Illinois Institute of Technology
Department of Computer Science

Homework Assignment 1

CS 430 Introduction to Algorithms
Spring Semester, 2016

Rules for Homework

On this and all future homework assignments, observe these guidelines *or credit will be deducted*:

- **Observe the Honesty Pledge!** All work must be your own with no collaboration with anyone else. Remember, you must sign and turn in the honesty pledge with this assignment; violating it will result in automatically failing CS 430.

- Submit all HW through Blackboard

- Explicitly cite any references you use, including the textbook and any web pages; except for the text, always give full citations—authors, titles, dates of publication, page numbers.

- Algorithms must be carefully presented, proved correct, and analyzed in terms of the their time and space requirements. Follow the style of the texbook in these matters—your analyses and proofs must be mathematically rigorous.

- You must justify any mathematical statements.

- No homework credit once the solutions have beenposted.

Due: Wednesday, January 20

1. Problem 2.3-3 on page 39

2. Problem 2.3-4 on page 39

3. Problem 2-3(a) on page 41

4. Problem 3-3(a), fourth row only, on pages 61–62; justify your answers!

5. Problem 4-3(a) on page 108; solve this problem two ways: first with the master theorem on page 94, and then using secondary recurrences (pages 15–16 in the January 13 notes)