ECS 10

Jan 7

Welcome!

□ Prof. Nina Amenta
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A first programming class

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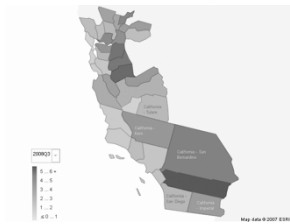□ Write six programs

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.
- ECS 12 – Media programming. Learn the language Processing.
- ENG 6 – Required for engineering majors. Matlab.

Announcments

- Sections will met this week but TAs will just be there to answer questions
- Lab hours starting today
- I will be at Thursday AM lab hour 10-11 AM.
- My office hour is Friday 11 AM. Administrative issues only.

Course Structure

- Six programs – 36% of grade.

- Tentative breakdown:
  - First program – 1%
  - Other program – 7%

- FIRST PROGRM DUE 10PM THIS Thursday Jan. 10

Exams

- Two midterms – 18% each
  - 1/28 and 2/25
  - Email me if you will miss the midterm
  - Makeups will include later material
- Final – 28%
  - March 20 1-3 PM in this room
  - DO NOT miss the final
- 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.
- Discussion section – 1 hour
  - Also bring laptops
- Lab hours – 8 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.
- Best to install Python on your own computer!
- If you do all your work on the lab computers, you will need to store it either on SmartSite, or on a flashdrive.

Python 3 and Python 2

- Python 3.3.0 is the latest version (Python 3).
- But Python 2 is still around.
- Ignore it.

Textbook

- Get the 3rd Edition or have to hassle with differences between Python 2 and Python 3.

- Type along with the examples.

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 Thursday 1/10.
- ☐ Get on a computer and start Web browser
- ☐ Find first assignment on course Web site:
  http://www.cs.ucdavis.edu/~amenta/w13/ecs10.html
  (can get there from SmartSite)
- ☐ Start using Python

What you do now

- ☐ Go to course Web site
- ☐ Look at assignments tab
- ☐ Look at software tab, directions to install Python
- ☐ We can help during lab hours if you have a laptop
- ☐ Read first chapter in text book
- ☐ Hand in first assignment on Thursday