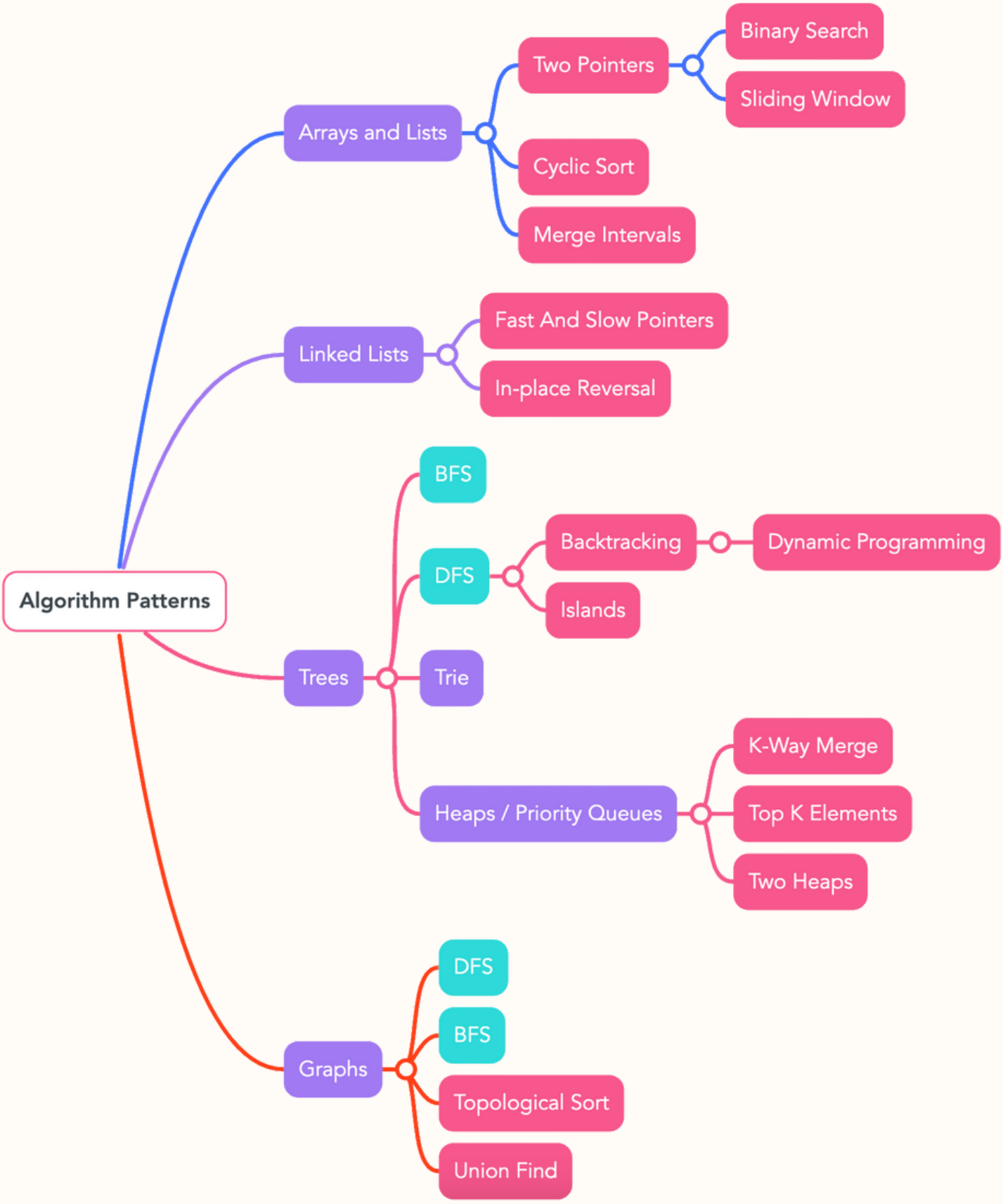
ALGOLAB 150

Algorithm Patterns.
150 Problems.
Problem-Solving.
Ace Coding Interviews.

