

From 0 to 1: Data Structures & Algorithms in Java

Modality: On Demand

Duration: 15 Hours

About this course:

This is an effective method which uses animated, visuospatial way to get training in data structures and algorithms.

- Our brain has a way of processing information with respect to their type – evolution has made us process information as effectively as we can when it is visuospatial i.e. when we close our eyes and see it.
- Hence, in order to learn on the concepts of data structures and algorithms, this method is the best to use. These topics are learnt best visually, and almost impossible to learn in any other way.
- This course has been designed with great attention and by a team of experts who have tons of experience in thinking about these topics and using them in their day-to-day tasks at Google, Microsoft and Flipkart.

Learning objectives:

The course has the following learning objectives:

- Big-O notation and complexity
- Heaps
- Stacks
- Linked lists
- Searching
- Queues
- Graphs and graph algorithms
- Trees
- Sorting

Audience:

This course is best suitable for those computer science and engineering grads who intend to gain expertise in visualizing data structures, and internalize their way of working. This course is also useful for the experienced software engineers who want to go through the foundational concepts of this field again and refresh their knowledge.

Course Outline:

- What this course is about
- Data Structures And Algorithms - A Symbiotic Relationship
- Complexity Analysis and the Big-O Notation

- Linked Lists
- Stacks And Queues
- Sorting and Searching
- Binary Trees
- Binary Search Tree
- Binary Tree Problems
- Heaps
- Revisiting Sorting - The Heap Sort
- Heap Problems
- Graphs
- Graph Algorithms
- Shortest Path Algorithms
- Spanning Tree Algorithms
- Graph Problems