A BETTER VERSION ->> https://neetcode.io/

Video Solution	Category	Name	Link	Notes
https://youtu.be/KLlXCFG5TnA	Arrays	Two Sum	https://leetcode	use hash map to instantly check for difference value, map will add index of last occurrence of a num, don't use same element twice;
https://youtu.be/1pkOgXD63yU	Arrays	Best Time to Buy and Sell Stock	https://leetcode	find local min and search for local max, sliding window;
https://youtu.be/3OamzN90kPg	Arrays	Contains Duplicate	https://leetcode	hashset to get unique values in array, to check for duplicates easily
https://youtu.be/bNvIQI2wAjk	Arrays	Product of Array Except Self	https://leetcode	make two passes, first in-order, second in-reverse, to compute products
https://youtu.be/5WZl3MMT0Eg	Arrays	Maximum Subarray	https://leetcode	pattern: prev subarray cant be negative, dynamic programming: compute max sum for each prefix
https://youtu.be/lXVy6YWFcRM	Arrays	Maximum Product Subarray	https://leetcode	dp: compute max and max-abs-val for each prefix subarr;
https://youtu.be/nIVW4P8b1VA	Arrays	Find Minimum in Rotated Sorted Arra	https://leetcode	check if half of array is sorted in order to find pivot, arr is guaranteed to be in at most two sorted subarrays
https://youtu.be/U8XENwh8Oy8	Arrays	Search in Rotated Sorted Array	https://leetcode	at most two sorted halfs, mid will be apart of left sorted or right sorted, if target is in range of sorted portion then search it, otherwise search other half
https://youtu.be/jzZsG8n2R9A	Arrays	3Sum	https://leetcode	sort input, for each first element, find next two where -a = b+c, if a=prevA, skip a, if b=prevB skip b to elim duplicates; to find b,c use two pointers, left/right on remaining list;
https://youtu.be/UuiTKBwPgAo	Arrays	Container With Most Water	https://leetcode	shrinking window, left/right initially at endpoints, shift the pointer with min height;
https://youtu.be/gVUrDV4tZfY	Binary	Sum of Two Integers	https://leetcode	add bit by bit, be mindful of carry, after adding, if carry is still 1, then add it as well;
https://youtu.be/5Km3utixwZs	Binary	Number of 1 Bits	https://leetcode	modulo, and dividing n; mod and div are expensive, to divide use bit shift, instead of mod to get 1's place use bitwise & 1;
https://youtu.be/RyBM56RIWrM	Binary	Counting Bits	https://leetcode	write out result for num=16 to figure out pattern; res[i] = res[i - offset], where offset is the biggest power of 2 <= I;
https://youtu.be/WnPLSRLSANE	Binary	Missing Number	https://leetcode	compute expected sum - real sum; xor n with each index and value;
https://youtu.be/UcoN6UjAI64	Binary	Reverse Bits	https://leetcode	reverse each of 32 bits;
https://youtu.be/Y0lT9Fck7qI	Dynamic Programming	Climbing Stairs	https://leetcode	subproblem find (n-1) and (n-2), sum = n;
https://youtu.be/H9bfqozjoqs	Dynamic Programming	Coin Change	https://leetcode	top-down: recursive dfs, for amount, branch for each coin, cache to store prev coin_count for each amount; bottom-up: compute coins for amount = 1, up until n, using for each coin (amount - coin), cache prev values
https://youtu.be/cjWnW0hdF1Y	Dynamic Programming	Longest Increasing Subsequence	https://leetcode	recursive: foreach num, get subseq with num and without num, only include num if prev was less, cache solution of each; dp=subseq length which must end with each num, curr num must be after a prev dp or by itself;
https://youtu.be/Ua0GhsJSlWM	Dynamic Programming	Longest Common Subsequence	https://leetcode	recursive: if first chars are equal find lcs of remaining of each, else max of: lcs of first and remain of 2nd and lcs of 2nd remain of first, cache result; nested forloop to compute the cache without recursion;
https://youtu.be/Sx9NNgInc3A	Dynamic Programming	Word Break Problem	https://leetcode	for each prefix, if prefix is in dict and wordbreak(remaining str)=True, then return True, cache result of wordbreak;
https://youtu.be/GBKI9VSKdGg	Dynamic Programming	Combination Sum	https://leetcode	visualize the decision tree, base case is curSum = or > target, each candidate can have children of itself or elements to right of it inorder to elim duplicate solutions;
