CS125: Introduction to Computer Science

Lecture 0000000012

Bill Chapman
Mr. Speaker, Mr. Vice President, Members of Congress, my fellow Americans:

Tonight marks the eighth year that I’ve come here to report on the State of the Union. And for this final one, I’m going to try to make it a little shorter. (Applause.) I know some of you are antsy to get back to Iowa. (Laughter.) I've been there. I'll be shaking hands afterwards if you want some tips. (Laughter.)

And I understand that because it’s an election season, expectations for what we will achieve this year are low. But, Mr. Speaker, I appreciate the constructive approach that you and the other leaders took at the end of last year to pass a budget and make tax cuts permanent for working families. So I hope we can work together this year on some bipartisan priorities like criminal justice reform -- (applause) -- and helping people who are battling prescription drug abuse and heroin abuse. (Applause.) So, who knows, we might surprise the cynics again.

But tonight, I want to go easy on the traditional list of proposals for the year ahead. Don’t worry, I’ve got plenty, from helping students learn to write computer code to personalizing medical treatments for patients....
10 Jobs With the Most Potential You Should Look For in 2015 and 2016

What jobs will be trending in 2015-2016? Which occupations are going to increase in demand and are worth your investment? These are the questions you should ask if you are choosing a college or want to switch careers. This article is aimed at helping you find the answers. Here are 10 jobs that have the most potential that you should consider in the future:

1. Software application developers

Training needed: Bachelor’s degree; practical experience for entry-level.

Job outlook: This is an undisputed job of the future. Software surrounds us every minute of our lives, and people who create it are never going to be out of a job and will always get high salaries. The ongoing revolution in technology has proven that this field is indispensable.
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History

Google’s ‘Security Princess’

YouTube

Advanced Micro Devices

LED

Mosaic/Netscape

Plasma screen

Siebel Systems

Project Gutenberg

Gene Hackman

Apple’s Swift

Integrated Circuit

Microsoft Flight Simulator

Oracle

PayPal

Yelp!
Introductions

- Bill
- you
- the course
about CS125

The science
The course
About you: life of a CS125 student
course themes

Machine Architecture
Procedural Programming
OO Programming
Software Engineering Principles
Recursion
Advanced topics and principles
BTW: proficiency exam sign-up links @ course website

Machine Architecture
Procedural Programming
OO Programming
Software Engineering Principles
Recursion
Searching, sorting, algorithm analysis
course applications

find paths through mazes
scientific visualization
contacts app for friends
create randomized love letters
determine efficiency of algorithms
modify (filters) images
android and iOS

solve puzzles
sorting and search data
chase routine for Pacman ghost
search movie script
crypt/decrypt messages
computer generated song
“Apple is at the intersection of technology and the liberal arts, the intersection of technology and the humanities.” — Steve Jobs
weekly activities/responsibilities

pre-MWF: Reading & Turing's Craft exercises
MWF: Lectures

Weekly: Lab/Discussion Sections

Most weeks: Quizzes/short assessments - start 3rd week

Programming ("MPs"): 7-8 of them

Newsgroup & Community: Piazza
+ "Debug Your Brain" (starts 3rd week)
grading

45% Quizzes (~10, weekly)
15% Machine Problems
5% Lecture participation
5% Section achievement points
5% Turing's Craft exercises
25% Final Exam

Guaranteed
90: A-
80: B-
65: C-

To pass, must attempt all MPs and other required items
how to succeed in CS 125

Keep up on daily readings / Turings craft examples
  Lectures and Labs will require brain power.

Attend and participate in all lectures and labs

Spend time and effort on MPs

Communicate with your CS community
  Public Qs : Piazza
  Private Qs : Piazza (private messages)
  Doyens!
what now?

Course website:
URL: http://courses.engr.illinois.edu/cs125
  Read Course Policy
  Read Course Notes #1 & #2
  before next Lecture (links on Lecture page)

Bring your laptop to your AY_ section
(you will be setting up your coding environment)
  java
  eclipse
  svn

Honors Section CS 196-25?
3hr Proficiency Exam (see CS125 home page)

just registered today, or are planning on registering in the future?
email: wlchapma@illinois.edu with your netID
a little java

System.out.println("This message will appear");