14-Day DSA Problem Solving Plan Using Python (Days 1–5)

# Day 1: Arrays - Basics and Prefix/Suffix

Two Sum

Maximum Subarray (Kadane’s Algorithm)

Move Zeroes

Best Time to Buy and Sell Stock

Find Pivot Index

Product of Array Except Self

Merge Intervals

Insert Interval

Spiral Matrix

Set Matrix Zeroes

Rotate Image

Subarray Sum Equals K

Longest Consecutive Sequence

Sliding Window Maximum

Sort Colors (Dutch National Flag)

Count Inversions

Next Permutation

3Sum

4Sum

Majority Element

# Day 2: Strings - Patterns and Sliding Window

Longest Substring Without Repeating Characters

Valid Anagram

Group Anagrams

Longest Palindromic Substring

Palindromic Substrings

Minimum Window Substring

Isomorphic Strings

String Compression

Multiply Strings

Implement strStr()

Rabin-Karp Implementation

KMP Algorithm

Roman to Integer

Integer to Roman

Decode Ways

Zigzag Conversion

Reverse Words in a String

Longest Common Prefix

Check if One String is Rotation of Another

Count and Say

# Day 3: Recursion - Core Patterns

Factorial

Fibonacci

Power(x, n)

Generate Parentheses

Permutations

Permutations II

Subsets

Subsets II

Combination Sum

Combination Sum II

Letter Combinations of a Phone Number

Word Search

Palindrome Partitioning

N-Queens

Sudoku Solver

Flatten Nested List Iterator

Gray Code

Climbing Stairs

Recursive Tree Traversal

Recursion with Memoization (e.g. Coin Change)

# Day 4: Two Sum & Variants

Two Sum

3Sum

4Sum

Two Sum II – Input array is sorted

Two Sum – BST

Count pairs with given sum

Longest subarray with 0 sum

Subarray Sum Equals K

K-diff Pairs in an Array

Find All Duplicates in Array

Continuous Subarray Sum

Longest Consecutive Sequence

Pairs of Songs With Total Durations Divisible by 60

Sum of Two Integers (Bit manipulation)

Equal Zero One Subarray

Pair with Given Difference

Count quadruplets that sum to a target

Xor Pairs

Min Operations to Make Array Sum Zero

Max Number of K-Sum Pairs

# Day 5: Divide and Conquer

Merge Sort

Quick Sort

Binary Search

Search in Rotated Sorted Array

Median of Two Sorted Arrays

Kth Largest Element

Count Inversions

Majority Element using Divide and Conquer

Closest Pair of Points

Merge K Sorted Lists

Find Peak Element

Power(x, n)

Find Minimum in Rotated Sorted Array

Maximum Subarray (Divide and Conquer)

Convert Sorted Array to BST

Construct Binary Tree from Inorder and Preorder

Longest Common Prefix (Divide and Conquer)

Number of Reverse Pairs

Smallest Range Covering Elements from K Lists

Skyline Problem