

Graph & Search

现在是课程答疑时间



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微博: <http://www.weibo.com/ninechapter>

官网: www.jiuzhang.com

- Graph
 - Clone Graph
 - Topological Sorting
- Search
 - DFS (Depth First Search)
 - BFS (Breadth First Search)

Clone Graph

<http://www.lintcode.com/problem/clone-graph/>

<http://www.jiuzhang.com/solutions/clone-graph/>

Topological Sorting

<http://www.lintcode.com/problem/topological-sorting/>

<http://www.jiuzhang.com/solutions/topological-sorting/>

<http://www.geeksforgeeks.org/topological-sorting/>

When?

1. Find connected graph
2. Shortest Path in Simple Graph

Graph BFS vs Tree BFS?

Take a break



5 minutes break

Search = {DFS, BFS}

Permutations

<http://www.lintcode.com/problem/permutations/>

<http://www.jiuzhang.com/solutions/permutations/>

Permutations II

<http://www.lintcode.com/problem/permutations-ii/>

<http://www.jiuzhang.com/solutions/permutations-ii/>

N Queens

<http://www.lintcode.com/problem/n-queens/>

<http://www.jiuzhang.com/solutions/n-queens/>

Palindrome Partitioning

<http://www.lintcode.com/problem/palindrome-partitioning/>

<http://www.jiuzhang.com/solutions/palindrome-partitioning/>

Combination Sum

<http://www.lintcode.com/problem/combination-sum/>

<http://www.jiuzhang.com/solutions/combination-sum/>

Combination Sum II

<http://www.lintcode.com/problem/combination-sum-ii/>

<http://www.jiuzhang.com/solutions/combination-sum-ii/>

Word Ladder

<http://www.lintcode.com/problem/word-ladder/>

<http://www.jiuzhang.com/solutions/word-ladder/>

Word Ladder II

<http://www.lintcode.com/problem/word-ladder-ii/>

<http://www.jiuzhang.com/solutions/word-ladder-ii/>

DFS ($O(2^n)$, $O(n!)$) (思想:构建搜索树+判断可行性)

1. Find all possible solutions
2. Permutations / Subsets

BFS ($O(m)$, $O(n)$)

1. Graph traversal (每个点只遍历一次)
2. Find shortest path in a simple graph

老师领进门，修行靠自身

- 刷多少题够？
- 只是刷一遍么？

多给予你周围的人帮助

- 帮助别人也是在提高自己

还想继续上课？

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