Programming for Scientists

Student Survey
Lecture 1: Introduction (January 13, 2009)

Please fill out this survey. Your answers will help steer the class in the right direction.

§1   ABOUT YOU

Name: _____

Email (if you want to receive class information): _____

Major/Programme: _____

I am taking this class for credit: yes☐ no☐.

§2   MOTIVATION

Why are you taking this class?

☐ To learn to program.

☐ To learn to program *better*.

☐ To learn Python.

☐ My advisor told me to take it.

Others (write as many as you can think of): _____

_____

_____

_____

3.1   Programming

How did you learn to program?

☐ On my own (from books, websites,. . .).

☐ Had one programming class.

☐ Had a few programming classes.

☐ Have a CS (or similar) degree.

☐ I don't know how to program.

Which programming languages do you know?

	Never heard of it	Heard of it	Used it at most a couple of times	Used it a lot	Expert
Matlab	☐	☐	☐	☐	☐
Java	☐	☐	☐	☐	☐
C	☐	☐	☐	☐	☐
C++	☐	☐	☐	☐	☐
Python	☐	☐	☐	☐	☐
R	☐	☐	☐	☐	☐
Fortran	☐	☐	☐	☐	☐
Perl	☐	☐	☐	☐	☐
Lisp	☐	☐	☐	☐	☐
Scheme	☐	☐	☐	☐	☐

3.2   Programming Tools

These are tools that will be taught in this class. I ask these questions to know what the class knows about, but this is also a self-test for you. If you answer "Use it always" to all these questions, then you might be over-qualified for this class. On the other hand, if you do not regularly use these tools, then this class might help you a lot.

	Never heard of it	Heard of it	Used it at most a couple of times	Used it a lot	Use it always
assert statement	☐	☐	☐	☐	☐
shell (command line)	☐	☐	☐	☐	☐
debugger	☐	☐	☐	☐	☐
profiler	☐	☐	☐	☐	☐
version control system (cvs, Subversion, Git,...)	☐	☐	☐	☐	☐
unit tests	☐	☐	☐	☐	☐
design-by-contract	☐	☐	☐	☐	☐

3.3 Programming Concepts

	Never heard of it	Heard of it	Vague Idea	I know what it means	I could write my dissertation about it
object-oriented programming	☐	☐	☐	☐	☐
regular expressions	☐	☐	☐	☐	☐

3.4 Things you know

These is a mixed-bag of stuff you might know and which might be mentioned in the course. It is important for me to understand where the students are coming from so that I avoid both assuming knowledge and repeating things that everybody knows.

- I know what open-source means   yes☐ no☐.

- I know the difference between the GPL and the BSD license yes☐ no☐.

- I know the difference between "amortised constant time" and "constant time"   yes☐ no☐.

- I know that there is a difference between Windows-style (CRLF) and Unix-style line-endings (LF)   yes☐ no☐.

- I have used a language with pointers (like C)   yes☐ no☐.

- I know what "over-" and "under-flow" are (when talking about floating-point) yes☐ no☐.

- I know what UTF-8 is yes☐ no☐.

3.5   Software usage

I use the following operating system(s) regularly (check all that apply):

☐ Windows XP

☐ Windows Vista

☐ Linux (Any particular distribution? _____)

☐ Mac OS X

☐ Other Unix variant (Which? _____)

I am able to use the following operating system(s), even if I do not use them regularly:

☐ Windows XP

☐ Windows Vista

☐ Mac OS X

☐ Non-Mac Unix (for example, Linux)

§4   INTERESTS

4.1   Special Topics

The last section of the course has some room for modification (see the syllabus). Please tell me what you would like to hear about.

☐ Setting up a web-service with your software

☐ Handling large amounts of data with databases

☐ Image processing

☐ Interfacing with other languages

☐ Concurrent (parallel) programming

☐ Graphical user interfaces

☐ Parsing XML

Something else: _____

_____

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If you have other ideas later, you can always tell me about it by email.

§5 COMMENTS

Please add any other comments you feel might be helpful.

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