

SDE ROADMAP: 10 MONTHS

Our Goals:

- Learning everything from **scratch**
- Want to do **DSA daily**
- Want to learn **DSA, OS, CN, DBMS, Cloud, System Design, and Generative AI**
- Also includes **projects, mock interviews, resume work, and contests**

10-MONTH CAREER ROADMAP

Week 1

- **Daily Hours:** 5
- **DSA Topics:** Basics (Arrays, Input/Output, Loops)
- **Core Subject:** OS – What is OS, Process, Threads
- **Weekend Tasks:** Setup Leetcode, Git, Notion
- **Leetcode Qs:** 30
- **Outcome:** Comfort with basic syntax + OS intro

Week 2

- **Daily Hours:** 5
- **DSA Topics:** Arrays + HashMaps
- **Core Subject:** OS – Scheduling (FCFS, SJF, RR)
- **Weekend Tasks:** Write 1-page OS summary
- **Leetcode Qs:** 30
- **Outcome:** Problem-solving with brute force

Week 3

- **Daily Hours:** 5–6
- **DSA Topics:** Two Pointers + Prefix Sum
- **Core Subject:** OS – Paging, Segmentation
- **Weekend Tasks:** Quiz yourself (10 OS MCQs)
- **Leetcode Qs:** 35
- **Outcome:** Understand memory management

Week 4

- **Daily Hours:** 6
- **DSA Topics:** Sliding Window
- **Core Subject:** OS – Deadlock (Conditions, Detection)
- **Weekend Tasks:** Create diagram of OS flow
- **Leetcode Qs:** 40
- **Outcome:** Start pattern-based DSA

Week 5

- **Daily Hours:** 6
- **DSA Topics:** Stack, Queue
- **Core Subject:** CN – OSI Model, TCP/IP layers
- **Weekend Tasks:** Visualize OSI/Packets
- **Leetcode Qs:** 40
- **Outcome:** Ready for recursion-based questions

Week 6

- **Daily Hours:** 6
- **DSA Topics:** Recursion + Backtracking Intro
- **Core Subject:** CN – IP Addressing, Subnetting
- **Weekend Tasks:** Subnetting calculator
- **Leetcode Qs:** 45
- **Outcome:** 1st milestone: 200 Leetcode Qs

Week 7

- **Daily Hours:** 6
- **DSA Topics:** Trees (Binary Tree, BST)
- **Core Subject:** CN – DNS, HTTP/HTTPS, WebSockets
- **Weekend Tasks:** Practice ping/traceroute
- **Leetcode Qs:** 40
- **Outcome:** First real tree traversals

Week 8

- **Daily Hours:** 6
- **DSA Topics:** DFS, BFS
- **Core Subject:** CN – ARP, MAC, Switches vs Routers
- **Weekend Tasks:** Network layer notes
- **Leetcode Qs:** 45
- **Outcome:** CN + Tree mastery

Week 9

- **Daily Hours:** 6
- **DSA Topics:** Linked List (All ops)
- **Core Subject:** DBMS – ER Model, Keys, Schema
- **Weekend Tasks:** Design ER for library system
- **Leetcode Qs:** 40
- **Outcome:** Solid DB start

Week 10

- **Daily Hours:** 6

- **DSA Topics:** Sorting (Merge, Quick, Insertion)
- **Core Subject:** DBMS – Relational Model, Functional Dependencies
- **Weekend Tasks:** Build SQL schema
- **Leetcode Qs:** 45
- **Outcome:** Understand normalization

Continuing with the **Weekly Breakdown Lists from Week 11 to Week 40:**

Week 11

- **Daily Hours:** 6
- **DSA Topics:** Binary Search (1D, 2D, search space)
- **Core Subject:** DBMS – Normal Forms (1NF–3NF), Joins
- **Weekend Tasks:** Practice SQL joins
- **Leetcode Qs:** 50
- **Outcome:** DSA pattern milestone #2

Week 12

- **Daily Hours:** 6
- **DSA Topics:** Matrix, Heap
- **Core Subject:** DBMS – Transactions, Indexes, Views
- **Weekend Tasks:** Mini project: SQL + ER
- **Leetcode Qs:** 40
- **Outcome:** Database basics + SQL query fluency

Week 13

- **Daily Hours:** 6
- **DSA Topics:** Trie, Greedy
- **Core Subject:** System Design – Intro to APIs, Load Balancing
- **Weekend Tasks:** Watch Gaurav Sen videos
- **Leetcode Qs:** 40
- **Outcome:** Understanding scalability

Week 14

- **Daily Hours:** 6
- **DSA Topics:** Bit Manipulation
- **Core Subject:** System Design – DNS, CDN, Proxies
- **Weekend Tasks:** Excalidraw diagrams
- **Leetcode Qs:** 45
- **Outcome:** Start LLD/HLD thinking

Week 15

- **Daily Hours:** 6

- **DSA Topics:** Graphs (DFS, BFS, Union Find)
- **Core Subject:** System Design – DB Scaling, Sharding
- **Weekend Tasks:** Design URL shortener
- **Leetcode Qs:** 50
- **Outcome:** SD + Graphs merged learning

