

Reading Assignment #1
Data Structure and Algorithm, Spring 2017
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Due: before the lecture on March 7, 2017

All of the following refers to the textbook “Introduction to Algorithms, 3rd edition” by Cormen, Leiserson, Rivest and Stein.

1. Read the beginning of chapter 2 and section 2.1. Make sure you understand how Insertion-Sort(A) on page 18 works. (Trace the code with a few example inputs to make sure) You can skip the “pseudocode conventions” subsection if it looks too trivial to you. (But it might still be a good idea to quickly go through it, just to make sure that you can read the pseudocode in this book in the intended way)
2. Read section 2.2. This teaches you how to analyze the running time of an algorithm, and introduces the concept of “order of growth.”
3. If you have time, try doing exercise 2.1-3 and 2.2-3. This gives you an idea of whether you actually understand what you just read.
4. Finally, read the beginning of chapter 3 and section 3.1 up to the subsection “Asymptotic notation, functions, and running times.” This will help you to understand when we introduces the asymptotic notations such as theta, big-O, and omega, in the lecture next week.