**DSA Roadmap with Java**

1. Java Foundations

📌 Java Syntax and Basic Programming Specifications

📌 Object-Oriented Principles (Inheritance, Encapsulation, Polymorphism, Abstraction)

2. Basic Data Structures

📌 Arrays

📌 Multi-dimensional Arrays

📌 Strings

📌 Linked List

📌 Singly Linked List

📌 Doubly Linked List

📌 Stack

📌 Queue

📌 Priority Queue

3. Intermediate Data Structures

📌 Trees

📌 Binary Trees

📌 Binary Search Trees

📌 AVL Trees

📌 Graphs

📌 Hash Tables

4. Advanced Data Structures

📌 Trie

📌 Segment Tree

📌 Fenwick Tree (Binary Indexed Tree)

5. Basic Algorithms

📌 Searching

📌 Linear Search

📌 Binary Search

📌 Sorting

📌 Bubble Sort

📌 Quick Sort

📌 Merge Sort

6. Intermediate Algorithms

📌 Graph Algorithms

📌 Depth-First Search (DFS)

📌 Breadth-First Search (BFS)

📌 Dijkstra’s Algorithm

📌 Kruskal’s Algorithm

7. Advanced Algorithms

📌 Dynamic Programming

📌 Greedy Algorithms

📌 Divide and Conquer

📌 Backtracking

8. Practice Problems and Real-world Projects

📌 Solve a variety of problems on online platforms like LeetCode, HackerRank.

📌 Develop projects focusing on implementing the learned concepts.

DSA with java youtube playlist - [(69) Data Structures and Algorithms in Java | Free course | Animations and Implementations - YouTube](https://www.youtube.com/watch?v=6iCHf7OZn6c&list=PL6Zs6LgrJj3tDXv8a_elC6eT_4R5gfX4d)

Java Project Ideas👇

1- Online Survey System

2- E-Healthcare Management System

3- Virtual Private Network (VPN)

4- Mobile Quiz using Android

5- Optical Character Recognition (OCR)

6- Prisoner Face Detecting System

7- E-Learning Application

8- Online House Renting System

9- School Management System

10- Airline Reservation System