★★★★★

"KEY TO ACING
CODING INTERVIEWS"
— FAANG ENGINEER


Algorithm Patterns
Arrays and Lists
Two Pointers
Binary Search
Sliding Window
Cyclic Sort
Merge Intervals
Linked Lists
Fast And Slow Pointers
In-place Reversal
Trees
BFS
DFS
Backtracking
Dynamic Programming
Islands
Trie
Heaps / Priority Queues
K-Way Merge
Top K Elements
Two Heaps
Graphs
DFS
BFS
Topological Sort
Union Find

Instructions

- Warm-up with easy problems first. Get few problems under your belt that you could solve under 15 minutes.
- Master one pattern at a time. Don’t move forward until you become comfortable with current pattern.
- A problem can be solved with many different patterns, but to master the current pattern, solve the problem with the pattern it is listed under.
- Never spend more than one hour maximum per problem. If it is taking that much time, the this is not the right level for you yet. Go back to easier problems and redo them faster.
- If you cannot solve the problem within first 25 minutes, then get hints by looking at the solution from others.
- Repeat coding of each problem for three times. First time, it will take longer, but second and third time it will be very fast. With little extra time, you will gain a lot.
- After solving a problem, have a look at the solutions by others to pick good points and improve your solution.
- Join Algolab’s video course to get video lessons, coding workspace, official solutions and solutions from others.

Warm Up

1. Palindrome Number
2. Merge Two Sorted Lists
3. Single Number
4. Contains Duplicate
5. Valid Anagram
6. Fibonacci Number
7. Defanging An Ip Address
8. Running Sum Of 1d Array
9. Number Of Good Pairs
10. Richest Customer Wealth
11. Build Array From Permutation
12. Concatenation Of Array
13. Fizz Buzz

Fixed Size Sliding Window

14. Number Of Sub Arrays Of Size K And Average Greater Than Or Equal To Threshold
15. Substrings Of Size Three With Distinct Characters
16. Find All Anagrams In A String
17. Permutation In String
18. Maximum Average Subarray I
19. Diet Plan Performance
20. Find K Length Substrings With No Repeated Characters
21. Average Of All Subarrays

Dynamic Size Sliding Window

22. Longest Substring Without Repeating Characters
23. Max Consecutive Ones Iii
24. Max Consecutive Ones
25. Minimum Window Substring

Binary Search

26. Find In Mountain Array
27. Search In Rotated Sorted Array
28. Find First And Last Position Of Element In Sorted Array
29. Single Element In A Sorted Array
30. Binary Search
31. Find Smallest Letter Greater Than Target
32. Peak Index In A Mountain Array

Two Pointers

33. Container With Most Water
34. 3sum
35. Two Sum Ii Input Array Is Sorted
36. Valid Palindrome
37. Remove Duplicates From Sorted Array
38. Remove Element
39. Move Zeroes
40. Reverse String
41. Sort Colors
42. Squares Of A Sorted Array

Cyclic Sort

43. Kth Missing Positive Number
44. First Missing Positive
45. Find All Duplicates In An Array
46. Find All Numbers Disappeared In An Array
47. Find The Duplicate Number
48. Set Mismatch
49. Missing Number

Top K Element

50. Least Number Of Unique Integers After K Removals
51. Sort Array By Increasing Frequency
52. Kth Largest Element In An Array
53. Sort Characters By Frequency
54. Top K Frequent Elements
55. Find K Closest Elements
56. K Closest Points To Origin

Merge Intervals

57. Non Overlapping Intervals
58. Merge Intervals
59. Insert Interval
60. Interval List Intersections
61. Employee Free Time
62. Meeting Rooms
63. Meeting Rooms Ii
64. Meeting Scheduler

