Java Introduction

- [ ] • Java Hello World
- [ ] • Java JVM, JRE and JDK
- [ ] • Java Variables
- [ ] • Java Data Types
- [ ] • Java Operators
- [ ] • Java Input and Output
- [ ] • Java Expressions & Blocks
- [ ] • Java Comment

Java Flow Control

- [ ] • Java if...else
- [ ] • Java switch Statement
- [ ] • Java for Loop
- [ ] • Java for-each Loop
- [ ] • Java while Loop
- [ ] • Java break Statement
- [ ] • Java continue Statement

Java Arrays

- [ ] • Java Arrays
- [ ] • Multidimensional Array
- [ ] • Java Copy Array

Java List

- [ ] • Java Collections Framework
- [ ] • Java Collection Interface
- [ ] • Java List Interface
- [ ] • Java Array List
- [ ] • Java Vector
- [ ] • Java Stack

Java OOP (Part I)

- [ ] • Java Class and Objects
- [ ] • Java Methods
- [ ] • Java Constructor
- [ ] • Java Strings
- [ ] • Java Access Modifiers
- [ ] • Java Recursion
- [ ] • Java instance of Operator

Java OOP (Part II)

- [ ] • Java Inheritance
- [ ] • Java Method Overriding
- [ ] • Java super Keyword
- [ ] • Abstract Class & Method
- [ ] • Java Interfaces
- [ ] • Java Polymorphism
- [ ] • Java Encapsulation

Java OOP (Part III)

- [ ] • Nested & Inner Class
- [ ] • Java Static Class
- [ ] • Java Anonymous Class
- [ ] • Java Singleton
- [ ] • Java enum Class
- [ ] • Java enum Constructor
- [ ] • Java enum String
- [ ] • Java Reflection

Java Exception Handling

- [ ] • Java Exceptions
- [ ] • Java Exception Handling
- [ ] • Java try...catch
- [ ] • Java throw and throws
- [ ] • Java catch Multiple Exceptions
- [ ] • Java try-with-resources
- [ ] • Java Annotations
- [ ] • Java Annotation Types
- [ ] • Java Logging
- [ ] • Java Assertions

Java Queue

- [ ] • Java Queue Interface
- [ ] • Java Priority Queue Interface
- [ ] • Java Deque Interface
- [ ] • Java LinkedList
- [ ] • Java Array Deque
- [ ] • Java Blocking Queue Interface
- [ ] • Java Array Blocking Queue
- [ ] • Java Linked Blocking Queue

Java Map

- [ ] • Java Map Interface
- [ ] • Java HashMap
- [ ] • Java LinkedHashMap
- [ ] • Java WeakHashMap
- [ ] • Java EnumMap
- [ ] • Java SortedMap Interface
- [ ] • Java NavigableMap Interface
- [ ] • Java TreeMap
- [ ] • Java ConcurrentMap Interface
- [ ] • Java ConcurrentHashMap

Java Set

- [ ] • Java Set Interface
- [ ] • Java HashSet
- [ ] • Java EnumSet
- [ ] • Java LinkedHashSet
- [ ] • Java SortedSet Interface
- [ ] • Java NavigableSet Interface
- [ ] • Java TreeSet
- [ ] • Java Algorithms
- [ ] • Java Iterator
- [ ] • Java ListIterator

Java I/O Streams

- [ ] • Java I/O Streams
- [ ] • Java InputStream
- [ ] • Java OutputStream
- [ ] • Java FileInputStream
- [ ] • Java FileOutputStream
- [ ] • Java ByteArrayInputStream
- [ ] • Java ByteArrayOutputStream
- [ ] • Java ObjectInputStream
- [ ] • Java ObjectOutputStream
- [ ] • Java BufferedInputStream
- [ ] • Java BufferedOutputStream
- [ ] • Java PrintStream

