Original **take U forward**'s Video : https://www.youtube.com/watch?v=WNtzUR_MwUQ

Original Roadmap (**SDE-PROBLEMS** Sheet) : https://bit.ly/takeUforward

Dream FAANG Google Classroom
(Code : **mfphb56**) (Invite Link)

Dream FAANG Roadmap

(***Mobile Version*** *: Mind-Map of Dream FAANG Roadmap*)

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Author : Kunal Chand

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- (6) Rotate Matrix

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Editorial

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- (3) Longest Consecutive Sequence
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- (5) Count number of subarrays with given XOR
- (6) Longest substring without repeat

Practice (Week 4)

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Week 8 - Greedy

- Editorial
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  - (2) Minimum number of platforms required for a railway
  - (3) Job sequencing Problem (Maximum Profit in Job Scheduling)
  - (4) Fractional Knapsack Problem
  - (5) Greedy algorithm to find minimum number of coins
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- Practice (Week 8)
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Week 9 - Recursion

- Editorial
  - (1) Combination sum-1
  - (2) Combination sum-2
  - (3) Palindrome Partioning
  - (4) Subset Sum-1 (Subset Sums) [Search For More Explanation]
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  - (6) K-th permutation Sequence (Permutation Sequence)

Week 10 - Backtracking

- Editorial
  - (1) N queens Problem
  - (2) Sudoko
  - (3) M coloring Problem (Graph prob)
  - (4) Rat in a Maze
  - (5) Print all Permutations of a string/array
  - (6) Word Break (print all ways) (Word Break II)

Week 11 - Divide and Conquer

- Editorial
  - (1) 1/N-th root of an integer (use binary search) (square root, cube root, ..)
  - (2) Matrix Median

- (3) Find the element that appears once in sorted array, and rest element appears twice (Binary search)
- (4) Search element in a sorted and rotated array/ find pivot where it is rotated
- (5) Median of 2 sorted arrays
- (6) K-th element of two sorted arrays

Week 12 - Bits / Bit Manipulation
- Editorial
  - (1) Check if a number if a power of 2 or not in O(1)
  - (2) Count total set bits
  - (3) Divide Integers without / operator
  - (4) Power Set (this is very important)
  - (5) Find MSB in o(1)
  - (6) Find square of a number without using multiplication or division operators.
- Practice (Week 12)
  - Q1. Find elements that occurs once while other elements occur M times

Week 13 - Stack and Queue
- Editorial
  - (1) Implement Stack / Implement Queue [In Progress]
  - (2) BFS
  - (3) Implement Stack using Queue [In Progress]
  - (4) Implement Queue using Stack
  - (5) Check for balanced parentheses
  - (6) Next Greater Element

Week 14 - Advance Stack & Queue
- Editorial
  - (1) Next Smaller Element
  - (2) LRU cache (vvvv. imp)
  - (3) Largest rectangle in histogram
  - (4) Sliding Window maximum
  - (5) Implement Min Stack [IN PROGRESS]
  - (6) Rotten Orange (Using BFS)

Week 15 - String
- Editorial
  - (1) Reverse Words in a String
  - (2) Longest Palindrome in a string
  - (3) Roman Number to Integer and vice versa
  - (4) Implement ATOI/STRSTR
  - (5) Longest Common Prefix
  - (6) Rabin Karp (Longest Duplicate Substring)
- Practice (Week 15)
  - Q1. Ways to split string into two palindromes (Rabin Karp Application)

Week 16 - Advance String

- Editorial
  - (1) Prefix Function/Z-Function
  - (2) KMP algo
  - (3) Minimum characters needed to be inserted in the beginning to make it palindromic.
  - (4) Check for Anagrams [IN PROGRESS]
  - (5) Count and Say
  - (6) Compare version numbers

Week 17 - Binary Tree (Easy)

- Editorial
  - (1) Inorder Traversal (with recursion and without recursion)
  - (2) Preorder Traversal (with recursion and without recursion)
  - (3) Postorder Traversal (with recursion and without recursion)
  - (4) LeftView Of Binary Tree
  - (5) Bottom View of Binary Tree
  - (6) Top View of Binary Tree

Week 18 - Binary Tree (Medium)

- Editorial
  - (1) Level order Traversal / Level order traversal in spiral form
  - (2) Height of a Binary Tree
  - (3) Diameter of Binary Tree
  - (4) Check if Binary tree is height balanced or not
  - (5) LCA in Binary Tree
  - (6) Check if two trees are identical or not

Week 19 - Binary Tree (Advance)

- Editorial
  - (1) Maximum path sum
  - (2) Construct Binary Tree from inorder and preorder
  - (3) Construct Binary Tree from Inorder and Postorder
  - (4) Symmetric Binary Tree
  - (5) Flatten Binary Tree to LinkedList
  - (6) Check if Binary Tree is mirror of itself or not

Week 20 - Binary Search Tree

- Editorial
  - (1) Populate Next Right pointers of Tree
  - (2) Search given Key in BST
  - (3) Construct BST from given keys.
  - (4) Check is a BT is BST or not
  - (5) Find LCA of two nodes in BST
  - (6) Find the inorder predecessor/successor of a given Key in BST.

Week 21 - Advance Binary Search Tree

- Editorial

- (1) Floor and Ceil in a BST
- (2) Find K-th smallest and K-th largest element in BST (2 different Questions)
- (3) Find a pair with a given sum in BST
- (4) BST iterator
- (5) Size of the largest BST in a Binary Tree
- (6) Serialize and deserialize Binary Tree

Week 22 - Mixed Questions

- Editorial
  - (1) Binary Tree to Double Linked List
  - (2) Find median in a stream of running integers.
  - (3) K-th largest element in a stream.
  - (4) Distinct numbers in Window.
  - (5) K-th largest element in an unsorted array.
  - (6) Flood-fill Algorithm
- Practice (Week 22)
  - Q1. Brick Wall
  - Q2. Minimum Area Rectangle
  - Q3. Maximum Equal Frequency

Week 23 - Graph

- Editorial
  - (1) Clone a graph (Not that easy as it looks)
  - (2) DFS
  - (3) BFS
  - (4) Detect A cycle in Undirected Graph/Directed Graph
  - (5) Topo Sort
  - (6) Number of islands (Do in Grid and Graph both)
  - (7) Bipartite Check

Week 24 - Advance Graph

- Editorial
  - (1) SCC(using KosaRaju's algo)
  - (2) Djisktra's Algorithm
  - (3) Bellman Ford Algo
  - (4) Floyd Warshall Algorithm
  - (5) MST using Prim's Algo
  - (6) MST using Kruskal's Algo

Week 25 - Dynamic Programming

- Editorial
  - (1) Max Product Subarray
  - (2) Longest Increasing Subsequence
  - (3) Longest Common Subsequence
  - (4) 0-1 Knapsack
  - (5) Edit Distance

Week 1 - Arrays

Editorial

(1) Find the duplicate in an array of N+1 integers.

Question :

Question A (Find the Duplicate Number):
https://leetcode.com/problems/find-the-duplicate-number/

Question B (Find All Duplicates in an Array):
https://leetcode.com/problems/find-all-duplicates-in-an-array/

Solutions :

Solution A :

take U forward's Video :
https://www.youtube.com/watch?v=32Ll35mhWg0

Algorithms Made Easy's Video :
https://www.youtube.com/watch?v=0U4e11Z7Vcs

GFG Editorial (5 Approaches) :
https://www.geeksforgeeks.org/find-repetitive-element-1-n-1/

LeetCode Article (3 Approaches) :
https://leetcode.com/problems/find-the-duplicate-number/solution/

Solution B :

Jason Chang's Video :
https://www.youtube.com/watch?v=OM7yWsiRVGI

Anish Malla's Video :
https://www.youtube.com/watch?v=kRrSeAZRD6E

Nick White's Video :
https://www.youtube.com/watch?v=aMsSF1ll3IY

Michael Muinos's Video :
https://www.youtube.com/watch?v=IYxEdtR5_xQ

(2) Sort an array of 0's 1's 2's without using extra space or sorting algo (Sort Colors)

Question :

https://leetcode.com/problems/sort-colors/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=oaVa-9wmpns

Aalekh Jain's Video :
https://www.youtube.com/watch?v=yjnErPy6ul8

Algorithms Made Easy's Video :
https://www.youtube.com/watch?v=4SNs8G-yByo

GFG Editorial :
https://www.geeksforgeeks.org/sort-an-array-of-0s-1s-and-2s/

(3) Repeat and Missing Number

Question :

https://practice.geeksforgeeks.org/problems/find-missing-and-repeating/0

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=5nMGY4VUoRY

GFG Editorial :
https://www.geeksforgeeks.org/find-a-repeating-and-a-missing-number/

(4) Merge two sorted Arrays without extra space

Question :

https://practice.geeksforgeeks.org/problems/merge-two-sorted-arrays/0

Solutions :

Dream FAANG's Video (with Intuition O(nlogn + mlogm)) :
https://youtu.be/JdS87OM_CPg?t=97

take U forward's Video :
https://www.youtube.com/watch?v=hVl2b3bLzBw

GFG Editorial :
https://www.geeksforgeeks.org/merge-two-sorted-arrays-o1-extra-space/

(5) Kadane's Algorithm

Question :

https://leetcode.com/problems/maximum-subarray/

OR

https://www.interviewbit.com/problems/max-sum-contiguous-subarray/

OR

https://practice.geeksforgeeks.org/problems/kadanes-algorithm-1587115620/1

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=w_KEocd__20

Michael Muinos's Video :
https://www.youtube.com/watch?v=tmakGVOGV3A&ab_channel=MichaelMuinos

Back To Back SWE's Video :
https://www.youtube.com/watch?v=2MmGzdiKR9Y&ab_channel=BackToBackSWE

mycodeschool's Video (3 Approaches):
https://www.youtube.com/watch?v=ohHWQf1HDfU

QuanticDev's Video (with Proof):
https://www.youtube.com/watch?v=4csAswCkXZM

GFG Editorial :
https://www.geeksforgeeks.org/largest-sum-contiguous-subarray/

(6) Merge Overlapping Subintervals (Merge Intervals)

Question :

https://leetcode.com/problems/merge-intervals/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=2JzRBPFYbKE

Giuseppe Picciano's Video :
https://www.youtube.com/watch?v=SXPvqPFX_VE

leetuition's Video :
https://www.youtube.com/watch?v=ygaBzC_qY0w

GFG Editorial :
https://www.geeksforgeeks.org/merging-intervals/

Practice (Week 1)

Q1. Find All Numbers Disappeared in an Array

Problem :

https://leetcode.com/problems/find-all-numbers-disappeared-in-an-array

Solutions :

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=CTBEcmzLAuA

Q2. Smallest Missing Integer

Problem :

Problem A (First Missing Positive):
https://leetcode.com/problems/first-missing-positive/

Problem B (Positive Mex):
https://www.codechef.com/LTIME83B/problems/MEXUM

Solutions :

Solution A :

Rachit Jain's Video :
https://www.youtube.com/watch?v=-IfHWWMmXXM

Michael Muinos's Video :
https://www.youtube.com/watch?v=9SnkdYXNIzM

Knapsak's Video :
https://www.youtube.com/watch?v=vDYzpUULJ8E

Solution B :

Algorythm's Video :
https://www.youtube.com/watch?v=__sclWOOhOU

Q3. Flipping Game

Problem :

https://codeforces.com/problemset/problem/327/A

Solutions :

GFG Editorial :
https://www.geeksforgeeks.org/maximize-number-0s-flipping-subarray/

alGOds's Video (Kadane's Algorithm Approach) :
https://www.youtube.com/watch?v=cLVpE5q_-DE

The Coding Guy's Video (Kadane's Algorithm Approach) :
https://www.youtube.com/watch?v=FtiWd8PIpxI

Stoover Coding's Video (Dynamic Programming Approach) :
https://www.youtube.com/watch?v=zF0UgUXGnuU

Q4. Insert Interval

Problem :

https://leetcode.com/problems/insert-interval/

Solutions :

CS with KV's Video :
https://www.youtube.com/watch?v=RCJW_y_Cogk

Q5. Product of Array Except Self

Problem :

https://leetcode.com/problems/product-of-array-except-self/

Solutions :

Algorythm's Video :
https://www.youtube.com/watch?v=PEzX2if5zZA

Nick White's Video :
https://www.youtube.com/watch?v=tSRFtR3pv74

Errichto's Video :
https://www.youtube.com/watch?v=E0FqAbHjf4E

LeetCode Article :
https://leetcode.com/problems/product-of-array-except-self/solution/

Q6. Duplicate Zeros

Problem :

https://leetcode.com/problems/duplicate-zeros/

Solutions :

LeetCode Article :
https://leetcode.com/problems/duplicate-zeros/solution/

Q7. Wiggle Sort II

Problem :

https://leetcode.com/problems/wiggle-sort-ii/

Solutions :

Coding Blocks's Video :
https://www.youtube.com/watch?v=di7gNqxfU1g

AfterAcademy Editorial :
https://afteracademy.com/blog/wave-array

GFG Editorial :
https://www.geeksforgeeks.org/sort-array-wave-form-2/

Medium Article :
https://medium.com/enjoy-algorithm/sort-an-array-in-wave-form-9c88ed34b7f2

Q8. Recursive Insertion Sort

Problem :

https://afteracademy.com/problems/recursive-insertion-sort

Solutions :

AfterAcademy Editorial :
https://afteracademy.com/blog/recursive-insertion-sort

GFG Editorial :

https://www.geeksforgeeks.org/recursive-insertion-sort/

Week 2 - Multi Dimensional Arrays

Editorial

(1) Set Matrix Zeros

Question :

https://leetcode.com/problems/set-matrix-zeroes/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=M65xBewcqcI

Errichto's Video :
https://www.youtube.com/watch?v=6_KMkeh5kEc

(2) Pascal Triangle

Question :

Question A (Pascal's Triangle):
https://leetcode.com/problems/pascals-triangle/

Question B (Pascal's Triangle II):
https://leetcode.com/problems/pascals-triangle-ii/

Solutions :

Solution A :

take U forward's Video :
https://www.youtube.com/watch?v=6FLvhQjZqvM

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=7pOzP9m_bX8

Michael Muinos's Video :
https://www.youtube.com/watch?v=VJBUH3chC64

GFG Editorial :
https://www.geeksforgeeks.org/pascal-triangle/

Solution B :

