Introduction

Merge Sort (Overview)

Design and Analysis of Algorithms I

Why Study Merge Sort?

- Good introduction to divide & conquer
  - Improves over Selection, Insertion, Bubble sorts
- Calibrate your preparation
- Motivates guiding principles for algorithm analysis (worst-case and asymptotic analysis)
- Analysis generalizes to "Master Method"

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The Sorting Problem

Input: array of n numbers, unsorted.

5	4	1	8	7	2	6	3

Assume
distinct

Output: same numbers, sorted in increasing order.

1	2	3	4	5	6	7	8

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Merge Sort: Example

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