

TLE Eliminators - DP Bootcamp

Class Number	In-Class Problems	Homework Problems	Lecture Slides
Week 1 - Harisam			
Class 1 Introduction to Recursion with memoization	1) Fibonacci 2) Dice Combinations CSES https://cses.fi/problemset/task/1633 3) Min path sum in Grid	1) CSES Minimizing Coins https://cses.fi/problemset/task/1634 2) CSES Coin Combinations 1 https://cses.fi/problemset/task/1635 3) LIS https://leetcode.com/problems/longest-increasing-subsequence/description/ 4) AtCoder Frog 2 https://atcoder.jp/contests/dp/tasks/dp_b	Link
Bonus Problems after Class 1		Tenzing and Balls https://codeforces.com/problemset/problem/1842/C Zebroid https://codeforces.com/problemset/problem/209/A	
Class 2 Problem Solving on Recursion with memoization	AtCoder Vacation https://atcoder.jp/contests/dp/tasks/dp_c Edit Distance CSES https://cses.fi/problemset/task/1639 CSES Book Shop https://cses.fi/problemset/task/1158	Hamiltonian Wall Codeforces https://codeforces.com/contest/1766/problem/C Array Walk Codeforces https://codeforces.com/problemset/problem/1389/B By Elevator or Stairs? Codeforces https://codeforces.com/problemset/problem/1249/E Dima and a Bad XOR Codeforces https://codeforces.com/contest/1151/problem/B Omkar and Bed Wars Codeforces https://codeforces.com/problemset/problem/1392/D Remove the Bracket Codeforces https://codeforces.com/contest/1787/problem/C Sleeping Schedule Codeforces https://codeforces.com/problemset/problem/1324/E	DP Bootcamp Class 2
Class 3 Terminology in DP, Time and Space complexity estimation	Covered Path Codeforces https://codeforces.com/contest/534/problem/B Road Optimization Codeforces https://codeforces.com/contest/1625/problem/C	Coin Combination 2 CSES https://cses.fi/problemset/task/1636 Array Description CSES https://cses.fi/problemset/task/1746 Mashmokh and ACM Codeforces https://codeforces.com/contest/414/problem/B Sending a Sequence Over the Network Codeforces https://codeforces.com/contest/1741/problem/E Pictures with Kittens Codeforces https://codeforces.com/problemset/problem/1077/F1	Link
Week 2 - Harisam			
Class 1 Recursive Vs Iterative DP	Planar reflections Codeforces https://codeforces.com/contest/1498/problem/C	Add one Codeforces https://codeforces.com/problemset/problem/1513/C Rectangle Cutting CSES https://cses.fi/problemset/task/1744 Removal Game CSES https://cses.fi/problemset/task/1097 Flood fill Codeforces https://codeforces.com/contest/1114/problem/D	Link
Class 2 Problem Solving on Recursive Vs Iterative DP	Armchairs Codeforces https://codeforces.com/contest/1525/problem/D AtCoder Knapsack 2 https://atcoder.jp/contests/dp/tasks/dp_e	Almost Identity Permutations Codeforces https://codeforces.com/contest/888/problem/D Explorer Space Codeforces https://codeforces.com/contest/1517/problem/D Office Keys Codeforces https://codeforces.com/contest/831/problem/D Coloring Trees Codeforces https://codeforces.com/contest/711/problem/C Yet another problem on a subsequence codeforces https://codeforces.com/contest/1000/problem/D Different Arrays codeforces https://codeforces.com/contest/1783/problem/D	Link
Class 3 State elimination, space optimization and transition optimization	e elimination: n white balls, m black balls. Find # ways to place them if you can place exactly a[i] balls at position i. AtCoder Candies https://atcoder.jp/contests/dp/tasks/dp_m	Counting Towers CSES https://cses.fi/problemset/task/2413 Between two arrays AtCoder https://atcoder.jp/contests/abc222/tasks/abc222_d Integer division AtCoder https://atcoder.jp/contests/abc288/tasks/abc288_f Checkout Assistant Codeforces https://codeforces.com/contest/18/problem/B	DP Bootcamp Class 6.pdf
Week 3 - Harisam			
Class 1 Problem Solving on Transition optimization	Lottery AtCoder https://atcoder.jp/contests/abc243/tasks/abc243_f Introduction: Segment Tree Optimization Codeforces https://codeforces.com/gym/316466/problem/A	Subsequences Codeforces https://codeforces.com/contest/597/problem/C Maximum Subarray Codeforces https://codeforces.com/contest/1796/problem/D Increasing Subsequences AtCoder https://cses.fi/problemset/task/1145 Chip Move Codeforces https://codeforces.com/contest/1716/problem/D	DP Bootcamp Class 7.pdf
Class 2 Answer Construction	Constructing Path in min sum grid path Reconstructing LCS	Dima and Bad XOR Codeforces https://codeforces.com/contest/1151/problem/B Cashback Codeforces https://codeforces.com/contest/940/problem/E Minimizing coins CSES (Try to reconstruct the answer here) https://cses.fi/problemset/task/1634 River Locks Codeforces https://codeforces.com/problemset/problem/1700/D Journey Codeforces https://codeforces.com/contest/721/problem/C	DP Bootcamp Class 8.pdf
Class 3 Non Integer DP States, Push and Pull DP	Non Integer DP States Kickstart problem Push pull dp: Chef Monocarp codeforces https://codeforces.com/contest/1437/problem/C	Sports Festival Codeforces https://codeforces.com/contest/1509/problem/C Make them equal Codeforces https://codeforces.com/contest/1633/problem/D Leaping Tak AtCoder https://atcoder.jp/contests/abc179/tasks/abc179_d Hot startup Codeforces https://codeforces.com/contest/1739/problem/D1	Link
Week 4 - Priyansh			
Class 1 DP with Bitmasking	Points Distance Problem - Permutation Minimum XOR Problem https://leetcode.com/problems/minimum-xor-sum-of-two-arrays/	O Matching https://atcoder.jp/contests/dp/tasks/dp_o Assign https://www.spoj.com/problems/ASSIGN/ Kefa and Dishes https://codeforces.com/contest/580/problem/D	Link
Class 2 DP on Subsets	3^n subsets idea problem https://codeforces.com/blog/entry/45223 Elevator Rides https://cses.fi/problemset/task/1653	Square Subsets https://codeforces.com/problemset/problem/895/C Elephant and T-shirts https://www.codechef.com/problems/TSHIRTS Counting Tilings https://cses.fi/problemset/task/2181	Link
Class 3 Digit DP	Count Number of digits with sum = K Google Kick Start Problem - even digit even, odd digit odd	Counting Numbers Digit DP https://cses.fi/problemset/task/2220 Classy Numbers https://codeforces.com/problemset/problem/1036/C Encoding https://www.codechef.com/problems/ENCODING Beautiful Integers in Range https://leetcode.com/problems/biweekly-contest-111/problems/number-of-beautiful-integers-in-the-range/	Link