* **DSA Revision Content**

| **How to use this document?**  Watch this quick video for a detailed guide: <https://bit.ly/dsa-onestop-video> |
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# Quick Revision Topics

| **Topic** | **Revision Material** | **Videos** | **Important Questions & Links** |
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| Arrays | [Revision Part 1: Arrays](https://docs.google.com/document/d/1_6XS6OVJfl0IASLf1Pwp1nlrIGhipCdBWUEdUlf5H-o/edit) | [Arrays](https://drive.google.com/drive/folders/1Ww4p2egf541Vz8JUj0KTVBCyqYFZ1RMB?usp=share_link) | 1. Equilibrium index of an array 2. Rain water trapped |
| Bit Manipulation | [Bit Manipulation](https://docs.google.com/document/d/1rW7tSSqq0yFhBI3_yW0PqR4DStDJM1YIoyeEpX73aYQ/edit) | [bits.mp4](https://drive.google.com/file/d/1zEJN4CuoTR7K6b0ecEiKzEP1Rzp3jHoR/view?usp=share_link) | 1. Single Number 2 2. Single Number 3 |
| Sorting | [Sorting](https://docs.google.com/document/d/1NHw_Z6PVJPpQOKC1IWY6PDUwNBL3fwYsZwfj2iju8GY/edit) | [Sorting1.mov](https://drive.google.com/file/d/10Bfov3--bJ_xl7AO5s0vX5DMqcDBUXHh/view?usp=share_link)[Sorting 2.mov](https://drive.google.com/file/d/1oC4QG_Zie3OG_kFNpbU8_RW1-BV3RsNt/view?usp=share_link) | 1. Merge Sort 2. B closest Point to Origin [Custom comparator] |
| Binary Search | [Binary Search](https://docs.google.com/document/d/1pkJhZH4yKubo0cJAlB2KUgg0wLAy0yZuyNdAg5uO3qM/edit) | [Binary Search](https://drive.google.com/drive/folders/15M4y3UGOg1HkBlZ0NRQ9Nai8We7ltKoA?usp=share_link) | 1. Rotated Sorted Array Search 2. Painters Partition Problem |
| HashMap | [Hashing:](https://docs.google.com/document/d/1HqxTtIHKzZY84BNbBqiF8Dhu5TLaYJVkH1br-S5FMUg/edit) |  | 1. Longest Subarray Zero Sum |
| Stacks | [Stacks](https://docs.google.com/document/d/11ANaYpxbia_MQPAebJvUU-0zAIL2OXVrZzBqe3LEg34/edit) | [Stacks.mp4](https://drive.google.com/file/d/1DEujBlO2QPMEMKGvgldNHrnB0997n_1s/view?usp=share_link) | 1. Balanced Parenthesis 2. Largest rectangle in histogram 3. [LINK](https://hackmd.io/@scaler-topics-main/H1WSRFjdp) |
| Trees | [Trees](https://docs.google.com/document/d/110f5qceF3iBNZmnW43WbRMNi2TEqoFhsMyXyZnXSvKM/edit) | [Binary Trees](https://drive.google.com/drive/folders/1I2I65U4ZuAxMsaGTkT0Lplbbnyzc8Y2B?usp=share_link) | 1. Zig Zag Level order 2. Binary Tree from In and Preorder 3. Diameter of Binary Tree 4. [LINK](https://hackmd.io/@scaler-topics-main/H1WSRFjdp) |
| LinkedLists | [LinkedList](https://docs.google.com/document/d/1TuRWiAqyGs__wqlJAEIsE2sh9PzW6xHjDZR9Drbm_bg/edit) | [Linked List.mp4](https://drive.google.com/file/d/1edSzhani6dGv7c8QGBm-Q-MJN6_aoCwJ/view?usp=share_link) | 1. Remove Loop from Linked List 2. [LINK](https://hackmd.io/@scaler-topics-main/H1WSRFjdp) |
| Dynamic Programming | [Dynamic Programming](https://docs.google.com/document/d/1Fxc9xRpyaqc-EUZB_rQ8Kv1JVUZOOOmfcb220Af1QHo/edit) | [DP](https://drive.google.com/drive/folders/1Ad9FiDTi8XV8j5r8XFG0SgnlV3YfQZwg?usp=share_link) | 1. 0-1 Knapsack 2. Fibonacci Sequence 3. N Stairs |
| Graph | [Graph](https://docs.google.com/document/d/1UCcZsTAEDAW81Uo0e7ALiY1Gd_cGi3hmJBg1WpOXZec/edit) |  | 1. [LINK](https://hackmd.io/4BZj-C3DQe2BFNnamZVlKQ) |
| Heaps | [Heaps](https://docs.google.com/document/d/1z7tou4-eLrnvEJondFBxCPFcaETpQBX40Oc4f4zFwds/edit) |  | 1. K Places Apart 2. [LINK](https://hackmd.io/@scaler-topics-main/By3KctjdT#Priority-Queue--Heaps) |
| Greedy |  |  | 1. [LINK](https://hackmd.io/@scaler-topics-main/By3KctjdT#Greedy) |

