

Beyond CS Camp

Fundamental Data Structure and Algorithm in Java

Description

This course serves as an introduction to data structures and algorithms in Java, and it is intended for motivated students interested in competitive programming, a computer science degree, or a head start in software development interview preparation. A familiarity with Java is assumed. By the end of a packed 8 weeks, students will be well equipped with various tools for analyzing and implementing efficient solutions to programming problems.

Unit of Study

Lesson	Topic
1	Course Overview, Runtime Complexity, Recursion
2	Lists: Arrays, ArrayLists, Linked Lists,
3	Stacks, Queues/Dequeues
4	List Sorting Algorithms, Binary Search
5	Trees and Related Algorithms
6	Graphs Introduction
7	Heaps and Priority Queues
8	Hashing, Sets, and Review