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=tTYU4PAiqOE

(3) Next Permutation

Question :

https://leetcode.com/problems/next-permutation/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=LuLCLgMElus

Back To Back SWE's Video :
https://www.youtube.com/watch?v=quAS1iydq7U

GFG Editorial :
https://www.geeksforgeeks.org/find-the-next-lexicographically-greater-word-than-a-given-word/

(4) Inversion of Array (Using Merge Sort)

Question :

https://practice.geeksforgeeks.org/problems/inversion-of-array/0

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=kQ1mJlwW-c0

GFG Editorial :
https://www.geeksforgeeks.org/counting-inversions/

(5) Stock Buy and Sell

Question :

https://leetcode.com/problems/best-time-to-buy-and-sell-stock/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=eMSfBgbiEjk

Inside code's Video :
https://www.youtube.com/watch?v=hOLSBR7eN4g

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=mmIMpgh67vg

Jesse Dietrichson's Video :
https://www.youtube.com/watch?v=X6i_I-JiB4Y

(6) Rotate Matrix

Question :

https://leetcode.com/problems/rotate-image/

OR

https://www.interviewbit.com/problems/rotate-matrix/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=Y72QeX0Efxw

My Programming Sandbox's Video (Long Approach) :
https://www.youtube.com/watch?v=Jtu6dJ0Cb94

Michael Muinos's Video (Short Approach) :
https://www.youtube.com/watch?v=J-Ihez5cwCM

Nick White's Video (Short Approach) :
https://www.youtube.com/watch?v=SA867FvqHrM

GFG Editorial (Long Approach) :
https://www.geeksforgeeks.org/inplace-rotate-square-matrix-by-90-degrees/

GFG Editorial (Short Approach) :
https://www.geeksforgeeks.org/rotate-matrix-90-degree-without-using-extra-space-set-2/

Practice (Week 2)

Q1. Game of Life

Problem :
https://leetcode.com/problems/game-of-life/

Solutions :
LeetCode Article :
https://leetcode.com/problems/game-of-life/solution/

happygirlzt's Video :
https://www.youtube.com/watch?v=sUqYZvfZ9UE

GFG Editorial :
https://www.geeksforgeeks.org/program-for-conways-game-of-life-set-2/

Q2. Best Time to Buy and Sell Stock II

Problem :
https://leetcode.com/problems/best-time-to-buy-and-sell-stock-ii/

Solutions :
Inside code's Video :
https://www.youtube.com/watch?v=GtFhszN6VIg

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=Q-8JkdUliVM

LeetCode Article :
https://leetcode.com/problems/best-time-to-buy-and-sell-stock-ii/solution/

GFG Editorial :
https://www.geeksforgeeks.org/stock-buy-sell/

Errichto's Video :
https://www.youtube.com/watch?v=MTnFIF2I2gw

Q3. Spiral Matrix Traversal

Problem :

Problem A (Spiral Matrix):
https://leetcode.com/problems/spiral-matrix/

Problem B (Spiral Matrix III):
https://leetcode.com/problems/spiral-matrix-iii/

Solutions :

Solution A :

mycodeschool's Video :
https://www.youtube.com/watch?v=siKFOI8PNKM

GFG Editorial :
https://www.geeksforgeeks.org/print-a-given-matrix-in-spiral-form/

Solution B :

LeetCode Article :
https://leetcode.com/articles/spiral-matrix-iii/

Q4. Max Sum of Rectangle No Larger Than K

Problem :

https://leetcode.com/problems/max-sum-of-rectangle-no-larger-than-k/

Solutions :

Back To Back SWE's Video (Using Kadane's Algorithm in 2D Grid):
https://www.youtube.com/watch?v=-FgseNO-6Gk

Q5. NEKO's Maze Game

Problem :

https://codeforces.com/contest/1292/problem/A

Solutions :

Errichto's Video :
https://www.youtube.com/watch?v=mhrvIor1qH0

Week 3 - Math

Editorial

(1) Search in a 2D matrix

Question :

Question A (Search a 2D Matrix):
https://leetcode.com/problems/search-a-2d-matrix/

Question B (Search a 2D Matrix II):
https://leetcode.com/problems/search-a-2d-matrix-ii/

Solutions :

Solution A :

take U forward's Video :
https://www.youtube.com/watch?v=ZYpYur0znng

Amell Peralta's Video :
https://www.youtube.com/watch?v=dHJDhsvBd8c

Back To Back SWE's Video (General Approach) :
https://www.youtube.com/watch?v=FOa55B9Ikfg

Solution B :

take U forward's Video :
https://www.youtube.com/watch?v=ZYpYur0znng

Amell Peralta's Video :
https://www.youtube.com/watch?v=Ohke9-qwAKU

GitHub Article (Based on Amell Peralta's Explanation) :
https://github.com/eMahtab/search-2D-matrix-ii

Giuseppe Picciano's Video (With Visual Explanation):
https://www.youtube.com/watch?v=OeHVnd_MTuc

Back To Back SWE's Video (General Approach) :
https://www.youtube.com/watch?v=FOa55B9Ikfg

(2) Pow(X,n)

Question :

https://leetcode.com/problems/powx-n/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=l0YC3876qxg

mycodeschool's Video (Exponentiation - Using Recursion):
https://www.youtube.com/watch?v=wAyrtLAeWvI

Algorithms Made Easy's Video :
https://www.youtube.com/watch?v=JMHL9geRAKI

GFG Editorial :
https://www.geeksforgeeks.org/write-a-c-program-to-calculate-powxn/

(3) Majority Element (>N/2 times) [SEARCH FOR MORE Explanations]

Question :

https://leetcode.com/problems/majority-element/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=AoX3BPWNnoE

(4) Majority Element (>N/3 times) [SEARCH FOR MORE Explanations]

Question :

https://leetcode.com/problems/majority-element-ii/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=yDbkQd9t2ig

(5) Grid Unique Paths

Question :

https://leetcode.com/problems/unique-paths/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=t_f0nwwdg5o

Don't Memorise's Video (Mathematical Optimization Intuition) :
https://www.youtube.com/watch?v=fpnNaAU0iPk

LeetCode Discussion (Mathematical Approach) :
https://leetcode.com/problems/unique-paths/discuss/22958/Math-solution-O(1)-space/175698

Michael Muinos's Video (DP Approach) :
https://www.youtube.com/watch?v=4Zq2Fnd6tl0

Amell Peralta's Video (DP Approach | Space Complexity - O(n^2)) :
https://www.youtube.com/watch?v=rdu3YVZ3KD4

Amell Peralta's Video (DP Approach | Space Complexity - O(n)) :
https://www.youtube.com/watch?v=RZz5M3iidBI

Khushboo Goel's Video (DP Approach | Space Complexity - O(n)) :
https://www.youtube.com/watch?v=fEcyKrdIkho

GFG Editorial :
https://www.geeksforgeeks.org/count-possible-paths-top-left-bottom-right-nxm-matrix/

(6) Reverse Pairs [SEARCH FOR MORE Explanations]

Question :

https://leetcode.com/problems/reverse-pairs/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=S6rsAlj_iB4

Practice (Week 3)

Q1. Excel Sheet Column Number & Title Conversion

Problem :

Problem A (Excel Column Number):
https://leetcode.com/problems/excel-sheet-column-number/

Problem B (Excel Sheet Column Title):
https://leetcode.com/problems/excel-sheet-column-title/

Solutions :

Solution A :

GFG Editorial :
https://www.geeksforgeeks.org/find-excel-column-number-column-title/

IDeserve's Video :
https://www.youtube.com/watch?v=77HYaBDcGuQ

Solution B :

GFG Editorial :
https://www.geeksforgeeks.org/find-excel-column-name-given-number/

IDeserve's Video :
https://www.youtube.com/watch?v=77HYaBDcGuQ

Q2. Factorial Trailing Zeroes

Problem :

https://leetcode.com/problems/factorial-trailing-zeroes/

Solutions :

Scaler Academy's Video :
https://www.youtube.com/watch?v=wkvVdggCSeo

GFG Editorial :
https://www.geeksforgeeks.org/count-trailing-zeroes-factorial-number/

Q3. Find GCD in Log N

Problem :
https://practice.geeksforgeeks.org/problems/gcd-of-two-numbers/0

Solutions :
mycodeschool's Video :
https://www.youtube.com/watch?v=7HCd074v8g8

Gaurav Sen's Video :
https://www.youtube.com/watch?v=80pOI0_BXyk

GFG Editorial :
https://www.geeksforgeeks.org/euclidean-algorithms-basic-and-extended/

Q4. Sqrt(x) / Valid Perfect Square

Problem :
Problem A (Sqrt(x)):
https://leetcode.com/problems/sqrtx/

Problem B (Valid Perfect Square):
https://leetcode.com/problems/valid-perfect-square/

Solutions :
Solution A :
Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=VYtEKhxKd1Q

Scaler Academy's Video :
https://www.youtube.com/watch?v=fItuKa_tIpY

Solution B :
Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=-oqZCmhJ2Zs

Q5. Roman & Integer Conversion

Problem :
Problem A (Roman to Integer):
https://leetcode.com/problems/roman-to-integer/

Problem B (Integer to Roman):
https://leetcode.com/problems/integer-to-roman/

Solutions :
Solution A :

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=9rfe5nXL05Q

GFG Editorial :
https://www.geeksforgeeks.org/converting-roman-numerals-decimal-lying-1-3999/

Solution B :

Michael Muinos's Video :
https://www.youtube.com/watch?v=yzB4M-UXqgI

Krishna Teaches's Video :
https://www.youtube.com/watch?v=zNlm28-ZdaE

GFG Editorial :
https://www.geeksforgeeks.org/converting-decimal-number-lying-between-1-to-3999-to-roman-numerals/

Q6. Maximum Swap

Problem :

https://leetcode.com/problems/maximum-swap/

Solutions :

Ren Zhang's Video (Time - O(n) & Space - O(1)) :
https://www.youtube.com/watch?v=arecn8VuQL0

GFG Editorial (Time - O(n) & Space - O(1)) :
https://www.geeksforgeeks.org/largest-number-with-one-swap-allowed/

happygirlzt's Video (Time - O(n) & Space - O(n)) :
https://www.youtube.com/watch?v=YM4_hj7AWrI

LeetCode Article (Time - O(n) & Space - O(n)) :
https://leetcode.com/problems/maximum-swap/solution/

Q7. Tower of Hanoi

Problem :

https://practice.geeksforgeeks.org/problems/help-the-old-man/0

Solutions :

Inside code's Video (Visual Recursive Approach) :
https://www.youtube.com/watch?v=UR1IOWMvAIA

Reducible's Video (Visual Recursive Approach) :
https://www.youtube.com/watch?v=rf6uf3jNjbo

AlgoData's Video (Visual Recursive Approach) :
https://www.youtube.com/watch?v=fffbT41IuB4

Medium Article (Recursive Approach) :
https://medium.com/@jamalmaria111/tower-of-hanoi-js-algorithm-3f667fa46f0f

GFG Editorial (Recursive Approach):
https://www.geeksforgeeks.org/c-program-for-tower-of-hanoi/

GFG Editorial (Time Complexity Analysis of Recursive Approach):
https://www.geeksforgeeks.org/time-complexity-analysis-tower-hanoi-recursion/

GFG Editorial (**Iterative** Approach):
https://www.geeksforgeeks.org/iterative-tower-of-hanoi/

Khan Academy Article :
https://www.khanacademy.org/computing/computer-science/algorithms/towers-of-hanoi/a/towers-of-hanoi

Medium Article (**3 Approaches**) :
https://medium.com/datadriveninvestor/tower-of-hanoi-solve-and-optimize-with-memoization-f215a1bd201f

Q8. Count Primes (Sieve of Eratosthenes)

Problem :

https://practice.geeksforgeeks.org/problems/sieve-of-eratosthenes5242/1

OR

https://leetcode.com/problems/count-primes/

Solutions :

GeeksforGeeks's Video (Best **Sieve of Eratosthenes** Explanation):
https://www.youtube.com/watch?v=NZ7-ntEgt6g

GeeksforGeeks's Video (**Segmented Sieve** Explanation):
https://www.youtube.com/watch?v=j0M8SF6daSs

GFG Editorial (**Simple Sieve** of Eratosthenes (O(N*log(logN))):
https://www.geeksforgeeks.org/sieve-of-eratosthenes/

GFG Editorial : Why **Sieve of Eratosthenes** has time complexity of **O(N*log(logN))**?
https://www.geeksforgeeks.org/how-is-the-time-complexity-of-sieve-of-eratosthenes-is-nloglogn/

GFG Editorial (**Segmented Sieve** (Only Space Optimal)):
https://www.geeksforgeeks.org/segmented-sieve/

AND

https://www.geeksforgeeks.org/segmented-sieve-print-primes-in-a-range/

Terrible Whiteboard's Video (**Sieve of Eratosthenes** Explanation) :
https://www.youtube.com/watch?v=PypkiVITRa4

mycodeschool's Video (**Sieve of Eratosthenes** Explanation) :

https://www.youtube.com/watch?v=eKp56OLhoQs

GFG Editorial (**Advance Sieve** of Eratosthenes (O(n))):
https://www.geeksforgeeks.org/sieve-eratosthenes-0n-time-complexity/

GFG Editorial (**Bitwise Sieve**):
https://www.geeksforgeeks.org/bitwise-sieve/

Week 4 - Hashing

Editorial

(1) 2 Sum problem

Question :

https://leetcode.com/problems/two-sum/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=dRUpbt8vHpo

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=U8B984M1VcU

Amell Peralta's Video :
https://www.youtube.com/watch?v=QW61VBhH10A

Jesse Dietrichson's Video :
https://www.youtube.com/watch?v=LB62Atgt0xM

LeetCode Article :
https://leetcode.com/problems/two-sum/solution/

(2) 4 Sum problem

Question :

https://leetcode.com/problems/4sum/

OR

https://www.interviewbit.com/problems/4-sum/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=4ggF3tXIAp0

LeetCode Article :
https://leetcode.com/problems/4sum/solution/

(3) Longest Consecutive Sequence

Question :

https://leetcode.com/problems/longest-consecutive-sequence/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=qgizvmgeyUM

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=xdMyL--dOqE

Byte By Byte's Video (with Time Complexity Analysis) :
https://www.youtube.com/watch?v=rpku4iVaDNU

