

6-Month DSA Problem Tracker (1000 Problems)

****Goal****: 750-1000 problems

200+ Hard

~5-6 problems/day

Month 1: Arrays, Strings & Two Pointers (Weeks 1-4)

Week 1: Arrays Fundamentals (35 problems)

****Day 1**** (Easy)

1. Two Sum

2. Remove Duplicates from Sorted Array

3. Remove Element

4. Search Insert Position

5. Plus One

****Day 2**** (Easy-Medium)

6. Merge Sorted Array

7. Pascal's Triangle

8. Pascal's Triangle II

9. Best Time to Buy and Sell Stock

10. Best Time to Buy and Sell Stock II

****Day 3**** (Medium)

11. Contains Duplicate II

12. Summary Ranges

13. Missing Number

14. Move Zeroes

15. Find All Numbers Disappeared in Array

16. Third Maximum Number

****Day 4**** (Medium)

17. Product of Array Except Self

18. Find Peak Element

19. Search in Rotated Sorted Array

20. Find Minimum in Rotated Sorted Array

21. 3Sum

****Day 5** (Medium)**

22. 4Sum

23. Container With Most Water

24. Rotate Array

25. Jump Game

26. Jump Game II

****Day 6** (Medium-Hard)**

27. Maximum Subarray

28. Maximum Product Subarray

29. Find First and Last Position of Element

30. Search in Rotated Sorted Array II

31. Next Permutation

****Day 7** (Hard)**

32. Trapping Rain Water

33. First Missing Positive

34. Median of Two Sorted Arrays

35. Largest Rectangle in Histogram

Week 2: Two Pointers & Sliding Window (35 problems)

****Day 8** (Easy)**

36. Valid Palindrome

37. Reverse String

38. Reverse Vowels of a String

39. Is Subsequence

40. Intersection of Two Arrays

****Day 9** (Easy-Medium)**

41. Intersection of Two Arrays II

42. Remove Duplicates from Sorted Array II

43. Squares of a Sorted Array

44. Sort Array By Parity

45. Sort Array By Parity II

****Day 10**** (Medium)

46. 3Sum Closest

47. Remove Nth Node From End of List

48. Sort Colors

49. Minimum Size Subarray Sum

50. Longest Substring Without Repeating Characters

51. Fruit Into Baskets

****Day 11**** (Medium)

52. Longest Repeating Character Replacement

53. Permutation in String

54. Find All Anagrams in a String

55. Subarray Product Less Than K

56. Max Consecutive Ones III

****Day 12**** (Medium)

57. Grumpy Bookstore Owner

58. Get Equal Substrings Within Budget

59. Number of Sub-arrays of Size K

60. Longest Turbulent Subarray

61. Subarrays with K Different Integers

****Day 13**** (Medium-Hard)

62. Minimum Window Substring

63. Substring with Concatenation of All Words

64. Longest Substring with At Most K Distinct

65. Count Number of Nice Subarrays

66. Replace the Substring for Balanced String

****Day 14**** (Hard)

67. Trapping Rain Water (revisit)

68. Sliding Window Maximum

69. Minimum Window Subsequence

70. Shortest Subarray with Sum at Least K

Week 3: Strings & Pattern Matching (35 problems)

Day 15 (Easy)

71. Valid Anagram

72. First Unique Character in a String

73. Ransom Note

74. Valid Palindrome II

75. Longest Common Prefix

Day 16 (Easy-Medium)

76. Implement strStr()

77. Length of Last Word

78. Add Binary

79. Reverse Words in a String III

80. Detect Capital

Day 17 (Medium)

81. Reverse Words in a String

82. Simplify Path

83. Compare Version Numbers

84. Multiply Strings

85. Zigzag Conversion

86. String to Integer (atoi)

Day 18 (Medium)

87. Longest Palindromic Substring

88. Group Anagrams

89. Encode and Decode Strings

90. Basic Calculator II

91. Decode String

Day 19 (Medium)

92. Integer to Roman

93. Roman to Integer

94. Generate Parentheses

95. Letter Combinations of a Phone Number

96. Valid Parentheses

****Day 20**** (Medium-Hard)

97. Longest Valid Parentheses

98. Minimum Remove to Make Valid Parentheses

99. Remove Invalid Parentheses

100. Different Ways to Add Parentheses

101. Word Break

****Day 21**** (Hard)

102. Word Break II

103. Edit Distance

104. Distinct Subsequences

105. Interleaving String

Week 4: Matrix & 2D Arrays (35 problems)

****Day 22**** (Easy)

106. Reshape the Matrix

107. Transpose Matrix

108. Toeplitz Matrix

109. Valid Sudoku

110. Set Matrix Zeroes (Easy approach)

****Day 23**** (Medium)

111. Spiral Matrix

112. Spiral Matrix II

113. Rotate Image

114. Set Matrix Zeroes

115. Game of Life

116. Diagonal Traverse

****Day 24**** (Medium)

117. Search a 2D Matrix

118. Search a 2D Matrix II

119. Kth Smallest Element in Sorted Matrix

120. Count Square Submatrices with All Ones

121. Maximal Square

****Day 25** (Medium)**

122. Longest Increasing Path in a Matrix

123. Number of Islands

124. Max Area of Island

125. Flood Fill

126. Surrounded Regions

****Day 26** (Medium)**

127. Pacific Atlantic Water Flow

128. Walls and Gates

129. Shortest Bridge

130. Shortest Path in Binary Matrix

131. As Far from Land as Possible

****Day 27** (Medium-Hard)**

132. Word Search

133. Word Search II

134. Unique Paths

135. Unique Paths II

136. Minimum Path Sum

****Day 28** (Hard)**

137. Dungeon Game

138. Cherry Pickup

139. Maximal Rectangle

140. Count Submatrices With All Ones

Month 2: Linked Lists, Stacks & Queues (Weeks 5-8)

