# Curriculum: 10-Week DSA Masterclass

| Week 1 - 3 | Fundamentals of DSA (Revision + Problem Solving) |
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| Week 4 - 7 | Non-linear Data Structures |
| Week 8 - 10 | Algorithm Design Techniques |

| Week 1 - 3: Fundamentals of DSA (Revision + Problem Solving) | |
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| 1 | Concept Revision: Complexity Analysis, Iteration and Recursion |
| 2 | Concept Revision: Sorting Algorithms |
| 3 | Problem Solving: Incremental approach, Two-pointers, Sliding window |
| 4 | Problem Solving: Binary search, Divide and conquer |
| 5 | Concept Revision: Linear Data Structures and Hash Table |
| 6 | Problem Solving: Linked List |
| 7 | Problem Solving: Stack and Queue |
| 8 | Problem Solving: Hash Table |
| 9 | Problem Solving: Other Iterative and Recursive Patterns |
| Discussion of 30 Questions Asked in Top Tech Companies | |
| 30 Questions to Practice With Doubt Support | |

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| Week 4 - 7: Non-linear Data Structures | |
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| 10 | Concept Discussion: Binary Tree, BST, Heap and Trie |
| 11 | Concept Discussion: Graph Data Structure |
| 12 | Problem Solving: Depth First Search (Tree and Graph) |
| 13 | Problem Solving: Breadth First Search (Tree and Graph) |
| 14 | Problem Solving: BST, Heap and Trie |
| 15 | Concept Discussion: Advanced Data Structures |
| 16 | Problem Solving: Range Query, Data Structure Design |
| 17 | Problem Solving: Other Specific Approaches |
| Discussion of 40 Questions Asked in Top Tech Companies. | |
| 40 Questions to Practice With Doubt Support. | |

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| | Week 8 - 10: Algorithm Design Techniques |
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| 18 | Concept Discussion: Dynamic programming |
| 19 | Problem Solving: Top 10 Dynamic Programming Patterns |
| 20 | Concept discussion: Greedy and Backtracking |
| 21 | Problem Solving: Greedy and Backtracking |
| 22 | Problem Solving: Bit Manipulation |
| 23 | Problem Solving: Mathematical and String Algorithms |
| 24 | Problem Solving: Other Specific Approaches |
| | Discussion of 30 Questions Asked in Top Tech Companies. |
| | 30 Questions to Practice With Doubt Support. |

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If you want to learn about the above topics through self-study, you can refer to these books and materials:

- EnjoyAlgorithms self-paced course
- Introduction to algorithms by CLRS
- Algorithms unlocked by Thomas Cormen
- Algorithm design manual by Steven S. Skiena
- Algorithms by Robert Sedgewick
- Cracking the coding interview by Gayle Laakmann
- Algorithmic puzzles (Oxford University Press)
- Math for computer science (MIT Opencourseware)

If you have any query related to curriculum, reach us via contact@enjoyalgorithms.com.

Thank you!