

Grokking Dynamic Programming Patterns for Coding Interviews



By: Design Gurus (/profile/view/5668639101419520)

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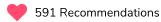
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Beginner	Lessons	Challenges	Playgrounds	Code	Illustrations
				Snippets	

The fact is, Dynamic Programming (DP) problems can be some of the most intimidating on a coding interview. Even when it's actually clear if a problem can be solved using DP (which it rarely is), it can be pretty challenging to even know where to start on the solution. Unless, that is, you're trained on the approach to solving DP problems.

This course was made from scratch with just that goal in mind. It'll equip you with a set of easy-to-understand techniques to handle any DP problem. Rather than just having you try to memorize solutions, you'll be walked through five underlying DP patterns that can then be applied to solve 35+ DP problems.

In each pattern, we'll start with a recursive brute-force solution -- this is actually the best way to start solving a DP problem! Once we have a recursive solution, we'll then apply the advanced DP methods of Memoization and Tabulation.

The practice problems in this course were carefully chosen, covering the most frequently asked DP questions in coding interviews.



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Rahul Kumar Software Engineer

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This course has literally taken away the fear of DP from my life and feel so much more confident going in. This course is life saver and changer. Thank you so much.



Preview Lessons

Learning Tracks

SEARCH

1 Introduction ^

 What is Dynamic Programming? (/courses/grokkingdynamic-programming-patterns-for-codinginterviews/m2G1pAq0OO0) Preview (/courses/grokking-dynamicprogramming-patterns-for-codinginterviews/m2G1pAq0OO0)

2 Pattern 1: 0/1 Knapsack ^

0/1 Knapsack (/courses/grokking-dynamicprogramming-patterns-for-codinginterviews/RM1BDv71V60) Preview (/courses/grokking-dynamicprogramming-patterns-for-codinginterviews/RM1BDv71V60)

Equal Subset Sum Partition (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/3jEPRo5PDvx)

Preview (/courses/grokking-dynamicprogramming-patterns-for-codinginterviews/3jEPRo5PDvx)

Subset Sum (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/3i64vRY6JnR)

Preview (/courses/grokking-dynamicprogramming-patterns-for-codinginterviews/3j64vRY6JnR)

Minimum Subset Sum Difference (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/xVVNRPPXQGr)

Count of Subset Sum (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/m27pwPZ3yvG)

Target Sum (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/7nAOY4oy64A)

3 Pattern 2: Unbounded Knapsack ^

Unbounded Knapsack (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/qV6RXWME4D3)

Rod Cutting (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/RM5E56PGnVY)

Coin Change (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/gx763A3x9PI)





Minimum.Coin Change (/courses/grokking-dynamic-programming-patterns-for-coding-educative(/learn) interviews/NE0yNJ1rZy6)

Maximum Ribbon Cut (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/YQVZJx1k0WY)

4 Pattern 3: Fibonacci Numbers ^

9	Fibonacci numbers (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/gx6jmzrMwgZ)
	Staircase (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/YQy7Lx79R0K)
	Number factors (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/NE52PnMY376)
	Minimum jumps to reach the end (/courses/grokking-dynamic-programming-patterns-for coding-interviews/7nAKN0Qz67r)
	$\label{lem:minum} \begin{tabular}{ll} Minimum jumps with fee (/courses/grokking-dynamic-programming-patterns-for-coding interviews/7nDNy6JDP1G) \end{tabular}$
7	House thief (/courses/grokking-dynamic-programming-patterns-for-coding-

5 Pattern 4: Palindromic Subsequence ^

interviews/m2E0xJ0Nkp3)

Longest Palindromic Subsequence (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/RMk1D1DY1PL)

Longest Palindromic Substring (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/m2yRjwxBY7A)

Count of Palindromic Substrings (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/xV73LEk5rx9)

Minimum Deletions in a String to make it a Palindrome (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/gkX4prBkRLj)

Palindromic Partitioning (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/gxxqrE2kKrY)

6 Pattern 5: Longest Common Substring ^

Longest Common Substring (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/RMkk7NwE44R)

 $Longest\ Common\ Subsequence\ (/courses/grokking-dynamic-programming-patterns-for-programming-programming-patterns-for-programming-programming-patterns-for-programming-patterns-for-programming-p$

coding-interviews/B8Pq4ZnBNUN)





edinicati petileam Insertions to Transform a String into another (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/m270kE8D080)

Longest Increasing Subsequence (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/YQ0y0Q0JQ69)

Maximum Sum Increasing Subsequence (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/B8rgqKEW05N)

Shortest Common Super-sequence (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/3jjLPyLGnAR)

Minimum Deletions to Make a Sequence Sorted (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/qV251wjM2ZD)

Longest Repeating Subsequence (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/7npz2VooPI1)

Subsequence Pattern Matching (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/JY7yZ2VyJnP)

Longest Bitonic Subsequence (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/gx842pQXGM9)

Longest Alternating Subsequence (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/gxp0yR37zBr)

Edit Distance (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/gx2QMvEorYY)

Strings Interleaving (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/RMM68YXRwEK)

7 Appendix ^

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Other courses (/courses/grokking-dynamicprogramming-patterns-for-codinginterviews/B8n50Q6EBQW) Preview (/courses/grokking-dynamic-programming-patterns-for-coding-interviews/7nVWonJzqVA)

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