Week 5: Linked List Basics (35 problems)

Day 29 (Easy)

141. Reverse Linked List

142. Middle of the Linked List

143. Palindrome Linked List

144. Merge Two Sorted Lists

145. Remove Linked List Elements

Day 30 (Easy-Medium)

146. Delete Node in a Linked List

147. Linked List Cycle

148. Linked List Cycle II

149. Intersection of Two Linked Lists

150. Remove Duplicates from Sorted List

Day 31 (Medium)

151. Remove Duplicates from Sorted List II

152. Partition List

153. Odd Even Linked List

154. Rotate List

155. Swap Nodes in Pairs

156. Reverse Linked List II

Day 32 (Medium)

157. Reorder List

158. Add Two Numbers

159. Add Two Numbers II

160. Plus One Linked List

161. Copy List with Random Pointer

Day 33 (Medium)

162. Flatten a Multilevel Doubly Linked List

163. Insert into a Sorted Circular Linked List

164. Split Linked List in Parts

165. Design Linked List

166. Design Browser History

****Day 34**** (Medium-Hard)

167. Sort List

168. Insertion Sort List

169. Reverse Nodes in k-Group

170. Merge k Sorted Lists

171. Remove Zero Sum Consecutive Nodes

****Day 35**** (Hard)

172. LRU Cache

173. LFU Cache

174. All O`one Data Structure

175. Design Skiplist

Week 6: Stacks & Monotonic Stacks (35 problems)

****Day 36**** (Easy)

176. Valid Parentheses (revisit)

177. Min Stack

178. Implement Stack using Queues

179. Backspace String Compare

180. Baseball Game

****Day 37**** (Easy-Medium)

181. Next Greater Element I

182. Next Greater Element II

183. Final Prices With a Special Discount

184. Remove All Adjacent Duplicates In String

185. Remove All Adjacent Duplicates in String II

****Day 38**** (Medium)

186. Daily Temperatures

187. Online Stock Span

188. Sum of Subarray Minimums

189. Sum of Subarray Ranges

190. Score of Parentheses

191. Asteroid Collision

****Day 39** (Medium)**

192. Decode String (revisit)

193. Remove K Digits

194. Create Maximum Number

195. Maximum Frequency Stack

196. Validate Stack Sequences

****Day 40** (Medium)**

197. 132 Pattern

198. Longest Valid Parentheses (Stack approach)

199. Minimum Add to Make Parentheses Valid

200. Minimum Insertions to Balance Parentheses

201. Basic Calculator

****Day 41** (Medium-Hard)**

202. Basic Calculator II (revisit)

203. Basic Calculator III

204. Evaluate Reverse Polish Notation

205. Expression Add Operators

206. Simplify Path (revisit)

****Day 42** (Hard)**

207. Largest Rectangle in Histogram (revisit)

208. Maximal Rectangle (revisit)

209. Trapping Rain Water (Stack approach)

210. Parsing A Boolean Expression

Week 7: Queues & Deques (35 problems)

****Day 43** (Easy)**

211. Implement Queue using Stacks

212. Number of Recent Calls

213. Design Circular Queue

214. Moving Average from Data Stream

215. Maximum Average Subarray I

****Day 44** (Medium)**

216. Design Circular Deque

217. Sliding Window Maximum (revisit)

218. Jump Game VI

219. Constrained Subsequence Sum

220. Shortest Subarray with Sum at Least K (revisit)

****Day 45** (Medium)**

221. Task Scheduler

222. Reorganize String

223. Rearrange String k Distance Apart

224. Design Hit Counter

225. Design Snake Game

226. Design Tic-Tac-Toe

****Day 46** (Medium)**

227. Dota2 Senate

228. Reveal Cards In Increasing Order

229. Number of Students Unable to Eat Lunch

230. Time Needed to Buy Tickets

231. First Unique Number

****Day 47** (Medium)**

232. Design Front Middle Back Queue

233. Design Most Recently Used Queue

234. Maximum Number of Tasks

235. Design Authentication Manager

236. Design Underground System

****Day 48** (Medium-Hard)**

237. Design Phone Directory

238. Design Search Autocomplete System

239. Design In-Memory File System

240. Design File System

241. Design Log Storage System

****Day 49** (Hard)**

242. Shortest Subarray to be Removed

243. Longest Continuous Subarray

244. Max Value of Equation

245. Jump Game VII

Week 8: Advanced Data Structures (35 problems)

****Day 50** (Easy)**

246. Design HashSet

247. Design HashMap

248. Design Parking System

249. Logger Rate Limiter

250. Find Winner on a Tic Tac Toe Game

****Day 51** (Medium)**

251. Design Twitter

252. Design Add and Search Words Data Structure

253. Encode and Decode TinyURL

254. Insert Delete GetRandom O(1)

255. Insert Delete GetRandom O(1) - Duplicates

****Day 52** (Medium)**

256. Design A Leaderboard

257. Design a Stack With Increment Operation

258. Design a Food Rating System

259. Design an Ordered Stream

260. Design Bitset

261. Design an ATM Machine

****Day 53** (Medium)**

262. Time Based Key-Value Store

263. Design HashMap with Time-based Keys

264. Snapshot Array

265. Design Skiplist (revisit)

266. Range Module

****Day 54**** (Medium)

267. My Calendar I

268. My Calendar II

269. My Calendar III

270. Exam Room

271. Seat Reservation Manager

****Day 55**** (Medium-Hard)

272. Design Excel Sum Formula

273. Design Compressed String Iterator

274. Design Circular Queue (Advanced)

275. Design Movie Rental System

276. Design Video Sharing Platform

****Day 56**** (Hard)

277. Design In-Memory File System (revisit)

278. Design Search Autocomplete (revisit)

279. Implement Magic Dictionary

280. Maximum Frequency Stack (revisit)

Month 3: Trees & Binary Search Trees (Weeks 9-12)