https://youtu.be/73r3KWiEvyk	Dynamic Programming	House Robber	https://leetcode	for each num, get max of prev subarr, or num + prev subarr not including last element, store results of prev, and prev not including last element
https://youtu.be/rWAJCfYYOvM	Dynamic Programming	House Robber II	https://leetcode	subarr = arr without first & last, get max of subarr, then pick which of first/last should be added to it
https://youtu.be/6aEyTjOwlJU	Dynamic Programming	Decode Ways	https://leetcode	can cur char be decoded in one or two ways? Recursion -> cache -> iterative dp solution, a lot of edge cases to determine, 52, 31, 29, 10, 20 only decoded one way, 11, 26 decoded two ways
https://youtu.be/IlEsdxuD4lY	Dynamic Programming	Unique Paths	https://leetcode	work backwards from solution, store paths for each position in grid, to further optimize, we don't store whole grid, only need to store prev row;
https://youtu.be/Yan0cv2cLy8	Dynamic Programming	Jump Game	https://leetcode	visualize the recursive tree, cache solution for O(n) time/mem complexity, iterative is O(1) mem, just iterate backwards to see if element can reach goal node, if yes, then set it equal to goal node, continue;
https://youtu.be/mQeF6bN8hMk	Graph	Clone Graph	https://leetcode	recursive dfs, hashmap for visited nodes
https://youtu.be/EgI5nU9etnU	Graph	Course Schedule	https://leetcode	build adjacentcy_list with edges, run dfs on each V, if while dfs on V we see V again, then loop exists, otherwise V isnt in a loop, 3 states= not visited, visited, still visiting
https://youtu.be/s-VkcjHqkGI	Graph	Pacific Atlantic Water Flow	https://leetcode	dfs each cell, keep track of visited, and track which reach pac, atl; dfs on cells adjacent to pac, atl, find overlap of cells that are visited by both pac and atl cells;
https://youtu.be/pV2kpPD66nE	Graph	Number of Islands	https://leetcode	foreach cell, if cell is 1 and unvisited run dfs, increment cound and marking each contigous 1 as visited
https://youtu.be/P6RZZMu_maU	Graph	Longest Consecutive Sequence	https://leetcode	use bruteforce and try to optimize, consider the max subseq containing each num; add each num to hashset, for each num if num-1 doesn't exist, count the consecutive nums after num, ie num+1; there is also a union-find solution;
https://youtu.be/6kTZYvNNyps	Graph	Alien Dictionary (Leetcode Premium)	https://leetcode	chars of a word not in order, the words are in order, find adjacency list of each unique char by iterating through adjacent words and finding first chars that are different, run topsort on graph and do loop detection;
https://youtu.be/bXsUuownnoQ	Graph	Graph Valid Tree (Leetcode Premium	https://leetcode	union find, if union return false, loop exists, at end size must equal n, or its not connected; dfs to get size and check for loop, since each edge is double, before dfs on neighbor of N, remove N from neighbor list of neighbor;
https://youtu.be/8f1XPm4WOUc	Graph	Number of Connected Components i	https://leetcode	dfs on each node that hasn't been visited, increment component count, adjacency list; bfs and union find are possible;
https://youtu.be/A8NUOmlwOlM	Interval	Insert Interval	https://leetcode	insert new interval in order, then merge intervals; newinterval could only merge with one interval that comes before it, then add remaining intervals;
https://youtu.be/44H3cEC2fFM	Interval	Merge Intervals	https://leetcode	sort each interval, overlapping intervals should be adjacent, iterate and build solution; also graph method, less efficient, more complicated
https://youtu.be/nONCGxWoUfM	Interval	Non-overlapping Intervals	https://leetcode	instead of removing, count how max num of intervals you can include, sort intervals, dp to compute max intervals up until the i-th interval;
https://youtu.be/PaJxqZVPhbg	Interval	Meeting Rooms (Leetcode Premium)	https://leetcode	sort intervals by start time, if second interval doesn't overlap with first, then third def wont overlap with first;
