ECS 10

Sept 23

Introductions

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A first programming class

- For people with no programming experience
- Learn the computer language Python
- Write six programs

Why learn to program?

- Understand computers
- Computers are used in almost every career
- The programs you have are never exactly what you want.
- The data you have is almost never in the format you want.

How does programming help?

- You can handle little problems yourself
- When you hire someone to program you have some idea of what she is doing.
- You have some idea of what is possible.
- A good programmer has lots of job options (you'll need more than this one class, though)

Example of What You'll Know

- One program last year.
- Get data on population, foreclosures and display it by California county.

Intellectual skills

□ The computer does *exactly* what you tell it to
□ Learning the language is the easy part; learning to give exact directions is the hard part.
□ Imagine telling a Martian how to tie their shoes….

□ Giving exact directions is a great leadership skill.
□ Some people find programming engrossing.

Why Python?

□ Great for interfacing one program to another
□ Free!
□ Used in industry – Google, ILM, NASA….
□ Easy to get started with!
□ Lots of "modules" (plugins) that do things like sound editing, computational biology, Web database access…..

Other options

□ ECS 15 – More conceptual overview. Understanding how computers and the internet work, a little programming.
□ ECS 30 – More intensive class for those with some programming experience (Basic?). Learn C. Required for ECS majors.

Course Structure

□ Six programs – 36% of grade.
□ Tentative breakdown:
  ◘ "converter" – 1%
  ◘ "coin flip" – 7%
  ◘ "election" – 7%
  ◘ "census data" – 7%
  ◘ "map" – 7%
  ◘ "graphing" – 7%
□ FIRST PROGRM DUE 10PM TUES Sept 27

Exams

□ Two midterms – 18% each
  ◘ 10/14 and 11/16
  ◘ Email me if you will miss the midterm
  ◘ Makeups will include later material
□ Final – 28%
  ◘ Dec 5 8-10 AM in this room
  ◘ DO NOT miss the final
  ◘ Missed final will be an incomplete
□ All exams open book, open notes

Makeups

□ No late homework.
□ There will be a makeup homework the last week of classes. The makeup homework will replace your lowest grade (even if the makeup homework is worse).
□ If you email me beforehand, you can take a makeup midterm the following week.
□ Makeup tests will include more material than the original tests.
□ No makeup finals.

Weekly activities

- Lecture – 3 hours
  - If you have a laptop, try typing along. I hope a lot of the class does this.
- Discussion section – 1 hour
  - Bring laptops
- Lab hours – 10 hours, optional
  - For help with programs.
- Office hours– 1 hour, optional
  - Administrative things. I will not help you with your program during office hours.
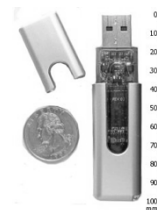
Lab Facilities

- You can often use the labs where we have lab hours during other times; check for availability.
- You can always use 75 Hutchinson or 1101 Hart.
- Best to install Python on your own computer!

Python 3 and Python 2

- Python 3.2 is the latest version (Python 3).
- But Python 2 is still around.
- Ignore it.

Flash drive

- If you work in the computer classrooms, you might want to have a flash drive.

Online Book

- Free!
- Print out only the parts you decide you need.
- Remember printing in computer labs is 11 cents per page.
- I will add .pdfs of the parts we are reading to course Web page.

Professional Conduct

- I am expecting professional, adult behavior
- Politeness
  - No eating in class
  - No phone calls
  - "Business letter" emails
- Honesty
  - Write and understand every line of every program
  - No cut-and-paste
  - No looking at other people's programs while typing

Getting started!

- First assignment due 10PM Tues 9/27.
- Get on a computer and start Web browser
- Find first assignment on course Web site:

http://www.cs.ucdavis.edu/~amenta/f11/ecs10.html

(can get there from SmartSite)

- Start using Python

Install Python on your computer

- Link to Python download page and directions on course Web site (3 NOT 2)
- We can help during lab hours if you have a laptop

What to do this weekend

- Look at the first assignment on the Web page
- Install Python on your computer
- Go to the lab and log on and try starting Python
- Read first chapter of online book

Announcments

- No sections met this week
- Lab hours starting Monday
- I will be at Tuesday lab hour
- My office hour is W 2:15 pm. Administrative issues only.