Editorial of Monthly Contest #1 (Rated)

By **cjchirag7**, 7 months ago,

Here, we present you the Editorial for the Monthly Contest #1 (Rated). I hope you enjoyed the contest !!

If you have any queries regarding any of the following tutorials or solutions, feel free to ask in the comment section below. We would try to answer your query as soon as possible.

Special thanks to **rath772k** for the only original problem in the contest.

A. Binary search or Dp or Greedy?

Tutorial
Solution

B. Game Developer

Tutorial
Solution

C. Playoff Dream

Author : rath772k

Method 1
Method 2
Method 1 code
Method 2 code

D. TunTun mausi and her laddus

Tutorial
Solution 1
Solution 2

E. Anti-monopoly

Tutorial
Solution

F. Ab "Swarnim" CodeISM jaye ya Matiyae?

Tutorial
Solution

Read more »

Tutorial of Monthly Contest #1 (Rated)

Monthly Contest #1 (Rated)

By **cjchirag7**, history, 7 months ago,

Hello Everyone!

We hope you are enjoying the long challenges.

I would like to invite you to our first rated contest in this group, Monthly Contest #1 (Rated). The contest will start at Sunday, November 1, 2020 at 20:05 (IST). You will be given 6 problems and 2 hours to solve them. The problems would be in increasing order of difficulty.

The problems have been prepared by **Its_Easy**, **contests_only**, **rath772k**, **cjchirag7** and **rajankesharii**. Thanks to **vikramaditya8**, **ujju_sucks**, **Sanket_17** and **ankit_1107** for testing the problems and providing valuable feedback. Special thanks to our coordinator **Its_Easy**

We have tried to prepare the problems in such a way that they can be solved using the topics, covered in CR-1 as well as CR-2. We hope we will receive a lot of participation and you will enjoy solving the problems.

Register here for the contest

UDP : Editorial

We are planning to organize such short contests on a monthly basis, but it all depends on the participation we receive. I would recommend that you try to attempt all the problems and upsolve the problems that you couldn't solve during the contest. This is a general advice for all the contests that you give, on any of the platforms. If you want to know more about "what is upsolving?", "how to upsolve effectively", or "why upsolving ?", you should watch this video once.

PS: Editorial for all the problems would be provided after the contest.

Read more »

Announcement of Monthly Contest #1 (Rated)

+30 cjchirag7 7 months ago 3

Resources

By **cjchirag7**, 8 months ago,

All the resources for both CR-1 & CR-2 would be updated here too, as and when, the topic is covered in any of the class.

Basics

Learn C++

- If you know C, you can shift to C++ by reading this short doc
- If you don't know C, then you can learn C++, as per the instructions given in this FB post

Additional Resource : If someone needs a reference book for C++, STL or OOPs using C++, you can refer this book

Time Complexity

1. Find whiteboard Slides of the class here
2. Watch this video for more about asymptotic notations .
3. Read this tutorial for space and time complexity

Implementation

- Solve warmup and implementation problems on hackerrank, at least until you get 5 or 6 star in problem solving on hackerrank.
- Solve problems from CR-1 Long Challenge on Implementation

STL

Vectors

View this for reference.

Pairs

View this for reference.

Sorting and comparators

1. Code used for comparator functions in sort and STL pairs can be found here
2. View this for reference.

Practice Problems :

1. https://www.spoj.com/problems/SORT2D/
2. https://www.spoj.com/problems/DOTAA2/
3. https://www.spoj.com/problems/AMR12G/

Stack

1. View this for reference.

Practice Problems :

1. https://www.spoj.com/problems/STPAR/
2. https://www.spoj.com/problems/JNEXT/
3. https://www.spoj.com/problems/ONP/
4. https://www.codechef.com/problems/COMPILER
5. https://www.spoj.com/problems/MMASS/

Queue

1. View this for reference.

Practice Problems :

1. https://www.spoj.com/problems/QUEUEEZ/
2. https://www.spoj.com/problems/QUEUESEQ/
3. https://www.spoj.com/problems/ADAQUEUE/

Dequeue

1. View this for reference.

Practice Problems :

1. https://www.hackerrank.com/challenges/deque-stl/problem
2. https://www.hackerrank.com/challenges/queries-with-fixed-length/problem

List

View this for reference.

