

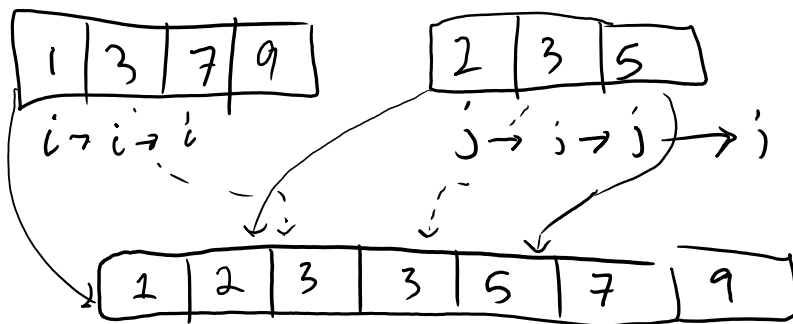
2019-05-07 MergeSort

Tuesday, May 7, 2019 8:59 AM

MergeSort

- NLogN Sort
- Relies on two fundamental observations
 - An array of size one is sorted
 - You can merge sorted arrays in linear time

Simple Example of Merging Sorted Arrays



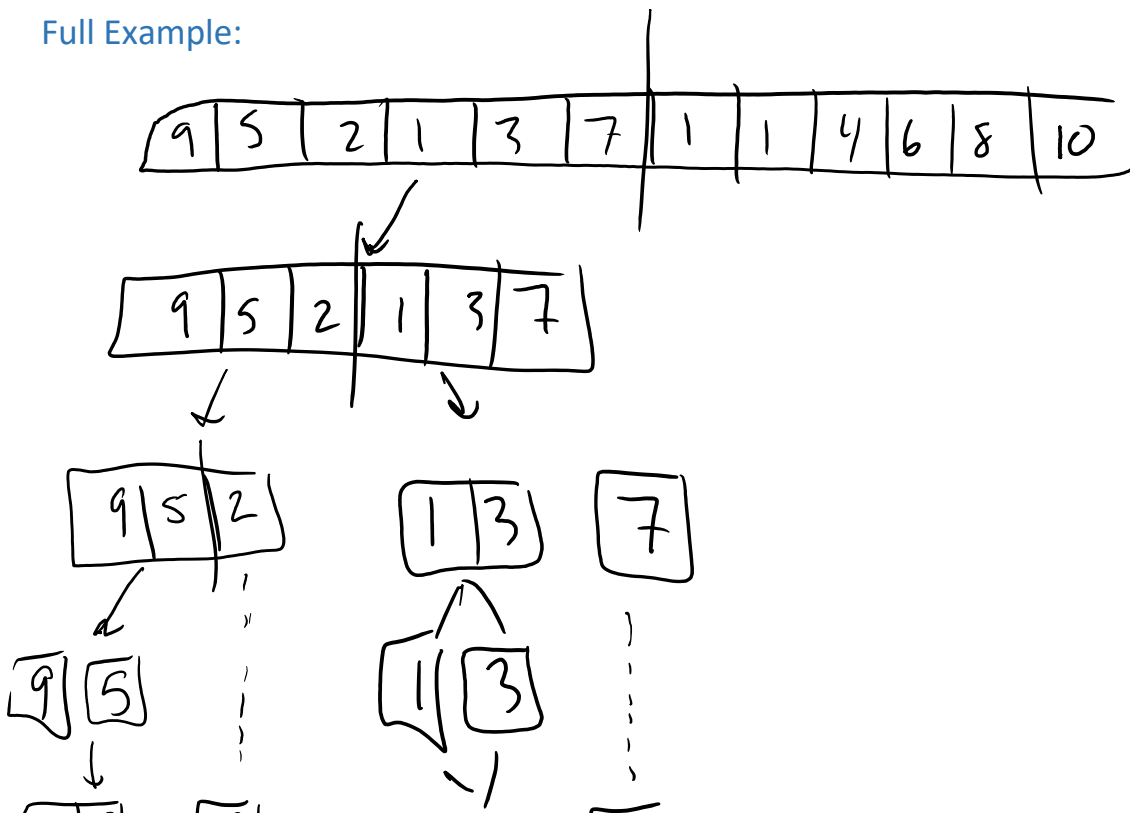
Process:

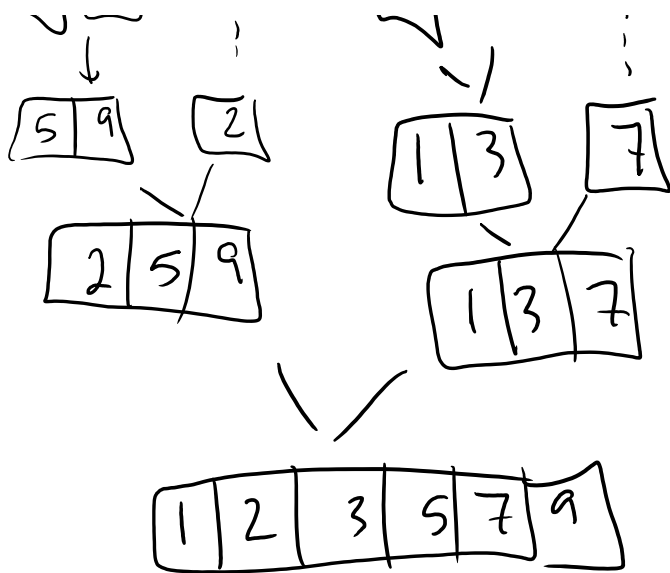
- Use two array index pointers to join the arrays (A, B)
- When value from A is taken, increment A's index pointer
- Same goes for B array

General Algorithm

- Break the array down until we get to observation #1 (array of single size is sorted)
- Then, progressively merge smaller chunks until we are completely sorted

Full Example:





Visual Analysis