Week 16

- **Daily Hours:** 6
- **DSA Topics:** Graphs (Toposort, Dijkstra)
- **Core Subject:** Git + GitHub: Pull, Merge, Fork
- **Weekend Tasks:** Deploy Git project
- **Leetcode Qs:** 40
- **Outcome:** Milestone: 500 Leetcode Qs

Week 17

- **Daily Hours:** 6
- **DSA Topics:** 1D DP: Fib, Climbing Stairs, House Robber
- **Core Subject:** GenAI – Prompt Engineering, OpenAI APIs
- **Weekend Tasks:** Simple chatbot using OpenAI
- **Leetcode Qs:** 40
- **Outcome:** Build your first GenAI app

Week 18

- **Daily Hours:** 6
- **DSA Topics:** 2D DP: Grid, Subsequence
- **Core Subject:** GenAI – LangChain basics
- **Weekend Tasks:** LangChain + PDF chatbot
- **Leetcode Qs:** 45
- **Outcome:** AI + logic sync

Week 19

- **Daily Hours:** 6
- **DSA Topics:** DP Variants: LIS, Partition, Knapsack
- **Core Subject:** Cloud – Docker Intro, Containers
- **Weekend Tasks:** Dockerize Leetcode scraper
- **Leetcode Qs:** 40
- **Outcome:** Add DevOps to skill stack

Week 20

- **Daily Hours:** 6
- **DSA Topics:** Monotonic Stack, Sliding Window 2
- **Core Subject:** Cloud – GitHub Actions + CI/CD
- **Weekend Tasks:** GitHub Actions for project

- **Leetcode Qs:** 45
- **Outcome:** 2nd GenAI app ready

Week 21

- **Daily Hours:** 6
- **DSA Topics:** Random Q Mix
- **Core Subject:** AWS – EC2, S3, IAM
- **Weekend Tasks:** Deploy project on EC2
- **Leetcode Qs:** 40
- **Outcome:** Infra + hosting done

Week 22

- **Daily Hours:** 6
- **DSA Topics:** DP Revision
- **Core Subject:** Resume Building – STAR Format
- **Weekend Tasks:** Resume v1 + LinkedIn update
- **Leetcode Qs:** 35
- **Outcome:** Start building profile

Week 23

- **Daily Hours:** 6
- **DSA Topics:** Pattern Revisit: Graphs, Recursion
- **Core Subject:** System Design – Rate Limiting, Caching
- **Weekend Tasks:** LLD: Design Netflix
- **Leetcode Qs:** 40
- **Outcome:** Advanced SD prep

Week 24

- **Daily Hours:** 6
- **DSA Topics:** Pattern Mix: DP, Heap, Graph
- **Core Subject:** Cloud – VPC, Load Balancers
- **Weekend Tasks:** Resume + 1 Blog Post
- **Leetcode Qs:** 45
- **Outcome:** Start publishing work

Week 25

- **Daily Hours:** 6
- **DSA Topics:** Contests, Timed Tests
- **Core Subject:** OS/CN/DBMS – Timed MCQ tests
- **Weekend Tasks:** 3 Mock Interviews (1/week)
- **Leetcode Qs:** 40
- **Outcome:** Assess weak zones

Week 26

- **Daily Hours:** 6
- **DSA Topics:** Revisit: HashMaps, Trees
- **Core Subject:** CS – Gate Smashers mocks
- **Weekend Tasks:** Resume v2 + Cover letter
- **Leetcode Qs:** 40
- **Outcome:** Apply to 10 companies

Week 27

- **Daily Hours:** 6
- **DSA Topics:** Contests, Mistake Review
- **Core Subject:** LLD – Parking Lot, BookMyShow
- **Weekend Tasks:** LLD Project
- **Leetcode Qs:** 40
- **Outcome:** System Design clarity

Week 28

- **Daily Hours:** 6
- **DSA Topics:** Revisit: DP, Graphs
- **Core Subject:** GenAI – Chainlit, APIs
- **Weekend Tasks:** Resume v3 + Devpost submit
- **Leetcode Qs:** 40
- **Outcome:** Apply to 20 companies

Week 29

- **Daily Hours:** 6
- **DSA Topics:** DP, Bitmask, More Graphs
- **Core Subject:** Cloud Final – Deploy scalable backend
- **Weekend Tasks:** AI/Cloud full-stack demo
- **Leetcode Qs:** 40
- **Outcome:** Strong project for resume

Week 30

- **Daily Hours:** 6
- **DSA Topics:** Timed DSA + Mock Rounds
- **Core Subject:** Final Resume Review + Referrals
- **Weekend Tasks:** Alumni connect via LinkedIn
- **Leetcode Qs:** 30
- **Outcome:** Warm-up for interviews