Set

View this for reference.

Map

View this for reference.

Unordered-Set

View this for reference.

Unordered-Map

View this for reference.

Priority Queue

View this for reference.

Also you can view this to know the syntax of making a priority queue of structure or class in C++.

Summary of all containers

For more topics, it would be added later, as and when those are covered in the sessions.
You may like to go through these articles once for an overview of all the containers of STL :
1. STL Tutorial Part 1
2. STL Tutorial Part 2

Some practice problems :

1. https://arc087.contest.atcoder.jp/tasks/arc087_a
2. https://www.spoj.com/problems/MINSTOCK/
3. http://www.spoj.com/problems/ADAFIELD/

Additional Resource :
For reference to all the STL containers, consider visiting
https://www.cplusplus.com/reference/stl/

Number Theory

Primes and Factorisation

1. Find the whiteboard slides here
2. Go through this hackerearth tutorial for primes, composites, sieve of erasthones, segmented sieve, etc..
3. Go through this article for number of divisors and sum of divisors.
4. Read upto "pre-computed primes method" from this article

Practice Problems :

1. https://www.spoj.com/problems/TDPRIMES/
2. https://www.spoj.com/problems/BREAKING/
3. https://www.spoj.com/problems/CDRSANJ/
4. https://www.spoj.com/problems/PRIME1/
5. https://www.spoj.com/problems/VECTAR8/
6. https://www.spoj.com/problems/HS08PAUL/
7. https://www.spoj.com/problems/NGIRL/
8. https://www.spoj.com/problems/DCEPC505/
9. https://www.spoj.com/problems/DIVSUM/
10. https://www.spoj.com/problems/NDIV/
11. https://www.hackerrank.com/contests/projecteuler/challenges/euler134/problem

- Find more problems in CR-1 Long Challenge on Number Theory

Modulo Arithmetic

1. Find whiteboard slides here
2. Go through this article for modulo arithmetic and binary exponentiation.

Practice Problems:

1. https://www.spoj.com/problems/LASTDIG/
2. https://atcoder.jp/contests/abc178/tasks/abc178_c
3. https://atcoder.jp/contests/abc178/tasks/abc178_d
4. https://atcoder.jp/contests/abc172/tasks/abc172_e
5. https://atcoder.jp/contests/abc171/tasks/abc171_e
6. https://www.spoj.com/problems/PRINT/
7. https://atcoder.jp/contests/abc177/tasks/abc177_e

- Find more problems in CR-1 Long Challenge on Number Theory

GCD, ETF and matrix exponentiation

1. Find whiteboard slides here
2. For ETF and its properties, go through this article.
3. Go through this article for binary exponentiation and related.
4. For matrix exponentiation and calculating nth Fibonacci number in O(log n), go through this article

Practice Problems:

1. https://www.spoj.com/problems/ETF/
2. https://www.hackerrank.com/challenges/john-and-gcd-list/problem
3. https://www.spoj.com/problems/ETFD/
4. https://www.hackerearth.com/problem/algorithm/maximise-gcd-4126af7b/
5. https://www.hackerrank.com/challenges/sherlock-and-gcd/problem
6. https://www.codechef.com/problems/GCDMOD

- Find more problems in CR-1 Long Challenge on Number Theory — II

Modulo Inverse

1. Find whiteboard slides here

Practice Problems: - Find problems in CR-1 Long Challenge on Number Theory — II

Binary Search

Binary Search

Resources :

