

## Applied Algorithms and Data Structures with Java

Pre Reads	Basics of java, Writing a Hello World Program, Loops and Conditional Statements, Basics of Classes
Module 1	Java Basics Revision, OOP concepts
	Basic Data structures : Arrays, Lists, Stacks, Queues - Time Complexities
	Linked Lists, Trees - Binary, BST, N-Ary - Time Complexities, Recursion
Module 2	Maps, Hashing, Collision, HashTable
	Design Concepts and Real World Application Design- Interface, Abstract Classes, Java Good Coding practices
	Code Kata
Module 3 (Optional)	Graph, Tree vs Graph, Tree Traversals
	Dynamic programming, memoization
	Threading + Hardware level + Operating system

There will be 2 (two) tests overall. 1 (one) midterm test and other would be end term test.