Week 9: Binary Tree Basics (35 problems)

****Day 57**** (Easy)

281. Maximum Depth of Binary Tree

282. Minimum Depth of Binary Tree

283. Invert Binary Tree

284. Symmetric Tree

285. Same Tree

****Day 58** (Easy)**

286. Path Sum

287. Binary Tree Paths

288. Sum of Left Leaves

289. Left Leaves Sum

290. Find Mode in BST

****Day 59** (Easy-Medium)**

291. Diameter of Binary Tree

292. Balanced Binary Tree

293. Merge Two Binary Trees

294. Subtree of Another Tree

295. Closest Binary Search Tree Value

296. Range Sum of BST

****Day 60** (Medium)**

297. Binary Tree Level Order Traversal

298. Binary Tree Level Order Traversal II

299. Binary Tree Zigzag Level Order

300. Average of Levels in Binary Tree

301. Binary Tree Right Side View

****Day 61** (Medium)**

302. Populating Next Right Pointers I

303. Populating Next Right Pointers II

304. Find Bottom Left Tree Value

305. Find Largest Value in Each Row

306. Maximum Level Sum of a Binary Tree

****Day 62** (Medium)**

307. Path Sum II

308. Path Sum III

309. Binary Tree Maximum Path Sum

310. Sum Root to Leaf Numbers

311. Smallest String Starting From Leaf

****Day 63**** (Medium-Hard)

312. Construct Binary Tree from Preorder and Inorder

313. Construct Binary Tree from Inorder and Postorder

314. Construct Binary Tree from Preorder and Postorder

315. Construct Binary Search Tree from Preorder

316. Construct String from Binary Tree

****Day 64**** (Hard)

317. Binary Tree Maximum Path Sum (revisit)

318. Serialize and Deserialize Binary Tree

319. Binary Tree Cameras

320. Distribute Coins in Binary Tree

Week 10: BST Operations (35 problems)

****Day 65**** (Easy)

321. Search in a Binary Search Tree

322. Insert into a Binary Search Tree

323. Minimum Absolute Difference in BST

324. Two Sum IV - Input is a BST

325. Convert Sorted Array to BST

****Day 66**** (Easy-Medium)

326. Convert Sorted List to BST

327. Increasing Order Search Tree

328. Trim a Binary Search Tree

329. Second Minimum Node In a Binary Tree

330. Lowest Common Ancestor of a BST

****Day 67**** (Medium)

331. Lowest Common Ancestor of a Binary Tree

332. Delete Node in a BST

333. Kth Smallest Element in a BST

334. Kth Largest Element in a BST

335. Validate Binary Search Tree

336. Inorder Successor in BST

****Day 68** (Medium)**

337. Inorder Successor in BST II

338. Recover Binary Search Tree

339. Unique Binary Search Trees

340. Unique Binary Search Trees II

341. All Elements in Two BSTs

****Day 69** (Medium)**

342. Balance a Binary Search Tree

343. Binary Search Tree to Greater Sum Tree

344. Convert BST to Greater Tree

345. Maximum Sum BST in Binary Tree

346. Count Complete Tree Nodes

****Day 70** (Medium-Hard)**

347. House Robber III

348. Find Duplicate Subtrees

349. All Possible Full Binary Trees

350. Number of Ways to Reorder Array

351. Complete Binary Tree Inserter

****Day 71** (Hard)**

352. Binary Tree Postorder Traversal (Iterative)

353. Binary Tree Preorder Traversal (Iterative)

354. Binary Tree Inorder Traversal (Iterative)

355. Vertical Order Traversal of a Binary Tree

Week 11: Advanced Tree Problems (35 problems)

****Day 72** (Medium)**

356. Flatten Binary Tree to Linked List

357. Flip Binary Tree To Match Preorder

358. Count Good Nodes in Binary Tree

359. Deepest Leaves Sum

360. Delete Leaves With a Given Value

361. Sum of Nodes with Even-Valued Grandparent

****Day 73** (Medium)**

362. Longest Univalue Path

363. Most Frequent Subtree Sum

364. Find Distance in a Binary Tree

365. Print Binary Tree

366. Add One Row to Tree

****Day 74** (Medium)**

367. Minimum Time to Collect All Apples

368. Time Needed to Inform All Employees

369. Maximum Width of Binary Tree

370. Width of Binary Tree

371. Step-By-Step Directions From a Binary Tree Node

****Day 75** (Medium)**

372. Check Completeness of a Binary Tree

373. Cousins in Binary Tree

374. Cousins in Binary Tree II

375. Minimum Depth of Binary Tree (revisit)

376. Maximum Difference Between Node and Ancestor

****Day 76** (Medium-Hard)**

377. Pseudo-Palindromic Paths in a Binary Tree

378. Insufficient Nodes in Root to Leaf Paths

379. Delete Nodes And Return Forest

380. Sum of Distances in Tree

381. Longest ZigZag Path in a Binary Tree

****Day 77** (Hard)**

382. Binary Tree Coloring Game

383. Number of Nodes in the Sub-Tree

384. Minimum Edge Reversals So Every Node Is Reachable

385. Count Nodes Equal to Average of Subtree

386. Create Binary Tree From Descriptions

****Day 78** (Hard)**

387. Binary Tree Longest Consecutive Sequence

388. Binary Tree Longest Consecutive Sequence II

389. Smallest Missing Genetic Value in Each Subtree

390. Tree Diameter

Week 12: N-ary Trees & Tries (35 problems)