1. Watch this video on binary search by Errichto
2. Go through this topcoder article on binary search once.
3. Link to doc used in the first session
4. Link to doc used in the second session
5. See lower_bound() and upper_bound() in C++ STL

Practice Questions :

1. https://www.spoj.com/problems/BSEARCH1/
2. https://www.spoj.com/problems/EKO/
3. https://atcoder.jp/contests/abc174/tasks/abc174_e
4. https://www.spoj.com/problems/HACKRNDM/
5. https://www.hackerrank.com/challenges/hackerland-radio-transmitters/problem
6. https://www.spoj.com/problems/PIE/
7. https://www.spoj.com/problems/AGGRCOW/
8. https://www.spoj.com/problems/NOTATRI/
9. https://www.spoj.com/problems/BOOKS1/

- Find more problems in CR-1 Long Challenge on Binary Search

Additional Resources :

You can also watch this video series by codeforces, on Binary Search and try the practice problems given there.

Ternary Search

Resources :

1. Go through this article

Problems :

1. https://www.codechef.com/problems/ICM2003
2. https://www.hackerearth.com/practice/algorithms/searching/ternary-search/practice-problems/algorithm/the-exam/description/

- Find more problems in CR-1 Long Challenge on Binary Search

Programming Techniques

Greedy

Resources :

1. Link to the doc used
2. Link to hackerearth tutorial on greedy

Practice Questions :

1. https://codingcompetitions.withgoogle.com/kickstart/round/000000000019ffc7/00000000001d3f56
2. https://www.spoj.com/problems/SOLDIER/
3. https://www.spoj.com/problems/ADDREV/
4. http://www.spoj.com/problems/DIEHARD/
5. http://www.spoj.com/problems/CHOCOLA/
6. http://www.spoj.com/problems/EXPEDI/
7. http://www.spoj.com/problems/TTTABLE/
8. http://www.spoj.com/problems/AMBM/
9. http://www.spoj.com/problems/AMR12I/
10. http://www.spoj.com/problems/MSCHED/

- Find more problems in CR-1 Long Challenge on Greedy or DP or Binary Search

Recursion and Backtracking

Resources :

1. Link to the doc used
2. Link to hackerearth article

Practice Questions :

1. https://www.hackerrank.com/challenges/the-power-sum/problem
2. https://www.hackerrank.com/challenges/recursive-digit-sum/problem

DP (Dynamic Programming)

Resources :

- Link to the docs used : — Day 1: Fibonacci using recursion, 1-D dp — Day 2: Top down DP vs Bottom up DP, Short-circuiting, passing vector to function, Primitive Calculator, Lines of wine — Day 3: Standard DP Problems : nCr, Maximum sum subarray, Minimum coins problem, Knapsack problem, Space Optimised DP, minimum insertions to sort array, LIS problem, Overflow and some precautions — Day 4: Maximum sum path in matrix, Garland problem, Matrix Chain Multiplication DP (MCM type DP problems), Principle of Inclusion and Exclusion (PIE) — Day 5: Bitwise Operations and their applications, Bitmasks, DP with bitmasking
- Link to hackerearth articles
- Watch Errichto's videos on DP — Part-1: iteration vs. recursion — Part-2: Coin change, double counting — Part-3: Line of wines
- For visualizing recursion tree and overlapping sub-problems in DP based problems, use this tool
- Youtube streams of CodeISM for Day 4 and 5 — DP Day 4: Maximum sum path in matrix, Garland problem, Matrix Chain Multiplication DP (MCM type DP problems), Principle of Inclusion and Exclusion (PIE) — DP Day 5 Part 1: Bitwise Operations and their applications, Bitmasks — DP Day 5 Part 2: DP with bitmasking

Practice Questions on DP :