Week 31

- **Daily Hours:** 6

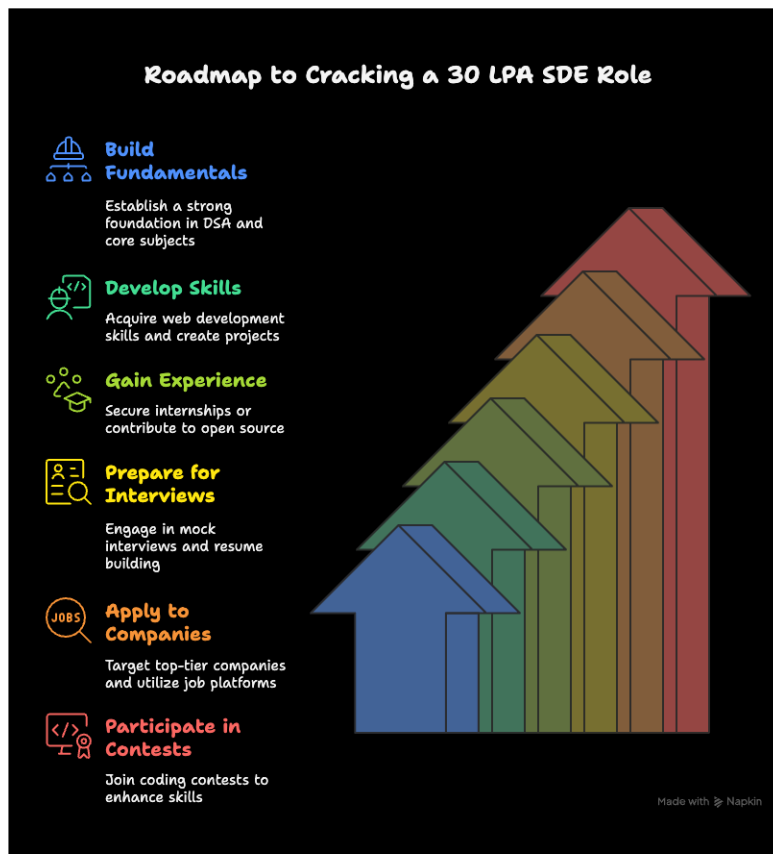
- **DSA Topics:** Mixed DSA + Real Interviews
- **Core Subject:** Company prep sets (Amazon, GFG)
- **Weekend Tasks:** 5 Mock HR + 5 Mock Tech
- **Leetcode Qs:** 30
- **Outcome:** Start appearing in interviews

Week 32–40 (Final Phase)

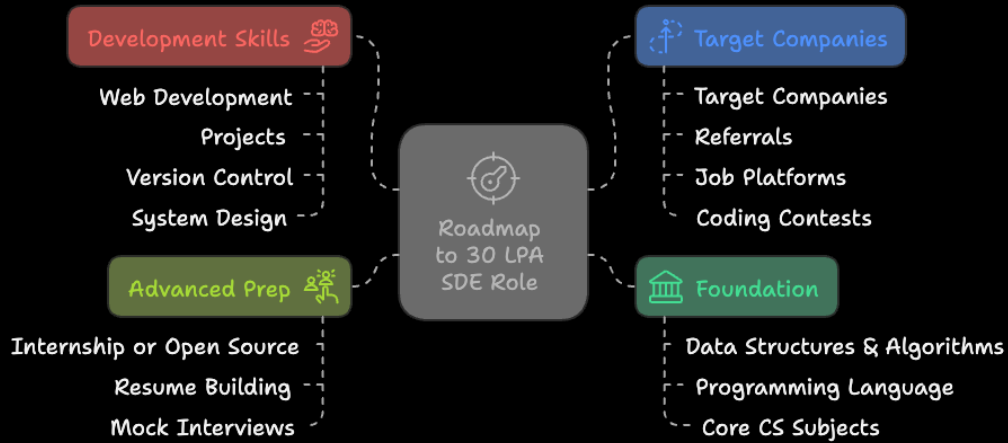
- **Daily Hours:** 6
- **DSA Topics:** Mixed DSA + Projects polish
- **Core Subject:** System Design + Leetcode Contests
- **Weekend Tasks:** Weekly interview attempts
- **Leetcode Qs:** ~300
- **Outcome:** Crack offers!

✓ Final Outcomes by End of Month 10:

- **1000+ Leetcode Problems Solved**
- **3 Major Projects:** 1 GenAI, 1 System Design, 1 SQL/Cloud
- **3 Mock Interviews/week for 2 Months**
- **Polished Resume + Portfolio Website**
- **Mastery in OS, CN, DBMS, Cloud, System Design**
- **100+ Companies Applied**
- **Prepared for ₹20 LPA+ Roles (SDE, AI/ML, GenAI Engineer)**



Roadmap to Achieve a High-Paying SDE Role



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Pathway to High-Paying Tech Roles



Competitive Coding

Engaging in coding competitions for top roles



Open Source Contributions

Gaining recognition through projects like GSoC



Hackathon Participation

Winning hackathons for career advancement



AI/ML and DevOps Tools

Working on advanced tech for high-paying jobs



Online Presence

Building a strong LinkedIn and GitHub profile



Weekly Schedule

Structured routine for skill development



Tools & Resources

Utilizing key resources for preparation

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