

# Competitive Programming Checklist

## ■ Level 0: Fundamentals

CSES – Counting Divisors

Infoarena – factori2 (prime factorization up to  $10^7$ )

Infoarena – euler (Euler's Totient up to  $10^6$ )

## ■ Level 0: 1D Dynamic Programming

AtCoder dp\_a – Frog 1

AtCoder dp\_b – Frog 2

CSES – Minimizing Coins

CSES – Coin Combinations I

Maximum Subarray Sum (Kadane)

Leetcode – House Robber

CSES – Staircase

## ■ Level 0: Simple Implementation / Ad-Hoc

CF 702A – Maximum Increase

CF 1659A – Red Versus Blue

## ■ Level 1: GCD / LCM & Combinatorics

Kilonova 784 – divizor

Kilonova 772 – numere

CSES – Binomial Coefficients II

Kilonova 1982 – Combination

Kilonova 1981 – divizibilitate

Kilonova 1983 – Common divisors and multiples

## ■ Level 1: 2D Dynamic Programming (Grid & Basic String)

CSES – Grid Paths

CSES – Grid Paths with Obstacles

Longest Common Substring

AtCoder dp\_f – LCS

AtCoder dp\_d – 0/1 Knapsack

Subset Sum

Leetcode – Partition Equal Subset Sum

CSES – Edit Distance

## ■ Level 1: CF Practice – Core Patterns

CF 1626A – Equidistant Letters

CF 1363B – Subsequence Hate

CF 1485A – Add and Divide

## ■ Level 2: Sequence & Space-Optimized DP

CSES – LIS  $O(n^2)$

Leetcode – LIS  $O(n \log n)$

Optimized 0/1 Knapsack (1D DP)

Codeforces EDU – Digit DP

## ■ Level 2: Graphs & Trees Intro

CSES – Labyrinth

Kilonova – Parcurgeri (NOI 2013 p1)

Kilonova 533 – keidei (DFS pre-order / BFS)

Kilonova 1126 – sumarb (subtree sums)

Kilonova 1254 – depth (node depths via DFS)

## ■ Level 2: CF Practice – Intermediate

CF 1399C – Boats Competition

CF 1473B – String LCM

CF 1500C – Matrix Sorting

## ■ Level 3: Advanced Topics

CSES – Subarray Divisors

CSES – Removal Game

Leetcode – Longest Palindromic Subsequence

Leetcode – Palindrome Partitioning II

AtCoder dp\_g – Longest Path in DAG

Infoarena – submultime (subset-sum bitset DP)

## ■ Level 3: CF Practice – Advanced

CF 1705C – Mark and His Unfinished Essay

CF 1132G – Greedy Merchants

Exponential-state DP & Bitmask Tutorial (Video)

Exponential-state DP & Bitmask Tutorial (Blog)

CF 2069C – Bitmask DP Example

CF 2053C – Common Divisors?

CF 2052F

CF 2050E

CF 2050C

CF 2033D

CF 2029C

CF 2028C

CF 2027C

CF 2008E

CF 2008D

CF 1999E

CF 1997D

CF 1994C  
CF 1992D  
CF 1987C  
CF 1984C1

## ■ Level 4: Elite Challenges

AtCoder dp\_h – TSP with Bitmask  
AtCoder dp\_o – Assignment Problem (bitmask)  
Sprague–Grundy / Grundy Numbers (theory & small examples)

## ■ Level 4: CF Practice – Elite

CF 1400E – Clear the Multiset  
CF 1499F – Diameter Cuts  
CF 2036D  
CF 2036C  
CF 2034B  
CF 2026C  
CF 2025C  
CF 2020C  
CF 2019B  
CF 1999D  
CF 1993C  
CF 1984B  
CF 1983B  
CF 1980D  
CF 1978C