale grading
  – Not in competition with other students.
  – Everyone can succeed!

• Have a “growth mindset”
  – Everyone can succeed!
  – … but you need to put in the effort.

• Detailed grading / late policies on the course syllabus
Academic integrity policy

• See Course Syllabus for details.
Some reasons not to cheat

• Dishonest
• USC reputation
• Real world consequences
• Losing learning opportunity
• Academic consequences
Hello.java

// Hello world: the traditional first program

public class Hello {

    public static void main(String[] args) {

        System.out.println("Hello, World!");

    }

}

Java naming conventions

// CarDriver.java
public class CarDriver {
    public static final double MILES_PER_GALLON = 35.6;

    public static void main(String[] args) {
        int distanceTraveled = 10;
        int milesUsed = MILES_PER_GALLON/distanceTraveled;

        System.out.println(milesUsed);
    }
}

455 Intro [Bono]