Knapsak's Video (with Code Walkthrough) :
https://www.youtube.com/watch?v=Awc7f5mCtks

LeetCode Article :
https://leetcode.com/articles/longest-consecutive-sequence/

GFG Editorial :
https://www.geeksforgeeks.org/longest-consecutive-subsequence/

(4) Longest Subarray with K sum

Question :

Question A (Longest Subarray with 0 sum):
https://practice.geeksforgeeks.org/problems/largest-subarray-with-0-sum/1

Question B (Maximum Size Subarray Sum Equals k **or** Longest Sub-Array with Sum K):
https://www.lintcode.com/problem/maximum-size-subarray-sum-equals-k/description

or

https://practice.geeksforgeeks.org/problems/longest-sub-array-with-sum-k/0

Solutions :

Solution A :

take U forward's Video :
https://www.youtube.com/watch?v=xmguZ6GbatA

GFG Editorial :
https://www.geeksforgeeks.org/find-the-largest-subarray-with-0-sum/

Solution B :

GFG Editorial :
https://www.geeksforgeeks.org/longest-sub-array-sum-k/

(5) Count number of subarrays with given XOR

Question :

https://www.interviewbit.com/problems/subarray-with-given-xor/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=lO9R5CaGRPY

GFG Editorial :
https://www.geeksforgeeks.org/count-number-subarrays-given-xor/

(6) Longest substring without repeat

Question :

https://leetcode.com/problems/longest-substring-without-repeating-characters/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=qtVh-XEpsJo

Michael Muinos's Video :
https://www.youtube.com/watch?v=4i6-9IzQHwo

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=WKTgajDkVcA

Scaler Academy's Video :
https://www.youtube.com/watch?v=pJZF_VCxG9I

GFG Editorial :
https://www.geeksforgeeks.org/length-of-the-longest-substring-without-repeating-characters/

Practice (Week 4)

Q1. Valid Sudoku

Problem :

https://leetcode.com/problems/valid-sudoku/

Solutions :

Nick White's Video :
https://www.youtube.com/watch?v=Pl7mMcBm2b8

Q2. Contiguous Array [WRITE A CLEAN EXPLANATION]

Problem :

https://leetcode.com/problems/contiguous-array/

Solutions :

Knowledge Center's Video (**Intuitive** Explanation):
https://www.youtube.com/watch?v=VM5Mh3-UFPg

daose's Video (**Intuitive** Explanation):
https://www.youtube.com/watch?v=63ogoiDrd4g

Nick White's Video :
https://www.youtube.com/watch?v=nSEO5zOwP7g

LeetCode Article :
https://leetcode.com/problems/contiguous-array/solution/

GFG Editorial :
https://www.geeksforgeeks.org/largest-subarray-with-equal-number-of-0s-and-1s/

Q3. Insert Delete GetRandom in O(1) Time

Problem :

Problem A (Insert Delete GetRandom O(1)):
https://leetcode.com/problems/insert-delete-getrandom-o1/

Problem B (Insert Delete GetRandom O(1) - Duplicates allowed):
https://leetcode.com/problems/insert-delete-getrandom-o1-duplicates-allowed/

Solutions :

Solution A :

Aalekh Jain's Video :
https://www.youtube.com/watch?v=AynZwcnFHwE

Michael Muinos's Video :
https://www.youtube.com/watch?v=TD2g8UjXMLA

Algorithms Made Easy's Video :
https://www.youtube.com/watch?v=yeTmZxk6-v4

UBlog's Video :
https://www.youtube.com/watch?v=kp3E4N7H1AA

GFG Editorial :
https://www.geeksforgeeks.org/design-a-data-structure-that-supports-insert-delete-search-and-getrandom-in-constant-time/

Solution B :

LeetCode Article:
https://leetcode.com/problems/insert-delete-getrandom-o1-duplicates-allowed/solution/

GFG Editorial :
https://www.geeksforgeeks.org/design-a-data-structure-that-supports-insert-delete-getrandom-in-o1-with-duplicates/

Q4. Design HashSet/HashMap

Problem :

Problem A (Design HashSet):
https://leetcode.com/problems/design-hashset/

Problem B (Design HashMap): [SEARCH FOR MORE EXPLANATION]
https://leetcode.com/problems/design-hashmap/

Solutions :

Solution A :

Java Brains's Video :
https://www.youtube.com/watch?v=NrMaQL_4Npo

FelixTechTips's Video :
https://www.youtube.com/watch?v=7y4p_ZPsttI

GFG Editorial (Internal Working of HashSet in Java) :
https://www.geeksforgeeks.org/internal-working-of-sethashset-in-java/

Solution B :

Ranjith ramachandran's Video :
https://www.youtube.com/watch?v=c3RVW3KGIIE
GFG Editorial (Internal Working of HashMap in Java) :
https://www.geeksforgeeks.org/internal-working-of-hashmap-java/

Q5. Eugene and an array [WRITE A CLEAN EXPLANATION]

Problem :

https://codeforces.com/problemset/problem/1333/C

Solutions :

ProgrammerSought Editorial :
https://www.programmersought.com/article/36934911835/

Stefan Dascalescu's Video :
https://www.youtube.com/watch?v=XR_ZQvr9zyU

Q6. Longest subarray with sum divisible/not divisible by K

Problem :

Problem A (Longest subarray with sum divisible by K): [WRITE A CLEAN EXPLANATION]
https://practice.geeksforgeeks.org/problems/longest-subarray-with-sum-divisible-by-k1259/1

Problem B (Length of longest subarray whose sum is **not** divisible by integer K):
https://www.geeksforgeeks.org/length-of-longest-subarray-whose-sum-is-not-divisible-by-integer-k/

Solutions :

Solution A :

GFG Editorial :
https://www.geeksforgeeks.org/longest-subarray-sum-divisible-k/

Solution B :

GFG Editorial :
https://www.geeksforgeeks.org/length-of-longest-subarray-whose-sum-is-not-divisible-by-integer-k/

Q7. Subarray Sums Divisible by K [WRITE A CLEAN EXPLANATION]

Problem :

https://leetcode.com/problems/subarray-sums-divisible-by-k/

Solutions :

LeetCode Comment (**Intuitive** Explanation):
https://leetcode.com/problems/subarray-sums-divisible-by-k/discuss/217962/Java-Clean-O(n)-Number-Theory-%2B-Prefix-Sums

GFG Editorial :
https://www.geeksforgeeks.org/count-sub-arrays-sum-divisible-k/

Q8. Flip Columns For Maximum Number of Equal Rows [WRITE A CLEAN EXPLANATION]

Problem :

https://leetcode.com/problems/flip-columns-for-maximum-number-of-equal-rows/

Solutions :

LeetCode Comment (@sourov_roy):
https://leetcode.com/problems/flip-columns-for-maximum-number-of-equal-rows/discuss/303847/Simple-C%2B%2B-Solution-with-comments

Programming Live with Larry's Video (Live Explanation):
https://www.youtube.com/watch?v=xj3ltfSh9Io

Week 5 - Linked List

Editorial

(1) Reverse a LinkedList

Question :

https://leetcode.com/problems/reverse-linked-list/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=iRtLEoL-r-g

Log2Base2's Video (Iterative Approach) :
https://www.youtube.com/watch?v=4NWR385qeY4

Coding with Conner's Video (Iterative Approach) :
https://www.youtube.com/watch?v=K-fqMtwbaPs

Jesse Dietrichson's Video (Recursive Approach) :
https://www.youtube.com/watch?v=S92RuTtt9EE

Joy Liu - Computer Psyc's Video (Visual Recursive Approach) :
https://www.youtube.com/watch?v=TzvmgkiDKkc

CodeWhoop's Video (Iterative Approach) :
https://www.youtube.com/watch?v=PQIHq0vfADI

mycodeschool's Video (Iterative Approach) :
https://www.youtube.com/watch?v=sYcOK51hl-A

mycodeschool's Video (Recursive Approach) :
https://www.youtube.com/watch?v=KYH83T4q6Vs

GFG Editorial :
https://www.geeksforgeeks.org/reverse-a-linked-list/

(2) Find middle of LinkedList

Question :

https://leetcode.com/problems/middle-of-the-linked-list/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=sGdwSH8RK-o

CodeWhoop's Video :
https://www.youtube.com/watch?v=M497FJW9mPk

GFG Editorial :
https://www.geeksforgeeks.org/write-a-c-function-to-print-the-middle-of-the-linked-list/

AfterAcademy Editorial :
https://afteracademy.com/blog/middle-of-the-linked-list

(3) Merge two sorted Linked List

Question :

https://leetcode.com/problems/merge-two-sorted-lists/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=Xb4slcp1U38

Back To Back SWE's Video (Iterative Approach) :
https://www.youtube.com/watch?v=GfRQvf7MB3k

Terrible Whiteboard's Video (Iterative Approach with Code) :
https://www.youtube.com/watch?v=orCMI6WjoIw

Fisher Coder's Video (Recursive Approach) :
https://www.youtube.com/watch?v=bdWOmYL5d1g

GFG Editorial :
https://www.geeksforgeeks.org/merge-two-sorted-linked-lists/

(4) Remove N-th node from back of LinkedList

Question :

https://leetcode.com/problems/remove-nth-node-from-end-of-list/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=Lhu3MsXZy-Q

Giuseppe Picciano's Video (One Pass Approach) :
https://www.youtube.com/watch?v=_-V4jJB3t9Q

Fisher Coder's Video (One Pass Approach) :
https://www.youtube.com/watch?v=Kka8VgyFZfc

LeetCode Article (Two Pass Approach & One Pass Approach) :
https://leetcode.com/problems/remove-nth-node-from-end-of-list/solution/

(5) Delete a given Node when a node is given. (0(1) Explanation)

Question :

https://leetcode.com/problems/delete-node-in-a-linked-list/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=icnp4FJdZ_c

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=3XGaTq-bRiU

CodeWhoop's Video :
https://www.youtube.com/watch?v=owMmoSdqIfI

LeetCode Article :
https://leetcode.com/problems/delete-node-in-a-linked-list/solution/

(6) Add two numbers as LinkedList

Question :

https://leetcode.com/problems/add-two-numbers/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=LBVsXSMOIk4

Terrible Whiteboard's Video (Iterative Approach) :
https://www.youtube.com/watch?v=1Spw7DEtB14

Suboptimal Engineer's Video (Recursive Approach) :
https://www.youtube.com/watch?v=G6X7Fn2IDPE

Practice (Week 5)

Q1. Reverse Linked List II

Problem :

https://leetcode.com/problems/reverse-linked-list-ii/

Solutions :

leetuition's Video (Iterative Approach) :
https://www.youtube.com/watch?v=wk8-_M-2fzI

Jyotinder Singh's Video (Iterative Approach) :
https://www.youtube.com/watch?v=BE0hruM5O5U

Amell Peralta's Video (Iterative Approach) :
https://www.youtube.com/watch?v=LnnJTODA77I

LeetCode Article (Recursive + Iterative Approach) :
https://leetcode.com/problems/reverse-linked-list-ii/solution/

Medium Article (Recursive Approach):
https://medium.com/journey-to-becoming-an-algoat/reverse-a-linked-list-ii-part-2-ed0b0c376761

Algorithms Casts's Video (Iterative + Recursive Approach) :
https://www.youtube.com/watch?v=sGNJidRPlUM

Q2. Partition List

Problem :

https://leetcode.com/problems/partition-list/

Solutions :

LeetCode Article :

https://leetcode.com/problems/partition-list/solution/

Keep On Coding's Video :
https://www.youtube.com/watch?v=vsPsU8DCfGg

Q3. Merge k Sorted Lists

Problem :

https://leetcode.com/problems/merge-k-sorted-lists/

Solutions :

Back To Back SWE's Video (Min Heap Algorithm Approach) :
https://www.youtube.com/watch?v=ptYUCjfNhJY

Michael Muinos's Video (Divide and Conquer Approach) :
https://www.youtube.com/watch?v=BBt9FB5Yt0M

Jyotinder Singh's Video (Min Heap Algorithm Approach) :
https://www.youtube.com/watch?v=OzWCsfl60sM

Amell Peralta's Video (Priority Queue Min Heap Code Walkthrough) :
https://www.youtube.com/watch?v=tDn9O7UQ4E8

Anwar Mamat's Video (3 Approach) :
https://www.youtube.com/watch?v=hqgpMUhwVOQ

Techie Codes's Video (Using Min Heap Data Structure) :
https://www.youtube.com/watch?v=8VpsIL-cvPE

GFG Editorial (2 Approach) :
https://www.geeksforgeeks.org/merge-k-sorted-linked-lists/

GFG Editorial (1 Approach) :
https://www.geeksforgeeks.org/merge-k-sorted-linked-lists-set-2-using-min-heap/

LeetCode Article (5 Approach) :
https://leetcode.com/problems/merge-k-sorted-lists/solution/

Q4. Add Two Numbers II

Problem :

https://leetcode.com/problems/add-two-numbers-ii/

Solutions :

Francesco Manicardi's Video (Short & Clean Code):
https://www.youtube.com/watch?v=z0B5u_HUd2Q

GFG Editorial (Using Recursion) :
https://www.geeksforgeeks.org/sum-of-two-linked-lists/

Amell Peralta's Video (Using Stack) :
https://www.youtube.com/watch?v=aLxAUxCbMLk

Q5. Odd Even Linked List

Problem :

https://leetcode.com/problems/odd-even-linked-list/

Solutions :

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=ie1rKf7bpHw

LeetCode Article :
https://leetcode.com/problems/odd-even-linked-list/solution/

AfterAcademy Editorial :
https://afteracademy.com/blog/odd-even-linked-list

GFG Editorial :
https://www.geeksforgeeks.org/rearrange-a-linked-list-such-that-all-even-and-odd-positioned-nodes-are-together/

Q6. Remove Linked List Elements

Problem :

https://leetcode.com/problems/remove-linked-list-elements/

Solutions :

Terrible Whiteboard's Video (Iterative Approach) :
https://www.youtube.com/watch?v=nVpgHAZdhQQ

Medium Article (Iterative + Recursive Approach) :
https://medium.com/@jimdaosui/remove-linked-list-elements-6ec6b7560327

GFG Editorial (Iterative Approach) :
https://www.geeksforgeeks.org/delete-occurrences-given-key-linked-list/

