

DP Concepts

video
13

&

Questions



codestorywithMIK

मिथुन
(Motivation)

- Your family is counting on you. ✓
- They have sacrificed for you. ✓
- Make them proud. ✓
- Make yourself proud. ✓
- Beat your older version everyday. ✓

cswithMIK → Twitter

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→ code story with MIK

- 1-D based DP
- 2-D based DP
- String based DP
- Grid based DP
- Game Strategy

we'll do:-

(.) RECURSION
+
MEMOIZATION
(Top Down)

(.) Bottom UP

(.) Time & Space

1-D Based D.P.

↳ Fibonacci Number

↳ Climbing Stairs (N-stairs Problem)

↳ House Robber ~~I~~, II (stickler thief)

↳ Maximum Alternative Subsequence Sum.

→ LIS and all variants

(*) LIS (longest Increasing Subsequence.

Recursion + Memo / Bottom UP

video - 11 & 12

Variants

→ (*) देखो जरा , सबर करौ

1. Maximum Length Of chain Pair .

Leetcode
- 646

~~medium~~

easy

Maximum Length Of chain Pair

(1,2), (7,8), $\rightarrow 2$

Example:- Pairs = $\left[\overset{\text{rev}}{\underbrace{\{1, \underline{2}\}}_{P1[1]}}, \underbrace{\{7, 8\}}_{P2[0]}, \{4, 5\} \right], n=3$
Output = 3

(1, 2), (7, 8), $\rightarrow 2$

$\left\{ \overset{2 < 4}{\underbrace{(1, \underline{2})}}, \overset{5 < 7}{\underbrace{(\underline{4}, \underline{5})}}, \underbrace{(7, 8)} \right\}$
3

LIS \rightarrow Rec + Mem
 \rightarrow Bottom UP

Re. Mem. \therefore Sorting

B. \therefore Sorting

Simple Dry Run :-

prev = -1 0 1 2
pairs = [{1, 2}, (4, 5), (7, 8)]

Solving