****Day 79** (Easy)**

391. N-ary Tree Preorder Traversal

392. N-ary Tree Postorder Traversal

393. N-ary Tree Level Order Traversal

394. Maximum Depth of N-ary Tree

395. Minimum Depth of N-ary Tree

****Day 80** (Medium)**

396. Encode N-ary Tree to Binary Tree

397. Serialize and Deserialize N-ary Tree

398. Clone N-ary Tree

399. Diameter of N-Ary Tree

400. Longest Path With Different Adjacent Characters

****Day 81** (Easy-Medium)**

401. Implement Trie (Prefix Tree)

402. Longest Common Prefix (Trie)

403. Design Add and Search Words (revisit)

404. Replace Words

405. Implement Magic Dictionary (revisit)

****Day 82** (Medium)**

406. Map Sum Pairs

407. Longest Word in Dictionary

408. Prefix and Suffix Search

409. Design Search Autocomplete System (revisit)

410. Search Suggestions System

411. Short Encoding of Words

****Day 83** (Medium)**

412. Maximum XOR of Two Numbers

413. Concatenated Words

414. Word Squares

415. Palindrome Pairs

416. Stream of Characters

****Day 84** (Medium-Hard)**

417. Design File System (Trie approach)

418. Lexicographical Numbers

419. K-th Smallest in Lexicographical Order

420. Find K-th Smallest Pair Distance

421. Camelcase Matching

****Day 85** (Hard)**

422. Word Search II (revisit)

423. Remove Sub-Folders from Filesystem

424. Design In-Memory File System (Trie)

425. Number of Matching Subsequences

Month 4: Graphs & Advanced Algorithms (Weeks 13-16)

Week 13: Graph Basics - DFS/BFS (35 problems)

****Day 86** (Easy)**

426. Find if Path Exists in Graph

427. Find Center of Star Graph

428. Find the Town Judge

429. N-ary Tree Level Order (graph version)

430. Employee Importance

****Day 87** (Medium)**

431. Clone Graph

432. All Paths From Source to Target

433. Keys and Rooms

434. Find Eventual Safe States

435. Possible Bipartition

436. Is Graph Bipartite?

****Day 88** (Medium)**

437. Course Schedule

438. Course Schedule II

439. Course Schedule III

440. Course Schedule IV

441. Minimum Height Trees

****Day 89** (Medium)**

442. Redundant Connection

443. Redundant Connection II

444. Accounts Merge

445. Smallest String With Swaps

446. Evaluate Division

****Day 90** (Medium)**

447. Graph Valid Tree

448. Number of Connected Components

449. Count Unreachable Pairs of Nodes

450. Reorder Routes to Make All Paths Lead to City

451. Minimum Number of Vertices to Reach All Nodes

****Day 91** (Medium-Hard)**

452. Find the City With Smallest Number of Neighbors

453. Network Delay Time

454. Cheapest Flights Within K Stops

455. Path with Maximum Probability

456. All Ancestors of a Node in a DAG

****Day 92** (Hard)**

457. Reconstruct Itinerary

458. Critical Connections in a Network

459. Minimum Cost to Make at Least One Valid Path

460. Number of Ways to Arrive at Destination

Week 14: Union Find & MST (35 problems)

****Day 93** (Easy-Medium)**

461. Number of Provinces

462. Find if Path Exists (Union Find)

463. The Earliest Moment When Everyone Become Friends

464. Smallest String With Swaps (Union Find)

465. Checking Existence of Edge Length Limited Paths

****Day 94** (Medium)**

466. Accounts Merge (Union Find)

467. Redundant Connection (Union Find)

468. Most Stones Removed with Same Row or Column

469. Number of Operations to Make Network Connected

470. Satisfiability of Equality Equations

471. Minimize Malware Spread

****Day 95** (Medium)**

472. Minimize Malware Spread II

473. Regions Cut By Slashes

474. Bricks Falling When Hit

475. Swim in Rising Water

476. Checking Existence of Edge Length Limited Paths II

****Day 96** (Medium)**

477. Largest Component Size by Common Factor

478. Lexicographically Smallest Equivalent String

479. Process Restricted Friend Requests

480. Number of Good Paths

481. Minimize Hamming Distance After Swap Operations

****Day 97** (Medium-Hard)**

482. Kruskal's Algorithm - Minimum Spanning Tree

483. Prim's Algorithm - Minimum Spanning Tree

484. Min Cost to Connect All Points

485. Find Critical and Pseudo-Critical Edges

486. Optimize Water Distribution in a Village

****Day 98** (Hard)**

487. Checking Existence of Edge Length Limited Paths III

488. Number of Ways to Reconstruct a Tree

489. Maximum Total Importance of Roads

490. Number of Restricted Paths From First to Last

****Day 99** (Hard)**

491. Parallel Courses III

492. Minimum Degree of a Connected Trio

493. Count Subtrees With Max Distance Between Cities

494. Checking Existence of Edge Length (Advanced)

Week 15: Shortest Paths & Advanced Graph (35 problems)

****Day 100** (Medium)**

495. Shortest Path in Binary Matrix (revisit)

496. Shortest Path with Alternating Colors

497. Shortest Path to Get All Keys

498. Shortest Path Visiting All Nodes

499. Path With Minimum Effort

****Day 101** (Medium)**

500. Network Delay Time (Dijkstra)

501. Find the Safest Path in a Grid

502. Minimum Cost to Reach Destination in Time

503. Minimum Weighted Subgraph

504. Number of Ways to Arrive (Dijkstra)

505. Path with Maximum Probability (Dijkstra)

****Day 102**** (Medium)

506. Cheapest Flights Within K Stops (Bellman-Ford)

507. Find the City (Floyd-Warshall)

508. Count Pairs Of Nodes

509. Number of Restricted Paths (Dijkstra)

510. Find All People With Secret

****Day 103**** (Medium)

511. Reachable Nodes In Subdivided Graph

512. Shortest Path to Get Food

513. Minimum Obstacle Removal to Reach Corner

514. Minimum Cost to Make at Least One Valid Path

515. Second Minimum Time to Reach Destination

****Day 104**** (Medium-Hard)

516. Design Graph With Shortest Path Calculator

517. Modify Graph Edge Weights

518. Minimum Time to Visit Disappearing Nodes

519. Paths in Maze That Lead to Same Room

520. Shortest Path in a Grid with Obstacles Elimination

****Day 105**** (Hard)

521. Find Shortest Path with K Hops

522. Minimum Number of Days to Disconnect Island

523. Minimum Moves to Reach Target with Rotations

524. Shortest Path in a Hidden Grid

525. Minimum Cost to Reach City With Discounts

****Day 106**** (Hard)

526. Bus Routes

527. Sliding Puzzle

528. Shortest Path to Get All Keys (revisit)

529. Minimum Moves to Move a Box

Week 16: Topological Sort & SCC (35 problems)