https://youtu.be/FdzJmTCVyJU	Interval	Meeting Rooms II (Leetcode Premium	https://leetcode	we care about the points in time where we are starting/ending a meeting, we already are given those, just separate start/end and traverse counting num of meetings going at these points in time; for each meeting check if a prev meeting has finished before curr started, using min heap;
https://youtu.be/G0_I-ZF0S38	Linked List	Reverse a Linked List	https://leetcode	iterate through maintaining cur and prev; recursively reverse, return new head of list
https://youtu.be/gBTe7lFR3vc	Linked List	Detect Cycle in a Linked List	https://leetcode	dict to remember visited nodes; two pointers at different speeds, if they meet there is loop
https://youtu.be/XIdigk956u0	Linked List	Merge Two Sorted Lists	https://leetcode	insert each node from one list into the other
https://youtu.be/q5a5OiGbT6Q	Linked List	Merge K Sorted Lists	https://leetcode	divied and conquer, merge lists, N totalnodes, k-lists, O(N*logk). For each list, find min val, insert it into list, use priorityQ to optimize finding min O(N*logk)
https://youtu.be/XVuQxVej6y8	Linked List	Remove Nth Node From End Of List	https://leetcode	use dummy node at head of list, compute len of list; two pointers, second has offset of n from first;
https://youtu.be/S5bfdUTrKLM	Linked List	Reorder List	https://leetcode	reverse second half of list, then easily reorder it; non-optimal way is to store list in array;
https://youtu.be/T41rL0L3Pnw	Matrix	Set Matrix Zeroes	https://leetcode	use sets to keep track of all rows, cols to zero out, after, for each num if it is in a zero row or col then change it to 0; flag first cell in row, and col to mark row/col that needs to be zeroed;
https://youtu.be/BJnMZNwUk1M	Matrix	Spiral Matrix	https://leetcode	keep track of visited cells; keep track of boundaries, layer-by-layer;
https://youtu.be/fMSJSS7eO1w	Matrix	Rotate Image	https://leetcode	rotate layer-by-layer, use that it's a square as advantage, rotate positions in reverse order, store a in temp, a = b, b = c, c = d, d = temp;
https://youtu.be/pfiQ_PS1g8E	Matrix	Word Search	https://leetcode	dfs on each cell, for each search remember visited cells, and remove cur visited cell right before you return from dfs;
https://youtu.be/wiGpQwVHdE0	String	Longest Substring Without Repeating	https://leetcode	sliding window, if we see same char twice within curr window, shift start position;
https://youtu.be/gqXU1UyA8pk	String	Longest Repeating Character Replace	https://leetcode	PAY ATTENTION: limited to chars A-Z; for each capital char, check if it could create the longest repeating substr, use sliding window to optimize; check if windowlen=1 works, if yes, increment len, if not, shift window right;
https://youtu.be/jSto0O4AJbM	String	Minimum Window Substring	https://leetcode	need is num of unique char in T, HAVE is num of char we have valid count for, sliding window, move right until valid, if valid, increment left until invalid, to check validity keep track if the count of each unique char is satisfied;
https://youtu.be/9UtInBqnCgA	String	Valid Anagram	https://leetcode	hashmap to count each char in str1, decrement for str2;
https://youtu.be/vzdNOK2oB2E	String	Group Anagrams	https://leetcode	for each of 26 chars, use count of each char in each word as tuple for key in dict, value is the list of anagrams;
https://youtu.be/WTzjTskDFMg	String	Valid Parentheses	https://leetcode	push opening brace on stack, pop if matching close brace, at end if stack empty, return true;
https://youtu.be/jJXJ16kPFWg	String	Valid Palindrome	https://leetcode	left, right pointers, update left and right until each points at alphanum, compare left and right, continue until left >= right, don't distinguish between upper/lowercase;
https://youtu.be/XYQecbcd6_c	String	Longest Palindromic Substring	https://leetcode	foreach char in str, consider it were the middle, consider if pali was odd or even;