# Quick Practice Test & Material Access



| **Additional Resources** | | | |
| --- | --- | --- | --- |
| Sample Question List for Mock Interview | [Sample Question List for Mock Interview](https://docs.google.com/document/d/1ICQlsOOKW2Y1j8_8s0QA4bt-dullKBHph05M3-UoVMg/edit?usp=sharing) | | |
| Demo DSA Mock Interview | [LINK](https://d3mgul5u8r8t6n.cloudfront.net/production/recordings/490420/500059/demo-mock-interview.mp4) | | |
| How to find particular assignment questions? | <https://rb.gy/2e74f> | | |

# Instructor Led Revision Sessions

| **Recorded Revision Sessions** | | | |
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| Greedy, Heaps, Backtracking | [LINK](https://www.scaler.com/meetings/revision-class-greedy-heaps-backtracking/j/a/SNLfifSCqjtuHGVJPadH@-bP3FNYBJo6) | | |
| Tree & LinkedList | [LINK](https://www.scaler.com/meetings/revision-class-trees-linkedlist/j/a/ON9CCtdiaL3RFmZ9HwAOHyzKEWlKdJ8_) | | |
| Sorting and Searching | [LINK](https://www.scaler.com/meetings/revision-class-sorting-searching/j/a/do$xTe5qgJqvErYA155dlrnOsI5c@thM) | | |
| Graphs | [LINK](http://revision-class-graphs) | | |
| Dynamic Programming | [LINK](https://www.scaler.com/meetings/revision-class-dynamic-programming/j/a/PAkGU64lGvrkmsy@w$cuoaTgf5icPFJP) | | |
| DSA 1 & 2 | [LINK](https://www.scaler.com/meetings/advanced-dsa-graphs-4-131/j/a/WtJHHIFfNDQBQ69sVPR0LT0p2qX1mUdz) | | |
| DSA 3 & 4 | [LINK](https://www.scaler.com/meetings/i/dsa-doubts-revision-3-4/archive) | | |
| Complete DSA Revision | [LINK](https://www.scaler.com/meetings/dsa/j/a/mliXOiLG@Dn9ytOvD806ExOK24ysyE28) | | |

