CIS 110

Introduction to Computer Programming
University of Pennsylvania
Summer 2013

Benedict Brown

www.seas.upenn.edu/~cis110
Overview

What is CIS 110? Introduction to programming and computer science

Goals.
- Demystify computer systems: what can computer do?
- Demystify computer science: what are the intellectual underpinnings?
- Demystify computer scientists: how do we think?

Topics.
- Programming in Java.
- Computer organization and assembly language
- Applications to science, engineering, and commercial computing.

“Computers are incredibly fast, accurate, and stupid; humans are incredibly slow, inaccurate, and brilliant; together they are powerful beyond imagination.” – Albert Einstein
The Basics

Lectures [Benedict Brown]
- Monday - Thursday, Towne 321, 10:00
- Office hours: TBA in Towne 313
- Email: cis110@cis.upenn.edu

Recitations
- Monday - Thursday, 11:00
- Two TAs per recitation: twice the fun!
- Clarify lecture material, tips on assignments, group activities

TA Office Hours (TBA)
- Questions about material
- Help with debugging
- Bring your laptop or use lab computers

Full details and office hours. See www.cis.upenn.edu/~cis110
Grades

Course grades  No preset curve or quota. Typically about half of students receive A- or higher. Many have no prior experience.

~9 programming assignments  40%
Recitation attendance and participation  10%
2 exams  50%
Extra credit and staff discretion  Adjust borderline cases

Check grades  Course web site
Course Materials

Course website [www.cis.upenn.edu/~cis110]
- Programming assignments and checklists
- Submit assignments
- Lecture slides - usually posted after lecture
- Lecture videos - don’t always record properly, and don’t record everything!
- Discussion board

Required text. Sedgewick and Wayne. *Intro to Programming in Java: An Interdisciplinary Approach.*
Programming Assignments

Desiderata
- Address an important scientific or commercial problem
- Illustrate the importance of a fundamental CS concept
- You solve problem from scratch!

Due 9pm on due date via Web submission
- 3 hour grace period (no extra credit, won't get questions answered)
- No late submissions (past grace period!)

Computing equipment.
- Your laptop [OS X, Windows, Linux, ... ]
- Moore computer labs

Advice.
- Start early; plan multiple sessions
- Seek help when needed

our job is to help you!
What's Ahead?

Lecture 2 Intro to Java

First recitation Meets tomorrow or Wednesday

Homework 0 Due Tuesday (tomorrow!) 9pm
  - Read Sections 1.1 and 1.2 in textbook
  - Install Java programming environment + a few exercises
  - Register for Piazza
  - Lots of help available, don't be bashful

END OF ADMINISTRATIVE STUFF
Languages

**Machine languages**  Tedious and error-prone

**Natural languages**  Ambiguous and hard for computer to parse

- Kids Make Nutritious Snacks
- Red Tape Holds Up New Bridge
- Police Squad Helps Dog Bite Victim
- Local High School Dropouts Cut in Half
  [ real newspaper headlines, compiled by Rich Pattis ]

- 'At Last' Singer Etta James Terminally Ill
  [ New York Time Online, 16 December 2011 ]

- "Santorum is an Unpleasant By-Product of Sex"
  [ deredactie.be, 6 January 2012 ]

**High-level programming languages**  Acceptable tradeoff

“Instead of imagining that our main task is to instruct a computer what to do, let us concentrate rather on explaining to human beings what we want a computer to do.”  – Donald Knuth