Q7. Remove Duplicates from Sorted List

Problem :

https://leetcode.com/problems/remove-duplicates-from-sorted-list/

Solutions :

Dream FAANG's Video (**Recursive** Approach) :
https://www.youtube.com/watch?v=aCAZN1x1q6w

Amell Peralta's Video (**Recursive** Approach) :
https://www.youtube.com/watch?v=TsdAEkB76_0

GFG Editorial (**Recursive** Approach) :
https://www.geeksforgeeks.org/remove-duplicates-sorted-linked-list-using-recursion/

Terrible Whiteboard's Video (Iterative Approach) :
https://www.youtube.com/watch?v=gfgJjrkR-W4

Helper Func's Video (Iterative Approach for more than 2 duplicates) :
https://www.youtube.com/watch?v=_pRN6SzRYLU

Amell Peralta's Video (Iterative Approach) :
https://www.youtube.com/watch?v=qbsuumkSia0

Week 6 - Advanced Linked List

Editorial

(1) Find intersection point of Y LinkedList

Question :

https://leetcode.com/problems/intersection-of-two-linked-lists/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=u4FWXfgS8jw

Programmer Mitch's Video (Optimal Approach) :
https://www.youtube.com/watch?v=gaMeDay XbM

Medium Article (3 Approaches) :
https://medium.com/swlh/intersection-of-two-linked-lists-a920fe2ec7c2

Terrible Whiteboard's Video (Optimal Approach) :
https://www.youtube.com/watch?v=c7dOI-hDa2Q

GFG Editorial (7 Approaches):
https://www.gfg.org/write-a-function-to-get-the-intersection-point-of-two-linked-lists/

mycodeschool's Video (3 Approaches with Complexity Analysis) :
https://www.youtube.com/watch?v=gE0GopCq378

Vivekanand Khyade - Algorithm Every Day's Video (Using Stack) :
https://www.youtube.com/watch?v=ycIMmSmkQbo

(2) Detect a cycle in Linked List

Question :

Question A (Linked List Cycle):
https://leetcode.com/problems/linked-list-cycle/

Question B (Linked List Cycle II):
https://leetcode.com/problems/linked-list-cycle-ii/

Question C (Detect and Remove Loop in a Linked List):
https://afteracademy.com/problems/detect-and-remove-loop-in-a-linked-list

Solutions :

Solution A :

take U forward's Video :
https://www.youtube.com/watch?v=354J83hX7RI

Terrible Whiteboard's Video:
https://www.youtube.com/watch?v=sMqEwkpvJvQ

codecram's Video (Also explains No-Cycle Detection):
https://www.youtube.com/watch?v=0Ih3MOgGAY8

HackerRank's Video:
https://www.youtube.com/watch?v=MFOAbpfrJ8g

CodeWhoop's Video:
https://www.youtube.com/watch?v=-V9BbUt8SbI

Byte By Byte's Video (2 Approaches):
https://www.youtube.com/watch?v=dvOilHNRzZs

Abdul Bari Data Structure's Video:
https://www.youtube.com/watch?v=C200KC7iXy4

GFG Editorial (4 Approaches):
https://www.geeksforgeeks.org/detect-loop-in-a-linked-list/

Solution B :

take U forward's Video :
https://www.youtube.com/watch?v=QfbOhn0WZ88

Evergreen's coderzone's Video (Time - O(n) & Space - O(1)) :
https://www.youtube.com/watch?v=iZVBVCpmugI

Evergreen's coderzone's Video (Time - O(n) & Space - O(n)) :
https://www.youtube.com/watch?v=pTRQyV0EEOA

Lets Algo together's Video :
https://www.youtube.com/watch?v=Qq-vnKmzJR0

GFG Editorial (3 Approaches):
https://www.geeksforgeeks.org/find-first-node-of-loop-in-a-linked-list/

Medium Article :
https://medium.com/@rajwar67/explanation-on-finding-the-starting-node-of-a-loop-in-linked-list-74c2f3d1590b

Solution C :

UBlog's Video (**Reason why slow-fast pointer approach works**):
https://www.youtube.com/watch?v=8NBkGnY5iJ8

CodesDope Blog :
https://www.codesdope.com/blog/article/detect-and-remove-loop-in-a-linked-list/

GFG Editorial (4 Approaches):
https://www.geeksforgeeks.org/detect-and-remove-loop-in-a-linked-list/

(3) Reverse a LinkedList in groups of size k. (Reverse Nodes in k-Group)

Question :

https://leetcode.com/problems/reverse-nodes-in-k-group/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=Of0HPkk3JgI

Coding with Conner's Video :
https://www.youtube.com/watch?v=jTWEmztptCQ

GFG Editorial (Using Recursion) :
https://www.geeksforgeeks.org/reverse-a-list-in-groups-of-given-size/

GFG Editorial (Using Stack) :
https://www.geeksforgeeks.org/reverse-linked-list-groups-given-size-set-2/

(4) Check if a LinkedList is palindrome or not.

Question :

https://leetcode.com/problems/palindrome-linked-list/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=-DtNInqFUXs

GFG Editorial (3 Approaches) :
https://www.geeksforgeeks.org/function-to-check-if-a-singly-linked-list-is-palindrome/

Fisher Coder's Video (Time Complexity - O(n) & Space Complexity - O(1)) :
https://www.youtube.com/watch?v=bOGh_3MTrdE

Amell Peralta's Video (Time Complexity - O(n) & Space Complexity - O(n)) :
https://www.youtube.com/watch?v=BTzWJUIoAIQ

(5) Find the starting point of the Loop of LinkedList

Question :

https://leetcode.com/problems/linked-list-cycle-ii/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=QfbOhn0WZ88

Evergreen's coderzone's Video (Time - O(n) & Space - O(1)) :
https://www.youtube.com/watch?v=iZVBVCpmugI

Evergreen's coderzone's Video (Time - O(n) & Space - O(n)) :
https://www.youtube.com/watch?v=pTRQyV0EEOA

Lets Algo together's Video :
https://www.youtube.com/watch?v=Qq-vnKmzJR0

GFG Editorial (3 Approaches):
https://www.geeksforgeeks.org/find-first-node-of-loop-in-a-linked-list/

Medium Article :
https://medium.com/@rajwar67/explanation-on-finding-the-starting-node-of-a-loop-in-linked-list-74c2f3d1590b

(6) Flattening of a LinkedList

Question :

Question A (Flattening a Singly Linked List):
https://practice.geeksforgeeks.org/problems/flattening-a-linked-list/1

Question B (Flatten a Multilevel Doubly Linked List):
https://leetcode.com/problems/flatten-a-multilevel-doubly-linked-list/

Solutions :

Solution A :

take U forward's Video :
https://www.youtube.com/watch?v=ysytSSXpAI0

GFG Editorial (Merge Singly Lists via Recursion) :
https://www.geeksforgeeks.org/flattening-a-linked-list/

GFG Editorial (Using Heap) :
https://www.geeksforgeeks.org/flattening-a-linked-list-set-2/

Solution B :

Algorithms Made Easy's Video (Recursive + Iterative Approach) :
https://www.youtube.com/watch?v=A7IeG9StaJ8

Akshay Goyal's Video (Iterative Approach) :
https://www.youtube.com/watch?v=pjWqjqGDOIw

Tech With Paul's Video (Iterative Approach) :
https://www.youtube.com/watch?v=ugBx_T1RHuc

Maged Helmy's Video (Recursive Approach) :
https://www.youtube.com/watch?v=QWoX2-s8KLE

(7) Rotate a LinkedList

Question :

Question A (Clockwise Rotation):
https://leetcode.com/problems/rotate-list/

Question B (Anti-Clockwise Rotation):
https://practice.geeksforgeeks.org/problems/rotate-a-linked-list/1

Solutions :

Solution A :

take U forward's Video :
https://www.youtube.com/watch?v=9VPm6nEbVPA

Jyotinder Singh's Video:
https://www.youtube.com/watch?v=A7nNLqFqmn8

Amell Peralta's Video:
https://www.youtube.com/watch?v=VX5Fz9z4-CE

GFG Editorial:
https://www.geeksforgeeks.org/clockwise-rotation-of-linked-list/

Solution B :

BORNTOCODE's Video:
https://www.youtube.com/watch?v=NC2hGWsyeLo

GFG Editorial:
https://www.geeksforgeeks.org/rotate-a-linked-list/

Practice (Week 6)

Q1. Linked List in Zig-Zag fashion

Problem :

https://practice.geeksforgeeks.org/problems/linked-list-in-zig-zag-fashion/1

Solutions :

O(n) Logic [Part 1]:
https://www.geeksforgeeks.org/converting-an-array-of-integers-into-zig-zag-fashion/

GFG Editorial (Implementation of Logic) [Part 2] :
https://www.geeksforgeeks.org/linked-list-in-zig-zag-fashion/

Q2. Reorder List

Problem :

https://leetcode.com/problems/reorder-list/

Solutions :

Nick White's Video :
https://www.youtube.com/watch?v=xRYPjDMSUFw

Algorithms Made Easy's Video :
https://www.youtube.com/watch?v=rEYm4yLHSHQ

Q3. Remove Zero Sum Consecutive Nodes from Linked List

Problem :

https://leetcode.com/problems/remove-zero-sum-consecutive-nodes-from-linked-list/

Solutions :

leetuition's Video :
https://www.youtube.com/watch?v=tss5biw6ctI

LeetCode Discussion Comment :
https://leetcode.com/problems/remove-zero-sum-consecutive-nodes-from-linked-list/discuss/366350/C%2B%2B-O(n)-(explained-with-pictures)

GFG Editorial :
https://www.geeksforgeeks.org/delete-continuous-nodes-with-sum-k-from-a-given-linked-list/

Q4. Sort List

Problem :

https://leetcode.com/problems/sort-list/

Solutions :

Amell Peralta's Video (Merge Sort via Recursion) :
https://www.youtube.com/watch?v=vH-o_6rwCEE

GFG Editorial (Merge Sort via Recursion) :
https://www.geeksforgeeks.org/merge-sort-for-linked-list/

GFG Editorial (Iterative Merge Sort) :
https://www.geeksforgeeks.org/iterative-merge-sort-for-linked-list/

GFG Editorial (QuickSort via Recursion) :
https://www.geeksforgeeks.org/quicksort-on-singly-linked-list/

Why is QuickSort preferred for Arrays and Merge Sort for Linked Lists? :
https://www.geeksforgeeks.org/why-quick-sort-preferred-for-arrays-and-merge-sort-for-linked-lists/

AfterAcademy Editorial (Merge Sort) :
https://afteracademy.com/blog/sort-list-merge-sort

Q5. Insertion Sort List

Problem :

https://leetcode.com/problems/insertion-sort-list/

Solutions :

Sahil Arora's Video :
https://www.youtube.com/watch?v=vyeHALAClic

AfterAcademy Editorial :
https://afteracademy.com/blog/sort-a-linked-list-using-insertion-sort

Quinston Pimenta's Video :
https://www.youtube.com/watch?v=_5_v2E0OWVs

Q6. Remove Duplicates from Sorted List II

Problem :

https://leetcode.com/problems/remove-duplicates-from-sorted-list-ii/

Solutions :

Ren Zhang's Video (Iterative + Recursive Approach) :
https://www.youtube.com/watch?v=ODwu-L7nH9A

alGOds's Video (Recursive Approach) :
https://www.youtube.com/watch?v=j7W70djR5ow

GFG Editorial (Iterative Approach) :
https://www.geeksforgeeks.org/remove-occurrences-duplicates-sorted-linked-list/

Q7. QuickSort on Doubly Linked List [SEARCH MORE EXPLANATIONS]

Problem :

https://practice.geeksforgeeks.org/problems/quicksort-on-doubly-linked-list/1

Solutions :

CodesDope Blog :
https://www.codesdope.com/blog/article/quicksort-on-doubly-linked-list/

GFG Editorial :
https://www.geeksforgeeks.org/quicksort-for-linked-list/

Week 7 - Two Pointer

Editorial

(1) Clone a Linked List with random and next pointer.

Question :

https://leetcode.com/problems/copy-list-with-random-pointer/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=VNf6VynfpdM

Medium Article (By Divya Godayal):
https://medium.com/spotthedifference/deep-copy-a-linked-list-b90d8376223f

Vivekanand Khyade's Video (Time - O(n) & Space - O(n)) :
https://www.youtube.com/watch?v=EHpS2TBfWQg

Maged Helmy's Video (Time - O(n) & Space - O(1)) :
https://www.youtube.com/watch?v=L2wOEvjCjwA

Rachit Jain's Video (2 Approaches):
https://www.youtube.com/watch?v=xbpUHSKoALg

Back To Back SWE's Video (2 Approaches):
https://www.youtube.com/watch?v=OvpKeraoxW0

Ren Zhang's Video (2 Approaches):
https://www.youtube.com/watch?v=DEKr0efEGTM

GFG Editorial (Time - O(n) & Space - O(1)) :
https://www.geeksforgeeks.org/clone-linked-list-next-random-pointer-o1-space/

GFG Editorial (Time - O(n) & Space - O(n)) :
https://www.geeksforgeeks.org/clone-linked-list-next-arbit-pointer-set-2/

(2) 3 sum

Question :

https://leetcode.com/problems/3sum/

OR

https://www.interviewbit.com/problems/3-sum-zero/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=onLoX6Nhvmg

CoderSnacks's Video (**Intuitive** Explanation) :
https://www.youtube.com/watch?v=jXZDUdHRbhY

Krishna Teaches's Video (Visual Code Walkthrough) :
https://www.youtube.com/watch?v=QLec4VB4Ol0

Khushboo Goel's Video (Visual Explanation):
https://www.youtube.com/watch?v=fj1g_-BwCMk

Giuseppe Picciano's Video (Visual Explanation):
https://www.youtube.com/watch?v=erEHQO0xljc

GFG Editorial :
https://www.geeksforgeeks.org/find-triplets-array-whose-sum-equal-zero/

(3) Trapping rainwater

Question :

https://leetcode.com/problems/trapping-rain-water/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=m18Hntz4go8

Knapsak's Video (3 Approaches):
https://www.youtube.com/watch?v=RV7jsfvJ33U

LogicHeap's Video (**Using Stack**):
https://www.youtube.com/watch?v=lhzrp3Nbj-w

GFG Editorial (4 Approaches):
https://www.geeksforgeeks.org/trapping-rain-water/

Algorithms Made Easy's Video (4 Approaches):
https://www.youtube.com/watch?v=EdR3V5DBgyo