1. Try A to K from atcoder DP contest : https://atcoder.jp/contests/dp/tasks
2. https://www.spoj.com/problems/COINS/
3. https://www.spoj.com/problems/TRT/
4. https://codeforces.com/problemset/problem/1245/C
5. https://codeforces.com/problemset/problem/628/B
6. https://codeforces.com/problemset/problem/455/A%7C
7. https://www.codechef.com/problems/ALTARAY
8. https://www.codechef.com/problems/DELISH
9. https://www.codechef.com/problems/DBOY
10. https://www.codechef.com/problems/XORSUB
11. https://www.codechef.com/problems/GRID
12. https://www.codechef.com/problems/TADELIVE
13. https://www.codechef.com/problems/FROGV
14. http://www.spoj.com/problems/MDOLLS/
15. http://www.spoj.com/problems/MSTICK/
16. http://www.spoj.com/problems/MCARDS/
17. https://www.spoj.com/problems/SAMER08D/
18. https://www.spoj.com/problems/AIBOHP/
19. https://www.codechef.com/problems/MATRIX2

20. https://www.codechef.com/problems/AMSGAME2

- Find more problems in CR-1 Long Challenge on Greedy or DP or Binary Search

Practice Questions on MCM type DP problems :

1. https://www.spoj.com/problems/MIXTURES/
2. https://atcoder.jp/contests/dp/tasks/dp_n
3. https://leetcode.com/problems/minimum-cost-to-cut-a-stick/

Practice Questions on MCM type Bitmasks and DP :

1. https://www.hackerrank.com/challenges/counter-game/problem
2. https://leetcode.com/problems/sum-of-two-integers/
3. https://www.spoj.com/problems/ASSIGN/
4. https://atcoder.jp/contests/dp/tasks/dp_u
5. https://leetcode.com/problems/number-of-ways-to-wear-different-hats-to-each-other/
6. https://www.hackerearth.com/practice/algorithms/dynamic-programming/bit-masking/practice-problems/algorithm/mehta-and-the-tricky-triplets/
7. https://www.hackerearth.com/practice/algorithms/dynamic-programming/bit-masking/practice-problems/algorithm/trophy-of-xorasia-0a2d466a/description/ [Asked in Google Intern Test '20]

- Find more problems in CR-1 Long Challenge on Bitmaks and DP

Graph Algorithms

Graph Representation, Graph Traversals - BFS, DFS and Topological Sorting

Resources :

- Link to the docs used : — Day 1: Introduction to Graphs and BFS — Day 2: DFS, its applications and topological sorting
- Link to articles : — 1. Graph Representation — 2. BFS (Breadth First Search) — 3. Applications of BFS — 4. DFS (Depth First Search) — 5. Applications of DFS — 6. Topological Sort (Hackerearth) — 7. Topological Sort (CP-Algorithms)
- Youtube streams of CodeISM for Day 1 and Day 2 — Graph Day 1: Basics of Graphs, Graph Representations, BFS and its applications — Graph Day 2 Part 1: DFS and its applications — Graph Day 2 Part 2: More Applications of DFS and Topological Sort

Practice Questions :

1. https://www.hackerearth.com/practice/algorithms/graphs/breadth-first-search/practice-problems/algorithm/bfs/
2. https://www.hackerearth.com/practice/algorithms/graphs/breadth-first-search/practice-problems/algorithm/monk-and-the-islands/
3. https://www.spoj.com/problems/BITMAP/
4. https://www.spoj.com/problems/KATHTHI/
5. https://codeforces.com/contest/329/problem/B
6. https://codeforces.com/problemset/problem/242/C
7. https://codeforces.com/problemset/problem/199/D
8. https://codeforces.com/problemset/problem/60/B
9. https://www.spoj.com/problems/ADATRIP
10. https://www.spoj.com/problems/AKBAR
11. https://www.spoj.com/problems/ALCATRAZ3
12. https://www.spoj.com/problems/CATM
13. https://www.spoj.com/problems/ONEZERO
14. https://www.spoj.com/problems/PPATH
15. https://www.spoj.com/problems/NAKANJ
16. https://www.spoj.com/problems/MICEMAZE
17. https://www.hackerearth.com/practice/algorithms/graphs/topological-sort/practice-problems/algorithm/lonelyisland-49054110/
18. https://cses.fi/problemset/task/1679/
19. https://www.codechef.com/problems/CHFNFRN
20. https://cses.fi/problemset/task/1666
21. https://codingcompetitions.withgoogle.com/kickstart/round/000000000019ff43/00000000003379bb
22. https://cses.fi/problemset/task/1669
23. https://cses.fi/problemset/task/1678/