Java Reader/Writer

- [ ] • Java Reader
- [ ] • Java Writer
- [ ] • Java InputStreamReader
- [ ] • Java OutputStreamWriter
- [ ] • Java FileReader
- [ ] • Java FileWriter
- [ ] • Java BufferedReader
- [ ] • Java BufferedWriter
- [ ] • Java StringReader
- [ ] • Java StringWriter
- [ ] • Java PrintWriter

Additional Topics

- [ ] Java Scanner Class
- [ ] Java Type Casting
- [ ] Java autoboxing and unboxing
- [ ] Java Lambda Expression
- [ ] Java Generics
- [ ] Java File Class
- [ ] Java Wrapper Class
- [ ] Java Command Line Arguments
- [ ] Packages
- [ ] Applets
- [ ] Basics of AWT and Swing
- [ ] Java Multithreading, Concurrency, and Performance Optimization
- [ ] Java Application Performance and Memory Management
- [ ] Java Memory Management
- [ ] Docker for Java Developers
- [ ] Kubernetes for Java Developers on Google Cloud
- [ ] Design Patterns in Java
- [ ] Java Beans

DSA Introduction

- [ ] What is an algorithm?
- [ ] Why learn algorithms?
- [ ] Asymptotic Notations
- [ ] Master Theorem
- [ ] Divide and Conquer Algorithm

Data Structures (Part I)

- [ ] Array
- [ ] Stack
- [ ] Queue
- [ ] Types of Queue
- [ ] Circular Queue
- [ ] Priority Queue
- [ ] Deque

Data Structures (Part II)

- [ ] Linked List
- [ ] Linked List Operations
- [ ] Linked List Traversals
- [ ] Types of Linked List
- [ ] Hash Table
- [ ] Heap Data Structure
- [ ] Fibonacci Heap
- [ ] Decrease Key and Delete node from Fibonacci Heap

Tree based DSA (Part I)

- [ ] Tree Data Structure
- [ ] Tree Traversal
- [ ] Binary Tree
- [ ] Full Binary Tree
- [ ] Perfect Binary Tree
- [ ] Complete Binary Tree
- [ ] Balanced Binary Tree
- [ ] Binary Search Tree
- [ ] AVL Tree

Tree based DSA (Part II)

- [ ] B Tree
- [ ] Insertion into B-tree
- [ ] Deletion from B-tree
- [ ] B+ Tree
- [ ] Insertion on a B+ Tree
- [ ] Deletion from a B+ Tree
- [ ] Red Black Tree
- [ ] Insertion in Red Black Tree
- [ ] Deletion from Red Black Tree

Recursion

- [ ] Introduction to Recursion
- [ ] Natural Number Check using Recursion
- [ ] Palindrome Check using Recursion
- [ ] Tower of Hanoi

Introduction to Hashing

- [ ] Address Table
- [ ] Collision Handling
- [ ] Open Addressing
- [ ] Double Hashing
- [ ] Chaining v/s Open Addressing

Sorting and Searching Algorithms

- [ ] Bubble Sort
- [ ] Selection Sort
- [ ] Insertion Sort
- [ ] Merge Sort
- [ ] Quick Sort
- [ ] Counting Sort
- [ ] Radix Sort
- [ ] Bucket Sort
- [ ] Heap Sort
- [ ] Shell Sort
- [ ] Linear Search
- [ ] Binary Search

Greedy Algorithms

- [ ] Ford-Fulkerson Algorithm
- [ ] Dijkstra's Algorithm
- [ ] Kruskal's Algorithm
- [ ] Prim's Algorithm
- [ ] Huffman Code

Dynamic Programming

- [ ] Flyod-Warshall Algorithm
- [ ] Longest Common Subsequence Algorithm
- [ ] Backtracking Algorithm
- [ ] Sliding Window Algorithm
- [ ] Loop Detection Algorithm
- [ ] Rabin Karp Algorithm
- [ ] Kadane’s Algorithm
- [ ] KMP Algorithm
- [ ] Kosaraju Algorithm