ForAllEpsilon's Video (Part **1/3**):
https://www.youtube.com/watch?v=HmBbcDiJapY

ForAllEpsilon's Video (Part **2/3**) [Time O(n) | Space O(n)]:
https://www.youtube.com/watch?v=VZpJxINSvfs

ForAllEpsilon's Video (Part **3/3**) [Time O(n) | Space O(1)]:
https://www.youtube.com/watch?v=XqTBrQYYUcc

Terrible Whiteboard's Video (DP Approach):
https://www.youtube.com/watch?v=fTD6Se3ZtEo

Time Complexity Infinity's Video (DP Approach):
https://www.youtube.com/watch?v=zdDeV5v_iUE

thecodingworld's Video (Visual DP Approach):
https://www.youtube.com/watch?v=W-lWBEVE7Uc

LeetCode Article (4 Approaches):
https://leetcode.com/problems/trapping-rain-water/solution/

(4) Remove Duplicate from Sorted array

Question :
https://leetcode.com/problems/remove-duplicates-from-sorted-array/

Solutions :
take U forward's Video :
https://www.youtube.com/watch?v=Fm_p9lJ4Z_8

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=rlfsnRY0S9k

Jesse Dietrichson's Video :
https://www.youtube.com/watch?v=4ZIJ6fGB1e0

CodesDope Blog :
https://www.codesdope.com/blog/article/remove-duplicate-elements-from-sorted-array/

labuladong's Article :
https://labuladong.gitbook.io/algo-en/iv.-high-frequency-interview-problem/removeduplicatesfromsortedarray

(5) Max continuous number of 1's

Question :
https://leetcode.com/problems/max-consecutive-ones/

Solutions :
take U forward's Video :
https://www.youtube.com/watch?v=Mo33MjjMlyA

Nick White's Video (Using Global & Local Maxima):
https://www.youtube.com/watch?v=PLa4tYQhqoU

Michael Geng's Video (Using Two Pointer Approach):
https://www.youtube.com/watch?v=4q0UyW6XB60

Coding Brunette's Video (Code Walkthrough via LeetCode Debugger):
https://www.youtube.com/watch?v=60TTTZWH9uY

GFG Editorial :
https://www.geeksforgeeks.org/maximum-consecutive-ones-or-zeros-in-a-binary-array/

The Brown Box's Video (**Only** Visual Walkthrough):
https://www.youtube.com/watch?v=MxAybn96rlQ

Coding Kevin BKH's Video (**Only** Visual Walkthrough):
https://www.youtube.com/watch?v=_l5aRR04Yuc

Practice (Week 7)

Q1. Subarray Product Less Than K

Problem :
https://leetcode.com/problems/subarray-product-less-than-k/

Solutions :
Anish Malla's Video :
https://www.youtube.com/watch?v=4775IgUKfww

GFG Editorial :
https://www.geeksforgeeks.org/number-subarrays-product-less-k/

LeetCode Comment (Explaining how "right - left + 1" works):
https://leetcode.com/problems/subarray-product-less-than-k/solution/717864

Q2. Subarrays with K Different Integers

Problem :
https://leetcode.com/problems/subarrays-with-k-different-integers/

Solutions :
GFG Editorial :
https://www.geeksforgeeks.org/count-of-subarrays-having-exactly-k-distinct-elements/

GFG Comment (Explaining how "right -left + 1" works) :
https://pasteboard.co/JtLmnnk.png

Q3. Subarrays with Sum K [SEARCH FOR MORE EXPLANATIONS]

Problem :
Problem A (Subarray Sum Equals K): [SEARCH FOR MORE EXPLANATIONS]
https://leetcode.com/problems/subarray-sum-equals-k/

Problem B (Binary Subarrays With Sum): [SEARCH FOR MORE EXPLANATIONS]
https://leetcode.com/problems/binary-subarrays-with-sum/

Solutions :
Solution A :
Medium Article (By Divya Godayal) :
https://medium.com/spotthedifference/number-of-subarrays-having-sum-exactly-equal-to-k-f943ea367bfa

Knapsak's Video (Visual + Code):
https://www.youtube.com/watch?v=6poxiip7sBY

daose's Video :
https://www.youtube.com/watch?v=D5_AudnzHTI

Jyotinder Singh's Video (Using HashMap):
https://www.youtube.com/watch?v=UhE-Srvawo8

Akshay Goyal's Video (Using HashMap):
https://www.youtube.com/watch?v=N6EzbSxD6Bg

LeetCode Article :
https://leetcode.com/problems/subarray-sum-equals-k/solution/

GFG Editorial :
https://www.geeksforgeeks.org/number-subarrays-sum-exactly-equal-k/

Solution B :

Medium Article (By Divya Godayal) :
https://medium.com/spotthedifference/number-of-subarrays-having-sum-exactly-equal-to-k-f943ea367bfa

Algorithms Casts's Video (Map Approach + Two Pointer Approach) :
https://www.youtube.com/watch?v=56qUe5E0QNc

Francesco Manicardi's Video (Two Pointer Approach) :
https://www.youtube.com/watch?v=riE1wrGKxN4

Q4. Smallest Subarray with Sum at least K [SEARCH FOR MORE EXPLANATIONS]

Problem :

Problem A (Minimum Size Subarray Sum):
https://leetcode.com/problems/minimum-size-subarray-sum/

Problem B (Shortest Subarray with Sum at Least K):
https://leetcode.com/problems/shortest-subarray-with-sum-at-least-k/

Solutions :

Solution A :

Medium Article (2 Approaches):
https://medium.com/@lenchen/leetcode-209-minimum-size-subarray-sum-ab92c2de4e94

LeetCode Comment (With Visual Walkthrough):
https://leetcode.com/problems/minimum-size-subarray-sum/discuss/277445/Python-Sliding-Window-Approach-(with-comments)

LeetCode Comment (By lee215):
https://leetcode.com/problems/minimum-size-subarray-sum/discuss/433123

Solution B :

LeetCode Comment (Using Deque):

1) Intuition :

https://leetcode.com/problems/shortest-subarray-with-sum-at-least-k/discuss/189039/Detailed-intuition-behind-Deque-solution

2) Code (By lee215):

https://leetcode.com/problems/shortest-subarray-with-sum-at-least-k/discuss/143726/C%2B%2BJavaPython-O(N)-Using-Deque

GFG Editorial (Using Binary Search + Prefix Sum + HashMap) [**O(N*LogN)**]:

https://www.geeksforgeeks.org/smallest-subarray-from-a-given-array-with-sum-greater-than-or-equal-to-k/

LeetCode Comment (Intuitive Heap Solution):

https://leetcode.com/problems/shortest-subarray-with-sum-at-least-k/discuss/572877/C%2B%2B-Intuition-behind-the-heap-solution

LeetCode Comment (Intuitive Greedy Approach) [**FAILS FEW EDGE CASES**]:

https://leetcode.com/problems/shortest-subarray-with-sum-at-least-k/discuss/152764/Beats-99.9(14-ms)-solutions-More-intutive-than-queue-based-solution.

Q5. Remove Duplicates from Sorted Array II

Problem :

hhttps://leetcode.com/problems/remove-duplicates-from-sorted-array-ii/

Solutions :

Amell Peralta's Video :

https://www.youtube.com/watch?v=-jHoA0e-IJ0

dev.to Article (Generalized Approach):

https://dev.to/varunu28/a-leetcode-a-day-remove-duplicates-from-sorted-array-ii-2b0

Francesco Manicardi's Video (Extremely Short Code):

https://www.youtube.com/watch?v=OTh-I-COvt4

Q6. Move Zeroes

Problem :

https://leetcode.com/problems/move-zeroes/

Solutions :

Terrible Whiteboard's Video (One Pass Solution):

https://www.youtube.com/watch?v=0rPuILjoVsg

shirin setayesh's Video (Two Pass Solution):

https://www.youtube.com/watch?v=vs4rvPT1_mM

On The Spot STEM's Video (**Intuition** for One Pass Solution):

https://www.youtube.com/watch?v=S6h1a1knsoQ

Brennan Fradelis's Video (One Pass Solution + Python Code):
https://www.youtube.com/watch?v=QOth4_VJkJY

studytonight.com Editorial (Two Pass Solution):
https://www.studytonight.com/post/leetcode-solution-move-zeroes-problem

cherryljr's Article (2 Approaches)
https://github.com/cherryljr/LeetCode/blob/master/Move%20Zeroes.java

AfterAcademy Editorial (3 Approaches):
https://afteracademy.com/blog/move-all-the-zeroes-to-the-end

Dev.to Article (3 Approaches):
https://dev.to/13point5/leetcode-challenge-move-zeroes-512p

LeetCode Article (3 Approaches) :
https://leetcode.com/problems/move-zeroes/solution/

Q7. 3Sum Closest

Problem :

https://leetcode.com/problems/3sum-closest/

OR

https://www.interviewbit.com/problems/3-sum/

Solutions :

Krishna Teaches's Video :
https://www.youtube.com/watch?v=hHMz-9sXE1g

Leslie Tang's Video (Visual Logic Walkthrough):
https://www.youtube.com/watch?v=cJOkAOgfRr8

LeetCode Article (2 Approaches) :
https://leetcode.com/problems/3sum-closest/solution/

GFG Editorial (1 Approach) :
https://www.geeksforgeeks.org/find-a-triplet-in-an-array-whose-sum-is-closest-to-a-given-number/

Han Jiang's Medium Article (Part 1 | Brute Force Approach):
https://medium.com/@hanjiang_54259/leetcode-16-3sum-closest-in-javascript-part-1-1493777c11b9

Han Jiang's Medium Article (Part 2 | Optimised Approach):
https://medium.com/@hanjiang_54259/leetcode-16-3sum-closest-in-javascript-part-2-ffa883a3cd2d

Q8. Container With Most Water

Problem :

https://leetcode.com/problems/container-with-most-water/

Solutions :

Inside code's Video :
https://www.youtube.com/watch?v=I7fFgU6n4x8

Michael Muinos's Video :
https://www.youtube.com/watch?v=JMmKtYH5VOE

Time Complexity Infinity's Video :
https://www.youtube.com/watch?v=k5fbSqb9sCI

Coding with Conner's Video :
https://www.youtube.com/watch?v=x6ZZ3JmgRKE

Krishna Teaches's Video (Visual Code Walkthrough) :
https://www.youtube.com/watch?v=aJOvDxY6AQw

Algorithms Casts's Video (**Intuitive** Explanation):
https://www.youtube.com/watch?v=O3BmSJWY6nU

Weili Yang's Video (**Intuitive** Explanation):
https://www.youtube.com/watch?v=XASDpSFty74

Joy Liu - Computer Psyc's Video (**Proof**):
https://www.youtube.com/watch?v=cPwXGcZQ1mA

GFG Editorial :
https://www.geeksforgeeks.org/container-with-most-water/

LeetCode Article (with links to proof) :
https://leetcode.com/problems/container-with-most-water/solution/

Q9. Minimum Window Substring [SEARCH FOR MORE EXPLANATION]

Problem :

https://leetcode.com/problems/minimum-window-substring/

Solutions :

Back To Back SWE's Video :
https://www.youtube.com/watch?v=eS6PZLjoaq8

Week 8 - Greedy

Editorial

(1) N meeting in one room

Question :

Question A (N meetings in one room):
https://practice.geeksforgeeks.org/problems/n-meetings-in-one-room/0

Question B (Meeting Rooms II):
https://www.interviewbit.com/problems/meeting-rooms/
OR
https://www.lintcode.com/problem/meeting-rooms-ii/description

Question C (Meeting Rooms):
https://www.lintcode.com/problem/meeting-rooms/description

Solutions :

Solution A :

take U forward's Video :
https://www.youtube.com/watch?v=II6ziNnub1Q

GFG Editorial :
https://www.geeksforgeeks.org/find-maximum-meetings-in-one-room/

Solution B :

Ankur Agrawal's Video (**Intuitive** Explanation):
https://www.youtube.com/watch?v=DFEf8_fjb_0

Coding With Jaz's Video (Using Heap):
https://www.youtube.com/watch?v=9ZsUM1ed05c

Coding With Jaz's Video (with **Follow-Up** Questions)
https://www.youtube.com/watch?v=wO4x9NnCOfU

Amell Peralta's Video:
https://www.youtube.com/watch?v=RBlcUlUkDCU

Phani Thaticharla's Video (**Visual Whiteboard** Explanation):
https://www.youtube.com/watch?v=JLPFkZinz30

Solution C :

Amell Peralta's Video :
https://www.youtube.com/watch?v=6Ygq6wXM4-I

Coding With Jaz's Video :

https://www.youtube.com/watch?v=s69Hc_MszQ8

Phani Thaticharla's Video (**Visual Whiteboard** Explanation):
https://www.youtube.com/watch?v=JLPFkZinz30

(2) Minimum number of platforms required for a railway

Question :

https://practice.geeksforgeeks.org/problems/minimum-platforms-1587115620/1

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=dxVcMDI7vyI

GFG Editorial (Greedy Approach):
https://www.geeksforgeeks.org/minimum-number-platforms-required-railwaybus-station/

GFG Editorial (Map Based Approach):
https://www.geeksforgeeks.org/minimum-number-platforms-required-railwaybus-station-set-2-map-based-approach/

(3) Job sequencing Problem (Maximum Profit in Job Scheduling)

Question :

https://practice.geeksforgeeks.org/problems/job-sequencing-problem-1587115620/1

OR

https://leetcode.com/problems/maximum-profit-in-job-scheduling/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=LjPx4wQaRIs

Abdul Bari's Video :
https://www.youtube.com/watch?v=zPtI8q9gvX8

GFG Editorial :
https://www.geeksforgeeks.org/job-sequencing-problem/

Medium Article :
https://medium.com/@withsnowy2009/job-sequencing-with-deadlines-c3e996df0928

(4) Fractional Knapsack Problem

Question :

https://practice.geeksforgeeks.org/problems/fractional-knapsack-1587115620/1

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=F_DDzYnxO14

Abdul Bari's Video :

https://www.youtube.com/watch?v=oTTzNMHM05I

Yusuf Shakeel's Video :
https://www.youtube.com/watch?v=_08myilrxq8

GFG Editorial :
https://www.geeksforgeeks.org/fractional-knapsack-problem/

AfterAcademy Editorial :
https://afteracademy.com/blog/fractional-knapsack-problem