- Also solve problems A to K in CR-1 + CR-2 Graphs and Shortest Paths

Shortest Path Algorithms

Resources :

1. Link to the youtube stream of Graphs Day 3 — Shortest Path Algorithms
2. Link to the doc used for shortest path algorithms
3. Link to hackerearth article
4. Link to blog for graph modelling

Practice Questions :

1. https://cses.fi/problemset/task/1667
2. https://cses.fi/problemset/task/1680
3. https://cses.fi/problemset/task/1671
4. https://cses.fi/problemset/task/1672
5. https://www.spoj.com/problems/ARBITRAG/
6. https://www.hackerearth.com/practice/algorithms/graphs/shortest-path-algorithms/practice-problems/algorithm/shortest-path-revisited-9e1091ea/ (asked in sprinkler intern test '20)
7. https://cses.fi/problemset/task/1195
8. https://www.hackerrank.com/challenges/synchronous-shopping/problem (asked in GS intern test '20)

- Also solve problems L and beyond in CR-1 + CR-2 Graphs and Shortest Paths
- Also solve problems from CR-1 + CR-2 Graph Algorithms-2

DSU and MST

Resources :

1. Link to the youtube stream of Graphs Day 4 — DSU and MST
2. Link to the doc used for shortest path algorithms
3. Link to article for DSU (Disjoint Set Union)
4. Link to blog for MST (Minimum Spanning Tree)

Practice Questions :

1. https://www.hackerrank.com/challenges/merging-communities/problem
2. https://cses.fi/problemset/task/1676
3. https://cses.fi/problemset/task/1675

- Also solve problems from CR-1 + CR-2 Graph Algorithms-2

SCC, Diameter of tree and Binary Lifting

Resources :

1. Link to the youtube stream of Graphs Day 6 — SCC, Diameter of tree and Binary Lifting
2. Link to the doc used for SCC, Diameter of tree and binary lifting
3. Link to cp-algorithms article for SCCs
4. Sections 14.2 and 18.1 from CPH book

Practice Questions :

1. https://cses.fi/problemset/task/1683
2. https://www.codechef.com/problems/MCO16405
3. https://www.spoj.com/problems/CAPCITY/
4. https://cses.fi/problemset/task/1131
5. https://cses.fi/problemset/task/1687
6. https://cses.fi/problemset/task/1686
7. https://www.spoj.com/problems/BREAK/

- Also solve problems from CR-1 + CR-2 Graph Algorithms-3

LCA, DP on trees and Re-rooting technique

Resources :

1. Link to the youtube stream of Graphs Day 6 — LCA, DP on trees and Re-rooting technique
2. Link to the doc used for LCA, DP on trees and Re-rooting technique

3. Link to cp-algorithms article for Binary Lifting
4. Link to CF blog on DP on trees

Practice Questions :

1. https://www.spoj.com/problems/LCA/
2. https://cses.fi/problemset/task/1135
3. https://atcoder.jp/contests/dp/tasks/dp_p
4. https://cses.fi/problemset/task/1130
5. https://cses.fi/problemset/task/1133
6. https://www.hackerearth.com/practice/algorithms/graphs/depth-first-search/practice-problems/algorithm/parwal-problem/description/
7. https://cses.fi/problemset/task/1688
8. https://atcoder.jp/contests/dp/tasks/dp_v
9. https://cses.fi/problemset/task/1132