https://youtu.be/4RACzI5-du8	String	Palindromic Substrings	https://leetcode	same as longest palindromic string, each char in str as middle and expand outwards, do same for pali of even len; maybe read up on manachers alg
https://youtu.be/B1k_sxOSgv8	String	Encode and Decode Strings (Leetcode	https://leetcode	store length of str before each string and delimiter like '#';
https://youtu.be/hTM3phVI6YQ	Tree	Maximum Depth of Binary Tree	https://leetcode	recursive dfs to find max-depth of subtrees; iterative bfs to count number of levels in tree
https://youtu.be/vRbbcKXCxOw	Tree	Same Tree	https://leetcode	recursive dfs on both trees at the same time; iterative bfs compare each level of both trees
https://youtu.be/OnSn2XEQ4MY	Tree	Invert/Flip Binary Tree	https://leetcode	recursive dfs to invert subtrees; bfs to invert levels, use collections.deque; iterative dfs is easy with stack if doing pre-order traversal
https://youtu.be/Hr5cWUld4vU	Tree	Binary Tree Maximum Path Sum	https://leetcode	helper returns maxpathsum without splitting branches, inside helper we also update maxSum by computing maxpathsum WITH a split;
https://youtu.be/6ZnyEApgFYg	Tree	Binary Tree Level Order Traversal	https://leetcode	iterative bfs, add prev level which doesn't have any nulls to the result;
https://youtu.be/u4JAi2JJhI8	Tree	Serialize and Deserialize Binary Tree	https://leetcode	bfs every single non-null node is added to string, and it's children are added too, even if they're null, deserialize by adding each non-null node to queue, deque node, it's children are next two nodes in string;
https://youtu.be/E36O5SWp-LE	Tree	Subtree of Another Tree	https://leetcode	traverse s to check if any subtree in s equals t; merkle hashing?
https://youtu.be/ihj4IQGZ2zc	Tree	Construct Binary Tree from Preorder	https://leetcode	first element in pre-order is root, elements left of root in in-order are left subtree, right of root are right subtree, recursively build subtrees;
https://youtu.be/s6ATEkipzow	Tree	Validate Binary Search Tree	https://leetcode	trick is use built in python min/max values float("inf"), "-inf", as parameters; iterative in-order traversal, check each val is greater than prev;
https://youtu.be/5LUXSvjmGCw	Tree	Kth Smallest Element in a BST	https://leetcode	non-optimal store tree in sorted array; iterative dfs in-order and return the kth element processed, go left until null, pop, go right once;
https://youtu.be/gs2LMfuOR9k	Tree	Lowest Common Ancestor of BST	https://leetcode	compare p, q values to curr node, base case: one is in left, other in right subtree, then curr is lca;

https://youtu.be/oobqoCJlHA0	Tree	Implement Trie (Prefix Tree)	https://leetcode	node has children characters, and bool if its an ending character, node DOESN'T have or need char, since root node doesn't have a char, only children;
https://youtu.be/BTf05gs_8iU	Tree	Add and Search Word	https://leetcode	if char = "." run search for remaining portion of word on all of curr nodes children;
https://youtu.be/asbcE9mZz_U	Tree	Word Search II	https://leetcode	trick: I though use trie to store the grid, reverse thinking, instead store dictionary words, dfs on each cell, check if cell's char exists as child of root node in trie, if it does, update currNode, and check neighbors, a word could exist multiple times in grid, so don't add duplicates;
https://youtu.be/q5a5OiGbT6Q	Heap	Merge K Sorted Lists	https://leetcode	we always want the min of the current frontier, we can store frontier in heap of size k for efficient pop/push; divide and conquer merging lists;
https://youtu.be/YPTqKIgVk-k	Heap	Top K Frequent Elements	https://leetcode	minheap that's kept at size k, if its bigger than k pop the min, by the end it should be left with k largest;
https://youtu.be/itmhHWaHupI	Heap	Find Median from Data Stream	https://leetcode	maintain curr median, and all num greater than med in a minHeap, and all num less than med in a maxHeap, after every insertion update median depending on odd/even num of elements;