Introduction to Programming

CS100M Spring 2006 (CIS121 / EAS121) Paul Chew & K-Y Daisy Fan

Today's lecture

- Course goals
- What is computer programming?
- Choosing among CS100 M, J, H
- Related courses
- Course objectives/policies (highlights)
- Example Matlab program

Course Goals

- Develop a practical intuition about problemsolving with the computer
- Develop a facility with the Matlab and Java programming environments.

Computer Programming

- Developing instructions for the computer to execute (in order to solve some problem)
- The steps must be logical

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 Use a particular language and follow the rules of the language (grammar/syntax)

Example: Adding songs from the internet to your music library

- Find a website with MP3 or other audio files
- Register with the music site, if required for music downloading. (Don't steal music.)
- Click on the music file to download it onto your computer
- Drag the file to your library

Reference: iTunes

Example: Adding songs from the internet to your music library

- Drag the file to your library
- Click on a music file to download it onto your computer
- Find a website with MP3 or other audio files
- Register with the music site, if required for music downloading. (Don't steal music.)

These steps are out of order! Illogical!

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Course Objectives—highlights

- Develop and implement algorithms for solving problems
- Fundamental programming concepts
- Basic application of object-oriented programming
- Sort and search data
- Visualization of data



CS100 or CS 99?

CS99

Fundamental Programming Concepts

- A slower-paced introduction
- No prior computing or programming experience!
- Use Matlab
- Not a substitute for CS100

CS100 or CS 211?

CS211 Computers & Programming

- Use Java
- Require Java (or C++) object-oriented programming experience

CS100M Requirements—highlights

- Attend lectures and sections (labs)
- Monitor announcements on website
- Write all exams
- Do homework
- Adhere to Code of Academic Integrity

Grading

- Best 5 of six projects (25%)
- Section/Lab exercises, in-class quizzes (5%).
 We count best x of y items, x<y.
- Prelim 1 (10%)
- Prelim 2 (20%)
- Prelim 3 (20%)

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- Final exam (30%)
- Less 10% of min{Pre1, Pre2, Pre3, Final}

Course Material

- Reading on Matlab will be available on the course website
- "*Absolute Java*" by Walter Savitch, 2nd ed.

Software

Optional (because of public labs)

- MATLAB Student Version R14
- DrJava

Consulting & Computing

- Consulting in Engineering Library computer clusters. Check course website for hours.
- Some public labs:
 - Upson B-7

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- ACCEL (Engineering Library, 2nd fl.)
- North campus: RPCC, Clara Dickson

Section	Days	Time	Room
1	т	12:20-01:10pm	UP B7 Right & UP 207
2	т	01:25-02:15pm	UP B7 Right & OH 216
3	т	02:30-03:20pm	UP B7 Right & OH 165
4	т	03:35-04:25pm	UP B7 Right & HO 110
5	W	10:10-11:00am	UP B7 Right & HO 320
6	w	11:15-12:05pm	UP B7 Right & UP 207
7	w	12:20-01:10pm	UP B7 Right & UP 207
8	w	01:25-02:15pm	UP B7 Right & UP 215
9	w	02:30-03:20pm	UP B7 Right & SE 1150
10	w	03:35-04:25pm	UP B7 Right & SE 1150
11	w	07:30-8:20pm	UP B7 Right & OH 216
21	w	12:20:1:10pm	ACCEL Blue rm & HO 401
22	w	01:25-02:15pm	ACCEL Blue rm & PH 403

Academic Excellence Workshops

- Small, collaborative classes parallel to course
- Classes begin next week in CL3 in Uris Library

CS100M	M 2:30-4:25pm	
	W 7:30-9:25pm	
CS100J	M 2:30-4:25pm	
	F 2:30-4:25pm	

What to do now?

- Pick a course (and section) (add/drop: lecture and section and AEW)
- Check course website
- Start reading from the "text" on course website (Sec 1.1)
- Attend lab (Upson B-7 or ACCEL Blue Rm) this week