- Also solve problems from CR-1 + CR-2 Graph Algorithms-3

More Practice Problems on Graphs

1. https://www.hackerrank.com/challenges/torque-and-development/problem
2. https://www.hackerrank.com/challenges/synchronous-shopping/problem
3. https://www.codechef.com/problems/MCO16405
4. https://www.spoj.com/problems/CAPCITY/
5. https://www.spoj.com/problems/BREAK/
6. https://www.spoj.com/problems/ONEZERO/
7. https://www.spoj.com/problems/WATER/
8. https://www.spoj.com/problems/PPATH/
9. https://www.hackerrank.com/challenges/tree-pruning/
10. https://www.spoj.com/problems/COURIER/
11. https://www.codechef.com/problems/PROFTRIP
12. https://www.hackerearth.com/practice/algorithms/graphs/shortest-path-algorithms/practice-problems/algorithm/lost-in-city-f6e7f540/?
13. https://www.spoj.com/problems/ADACYCLE/
14. https://www.spoj.com/problems/LABYR1/
15. https://www.spoj.com/problems/MICEMAZE/
16. https://www.spoj.com/problems/PT07Y/
17. https://www.spoj.com/problems/PT07Z/
18. https://www.spoj.com/problems/PYRA/
19. https://www.spoj.com/problems/BUGLIFE/
20. https://www.spoj.com/problems/BITMAP/
21. https://www.spoj.com/problems/POUR1/
22. https://www.spoj.com/problems/KOICOST/
23. https://www.codechef.com/LTIME61B/problems/TREESORT
24. https://www.spoj.com/problems/BLINNET/
25. https://www.spoj.com/problems/TOPOSORT/
26. https://www.spoj.com/problems/LCA/
27. https://www.spoj.com/problems/DISQUERY/
28. https://www.spoj.com/problems/NTICKETS/
29. https://www.codechef.com/problems/TYTACTIC
30. https://www.codechef.com/JULY17/problems/PSHTTR
31. https://atcoder.jp/contests/dp/tasks/dp_p
32. https://atcoder.jp/contests/dp/tasks/dp_v
33. https://atcoder.jp/contests/abc160/tasks/abc160_f
34. https://www.hackerrank.com/challenges/the-quickest-way-up/problem
35. https://cses.fi/problemset/task/1752
36. https://www.spoj.com/problems/DRTREE/
37. https://cses.fi/problemset/task/1752

- If you need more problems, you can find from these links also:

1. https://www.codechef.com/certification/data-structures-and-algorithms/prepare
2. https://codeforces.com/blog/entry/55274

String Algorithms and Tries

String Matching and Trie

Resources :

- Link to the doc used : — String Matching and Trie
- Link to articles : — 1. Prefix Function and KMP — 2. Tries — IIIT Hyderabad tutorial — 3. Hackerearth article on Tries
- Youtube streams of CodeISM — String Matching and Trie

Practice Questions :

1. https://www.spoj.com/problems/NHAY/
2. https://www.spoj.com/problems/PERIOD/
3. https://www.codechef.com/problems/BORDER
4. https://www.hackerrank.com/challenges/contacts/problem
5. https://practice.geeksforgeeks.org/problems/minimum-xor-value-pair/0/
6. https://www.hackerrank.com/challenges/maximum-xor/problem
7. https://www.hackerrank.com/challenges/no-prefix-set/problem

Other string algorithms**

Resources :

- https://cp-algorithms.com/string/string-hashing.html
- https://cp-algorithms.com/string/rabin-karp.html
- https://cp-algorithms.com/string/manacher.html

Practice Questions :

1. https://www.spoj.com/problems/ADACLEAN/
2. https://codeforces.com/problemset/problem/271/D
3. https://leetcode.com/problems/palindromic-substrings/

Range Query

Sparse Table and Fenwick Tree (or Binary Indexed Tree)

