Slide 1

数组与数
Array & Numbers

课程版本 v3.3　　主讲 令狐冲

禁止录制与传播视频，否则将追究法律责任和经济赔偿

扫描二维码关注微信/微博
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官网：http://www.jiuzhang.com

Slide 2

大纲 Outline

- Sorted Array
  - Merge Two Sorted Arrays
    - Intersection of Two Arrays
    - Multiply Two Arrays
  - Median Of Two Sorted Arrays
- Subarray
  - Best Time to Buy and Sell Stocks I, II, III
  - Subarray I, II, III, IV
- Two Pointers
  - Two sum, 3Sum, 4Sum, k Sum, 3Sum Closest
  - Partition Array

Slide 3

令狐师兄带你写代码之

Merge Two Sorted Arrays

http://www.lintcode.com/problem/merge-two-sorted-arrays

Slide 4

Related Questions

- 将小数组归并到大数组里
  - http://www.lintcode.com/problem/merge-sorted-array/
  - http://www.jiuzhang.com/solutions/merge-sorted-array/

- 两个数组的交
  - http://www.lintcode.com/problem/intersection-of-two-arrays/

- 数组内积（点乘）
  - Example [1,3] · [2,4] = 1*2 + 3*4 = 14
  - Follow up: 两个数组都非常大，但是其中都包含很多0
  - Example [1,0,0,0,0 …, 0, 2, 0,…, 0, 3] · [0,…, 0, 4, 0,…, 0, 5]

Slide 5

Median of Two Sorted Arrays

http://www.lintcode.com/problem/median-of-two-sorted-arrays/
http://www.jiuzhang.com/solutions/median-of-two-sorted-arrays/

Slide 6

Best Time to Buy and Sell Stock
vs Maximum Subarray

http://www.lintcode.com/problem/best-time-to-buy-and-sell-stock/
http://www.lintcode.com/problem/maximum-subarray/

独孤九剑 ——破掌式

碰到 Subarray 相关的问题，一定要想到Prefix Sum

Related Questions

- http://www.lintcode.com/problem/best-time-to-buy-and-sell-stock-ii/
- http://www.lintcode.com/problem/best-time-to-buy-and-sell-stock-iii/
- http://www.lintcode.com/problem/maximum-subarray-ii/
- http://www.lintcode.com/problem/maximum-subarray-iii/

Take a break

5 minutes

Subarray

- **Minimum Subarray**
- http://www.lintcode.com/problem/minimum-subarray/
- **Maximum Subarray Difference**
- http://www.lintcode.com/problem/maximum-subarray-difference/
- **Subarray Sum**
- http://www.lintcode.com/problem/subarray-sum/
- http://www.lintcode.com/problem/subarray-sum-closest/

令狐师兄带你敲代码之
Two Sum & Two Sum Closest

http://www.lintcode.com/problem/two-sum/
http://www.lintcode.com/problem/two-sum-closest/

3Sum

http://www.lintcode.com/problem/3sum/
http://www.jiuzhang.com/solutions/3sum/

3Sum Closest

http://www.lintcode.com/problem/3sum-closest/
http://www.jiuzhang.com/solutions/3sum-closest/

4Sum

http://www.lintcode.com/problem/4sum/
http://www.jiuzhang.com/solutions/4sum/

小结

- Two Sum 相关的问题的两种做法
  - Hash Map
  - Sort + Two Pointers
- 学会比较他们的优劣

令狐师兄带你敲代码之
Partition Array

http://www.lintcode.com/problem/partition-array/
http://www.jiuzhang.com/solutions/partition-array/

Sort Letters by Case

http://www.lintcode.com/problem/sort-letters-by-case/
http://www.jiuzhang.com/solutions/sort-letters-by-case/

Sort Colors

http://www.lintcode.com/en/problem/sort-colors/
http://www.jiuzhang.com/solutions/sort-colors/

Related Questions

- **Sort Colors II**
- http://www.lintcode.com/en/problem/sort-colors-ii/
- http://www.jiuzhang.com/solutions/sort-colors-ii/
- **Interleaving Positive and Negative Numbers**
- http://www.lintcode.com/problem/interleaving-positive-and-negative-numbers/
- http://www.jiuzhang.com/solutions/interleaving-positive-and-negative-integers/

总结

- Median of Two Sorted Arrays
  - 想不到算法没关系, 但要能理解算法并实现出来
- Subarray
  - Prefix Sum
- Two Sum
  - Hash Map vs Two Pointers
- Partition Array
  - 二分 vs 三分