

Top-20 Training Program (Graph Problems-I)

Apply the solution building strategies discussed in class to solve following problems.

Group1: Graph Traversal

Number of Connected Components: https://leetcode.com/problems/number-of-

connected-components-in-an-undirected-graph

Friend Circles: https://leetcode.com/problems/friend-circles/

Route between Nodes: https://www.lintcode.com/problem/route-between-two-nodes-in-

graph/description

Simple Parser: https://www.lintcode.com/problem/parser/description
Bipartite or Not: https://www.lintcode.com/problem/is-graph-bipartite/
Movie Network: https://www.lintcode.com/problem/movie-network/
Alien Dictionary: https://leetcode.com/problems/alien-dictionary/

Itenary Reconst: https://www.lintcode.com/problem/reconstruct-itinerary/description
Minimum Height Trees: https://www.lintcode.com/problem/minimum-height-

trees/description

Account Merging: https://leetcode.com/problems/accounts-merge/

Group2: Dynamic Connectivity

Connecting Graphs-I: https://www.lintcode.com/en/problem/connecting-graph/
Connecting Graphs-III: https://www.lintcode.com/en/problem/connecting-graph-iii/
Graph Valid Tree: https://www.lintcode.com/problem/graph-valid-tree/description
Redundant Connection: https://www.lintcode.com/problem/redundant-

connection/description

Maximum Association Set: https://www.lintcode.com/problem/maximum-association-set/

Weak Connectedness in Di-graph: https://www.lintcode.com/problem/find-the-weak-connected-component-in-the-directed-graph/

Couples Holding Hands: https://leetcode.com/problems/couples-holding-hands/

Group3: Grid problems

Number of Islands: https://leetcode.com/problems/number-of-islands/

Number of Islands-II: https://www.lintcode.com/problem/number-of-islands-

ii/description

Island City: https://www.lintcode.com/problem/island-city/

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Number of Big Islands: https://www.lintcode.com/problem/number-of-big-

islands/description

Max Area Island: https://leetcode.com/problems/max-area-of-island/
Island Parameter: https://leetcode.com/problems/island-perimeter/

Number of Distinct Islands: https://www.lintcode.com/problem/number-of-distinct-

islands/description

Number of Distinct Islands-II: https://www.lintcode.com/problem/number-of-distinct-

islands-ii/description

Word Search: https://leetcode.com/problems/word-search/description/
Word Search-II: https://leetcode.com/problems/word-search-ii/description/
Walls and Gates: https://www.lintcode.com/problem/walls-and-gates/description

Portal: https://www.lintcode.com/problem/portal/description

Surrounded Regions: https://leetcode.com/problems/surrounded-regions/

Flood Fill: https://leetcode.com/problems/flood-fill/

Coloring a Border: https://leetcode.com/problems/coloring-a-border/

Pacific Atlantic Water Flow: https://www.lintcode.com/problem/pacific-atlantic-water-

flow/description

Group4: DAG

Topological Order: https://www.lintcode.com/problem/topological-sorting/description

Course Schedule-II: https://leetcode.com/problems/course-schedule/ Course Schedule-III: https://leetcode.com/problems/course-schedule-ii/

All Paths in DAG: https://leetcode.com/problems/all-paths-from-source-to-target/

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