(5) Greedy algorithm to find minimum number of coins

Question :

https://www.geeksforgeeks.org/greedy-algorithm-to-find-minimum-number-of-coins/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=mVg9CfJvayM

Progressive Coder Editorial :
http://progressivecoder.com/coin-change-problem-using-greedy-algorithm/

Codeforces Comment (**Required Condition for Greedy Approach to work**) :
https://codeforces.com/blog/entry/60565?#comment-725434

CodesDope Editorial :
https://www.codesdope.com/course/algorithms-greedy-algorithm/

GFG Editorial :
https://www.geeksforgeeks.org/greedy-algorithm-to-find-minimum-number-of-coins/

(6) Activity Selection [SEARCH FOR MORE EXPLANATION]

Question :

https://afteracademy.com/problems/activity-selection-problem

Solutions :

CodesDope Editorial :
https://www.codesdope.com/course/algorithms-activity-selection/

Practice (Week 8)

Q1. Non-overlapping Intervals [SEARCH FOR MORE EXPLANATION]

Problem :

https://leetcode.com/problems/non-overlapping-intervals/

Solutions :

Algorythm's Video :

https://www.youtube.com/watch?v=hyQZCTfQDxo

Anish Malla's Video :
https://www.youtube.com/watch?v=3oDvuHCTFmY

Q2. Remove Covered Intervals [SEARCH FOR MORE EXPLANATION]

Problem :
https://leetcode.com/problems/remove-covered-intervals/

Solutions :
Anish Malla's Video :
https://www.youtube.com/watch?v=emPnw5m2nN0

Francesco Manicardi's Video :
https://www.youtube.com/watch?v=eSqgqWV5D50

Q3. Chef and Bitwise Product [SEARCH FOR MORE EXPLANATION]

Problem :
https://www.codechef.com/problems/CHANDF

Solutions :
Rachit Jain's Video :
https://www.youtube.com/watch?v=-F7cHQ-gWS4

Q4. Gas Station

Problem :
https://leetcode.com/problems/gas-station/

Solutions :
Knapsak's Video :
https://www.youtube.com/watch?v=wDgKaNrSOEI

Joy Liu - Computer Psyc's Video (With Proof) :
https://www.youtube.com/watch?v=rf66wlb9aNQ

Anish Malla's Video :
https://www.youtube.com/watch?v=lWI-HbIC70g

Applied AI Course's Video :
https://www.youtube.com/watch?v=nTKdYm_5-ZY

Medium Article :
https://medium.com/@rohitsharmacr/gas-station-leetcode-134-d9693244d18c

GFG Editorial :
https://www.geeksforgeeks.org/find-a-tour-that-visits-all-stations/

GFG Editorial (DP Approach):

https://www.geeksforgeeks.org/number-of-circular-tours-that-visit-all-petrol-pumps/

Week 9 - Recursion

Editorial

(1) Combination sum-1

Question :

Question A (Combination Sum):
https://leetcode.com/problems/combination-sum/
OR
https://practice.geeksforgeeks.org/problems/combination-sum-1587115620/1

Question B (Combination Sum IV):
https://leetcode.com/problems/combination-sum-iv/

Solutions :

Solution A :

take U forward's Video :
https://www.youtube.com/watch?v=OyZFFqQtu98

Time Complexity Infinity's Video :
https://www.youtube.com/watch?v=MTI2wc8s0BY

GFG Editorial :
https://www.geeksforgeeks.org/combinational-sum/

AfterAcademy Editorial :
https://afteracademy.com/blog/combination-sum

Solution B :

Knapsak's Video :
https://www.youtube.com/watch?v=VPdg1gPRe04

(2) Combination sum-2

Question :

Question A (Combination Sum II):
https://leetcode.com/problems/combination-sum-ii/

Question B (Combination Sum III):
https://leetcode.com/problems/combination-sum-iii/

Solutions :

Solution A :

take U forward's Video :
https://www.youtube.com/watch?v=G1fRTGRxXU8

Kevin Naughton Jr.'s Video :
https://www.youtube.com/watch?v=IER1ducXujU

GFG Editorial :
https://www.geeksforgeeks.org/all-unique-combinations-whose-sum-equals-to-k/

Solution B :

Anish Malla's Video (Backtracking):
https://www.youtube.com/watch?v=J2hcPZRpbMk

thecodingworld's Video (DFS Approach):
https://www.youtube.com/watch?v=RdqpTEiR9ss

(3) Palindrome Partioning

Question :

https://leetcode.com/problems/palindrome-partitioning/

OR

https://www.interviewbit.com/problems/palindrome-partitioning/

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=WBgsABoCIE0

LeetCode Article (Backtracking + DP):
https://leetcode.com/problems/palindrome-partitioning/solution/

NeetCode's Video (Visual Explanation + Python Code):
https://www.youtube.com/watch?v=3jvWodd7ht0

Algorithms Made Easy's Video (Java Code):
https://www.youtube.com/watch?v=uJeS6FmbSjM

GFG Editorial :
https://www.geeksforgeeks.org/print-palindromic-partitions-string/

AND

https://www.geeksforgeeks.org/given-a-string-print-all-possible-palindromic-partition/

(4) Subset Sum-1 (Subset Sums) [Search For More Explanation]

Question :

https://practice.geeksforgeeks.org/problems/subset-sums2234/1

Solutions :

take U forward's Video :
https://www.youtube.com/watch?v=rYkfBRtMJr8

(5) Subset Sum-2 [Search For More Explanation]

Question :

Question A (Subsets):

https://leetcode.com/problems/subsets/

Question B (Subsets II):
https://leetcode.com/problems/subsets-ii/

Solutions :

Solution A :

Channel Name's Video :
https

Solution B :

take U forward's Video :
https://www.youtube.com/watch?v=RIn3gOkbhQE

(6) K-th permutation Sequence (Permutation Sequence)

Question :

https://leetcode.com/problems/permutation-sequence/

Solutions :

Algorithms Made Easy's Video (Visual Logic Explanation):
https://www.youtube.com/watch?v=T_KP7GcsHVY

Khushboo Goel's Video (Code Explanation):
https://www.youtube.com/watch?v=QNCuMUApTSc

GFG Editorial :
https://www.geeksforgeeks.org/find-the-k-th-permutation-sequence-of-first-n-natural-numbers/

Week 10 - Backtracking

Editorial

(1) N queens Problem

Question :

Question A (N-Queens):
https://leetcode.com/problems/n-queens/
OR
https://www.interviewbit.com/problems/nqueens/

Question B (N-Queens II):
https://leetcode.com/problems/n-queens-ii/

Solutions :

Solution A :

Back To Back SWE's Video (WhiteBoard Explanation):
https://www.youtube.com/watch?v=wGbuCyNpxIg

CSBreakdown's Video (Visual Code Walkthrough):
https://www.youtube.com/watch?v=kX5frmc6B7c

GeeksforGeeks's Video (Animation):
https://www.youtube.com/watch?v=0DeznFqrgAI

CodesDope Editorial (with **Complexity Analysis**):
https://www.codesdope.com/course/algorithms-backtracking/

GFG Editorial (All possible output):
https://www.geeksforgeeks.org/printing-solutions-n-queen-problem/

Medium Article (Optimization Intuition):
https://towardsdatascience.com/data-manipulation-with-n-queens-640d37e3c774

Solution B :

Programming Live with Larry's Video :
https://www.youtube.com/watch?v=1x6DraMw35c

Medium Article (Induition):
https://medium.com/swlh/how-many-solutions-does-the-n-queens-problem-have-e8da5d45a34c

(2) Sudoko

Question (Sudoku Solver):
https://leetcode.com/problems/sudoku-solver/
OR
https://www.interviewbit.com/problems/sudoku/

Solutions :

GeeksforGeeks's Video (Visual Explanation) :
https://www.youtube.com/watch?v=_vWRZiDUGHU

Back To Back SWE's Video (Only Theory):
https://www.youtube.com/watch?v=JzONv5kaPJM

happygirlzt's Video (with Code):
https://www.youtube.com/watch?v=wWUDo2FkdMc

AfterAcademy Editorial :
https://afteracademy.com/blog/sudoku-solver

GFG Editorial :
https://www.geeksforgeeks.org/sudoku-backtracking-7/

CodesDope Blog :
https://www.codesdope.com/blog/article/solving-sudoku-with-backtracking-c-java-and-python/

(3) M coloring Problem (Graph prob)

Question :

https

Solutions :

Channel Name's Video :
https

(4) Rat in a Maze

Question :

Question A (Rat in a Maze Problem):
https://practice.geeksforgeeks.org/problems/rat-in-a-maze-problem/1

Question B (Rat Maze):
https://www.codechef.com/problems/BPHC03

Question C (Jumping Rat in a Maze):
https://www.geeksforgeeks.org/rat-in-a-maze-with-multiple-steps-jump-allowed/

Solutions :

Solution A :

GeeksforGeeks's Video (Visual Explanation):
https://www.youtube.com/watch?v=PwxGTHraMNg

GFG Editorial :
https://www.geeksforgeeks.org/rat-in-a-maze-backtracking-2/

CodesDope Editorial :
https://www.codesdope.com/blog/article/backtracking-to-solve-a-rat-in-a-maze-c-java-pytho/

Solution B :

GFG Editorial :
https://www.geeksforgeeks.org/rat-in-a-maze-problem-when-movement-in-all-possible-directions-is-allowed/

GFG Editorial (Using **STACK**):
https://www.geeksforgeeks.org/rat-in-a-maze-backtracking-using-stack/

CodeChef Accepted Solution (Code with **Comments**):
https://www.codechef.com/viewsolution/40295633

Solution C :

GFG Editorial (Backtracking Approach):
https://www.geeksforgeeks.org/rat-in-a-maze-with-multiple-steps-jump-allowed/

GFG Editorial (DP Approach):

https://www.geeksforgeeks.org/a-variation-of-rat-in-a-maze-multiple-steps-or-jumps-allowed/

(5) Print all Permutations of a string/array

Question :

Question A (Permutations):
https://leetcode.com/problems/permutations/
OR
https://practice.geeksforgeeks.org/problems/permutations-of-a-given-string/0

Question B (Permutations II):
https://leetcode.com/problems/permutations-ii/

Solutions :

Solution A :

Back To Back SWE's Video (Logic Explanation):
https://www.youtube.com/watch?v=GCm7m5671Ps

computer's Video (Logic + Code):
https://www.youtube.com/watch?v=Nabbpl7y4Lo

Amell Peralta's Video (Code Explanation):
https://www.youtube.com/watch?v=idmgLLNIC2U

GFG Editorial :
https://www.geeksforgeeks.org/write-a-c-program-to-print-all-permutations-of-a-given-string/

Solution B :

Amell Peralta's Video :
https://www.youtube.com/watch?v=A3ge2mdQi4g

Programming Live with Larry's Video :
https://www.youtube.com/watch?v=PRUXZW-mVLQ

GFG Editorial :
https://www.geeksforgeeks.org/distinct-permutations-string-set-2/

(6) Word Break (print all ways) (Word Break II)

Question :

https://leetcode.com/problems/word-break-ii/
OR
https://practice.geeksforgeeks.org/problems/word-break-part-2/0

Solutions :

another digital nomad's Video (Code Explanation):
https://www.youtube.com/watch?v=uR3RElKnrkU

Algorithms Made Easy's Video (Visual Explanation):
https://www.youtube.com/watch?v=PdaXY6GOL2U

Medium Article (with Time & Space Complexity Analysis):
https://salonikaurone.medium.com/leetcode-word-break-ii-explained-d41ecfbe8fc5

GFG Editorial (Backtracking):
https://www.geeksforgeeks.org/word-break-problem-using-backtracking/

GFG Editorial (Optimized using **DP**):
https://www.geeksforgeeks.org/word-break-problem-dp-32-set-2/

Week 11 - Divide and Conquer

Editorial

(1) 1/N-th root of an integer (use binary search) (square root, cube root, ..)

Question :

Question A (Calculating n-th real root using binary search):
https://practice.geeksforgeeks.org/problems/find-nth-root-of-m5843/1

Question B (Floor value Kth root of a number using Recursive Binary Search):
https://www.geeksforgeeks.org/floor-value-kth-root-of-a-number-using-recursive-binary-search/

Solutions :

Solution A :

GFG Editorial :
https://www.geeksforgeeks.org/calculating-n-th-real-root-using-binary-search/

Solution B :

GFG Editorial :
https://www.geeksforgeeks.org/floor-value-kth-root-of-a-number-using-recursive-binary-search/

(2) Matrix Median

Question :

Question A (Median of K Sorted Arrays of Same Size):
https://www.interviewbit.com/problems/matrix-median/
OR
https://afteracademy.com/problems/median-in-row-wise-sorted-matrix
OR
https://practice.geeksforgeeks.org/problems/median-in-a-row-wise-sorted-matrix1527/1

Question B (Median of K Sorted Arrays of Different Size):
https://www.lintcode.com/problem/median-of-k-sorted-arrays/description

Solutions :

Solution A :

AfterAcademy Editorial :
https://afteracademy.com/blog/median-in-a-row-wise-sorted-matrix

GFG Editorial :
https://www.geeksforgeeks.org/find-median-row-wise-sorted-matrix/

LeetCode Discussion :
https://leetcode.com/discuss/interview-question/904537/Amazon-or-Onsite-or-Median-of-K-sorted-arrays-of-size-N-each

Solution B :

StackOverflow Discussion :
https://stackoverflow.com/questions/6182488/median-of-5-sorted-arrays

(3) Find the element that appears once in sorted array, and rest element appears twice (Binary search)

Question (Single Element in a Sorted Array):
https://leetcode.com/problems/single-element-in-a-sorted-array/
OR
https://practice.geeksforgeeks.org/problems/find-the-element-that-appears-once-in-sorted-array0624/1

Solutions :

daose's Video (Visual & Intuitive):
https://www.youtube.com/watch?v=aFXhs190zeg

Michael Muinos's Video (Visual) :
https://www.youtube.com/watch?v=4Gi8uAz666s

Algorithms Made Easy's Video (Visual) :
https://www.youtube.com/watch?v=4iMnnMcEDpQ

GFG Editorial :
https://www.geeksforgeeks.org/find-the-element-that-appears-once-in-a-sorted-array/