# 100 Sample Questions - Topic Wise

| **Arrays** | |
| --- | --- |
| Find Perfect Numbers | [www.scaler.com/academy/mentee/problems/29084](http://www.scaler.com/academy/mentee/problems/29084) |
| Array Rotation | [www.scaler.com/academy/mentee/problems/29098](http://www.scaler.com/academy/mentee/problems/29098) |
| Range Sum Query - II | [www.scaler.com/academy/mentee/problems/27366](http://www.scaler.com/academy/mentee/problems/27366) |
| Equilibrium index of an array | [www.scaler.com/academy/mentee/problems/12826](http://www.scaler.com/academy/mentee/problems/12826) |
| Product array puzzle | [www.scaler.com/academy/mentee/problems/4103](http://www.scaler.com/academy/mentee/problems/4103) |
| Closest MinMax | [www.scaler.com/academy/mentee/problems/986](http://www.scaler.com/academy/mentee/problems/986) |
| Bulbs | [www.scaler.com/academy/mentee/problems/16728](http://www.scaler.com/academy/mentee/problems/16728) |
| Pick from both sides! | [www.scaler.com/academy/mentee/problems/9900](http://www.scaler.com/academy/mentee/problems/9900) |
| Generate all subarrays | [www.scaler.com/academy/mentee/problems/26732](http://www.scaler.com/academy/mentee/problems/26732) |
| Sum of All Subarrays | [www.scaler.com/academy/mentee/problems/14363](http://www.scaler.com/academy/mentee/problems/14363) |
| Alternating Subarrays Easy | [www.scaler.com/academy/mentee/problems/16123](http://www.scaler.com/academy/mentee/problems/16123) |
| Rotate Matrix | [www.scaler.com/academy/mentee/problems/55](http://www.scaler.com/academy/mentee/problems/55) |
| Anti Diagonals | [www.scaler.com/academy/mentee/problems/293](http://www.scaler.com/academy/mentee/problems/293) |
| Subarray with given sum and length | [www.scaler.com/academy/mentee/problems/30351](http://www.scaler.com/academy/mentee/problems/30351) |
| Length of longest consecutive ones | [www.scaler.com/academy/mentee/problems/4256](http://www.scaler.com/academy/mentee/problems/4256) |
| Majority Element | [www.scaler.com/academy/mentee/problems/41388](http://www.scaler.com/academy/mentee/problems/41388) |
| Special Index | [www.scaler.com/academy/mentee/problems/12828](http://www.scaler.com/academy/mentee/problems/12828) |
| Max Sum Contiguous Subarray | [www.scaler.com/academy/mentee/problems/56](http://www.scaler.com/academy/mentee/problems/56) |
| Sum of all Submatrices | [www.scaler.com/academy/mentee/problems/4091](http://www.scaler.com/academy/mentee/problems/4091) |
| Search in a row wise and column wise sorted matrix | [www.scaler.com/academy/mentee/problems/4092](http://www.scaler.com/academy/mentee/problems/4092) |
| Rain water trapped | [www.scaler.com/academy/mentee/problems/47](http://www.scaler.com/academy/mentee/problems/47) |
| Merge Intervals | [www.scaler.com/academy/mentee/problems/58](http://www.scaler.com/academy/mentee/problems/58) |
| First Missing Integer | [www.scaler.com/academy/mentee/problems/65](http://www.scaler.com/academy/mentee/problems/65) |
| Container With Most Water | [www.scaler.com/academy/mentee/problems/169](http://www.scaler.com/academy/mentee/problems/169) |
| **Bit Manipulation** | |
| Single Number 2 | [www.scaler.com/academy/mentee/problems/195](http://www.scaler.com/academy/mentee/problems/195) |
| Single Number 3 | [www.scaler.com/academy/mentee/problems/9184](http://www.scaler.com/academy/mentee/problems/9184) |
| Maximum AND Pair | [www.scaler.com/academy/mentee/problems/19558](http://www.scaler.com/academy/mentee/problems/19558) |
| **Maths** | |
| Delete one | [www.scaler.com/academy/mentee/problems/9103](http://www.scaler.com/academy/mentee/problems/9103) |
| Pubg | [www.scaler.com/academy/mentee/problems/9104](http://www.scaler.com/academy/mentee/problems/9104) |
| Find All Primes | [www.scaler.com/academy/mentee/problems/35398](http://www.scaler.com/academy/mentee/problems/35398) |
| Count of Divisors | [www.scaler.com/academy/mentee/problems/4107](http://www.scaler.com/academy/mentee/problems/4107) |
| Sorted Permutation Rank | [www.scaler.com/academy/mentee/problems/317](http://www.scaler.com/academy/mentee/problems/317) |
| Excel Column Title | [www.scaler.com/academy/mentee/problems/76](http://www.scaler.com/academy/mentee/problems/76) |
| **Sorting** | |
| Inversion count in an array | [www.scaler.com/academy/mentee/problems/4190](http://www.scaler.com/academy/mentee/problems/4190) |
| Unique Elements | [www.scaler.com/academy/mentee/problems/26673](http://www.scaler.com/academy/mentee/problems/26673) |
| B Closest Points to Origin | [www.scaler.com/academy/mentee/problems/4194](http://www.scaler.com/academy/mentee/problems/4194) |
| Sum the Difference | [www.scaler.com/academy/mentee/problems/453](http://www.scaler.com/academy/mentee/problems/453) |
| Maximum Unsorted Subarray | [www.scaler.com/academy/mentee/problems/359](http://www.scaler.com/academy/mentee/problems/359) |
| **Hashing** | |
| Pairs with given sum II | [www.scaler.com/academy/mentee/problems/5097](http://www.scaler.com/academy/mentee/problems/5097) |
| Sub-array with 0 sum | [www.scaler.com/academy/mentee/problems/4202](http://www.scaler.com/academy/mentee/problems/4202) |