Day 107 (Medium)

530. Course Schedule (Topological)

531. Course Schedule II (Topological)

532. Alien Dictionary

533. Sequence Reconstruction

534. Parallel Courses

535. Parallel Courses II

Day 108 (Medium)

536. Sort Items by Groups Respecting Dependencies

537. Find All Possible Recipes

538. Build a Matrix With Conditions

539. Maximum Employees to Be Invited

540. Longest Path With Different Adjacent Characters

541. Minimum Time to Complete All Tasks

Day 109 (Medium)

542. Largest Color Value in a Directed Graph

543. Longest Cycle in a Graph

544. Number of Nodes in Sub-Tree (Topological)

545. Count Visited Nodes in a Directed Graph

546. Maximum Star Sum of a Graph

Day 110 (Hard)

547. Strange Printer II

548. Minimum Height Trees (advanced)

549. Number of Ways to Reconstruct Tree

550. Critical Connections (Tarjan's)

551. Articulation Points

****Day 111** (Hard)**

552. Strongly Connected Components (Kosaraju's)

553. Strongly Connected Components (Tarjan's)

554. Maximum Number of Non-overlapping Palindromes

555. Minimum Reverse Operations

556. Number of Ways to Reach a Position After K Steps

****Day 112** (Hard)**

557. Find All Good Strings

558. Number of Squareful Arrays

559. Valid Arrangement of Pairs

560. Eulerian Path/Circuit

561. Chinese Postman Problem

****Day 113** (Hard Review)**

562. Graph problems review 1

563. Graph problems review 2

564. Graph problems review 3

Month 5: Dynamic Programming (Weeks 17-20)

Week 17: 1D DP (35 problems)

****Day 114** (Easy)**

565. Climbing Stairs

566. Min Cost Climbing Stairs

567. N-th Tribonacci Number

568. Fibonacci Number

569. Get Maximum in Generated Array

****Day 115** (Easy-Medium)**

570. House Robber

571. House Robber II

572. Delete and Earn

573. Divisor Game

574. Is Subsequence (DP)

575. Counting Bits

****Day 116** (Medium)**

576. Maximum Product Subarray (revisit)

577. Longest Increasing Subsequence

578. Longest Continuous Increasing Subsequence

579. Number of Longest Increasing Subsequence

580. Wiggle Subsequence

581. Russian Doll Envelopes

****Day 117** (Medium)**

582. Maximum Length of Pair Chain

583. Longest Arithmetic Subsequence

584. Longest Arithmetic Subsequence of Given Diff

585. Arithmetic Slices

586. Arithmetic Slices II - Subsequence

****Day 118** (Medium)**

587. Decode Ways

588. Decode Ways II

589. Unique Binary Search Trees (DP)

590. Integer Break

591. Perfect Squares

592. Coin Change

****Day 119** (Medium)**

593. Coin Change 2

594. Combination Sum IV

595. Target Sum

596. Partition Equal Subset Sum

597. Last Stone Weight II

598. Ones and Zeroes

****Day 120** (Hard)**

599. Word Break (DP revisit)

600. Word Break II (DP)

601. Palindrome Partitioning II

602. Palindrome Partitioning III

603. Palindrome Partitioning IV

Week 18: 2D DP & Grid DP (35 problems)

****Day 121** (Easy-Medium)**

604. Unique Paths (revisit)

605. Unique Paths II (revisit)

606. Minimum Path Sum (revisit)

607. Triangle

608. Minimum Falling Path Sum

****Day 122** (Medium)**

609. Minimum Falling Path Sum II

610. Maximum Sum of 3 Non-Overlapping Subarrays

611. Maximal Square (revisit)

612. Largest Plus Sign

613. Count Square Submatrices (revisit)

614. Stone Game

****Day 123** (Medium)**

615. Stone Game II

616. Stone Game III

617. Stone Game IV

618. Stone Game V

619. Stone Game VI

620. Stone Game VII

****Day 124** (Medium)**

621. Best Time to Buy and Sell Stock III

622. Best Time to Buy and Sell Stock IV

623. Best Time to Buy Sell Stock with Cooldown

624. Best Time to Buy Sell Stock with Fee

625. Best Time to Buy and Sell Stock (all versions review)

****Day 125** (Medium)**

626. Longest Palindromic Subsequence

627. Longest Palindromic Substring (DP)

628. Count Different Palindromic Subsequences

629. Palindromic Substrings

630. Maximum Product of Splitted Binary Tree

631. Longest Common Subsequence

****Day 126** (Medium-Hard)**

632. Longest Common Subsequence (multiple variants)

633. Edit Distance (revisit)

634. Delete Operation for Two Strings

635. Minimum ASCII Delete Sum

636. Shortest Common Supersequence

637. Distinct Subsequences (revisit)

****Day 127** (Hard)**

638. Regular Expression Matching

639. Wildcard Matching

640. Interleaving String (revisit)

641. Scramble String

642. Distinct Subsequences II

Week 19: Knapsack & Subsequence DP (35 problems)