LeetCode Comment :
https://leetcode.com/problems/single-element-in-a-sorted-array/discuss/628111/C%2B%2B-Solution-O(logn)-with-detailed-explanation

(4) Search element in a sorted and rotated array/ find pivot where it is rotated

Question (Search in Rotated Sorted Array):
https://leetcode.com/problems/search-in-rotated-sorted-array/
OR
https://www.interviewbit.com/problems/rotated-sorted-array-search/
OR
https://practice.geeksforgeeks.org/problems/search-in-a-rotated-array/0

Solutions :

NeetCode's Video (Visual Python O(logn)) :
https://www.youtube.com/watch?v=U8XENwh8Oy8

Coding Blocks's Video (**Hindi** Visual Recursive O(logn)) :
https://www.youtube.com/watch?v=ctW9Q6Y_Z8k

daose's Video (Visual Java O(logn)) :
https://www.youtube.com/watch?v=82VgjkIdzFQ

Time Complexity Infinity's Video (Finding Pivot Visual O(2*logn)) :
https://www.youtube.com/watch?v=VoP4woobBns

Medium Article (Detailed Explanation With Diagrams) :
https://medium.com/spotthedifference/search-in-a-rotated-sorted-array-72c12bcb212

LeetCode Comment (Detail Case Wise Explanation):
https://leetcode.com/problems/search-in-rotated-sorted-array/discuss/14547/Java-Super-Clear-Solution-with-Super-Detailed-Explanation-(Took-me-2-hours-to-write)

GFG Editorial :
https://www.geeksforgeeks.org/search-an-element-in-a-sorted-and-pivoted-array/

(5) Median of 2 sorted arrays

Question :

Question A (Median of Two Sorted Arrays of Different Size):
https://leetcode.com/problems/median-of-two-sorted-arrays/
OR
https://www.interviewbit.com/problems/median-of-array/

Question B (Median of Two Sorted Array of Same Size):
https://afteracademy.com/problems/median-of-two-sorted-array-of-same-size

Solutions :

Solution A :

Medium Article (Intuitive Explanation) :
https://medium.com/@hazemu/finding-the-median-of-2-sorted-arrays-in-logarithmic-time-1d3f2ecbeb46

Keerti Purswani's Video (WhiteBoard Explanation) :
https://www.youtube.com/watch?v=yD7wV8SyPrc

NeetCode's Video (Visual + Python Code) :
https://www.youtube.com/watch?v=q6IEA26hvXc

Krishna Teaches's Video (Using Heap | Visual Code Walkthrough):
https://www.youtube.com/watch?v=juzJ6SmxovA

ForAllEpsilon's Video (Part 1) :

https://www.youtube.com/watch?v=CMjAo8_8JYM

GFG Editorial (Different Size Array | 2 Approaches) :
https://www.geeksforgeeks.org/median-of-two-sorted-arrays-of-different-sizes/

GFG Editorial (Different Size Array | 1 Optimized Approach) :
https://www.geeksforgeeks.org/median-two-sorted-arrays-different-sizes-ologmin n-m/

Solution B :

AfterAcademy Editorial (Same Size Array) :
https://afteracademy.com/blog/median-of-the-two-sorted-array-of-same-size

GFG Editorial (Same Size Array | 2 Approaches) :
https://www.geeksforgeeks.org/median-of-two-sorted-arrays/

(6) K-th element of two sorted arrays

Question :

https://practice.geeksforgeeks.org/problems/k-th-element-of-two-sorted-array1317/1

OR

https://leetcode.com/discuss/interview-question/351782/Google-or-Phone-Screen-or-Kth -Largest-Element-of-Two-Sorted-Arrays

Solutions :

AlgorithmsAndMe Editorial :
http://www.algorithmsandme.com/find-kth-smallest-element-in-two-sorted-arrays/

GFG Editorial :
https://www.geeksforgeeks.org/k-th-element-two-sorted-arrays/

Gaurav Sen'v Video (Generalize + Concept Explanation):
https://www.youtube.com/watch?v=Q3JUfHpffIg

Week 12 - Bits / Bit Manipulation

Editorial

(1) Check if a number if a power of 2 or not in O(1)

Question :

https

Solutions :

Channel Name's Video :
https

(2) Count total set bits

Question :

https

Solutions :

Channel Name's Video :

https

(3) Divide Integers without / operator

Question :

https

Solutions :

Channel Name's Video :

https

(4) Power Set (this is very important)

Question :

https

Solutions :

Channel Name's Video :

https

(5) Find MSB in o(1)

Question :

https

Solutions :

Channel Name's Video :

https

(6) Find square of a number without using multiplication or division operators.

Question :

https

Solutions :

Channel Name's Video :

https

Practice (Week 12)

Q1. Find elements that occurs once while other elements occur M times

Problem :

Problem A (Single Number II):

https://leetcode.com/problems/single-number-ii/

OR

https://www.interviewbit.com/problems/single-number-ii/

Problem B (Single Number III):
https://leetcode.com/problems/single-number-iii/

Solutions :

Solution A :

IDeserve's Video (Visual) :
https://www.youtube.com/watch?v=mHfvInveXDQ

Scaler Academy's Video :
https://www.youtube.com/watch?v=jO7uGdvGGC4

IDeserve Article :
https://www.ideserve.co.in/learn/find-the-element-that-appears-once-in-an-array

CareerCup Discussion :
https://www.careercup.com/question?id=7902674

GFG Editorial :
https://www.geeksforgeeks.org/find-the-element-that-appears-once/

LeetCode Comment (Summarised Explanation):
https://leetcode.com/problems/single-number-ii/discuss/326621/All-In-One-Summary-(Single-Number-I-II-III)

Solution B :

Sheep's Video :
https://www.youtube.com/watch?v=3TSC0nlur58

LeetCode Comment (Summarised Explanation):
https://leetcode.com/problems/single-number-iii/discuss/326622/All-In-One-Summary-(Single-Number-I-II-III)

LeetCode Comment (Generalization of Bitwise Operation for Single Numbers) :
https://leetcode.com/problems/single-number-ii/discuss/43295/Detailed-explanation-and-generalization-of-the-bitwise-operation-method-for-single-numbers

Week 13 - Stack and Queue

Editorial

(1) Implement Stack / Implement Queue [In Progress]

Question :

Question A (Implement stack using array):

https://practice.geeksforgeeks.org/problems/implement-stack-using-array/1

Question B (Implement Stack using Linked List):
https://practice.geeksforgeeks.org/problems/implement-stack-using-linked-list/1

Question C (Implement Queue using array):
https://practice.geeksforgeeks.org/problems/implement-queue-using-array/1

Question D (Implement Queue using Linked List):
https://practice.geeksforgeeks.org/problems/implement-queue-using-linked-list/1

Question E (Design Circular Queue):
https://leetcode.com/problems/design-circular-queue/

Solutions :

Solution A :

CodesDope Editorial :
https://www.codesdope.com/blog/article/making-a-stack-using-an-array-in-c/

Solution B :

CodesDope Editorial :
https://www.codesdope.com/blog/article/making-a-stack-using-linked-list-in-c/

Solution C :

CodesDope Editorial :
https://www.codesdope.com/blog/article/making-a-queue-using-an-array-in-c/

Solution D :

CodesDope Editorial :
https://www.codesdope.com/blog/article/making-a-queue-using-linked-list-in-c/

Solution E :

GFG Editorial (Set 1 - Array Implementation) :
https://www.geeksforgeeks.org/circular-queue-set-1-introduction-array-implementation/

GFG Editorial (Set 2 - Linked List Implementation) :
https://www.geeksforgeeks.org/circular-queue-set-2-circular-linked-list-implementation/

(2) BFS

Question :

https

Solutions :

Channel Name's Video :
https

(3) Implement Stack using Queue [In Progress]

Question (Implement Stack using Queues) :

https://leetcode.com/problems/implement-stack-using-queues/

OR

https://practice.geeksforgeeks.org/problems/stack-using-two-queues/1

Solutions :

Terrible Whiteboard's Video (Using **One** Queue) :
https://www.youtube.com/watch?v=t3OvIcsaXjk&ab_channel=TerribleWhiteboard

CodeWhoop's Video (Using **Two** Queues) :
https://www.youtube.com/watch?v=kKjYSBeDpFA&ab_channel=CodeWhoop

(4) Implement Queue using Stack

Question :

https

Solutions :

Channel Name's Video :
https

(5) Check for balanced parentheses

Question :

https

Solutions :

Channel Name's Video :
https

(6) Next Greater Element

Question :

https

Solutions :

Channel Name's Video :
https

Week 14 - Advance Stack & Queue

Editorial

(1) Next Smaller Element

Question :

https

Solutions :

Channel Name's Video :
https

(2) LRU cache (vvvv. imp)

Question :

https

Solutions :

Channel Name's Video :
https

(3) Largest rectangle in histogram

Question :

https

Solutions :

Channel Name's Video :
https

(4) Sliding Window maximum

Question :

https

Solutions :

Channel Name's Video :
https

(5) Implement Min Stack [IN PROGRESS]

Question :

Question A (Min Stack):
https://leetcode.com/problems/min-stack/

Question B (Max Stack):
https://www.lintcode.com/problem/max-stack/description

Solutions :

Solution A :

Channel Name's Video :
https

Solution B :

Channel Name's Video :
https

(6) Rotten Orange (Using BFS)

Question :

https

Solutions :

Channel Name's Video :

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Week 15 - String

Editorial

(1) Reverse Words in a String

Question :

https

Solutions :

Channel Name's Video :

https

(2) Longest Palindrome in a string

Question :

https

Solutions :

Channel Name's Video :

https

(3) Roman Number to Integer and vice versa

Question :

https

Solutions :

Channel Name's Video :

https

(4) Implement ATOI/STRSTR

Question :

https

Solutions :

Channel Name's Video :

https

(5) Longest Common Prefix

Question :

https

Solutions :

Channel Name's Video :
https

(6) Rabin Karp (Longest Duplicate Substring)

Question :

https://leetcode.com/problems/longest-duplicate-substring/

Solutions :

Aalekh Jain's Video (Full Explanation):
https://www.youtube.com/watch?v=bmEHg_yUr0k

Stable Sort's Video (Rolling Hash Function Tutorial):
https://www.youtube.com/watch?v=BfUejqd07yo

Abdul Bari's Video (Rabin-Karp String Matching Algorithm Tutorial):
https://www.youtube.com/watch?v=qQ8vS2btsxI

Medium Article (Rabin-Karp Algorithm Tutorial):
https://medium.com/@darshanrathod4400/rabin-karp-algorithm-50bf47265b29

Practice (Week 15)

Q1. Ways to split string into two palindromes (Rabin Karp Application)

Problem :

https://www.geeksforgeeks.org/count-of-ways-to-split-given-string-into-two-non-empty-palindromes/

Solutions :

GFG Editorial :
https://www.geeksforgeeks.org/count-of-ways-to-split-given-string-into-two-non-empty-palindromes/

Week 16 - Advance String

Editorial

(1) Prefix Function/Z-Function

Question :

https

Solutions :

Channel Name's Video :
https

(2) KMP algo

Question :

Question A (Longest Prefix Suffix):
https://practice.geeksforgeeks.org/problems/longest-prefix-suffix2527/1

Question B (Implement strStr()):
https://leetcode.com/problems/implement-strstr/

Solutions :

Solution A :

Stable Sort's Video (Visual Animation + Code Tutorial):
https://www.youtube.com/watch?v=EL4ZbRF587g

Lucian Bicsi's Video (Intuitive Explanation):
https://www.youtube.com/watch?v=7V-Nt-TA3m0

Back To Back SWE's Video (Whiteboard Explanation):
https://www.youtube.com/watch?v=BXCEFAzhxGY

Abdul Bari's Video (Whiteboard Explanation):
https://www.youtube.com/watch?v=V5-7GzOfADQ

Logic First's Video (Visual + Code Explanation in Python):
https://www.youtube.com/watch?v=4jY57Ehc14Y

GFG Editorial :
https://www.geeksforgeeks.org/kmp-algorithm-for-pattern-searching/

Explanation of **computeLPSArray()** on GFG Editorial :
https://leetcode.com/problems/implement-strstr/discuss/13160/detailed-explanation-on-building-up-lps-for-kmp-algorithm

Solution B :

Amell Peralta's Video (Clean Implementation in Java):
https://www.youtube.com/watch?v=TsxFvVy_5m0

Basheer Ahmad's Video (Hindi Explanation):
https://www.youtube.com/watch?v=4yT8mpJxHks

LeetCode Comment (Code in C with comments):
https://leetcode.com/problems/implement-strstr/discuss/797907/Simple-C-solution-with-detailed-explanation.-faster-than-100

(3) Minimum characters needed to be inserted in the beginning to make it palindromic.