Linked List

65. Reverse Linked List
66. Rotate List
67. Reverse Linked List Ii
68. Reverse Nodes In K Group

Fast And Slow Pointers

69. Linked List Cycle
70. Linked List Cycle Ii
71. Happy Number
72. Middle Of The Linked List

Depth First Search (DFS)

73. Path Sum Iii
74. Same Tree
75. Maximum Depth Of Binary Tree
76. Path Sum
77. Path Sum Ii
78. Binary Tree Maximum Path Sum
79. Sum Root To Leaf Numbers
80. Evaluate Boolean Binary Tree
81. Diameter Of Binary Tree
82. Range Sum Of Bst
83. Binary Tree Inorder Traversal
84. Find All The Lonely Nodes

Breadth First Search (BFS)

85. Binary Tree Level Order Traversal
86. Binary Tree Zigzag Level Order Traversal
87. Minimum Depth Of Binary Tree
88. Binary Tree Level Order Traversal Ii
89. N Ary Tree Level Order Traversal
90. Average Of Levels In Binary Tree

Islands

91. Flood Fill
92. Number Of Islands
93. Surrounded Regions
94. Walls And Gates
95. Find All Groups Of Farmland
96. Count Sub Islands
97. Minesweeper

Topological Sort

98. Course Schedule
99. Course Schedule Ii
100. Alien Dictionary
101. Minimum Height Trees
102. All Ancestors Of A Node In A Directed Acyclic Graph
103. Build A Matrix With Conditions
104. Find All Possible Recipes From Given Supplies

Tries

105. Word Break
106. Word Break Ii
107. Implement Trie Prefix Tree
108. Design Add And Search Words Data Structure
109. Word Search Ii
110. Concatenated Words

Union Find

111. Number Of Operations To Make Network Connected
112. Number Of Provinces
113. Remove Max Number Of Edges To Keep Graph Fully Traversable
114. Redundant Connection
115. Similar String Groups
116. Graph Valid Tree
117. Number Of Connected Components In An Undirected Graph

Two Heaps

118. Find Median From Data Stream
119. Sliding Window Median
120. IPO
121. Find Right Interval

Backtracking

122. Subsets
123. Subsets Ii
124. Permutations
125. Letter Combinations Of A Phone Number
126. Palindrome Partitioning
127. Combination Sum
128. Combination Sum Ii
129. Permutations Ii

K Way Merge

130. Merge K Sorted Lists
131. Kth Smallest Element In Sorted Matrix
132. Find K Pairs With Smallest Sum
133. Smallest Range Covering Elements From K Lists
134. Rearranging Strings K Distance Apart
135. Minimum Cost To Hire K Workers

Dynamic Programming

136. Fibonacci Number
137. Counting Bits
138. Is Subsequence
139. Get Maximum In Generated Array
140. Climbing Stairs
141. Minimum Cost Climbing Stairs
142. Pascal Triangle
143. Pascal Triangle Ii
144. Nth Tribonacci Number
145. Unique Paths
146. Unique Paths
147. All Possible Full Binary Trees
148. Minimum Path Sum
149. Count Square Submatrices With All Ones
150. Where Will The Ball Fall

Save Your Time

Save time and master the coding interviews by learning from video lessons at the following link.

https://algolab.so/p/algorithms-and-data-structure-video-course

	LeetCode	AlgoExpert	Algolab
100+ Practice Questions	✓	✓	✓
Coding Workspace	✓	✓	✓
Multiple Programming Languages	✓	✓	✓
High-Quality Solutions	✓	✓	✓
Video Explanations	✗	✓	✓
All-In-One Platform	✗	✓	✓
Algorithm Patterns Approach	✗	✗	✓
Professional Quality Videos	✗	✗	✓
Value For Money	✗	✗	✓
Private Slack Community	✗	✗	✓
Life-time Access	✗	✗	✓

Algolab

https://bit.ly/3hRs6Qc