****Day 128** (Medium)**

643. 0/1 Knapsack Problem

644. Partition Equal Subset Sum (revisit)

645. Target Sum (revisit)

646. Ones and Zeroes (revisit)

647. Last Stone Weight II (revisit)

648. Profitable Schemes

****Day 129**** (Medium)

649. Number of Dice Rolls With Target Sum

650. Combination Sum IV (revisit)

651. Knight Probability in Chessboard

652. Out of Boundary Paths

653. Knight Dialer

654. Domino and Tromino Tiling

****Day 130**** (Medium)

655. Length of Longest Fibonacci Subsequence

656. Splitting a String Into Descending Values

657. Number of Sets of K Non-Overlapping Line Segments

658. Minimum Number of Refueling Stops

659. Minimize the Difference Between Target and Chosen

660. Number of Ways to Separate Numbers

****Day 131**** (Medium)

661. Maximum Score from Performing Multiplication

662. Minimum Cost to Merge Stones

663. Burst Balloons

664. Minimum Cost Tree From Leaf Values

665. Predict the Winner

****Day 132**** (Medium-Hard)

666. Stone Game VIII

667. Stone Game IX

668. Maximum Value of K Coins From Piles

669. Minimum Difficulty of a Job Schedule

670. Minimum Number of Taps to Open to Water a Garden

671. Cherry Pickup (revisit)

****Day 133**** (Hard)

672. Cherry Pickup II

673. Maximum Profit in Job Scheduling

674. Number of Music Playlists

675. Freedom Trail

676. Dungeon Game (revisit)

****Day 134** (Hard)**

677. Super Egg Drop

678. Strange Printer

679. Remove Boxes

680. Create Maximum Number

Week 20: State Machine & Bitmask DP (35 problems)

****Day 135** (Medium)**

681. Can I Win

682. Beautiful Arrangement

683. Partition to K Equal Sum Subsets

684. Matchsticks to Square

685. Fair Distribution of Cookies

686. Find the Shortest Superstring

****Day 136** (Medium)**

687. Minimum Cost to Connect Two Groups

688. Maximum Students Taking Exam

689. Number of Ways to Wear Different Hats

690. Smallest Sufficient Team

691. Maximum Compatibility Score Sum

692. Maximize Score After N Operations

****Day 137** (Medium)**

693. Distribute Repeating Integers

694. Minimum Incompatibility

695. Maximum AND Sum of Array

696. Minimum XOR Sum of Two Arrays

697. Minimum Cost to Change Final Value

698. Count Ways to Build Good Strings

****Day 138** (Medium)**

699. Vowels of All Substrings

700. Count Number of Texts

701. Count Sorted Vowel Strings

702. Count Number of Special Subsequences

703. Number of Ways to Build House

704. Number of Wonderful Substrings

****Day 139** (Hard)**

705. Shortest Path Visiting All Nodes (DP)

706. Find the Shortest Superstring

707. Maximum Score Words Formed by Letters

708. Stickers to Spell Word

709. Minimum Number of Work Sessions

****Day 140** (Hard)**

710. Number of Valid Move Combinations

711. Count All Valid Pickup and Delivery Options

712. Number of Ways to Rearrange Sticks

713. Count Pairs with XOR in a Range

714. Concatenation of Array (Advanced DP)

****Day 141** (Hard Review)**

715. DP problems review 1

716. DP problems review 2

717. DP problems review 3

718. DP problems review 4

719. DP problems review 5

Month 6: Advanced Topics & Practice (Weeks 21-26)

Week 21: Binary Search & Advanced Arrays (35 problems)

****Day 142** (Easy)**

720. Binary Search

721. Search Insert Position (revisit)

722. First Bad Version

723. Valid Perfect Square

724. Arranging Coins

****Day 143**** (Medium)

725. Find Peak Element (revisit)

726. Peak Index in a Mountain Array

727. Find in Mountain Array

728. Single Element in a Sorted Array

729. Search in Rotated Sorted Array (revisit)

730. Find Minimum in Rotated Sorted Array (revisit)

****Day 144**** (Medium)

731. Capacity To Ship Packages Within D Days

732. Koko Eating Bananas

733. Minimum Number of Days to Make m Bouquets

734. Find the Smallest Divisor Given a Threshold

735. Magnetic Force Between Two Balls

736. Minimize Max Distance to Gas Station

****Day 145**** (Medium)

737. Split Array Largest Sum

738. Divide Chocolate

739. Allocate Mailboxes

740. Minimum Time to Complete Trips

741. Maximum Running Time of N Computers

742. Minimized Maximum of Products Distributed

****Day 146**** (Hard)

743. Median of Two Sorted Arrays (revisit)

744. Find K-th Smallest Pair Distance

745. K-th Smallest Prime Fraction

746. Minimize Max Distance to Gas Station (Hard)

747. Nth Magical Number

****Day 147** (Hard)**

748. Count of Range Sum

749. Count of Smaller Numbers After Self

750. Reverse Pairs

751. Count Subarrays With Median K

752. Longest Duplicate Substring

****Day 148** (Hard)**

753. Maximum Sum of 3 Non-Overlapping Subarrays (revisit)

754. Max Sum of Rectangle No Larger Than K

755. Number of Submatrices That Sum to Target

756. Count Subarrays With Score Less Than K

Week 22: Heaps & Priority Queues (35 problems)

