

Guide to some advanced DS and Algo

Segment Tree

<https://www.hackerearth.com/practice/data-structures/advanced-data-structures/segment-trees/tutorial/>

Question 1

<https://www.codechef.com/problems/FLIPCOIN>

If want to go deep though not really needed:

<https://codeforces.com/blog/entry/22616>

Segment tree with lazy propagation (Not required)

<https://www.hackerearth.com/practice/data-structures/advanced-data-structures/segment-trees/practice-problems/algorithm/little-deepu-and-array/>

Trie

<https://www.hackerearth.com/practice/data-structures/advanced-data-structures/trie-key-word-tree/tutorial/>

<https://www.topcoder.com/community/competitive-programming/tutorials/using-tries/>

Question 1

<https://www.hackerrank.com/challenges/contacts/problem>

Question 2

<https://www.hackerrank.com/challenges/no-prefix-set/problem>

Question 3

<https://www.geeksforgeeks.org/word-break-problem-trie-solution/>

(See it's DP solution as well)

Prims

https://www.geeksforgeeks.org/prims-algorithm-using-priority_queue-stl/

Question-1

<https://www.hackerrank.com/challenges/prismstsub/problem>

DSU

<https://www.hackerearth.com/practice/notes/disjoint-set-union-union-find/>

Question 1

<https://www.hackerrank.com/challenges/components-in-graph/problem>

Question 2

https://www.hackerrank.com/challenges/friend-circle-queries/problem?h_l=interview&playlist_slugs%5B%5D=interview-preparation-kit&playlist_slugs%5B%5D=miscellaneous

Question 3

<https://www.codechef.com/problems/SNGRAPH>

Kruskal

<https://www.geeksforgeeks.org/kruskals-minimum-spanning-tree-using-stl-in-c/>

Question 1

<https://www.hackerrank.com/challenges/kruskalmstsub/problem>

Dijkstra

https://www.geeksforgeeks.org/dijkstras-shortest-path-algorithm-using-priority_queue-stl/

Question 1

<https://www.hackerrank.com/challenges/dijkstrashortreach/problem>

Kosa raju

<https://www.geeksforgeeks.org/strongly-connected-components/>

Question 1

<https://www.hackerrank.com/contests/pg1-induction/challenges/sacred-games>

Question 2

<https://www.codechef.com/problems/TUX02>

Topological sort

Kahn's algo

<https://www.geeksforgeeks.org/topological-sorting-indegree-based-solution/>

All topological sort using backtracking

<https://www.geeksforgeeks.org/all-topological-sorts-of-a-directed-acyclic-graph/>

Question-1

<https://leetcode.com/problems/course-schedule/>

Question-2

<https://leetcode.com/problems/course-schedule-ii/>

Fast Matrix-Exponentiation

<https://www.hackerearth.com/practice/notes/fast-matrix-exponentiation-2/>

Question-1

<https://www.hackerearth.com/problem/golf/hack-sequence/>