Question :

https

Solutions :

Channel Name's Video :
https

(4) Check for Anagrams [IN PROGRESS]

Question :

Question A (Valid Anagram):
https://leetcode.com/problems/valid-anagram/

Question B (Find All Anagrams in a String):
https://leetcode.com/problems/find-all-anagrams-in-a-string/

Question C (Group Anagrams):
https://leetcode.com/problems/group-anagrams/
OR
https://www.interviewbit.com/problems/anagrams/

Solutions :

Solution A :

Terrible Whiteboard's Video :
https://www.youtube.com/watch?v=FMkueJAQ2pE

GFG Editorial :
https://www.geeksforgeeks.org/check-whether-two-strings-are-anagram-of-each-other/

AfterAcademy's Blog :
https://afteracademy.com/blog/valid-anagram

Solution B :

Inside code's Video :
https://www.youtube.com/watch?v=Y6DLFLceX7Q

Solution C :

Scaler Academy's Video :
https://www.youtube.com/watch?v=psDooQ8Dwdo

LeetCode Solution :
https://leetcode.com/problems/group-anagrams/solution/

(5) Count and Say

Question :

https

Solutions :

Channel Name's Video :
https

(6) Compare version numbers

Question :

https

Solutions :

Channel Name's Video :

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Week 17 - Binary Tree (Easy)

Editorial

(1) Inorder Traversal (with recursion and without recursion)

Question :

https

Solutions :

Channel Name's Video :

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(2) Preorder Traversal (with recursion and without recursion)

Question :

https

Solutions :

Channel Name's Video :

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(3) Postorder Traversal (with recursion and without recursion)

Question :

https

Solutions :

Channel Name's Video :

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(4) LeftView Of Binary Tree

Question :

https

Solutions :

Channel Name's Video :

https

(5) Bottom View of Binary Tree

Question :

https

Solutions :

Channel Name's Video :

https

(6) Top View of Binary Tree

Question :

https

Solutions :

Channel Name's Video :

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Week 18 - Binary Tree (Medium)

Editorial

(1) Level order Traversal / Level order traversal in spiral form

Question :

https

Solutions :

Channel Name's Video :

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(2) Height of a Binary Tree

Question :

https

Solutions :

Channel Name's Video :

https

(3) Diameter of Binary Tree

Question :

https

Solutions :

Channel Name's Video :

https

(4) Check if Binary tree is height balanced or not

Question :

https

Solutions :

Channel Name's Video :

https

(5) LCA in Binary Tree

Question :

https

Solutions :

Channel Name's Video :

https

(6) Check if two trees are identical or not

Question :

https

Solutions :

Channel Name's Video :

https

Week 19 - Binary Tree (Advance)

Editorial

(1) Maximum path sum

Question :

https

Solutions :

Channel Name's Video :

https

(2) Construct Binary Tree from inorder and preorder

Question :

https

Solutions :

Channel Name's Video :

https

(3) Construct Binary Tree from Inorder and Postorder

Question :

https

Solutions :

Channel Name's Video :

https

(4) Symmetric Binary Tree

Question :

https

Solutions :

Channel Name's Video :

https

(5) Flatten Binary Tree to LinkedList

Question :

https

Solutions :

Channel Name's Video :

https

(6) Check if Binary Tree is mirror of itself or not

Question :

https

Solutions :

Channel Name's Video :

https

Week 20 - Binary Search Tree

Editorial

(1) Populate Next Right pointers of Tree

Question :

https

Solutions :

Channel Name's Video :

https

(2) Search given Key in BST

Question :

https

Solutions :

Channel Name's Video :

https

(3) Construct BST from given keys.

Question :

https

Solutions :

Channel Name's Video :

https

(4) Check is a BT is BST or not

Question :

https

Solutions :

Channel Name's Video :

https

(5) Find LCA of two nodes in BST

Question :

https

Solutions :

Channel Name's Video :

https

(6) Find the inorder predecessor/successor of a given Key in BST.

Question :

https

Solutions :

Channel Name's Video :

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Week 21 - Advance Binary Search Tree

Editorial

(1) Floor and Ceil in a BST

Question :

https

Solutions :

Channel Name's Video :

https

(2) Find K-th smallest and K-th largest element in BST (2 different Questions)

Question :

https

Solutions :

Channel Name's Video :

https

(3) Find a pair with a given sum in BST

Question :

https

Solutions :

Channel Name's Video :

https

(4) BST iterator

Question :

https

Solutions :

Channel Name's Video :

https

(5) Size of the largest BST in a Binary Tree

Question :

https

Solutions :

Channel Name's Video :

https

(6) Serialize and deserialize Binary Tree

Question :

https

Solutions :

Channel Name's Video :

https

Week 22 - Mixed Questions

Editorial

(1) Binary Tree to Double Linked List

Question :

https

Solutions :

Channel Name's Video :

https

(2) Find median in a stream of running integers.

Question :

https

Solutions :

Channel Name's Video :

https

(3) K-th largest element in a stream.

Question :

https

Solutions :

Channel Name's Video :

https

(4) Distinct numbers in Window.

Question :

https

Solutions :

Channel Name's Video :

https

(5) K-th largest element in an unsorted array.

Question :

https

Solutions :

Channel Name's Video :
https

(6) Flood-fill Algorithm

Question :

https

Solutions :

Channel Name's Video :
https

Practice (Week 22)

Q1. Brick Wall

Problem :

https://leetcode.com/problems/brick-wall/

Solutions :

LeetCode Comment (**Intuition + Pictures**) :
https://leetcode.com/problems/brick-wall/discuss/888577/IntuitionC++With-PicturesHashMapDetailed-ExplanationCommentsSolutionCode

Q2. Minimum Area Rectangle

Problem :

https://leetcode.com/problems/minimum-area-rectangle/

Solutions :

LeetCode Comment (**Intuition + Pictures**) :
https://leetcode.com/problems/minimum-area-rectangle/discuss/900264/IntuitiveWith-PicturesC++JavaExplanation

Sonu Raj's Video :
https://www.youtube.com/watch?v=vvRY7bS4OMI

Q3. Maximum Equal Frequency

Problem :

https://leetcode.com/problems/maximum-equal-frequency/

Solutions :

Dream FAANG's Video (Visual + Code Walkthrough):
https://www.youtube.com/watch?v=h27CAXRgd94

LeetCode Comment (**Intuition** @deleted_user):
https://leetcode.com/problems/maximum-equal-frequency/discuss/404144/Python-long-explanation-with-lots-of-comments-in-the-code.

happygirlzt's Video :
https://www.youtube.com/watch?v=nbw-jm4S1bc

Errichto's Video :
https://www.youtube.com/watch?v=6kaRxT7pI4I&feature=youtu.be&t=636

Week 23 - Graph

Editorial

(1) Clone a graph (Not that easy as it looks)

Question :
https

Solutions :
Channel Name's Video :
https

(2) DFS

Question :
https

Solutions :
Channel Name's Video :
https

(3) BFS

Question :
https

Solutions :
Channel Name's Video :
https

(4) Detect A cycle in Undirected Graph/Directed Graph

Question :
https

Solutions :
Channel Name's Video :
https

(5) Topo Sort

Question :

https

Solutions :

Channel Name's Video :

https

(6) Number of islands (Do in Grid and Graph both)

Question :

https

Solutions :

Channel Name's Video :

https

(7) Bipartite Check

Question :

https

Solutions :

Channel Name's Video :

https

Week 24 - Advance Graph

Editorial

(1) SCC(using KosaRaju's algo)

Question :

https

Solutions :

Channel Name's Video :

https

(2) Djisktra's Algorithm

Question :

https

Solutions :

Channel Name's Video :

https

(3) Bellman Ford Algo

Question :

https

Solutions :

Channel Name's Video :

https

(4) Floyd Warshall Algorithm

Question :

https

Solutions :

Channel Name's Video :

https

(5) MST using Prim's Algo

Question :

https

Solutions :

Channel Name's Video :

https

(6) MST using Kruskal's Algo

Question :

https

Solutions :

Channel Name's Video :

https

Week 25 - Dynamic Programming

Editorial

(1) Max Product Subarray

Question :

https

Solutions :

Channel Name's Video :

https

(2) Longest Increasing Subsequence

Question :

https

Solutions :

Channel Name's Video :
https

(3) Longest Common Subsequence

Question :

https

Solutions :

Channel Name's Video :
https

(4) 0-1 Knapsack

Question :

https

Solutions :

CodesDope Editorial :
https://www.codesdope.com/course/algorithms-knapsack-problem/

WilliamFiset's Video :
https://www.youtube.com/watch?v=cJ21moQpofY

Channel Name's Video :
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(5) Edit Distance

Question :

https

Solutions :

Channel Name's Video :
https

(6) Maximum sum increasing subsequence

Question :

https

Solutions :

Channel Name's Video :
https

(7) Matrix Chain Multiplication

Question :

https

Solutions :

Channel Name's Video :
https

Week 26 - Advance Dynamic Programming

Editorial

(1) Maximum sum path in matrix, (count paths, and similar type do, also backtrack to find the maximum path)

Question :

https

Solutions :

Channel Name's Video :
https

(2) Coin change [IN PROGRESS]

Question :

Question A (Coin Change):
https://leetcode.com/problems/coin-change/

Question B (Coin Change 2):
https://leetcode.com/problems/coin-change-2/

Solutions :

Solution A :

Back To Back SWE's Video :
https://www.youtube.com/watch?v=jgiZIGzXMBw

GFG Editorial :
https://www.geeksforgeeks.org/find-minimum-number-of-coins-that-make-a-change/

CodesDope Editorial :
https://www.codesdope.com/course/algorithms-coin-change/

Solution B :

Back To Back SWE's Video :
https://www.youtube.com/watch?v=DJ4a7cmjZY0

GFG Editorial :

https://www.geeksforgeeks.org/coin-change-dp-7/

(3) Subset Sum [IN PROGRESS]

Question :

Question A (Perfect Sum Problem):
https://practice.geeksforgeeks.org/problems/perfect-sum-problem5633/1

Question B (Subset Sum Problem!):
https://www.interviewbit.com/problems/subset-sum-problem/

Solutions :

Solution A :

GFG Editorial (Backtracking Approach):
https://www.geeksforgeeks.org/subset-sum-backtracking-4/

GFG Editorial (Optimized DP Approach):
https://www.geeksforgeeks.org/perfect-sum-problem-print-subsets-given-sum/

Solution B :

GFG Editorial (DP Approach):
https://www.geeksforgeeks.org/subset-sum-problem-dp-25/

GFG Editorial (Space Optimal Approach):
https://www.geeksforgeeks.org/subset-sum-problem-osum-space/

(4) Rod Cutting

Question :

https

Solutions :

Channel Name's Video :
https

(5) Egg Dropping

Question :

https

Solutions :

Channel Name's Video :
https

(6) Word Break

Question :

Question A (Word Break): [SEARCH FOR MORE EXPLANATION]
https://leetcode.com/problems/word-break/
OR
https://afteracademy.com/problems/word-break-problem
OR

https://practice.geeksforgeeks.org/problems/word-break1352/1

Question B (Word Break III):
https://leetcode.com/discuss/interview-question/385870/Google-or-Onsite-or-Word-Break-III/347600

Solutions :

Solution A :

Knapsak's Video :
https://www.youtube.com/watch?v=1U4jQusbeJc

GFG Editorial (DP Approach):
https://www.geeksforgeeks.org/word-break-problem-dp-32/

GFG Editorial (Using **Trie**):
https://www.geeksforgeeks.org/word-break-problem-trie-solution/

Solution B :

GFG Editorial :
https://www.geeksforgeeks.org/minimum-word-break/

(7) Palindrome Partitioning (MCM Variation)

Question :

Question A (Palindrome Partitioning II) :
https://leetcode.com/problems/palindrome-partitioning-ii/
OR
https://www.interviewbit.com/problems/palindrome-partitioning-ii/
OR
https://afteracademy.com/problems/palindrome-partitioning
OR
https://practice.geeksforgeeks.org/problems/palindromic-patitioning4845/1

Question B (Palindrome Partitioning III) :
https://leetcode.com/problems/palindrome-partitioning-iii/

Solutions :

Solution A :

IDeserve's Video :
https://www.youtube.com/watch?v=WPr1jDh3bUQ

Arun Goel's Video :
https://www.youtube.com/watch?v=rmNK2awrhkU

GFG Editorial :
https://www.geeksforgeeks.org/palindrome-partitioning-dp-17/

Solution B :

Arun Goel's Video :
https://www.youtube.com/watch?v=l4jp7c53LGI

Practice (Week 26)

Q1. Subset Sum Partition

Problem :

Problem A (Partition Equal Subset Sum):
https://leetcode.com/problems/partition-equal-subset-sum/
OR
https://practice.geeksforgeeks.org/problems/subset-sum-problem2014/1
OR
https://afteracademy.com/problems/partition-equal-subset-sum

Problem B (Partition to K Equal Sum Subsets):
https://leetcode.com/problems/partition-to-k-equal-sum-subsets/
OR
https://practice.geeksforgeeks.org/problems/partition-array-to-k-subsets/1

Problem C (Minimum sum partition):
https://practice.geeksforgeeks.org/problems/minimum-sum-partition3317/1

Solutions :

Solution A :

GFG Editorial :
https://www.geeksforgeeks.org/partition-problem-dp-18/

AfterAcademy Editorial :
https://afteracademy.com/blog/partition-equal-subset-sum

Solution B :

Stable Sort's Video :
https://www.youtube.com/watch?v=DB-9JInbBpM

GFG Editorial (Recursive Approach):
https://www.geeksforgeeks.org/partition-set-k-subsets-equal-sum/

GFG Editorial (Using **BitMask** and DP):
https://www.geeksforgeeks.org/partition-of-a-set-into-k-subsets-with-equal-sum-using-bitmask-and-dp/

Solution C :

GFG Editorial :
https://www.geeksforgeeks.org/partition-a-set-into-two-subsets-such-that-the-difference-of-subset-sums-is-minimum/

Week 27 - Heap

Practice (Week 27)

Q1. Top K Frequent Words/Elements

Problem :

Problem A (Top K Frequent Words): [SEARCH FOR MORE EXPLANATION]
https://leetcode.com/problems/top-k-frequent-words/

Problem B (Top K Frequent Elements):
https://leetcode.com/problems/top-k-frequent-elements/

Solutions :

Solution A :

Michael Muinos's Video (Using Priority Queue) :
https://www.youtube.com/watch?v=cupg2TGIkyM

Solution B :

LeetCode Article :
https://leetcode.com/problems/top-k-frequent-elements/solution/

GFG Editorial :
https://www.geeksforgeeks.org/find-k-numbers-occurrences-given-array/

Week 28 - OS (Operating System)

(1) Love Babbar Cheat Sheet

Cheat Sheet Link :
https://whimsical.com/operating-system-cheatsheet-by-love-babbar-S9tuWBCSQfzoBRF5EDNinQ

Original Video Link :
https://www.youtube.com/watch?v=SWBjv-GU3VQ

Sub-Section Name

(1) Resource name is written over here

Resource Link :

Channel Name's Video :
https

Week 29 - DBMS (Database Management System)

(1) Love Babbar RoadMap

Cheat Sheet Link :
https://whimsical.com/dbms-roadmap-by-love-babbar-FmUi8ffVop33t3MmpVxPCo

Original Video Link :
https://www.youtube.com/watch?v=BQBGORBPytw

Sub-Section Name

(1) Resource name is written over here

Resource Link :
Channel Name's Video :
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Week 30 - CN (Computer Networking)

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Resource Link :
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Sub-Section Name

(1) Resource name is written over here

Resource Link :
Channel Name's Video :
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Week 31 - OOP (Object Oriented Programming)

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Sub-Section Name

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Resource Link :
Channel Name's Video :
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Week 32 - System Design

Sub-Section Name

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Resource Link :

Channel Name's Video :
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