****Day 149** (Easy)**

757. Kth Largest Element in a Stream

758. Last Stone Weight

759. Relative Ranks

760. Third Maximum Number (Heap)

761. K Closest Points to Origin

****Day 150** (Medium)**

762. Top K Frequent Elements

763. Top K Frequent Words

764. Kth Largest Element in an Array

765. Find K Pairs with Smallest Sums

766. Kth Smallest Element in a Sorted Matrix (Heap)

767. Ugly Number II

****Day 151** (Medium)**

768. Super Ugly Number

769. Find K-th Smallest Pair Distance (Heap)

770. K-th Smallest Prime Fraction (Heap)

771. Kth Smallest Number in Multiplication Table

772. Smallest Range Covering Elements from K Lists

773. Find Median from Data Stream

****Day 152**** (Medium)

774. IPO

775. Maximum Performance of a Team

776. Minimum Cost to Hire K Workers

777. Maximum Subsequence Score

778. Total Cost to Hire K Workers

779. Single-Threaded CPU

****Day 153**** (Medium)

780. Task Scheduler (Heap)

781. Reorganize String (Heap)

782. Rearrange String k Distance Apart (Heap)

783. Process Tasks Using Servers

784. Maximum Number of Events That Can Be Attended

785. Maximum Number of Events II

****Day 154**** (Hard)

786. Find Median from Data Stream (Follow-up)

787. Sliding Window Median

788. IPO (Advanced)

789. The Skyline Problem

790. Minimum Number of Refueling Stops (Heap)

****Day 155**** (Hard)

791. Minimum Cost to Make Array Equal

792. Minimum Time to Finish the Race

793. Parallel Courses III (Heap)

794. Maximum Profit in Job Scheduling (Heap)

795. Meeting Rooms III

Week 23: Backtracking & Recursion (35 problems)

****Day 156** (Easy-Medium)**

796. Subsets

797. Subsets II

798. Permutations

799. Permutations II

800. Combinations

****Day 157** (Medium)**

801. Combination Sum

802. Combination Sum II

803. Combination Sum III

804. Letter Combinations of a Phone Number (revisit)

805. Generate Parentheses (revisit)

806. Restore IP Addresses

****Day 158** (Medium)**

807. Palindrome Partitioning

808. Partition to K Equal Sum Subsets (revisit)

809. Beautiful Arrangement (revisit)

810. Split Array into Fibonacci Sequence

811. Additive Number

812. Word Search (revisit)

****Day 159** (Medium)**

813. N-Queens

814. N-Queens II

815. Sudoku Solver

816. Valid Sudoku (revisit)

817. Expression Add Operators (revisit)

818. Different Ways to Add Parentheses (revisit)

****Day 160** (Medium)**

819. Gray Code

820. Letter Case Permutation

821. Increasing Subsequences

822. Iterator for Combination

823. Count Sorted Vowel Strings (Backtracking)

824. Maximum Length of a Concatenated String

****Day 161** (Hard)**

825. Word Search II (revisit)

826. Remove Invalid Parentheses (revisit)

827. Zuma Game

828. Shopping Offers

829. Stickers to Spell Word (Backtracking)

830. Confusing Number II

****Day 162** (Hard)**

831. Cracking the Safe

832. Parse Lisp Expression

833. Verbal Arithmetic Puzzle

834. Max Length of a Concatenated String with Unique Chars

835. Word Squares (revisit)

Week 24: Greedy & Math (35 problems)

****Day 163** (Easy)**

836. Assign Cookies

837. Lemonade Change

838. Best Time to Buy and Sell Stock (Greedy)

839. Best Time to Buy and Sell Stock II (Greedy)

840. Maximize Sum Of Array After K Negations

****Day 164** (Medium)**

841. Jump Game (Greedy)

842. Jump Game II (Greedy)

843. Gas Station

844. Candy

845. Minimum Number of Arrows to Burst Balloons

846. Non-overlapping Intervals

****Day 165** (Medium)**

847. Minimum Number of Taps to Open (Greedy)

848. Partition Labels

849. Merge Intervals

850. Insert Interval

851. Meeting Rooms

852. Meeting Rooms II

****Day 166** (Medium)**

853. Car Fleet

854. Car Fleet II

855. Boats to Save People

856. Queue Reconstruction by Height

857. Advantage Shuffle

858. Bag of Tokens

****Day 167** (Medium)**

859. Task Scheduler (Greedy)

860. Reorganize String (Greedy)

861. Minimum Deletions to Make String Balanced

862. Minimum Deletions to Make Character Frequencies Unique

863. Construct K Palindrome Strings

864. Largest Number

****Day 168** (Hard)**

865. Remove K Digits (revisit)

866. Create Maximum Number (revisit)

867. Smallest Range II

868. Maximum Sum Obtained of Any Permutation

869. Minimum Number of K Consecutive Bit Flips

****Day 169** (Hard)**

870. Patching Array

871. Split Array into Consecutive Subsequences

872. Hand of Straights

873. Maximum Number of Events That Can Be Attended II

874. Minimum Number of Operations to Make Array Continuous

Week 25: Bit Manipulation & Math (35 problems)

Day 170 (Easy)

875. Single Number

876. Single Number II

877. Single Number III

878. Number of 1 Bits

879. Reverse Bits

880. Power of Two

Day 171 (Easy-Medium)

881. Power of Three

882. Power of Four

883. Missing Number (Bit)

884. Counting Bits (revisit)

885. Hamming Distance

886. Total Hamming Distance

Day 172 (Medium)

887. Sum of Two Integers

888. Divide Two Integers

889. Maximum XOR of Two Numbers (revisit)

890. Maximum XOR With an Element From Array

891. Maximum Genetic Difference Query

892. Bitwise AND of Numbers Range

Day 173 (Medium)

893. UTF-8 Validation

894. Gray Code (Bit manipulation)

895. Binary Watch

896. Prime Number of Set Bits

897. Find the Duplicate Number

898. XOR Queries of a Subarray

****Day 174** (Medium)**

- 899. Minimum Flips to Make a OR b Equal to c
- 900. Number of Steps to Reduce to Zero (Bit)
- 901. Complement of Base 10 Integer
- 902. Convert Binary Number in a Linked List to Integer
- 903. Count Triplets That Can Form Two Arrays of Equal XOR
- 904. Decode XORed Array

****Day 175** (Hard)**

- 905. Maximum Product of Word Lengths
- 906. Concatenated Words (Bit)
- 907. Maximize XOR for Each Query
- 908. Find XOR Sum of All Pairs Bitwise AND
- 909. Minimize XOR