Resources :

- Link to the doc used : — Sparse Table, Fenwick Tree (Binary Indexed Tree or BIT) and Subtree & Path queries in a tree
- Link to articles : — 1. CP Algorithms article on Sparse Trees — 2. Hackerearth article on Fenwick Tree — 3. Topcoder tutorial on Fenwick Tree
- Youtube streams of CodeISM — Sparse Table, Fenwick Tree (Binary Indexed Tree or BIT), Subtree and Path queries in a tree

Practice Questions :

1. https://cses.fi/problemset/task/1646
2. https://cses.fi/problemset/task/1652
3. https://cses.fi/problemset/task/1650
4. http://www.spoj.com/problems/RMQSQ/
5. https://cses.fi/problemset/task/1648
6. https://www.spoj.com/problems/INVCNT/
7. https://cses.fi/problemset/task/1749
8. https://cses.fi/problemset/task/1651
9. https://cses.fi/problemset/task/1137
10. https://cses.fi/problemset/task/1138
11. https://cses.fi/problemset/task/1739

Segment Trees

Resources :

- Link to the doc used : — Segment Trees
- Link to articles : — Codeforces Edu Lectures on segment trees — CS Academy article on segment trees with visualisation — Page 99 of CPH Book — CP-Algorithms article on Segment Trees — Codeforces blog on segment trees
- Youtube video of CodeISM — Segment Trees, with implementation in C++

Practice Questions :

1. https://codeforces.com/edu/course/2/lesson/4/1/practice/contest/273169/problem/B
2. https://codeforces.com/edu/course/2/lesson/4/1/practice/contest/273169/problem/C
3. https://codeforces.com/edu/course/2/lesson/4/1/practice/contest/273169/problem/A
4. https://codeforces.com/edu/course/2/lesson/4/2/practice/contest/273278/problem/A
5. https://cses.fi/problemset/task/1143
6. https://www.spoj.com/problems/KQUERY/
7. https://www.spoj.com/problems/POSTERS/
8. https://cses.fi/problemset/task/1735
9. https://www.codechef.com/problems/IITK1P10
10. https://www.spoj.com/problems/GSS3/
11. https://codeforces.com/problemset/problem/383/C
12. https://codeforces.com/problemset/problem/339/D
13. https://codeforces.com/problemset/problem/1234/D
14. https://codeforces.com/contest/356/problem/A
15. https://codeforces.com/contest/474/problem/F
16. https://codeforces.com/contest/515/problem/E
17. https://codeforces.com/problemset/problem/52/C
18. https://cses.fi/problemset/task/1736
19. https://www.codechef.com/problems/TAQTREE
20. https://www.codechef.com/problems/TYTACTIC

Combinatorics, Probability and Expected Value

Combinatorics, Probability and Expected Value

Resources :

- Link to the doc used : — Combinatorics, Probability and Expected Value
- Link to articles : — Topcoder article on basics of combinatorics — CP-Algorithms article on "Stars and bars" technique — CP-Algorithms article on catalan numbers — CF Blog on Sums and Expected Value
- Youtube streams of CodeISM — Combinatorics, Probability and Expected Value

Practice Questions :

1. https://www.hackerearth.com/problem/algorithm/binary-string-construction-c31f511d/description/
2. https://atcoder.jp/contests/abc178/tasks/abc178_d
3. https://atcoder.jp/contests/abc178/tasks/abc178_c
4. https://codingcompetitions.withgoogle.com/kickstart/round/000000000019ffc8/00000000002d8565#problem
5. https://codeforces.com/problemset/problem/1475/E
6. https://leetcode.com/problems/number-of-ways-of-cutting-a-pizza/

- More practice problems can be found in the Long challenge on combinatorics and probability

*Topics marked with ** are less important, as compared to others. Go through them, only when you have completed other topics*

Read more »

+19 cjchirag7 8 months ago 1