| Longest Consecutive Sequence | [www.scaler.com/academy/mentee/problems/152](http://www.scaler.com/academy/mentee/problems/152) |
| First non-repeating character | [www.scaler.com/academy/mentee/problems/4365](http://www.scaler.com/academy/mentee/problems/4365) |
| Longest Subarray Zero Sum | [www.scaler.com/academy/mentee/problems/27742](http://www.scaler.com/academy/mentee/problems/27742) |
| **Binary Search** | |
| Find a peak element | [www.scaler.com/academy/mentee/problems/4132](http://www.scaler.com/academy/mentee/problems/4132) |
| Rotated Sorted Array Search | [www.scaler.com/academy/mentee/problems/203](http://www.scaler.com/academy/mentee/problems/203) |
| Median of Array | [www.scaler.com/academy/mentee/problems/198](http://www.scaler.com/academy/mentee/problems/198) |
| Ath Magical Number | [www.scaler.com/academy/mentee/problems/5697](http://www.scaler.com/academy/mentee/problems/5697) |
| Painter's Partition Problem | [www.scaler.com/academy/mentee/problems/271](http://www.scaler.com/academy/mentee/problems/271) |
| **LinkedList** | |
| Reverse Linked List | [www.scaler.com/academy/mentee/problems/40](http://www.scaler.com/academy/mentee/problems/40) |
| Remove Loop from Linked List | [www.scaler.com/academy/mentee/problems/4226](http://www.scaler.com/academy/mentee/problems/4226) |
| Longest Palindromic List | [www.scaler.com/academy/mentee/problems/4386](http://www.scaler.com/academy/mentee/problems/4386) |
| Palindrome List | [www.scaler.com/academy/mentee/problems/331](http://www.scaler.com/academy/mentee/problems/331) |
| LRU Cache | [www.scaler.com/academy/mentee/problems/239](http://www.scaler.com/academy/mentee/problems/239) |
| Reorder List | [www.scaler.com/academy/mentee/problems/33](http://www.scaler.com/academy/mentee/problems/33) |
| Add Two Numbers as Lists | [www.scaler.com/academy/mentee/problems/38](http://www.scaler.com/academy/mentee/problems/38) |
| **Stack and Queue** | |
| Evaluate Expression | [www.scaler.com/academy/mentee/problems/46](http://www.scaler.com/academy/mentee/problems/46) |
| Double Character Trouble | [www.scaler.com/academy/mentee/problems/968](http://www.scaler.com/academy/mentee/problems/968) |
| Largest Rectangle in Histogram | [www.scaler.com/academy/mentee/problems/49](http://www.scaler.com/academy/mentee/problems/49) |
| MAX and MIN | [www.scaler.com/academy/mentee/problems/7042](http://www.scaler.com/academy/mentee/problems/7042) |
| Sliding Window Maximum | [www.scaler.com/academy/mentee/problems/85621](http://www.scaler.com/academy/mentee/problems/85621) |
| **Trees** | |
| Right View of Binary tree | [www.scaler.com/academy/mentee/problems/5714](http://www.scaler.com/academy/mentee/problems/5714) |
| Vertical Order traversal | [www.scaler.com/academy/mentee/problems/378](http://www.scaler.com/academy/mentee/problems/378) |
| Largest BST Subtree | [www.scaler.com/academy/mentee/problems/4857](http://www.scaler.com/academy/mentee/problems/4857) |
| Valid Binary Search Tree | [www.scaler.com/academy/mentee/problems/221](http://www.scaler.com/academy/mentee/problems/221) |
| Recover Binary Search Tree | [www.scaler.com/academy/mentee/problems/216](http://www.scaler.com/academy/mentee/problems/216) |
| Morris Inorder Traversal | [www.scaler.com/academy/mentee/problems/35988](http://www.scaler.com/academy/mentee/problems/35988) |
| Least Common Ancestor | [www.scaler.com/academy/mentee/problems/218](http://www.scaler.com/academy/mentee/problems/218) |
| Diameter of binary tree | [www.scaler.com/academy/mentee/problems/9256](http://www.scaler.com/academy/mentee/problems/9256) |
| Path Sum | [www.scaler.com/academy/mentee/problems/234](http://www.scaler.com/academy/mentee/problems/234) |
| **Dynamic Programming** | |
| Stairs | [www.scaler.com/academy/mentee/problems/30](http://www.scaler.com/academy/mentee/problems/30) |
| Minimum Number of Squares | [www.scaler.com/academy/mentee/problems/600](http://www.scaler.com/academy/mentee/problems/600) |
| Dungeon Princess | [www.scaler.com/academy/mentee/problems/17](http://www.scaler.com/academy/mentee/problems/17) |
| Fractional Knapsack | [www.scaler.com/academy/mentee/problems/35883](http://www.scaler.com/academy/mentee/problems/35883) |
| 0-1 Knapsack | [www.scaler.com/academy/mentee/problems/9292](http://www.scaler.com/academy/mentee/problems/9292) |
| Coin Sum Infinite | [www.scaler.com/academy/mentee/problems/319](http://www.scaler.com/academy/mentee/problems/319) |
| Cutting a Rod | [www.scaler.com/academy/mentee/problems/9318](http://www.scaler.com/academy/mentee/problems/9318) |
| **Graphs** | |
| Number of islands | [www.scaler.com/academy/mentee/problems/4702](http://www.scaler.com/academy/mentee/problems/4702) |
| Topological Sort | [www.scaler.com/academy/mentee/problems/9328](http://www.scaler.com/academy/mentee/problems/9328) |
| Dijsktra | [www.scaler.com/academy/mentee/problems/4706](http://www.scaler.com/academy/mentee/problems/4706) |
| Rotten Oranges | [www.scaler.com/academy/mentee/problems/4704](http://www.scaler.com/academy/mentee/problems/4704) |
|  |  |