

Outline for January 9, 2012

Reading: §1

1. About the class
 - a. Instructors and TAs
 - b. Class web site, handouts
 - c. Smartsite and submitting homework
 - d. Homework, grading, and extra credit
2. What is a computer?
 - a. Computer programs
 - b. Execution
3. Software and hardware
 - a. Functional description of a computer
 - b. How the software controls the hardware
 - c. How the hardware limits the software
4. Algorithms
 - a. Precision and completeness
 - b. What is computable
 - c. What is intractable
5. Programming languages
 - a. High-level languages: semantics and syntax
 - b. Low-level languages: assembly language, machine language
 - c. Compilers, assemblers, interpreters
 - d. Source code, object code
 - e. Libraries
6. Python
 - a. What is Python?
 - b. Why Python for this class?