****Day 176** (Hard)**

- 910. Number of Valid Words for Each Puzzle
- 911. Shortest Impossible Sequence of Rolls
- 912. Maximum Strong Pair XOR
- 913. Count Number of Maximum Bitwise-OR Subsets
- 914. Find Array Given Subset Sums

Week 26: Mock Interviews & Company-Specific (35 problems)

****Day 177** (Google-style)**

- 915. Design Search Autocomplete (Google)
- 916. Logger Rate Limiter (Google)
- 917. Snapshot Array (Google)
- 918. Time Based Key-Value Store (Google)
- 919. Design Hit Counter (Google)
- 920. Design Underground System (Google)

****Day 178** (Meta-style)**

- 921. Binary Tree Vertical Order Traversal

922. Buildings With an Ocean View

923. Dot Product of Two Sparse Vectors

924. Random Pick with Weight

925. Random Pick Index

926. Insert Delete GetRandom O(1)

****Day 179**** (Amazon-style)

927. Number of Islands (revisit)

928. Word Ladder

929. Word Ladder II

930. Rotting Oranges

931. Walls and Gates (revisit)

932. Trapping Rain Water (Amazon)

****Day 180**** (Microsoft-style)

933. Design Excel Sum Formula (revisit)

934. Flatten Nested List Iterator

935. Peeking Iterator

936. Zigzag Iterator

937. Binary Search Tree Iterator

938. Design Circular Queue (revisit)

****Day 181**** (Apple-style)

939. LRU Cache (revisit)

940. LFU Cache (revisit)

941. All O`one Data Structure (revisit)

942. Min Stack (revisit)

943. Max Stack

944. Design Twitter (revisit)

****Day 182**** (Hard Company Mix)

945. Serialize and Deserialize Binary Tree (revisit)

946. Serialize and Deserialize N-ary Tree (revisit)

947. Encode and Decode Strings (revisit)

948. Encode N-ary Tree to Binary Tree (revisit)

949. Design In-Memory File System (revisit)

****Day 183**** (Final Review - High Frequency)

950. Two Sum (revisit)

951. Three Sum (revisit)

952. Merge Intervals (revisit)

953. Valid Parentheses (revisit)

954. Longest Substring Without Repeating Characters (revisit)

955. Maximum Subarray (revisit)

Remaining 45 Problems (Days 184-189)

****Day 184**** (Mixed Difficulty - Array/String)

956. Container With Most Water (revisit)

957. Trapping Rain Water (final review)

958. Product of Array Except Self (revisit)

959. Sliding Window Maximum (revisit)

960. Minimum Window Substring (revisit)

961. Valid Anagram (revisit)

962. Group Anagrams (revisit)

963. Longest Palindromic Substring (revisit)

****Day 185**** (Mixed Difficulty - Trees/Graphs)

964. Binary Tree Maximum Path Sum (revisit)

965. Serialize and Deserialize Binary Tree (final)

966. Lowest Common Ancestor (revisit)

967. Course Schedule (revisit)

968. Clone Graph (revisit)

969. Number of Islands (final)

970. Word Ladder (revisit)

****Day 186**** (Mixed Difficulty - DP)

971. Longest Increasing Subsequence (revisit)

972. Coin Change (revisit)

973. Word Break (final review)

974. Unique Paths (revisit)

975. Jump Game (revisit)

976. House Robber (revisit)

977. Longest Common Subsequence (revisit)

978. Edit Distance (final review)

****Day 187** (Hard Problems Focus)**

979. Regular Expression Matching (revisit)

980. Wildcard Matching (revisit)

981. Median of Two Sorted Arrays (final)

982. Merge k Sorted Lists (revisit)

983. Reverse Nodes in k-Group (revisit)

984. Longest Valid Parentheses (revisit)

985. The Skyline Problem (revisit)

****Day 188** (System Design Related)**

986. LRU Cache (final review)

987. LFU Cache (final review)

988. Design Twitter (final review)

989. Design Search Autocomplete System (final)

990. Time Based Key-Value Store (revisit)

991. Design File System (final)

992. Snapshot Array (final)

****Day 189** (Final Day - Top Interview Questions)**

993. Reverse Linked List (final)

994. Merge Two Sorted Lists (final)

995. Climbing Stairs (final)

996. Best Time to Buy and Sell Stock (final)

997. Valid Palindrome (final)

998. Implement Trie (final)

999. Top K Frequent Elements (final)

1000. Kth Largest Element (final)

Problem Difficulty Breakdown

- **Easy**: ~250 problems (25%)
- **Medium**: ~550 problems (55%)
- **Hard**: ~200 problems (20%)

Pattern Coverage

- Arrays & Strings: 140 problems
- Two Pointers & Sliding Window: 70 problems
- Linked Lists: 35 problems
- Stacks & Queues: 70 problems
- Trees & BST: 105 problems
- Graphs: 105 problems
- Dynamic Programming: 155 problems
- Binary Search: 35 problems
- Heaps: 39 problems
- Backtracking: 42 problems
- Greedy: 35 problems
- Bit Manipulation: 40 problems
- Design & System Design: 50 problems
- Tries: 25 problems
- Union Find: 27 problems
- Math: 27 problems

Daily Progress Tracking

- **Week 1-4**: Foundation (Arrays, Strings, Two Pointers)
- **Week 5-8**: Linear Structures (Linked Lists, Stacks, Queues)
- **Week 9-12**: Trees & Tries
- **Week 13-16**: Graphs & Advanced Algorithms
- **Week 17-20**: Dynamic Programming (All variants)
- **Week 21-26**: Advanced Topics & Mock Interviews

Tips for Success

1. Solve problems in order for each day
2. Spend 30-45 min per easy, 45-60 min per medium, 60+ min per hard
3. Review patterns weekly
4. Redo hard problems after 2 weeks
5. Last month: Focus on company-specific patterns
6. Track time and space complexity for each solution
7. Practice explaining solutions out loud

****Good luck with your preparation! ****