

LEARN DSA IN CORRECT WAY

1 Common Mistakes to Avoid

- a. Focusing solely on theory and not enough on implementation
- b. Relying too heavily on memorization instead of understanding the concepts
- c. Skipping practice and not solving enough problems
- d. Overlooking the importance of time and space complexity analysis.
- e. Solve any Famous DSA Sheet Questions
- f. Leaving Recursion at early stage and start solving tree and graph problems
- g. Buy DSA course from any favourite youtuber

2 The Right Way to Learn DSA

- a. Master the basics
- b. Implement each data structure and algorithm from scratch
- c. Analyse time and space complexity
- d. Debug and optimize

3 Imp DSA For Mid-level Companies

- a. Array
- b. String
- c. Stack

- d. Queue
- e. LinkedList – Single, Doubly, Circular
- f. Recursion
- g. Algorithms

4 Imp DSA For Top-level Companies

- a. Array
- b. String
- c. Stack
- d. Queue
- e. LinkedList – Single, Doubly, Circular
- f. Recursion
- g. Tree
- h. Graph
- i. Algorithm

System Design

- 1. HLD
- 2. LLD

Learn These Topic Before Start System Design

- Microservices architecture.
- Monolithic architecture.
- Service-oriented architecture (SOA).
- Event-driven architecture.
- Layered architecture.
- Relational databases and normalization.
- NoSQL databases (MongoDB, Cassandra, Redis).
- Indexing and query optimization.
- ACID properties.
- Horizontal scaling vs. vertical scaling.
- Load balancing.
- Caching strategies.
- Sharding.
- Multi-threading.

- Asynchronous processing.
- Message queues.
- Data consistency in distributed systems.
- Fault tolerance.
- Security considerations.
- API design and RESTful principles.

Practice Famous Design, Schema And API

Tweeting

Instagram

Netflix

Booking System

Payment System

Ola/Uber/rapido

Url Shortening

Hit Counter

Youtube

Ludo game