

**Minakshi Kudalkar**

**(DSA Roadmap)**

**16th December 2020**

**Topics to cover**

1. Language basics (**Java, C++, Python**, C, JS) - "LANGUAGE DOES NOT MATTER" (PS: choose Object oriented language)
2. Recursion
3. Time and Space complexity
4. DP and Greedy
5. DS
   1. Arrays
   2. Lists (Collections)
   3. Stacks and Queues
   4. Trees ( Generic, Binary, BST)
   5. HashMap, HashSets
   6. Priority Queues
   7. BFS, DFS
   8. Range Queries ( Sqrt decomposition, Segment trees, Fenwick trees)
   9. Text processing
6. Core subjects
   1. OOPS
   2. DBMS
   3. CN
   4. OS
   5. System design and puzzles

**PLAN**

**LEARNING PHASE**

Learn concepts - slow and subtle - approx 50-60 days

**Resources:** GFG, Youtube(Tushar Roy, Pepcoding, Back to Back SWE), Book: Cormen

**DEVELOP CODING APTITUDE**

Solve new questions (level up)

Participate in contests - Leetcode, Codeforces, Codechef

**Resources:**

1. **GFG Practise**

2. Hackerrank

3. Hackerearth

4. Codechef

5. codeforces

6. **LEETCODE**

7. **Interview Bit**

*{Momentum> Motivation}*

**INTERVIEW PREP (REV)**

**Book - Cracking the Coding Interview by Gayle Laakmann McDowell** - (Green book)

**Youtube** - Tushar Roy, Pepcoding, Tech dose, Rachit Jain

Solve top most asked interview questions

1. LEETCODE

2. Geeks For Geeks

3. InterviewBit

**Question lists (optional)**

1. Top Interview Qs (~500)

<https://docs.google.com/spreadsheets/d/1Ql9bgw7_x8qKBewiD0PV4B3tL5RdSfM8BJYVYT90SEc/edit?usp=sharing>

2. Striver SDE Sheet (30 days plan)

<https://docs.google.com/document/d/1SM92efk8oDl8nyVw8NHPnbGexTS9W-1gmTEYfEurLWQ/edit?usp=sharing>

- MOCK INTERVIEWS

[https://www.pramp.com/](https://www.pramp.com/#/)

**Rough Overview**

**2nd Year:**

Build DSA concepts

Get your hands in DEV ( Web, Mobile, Data Science, ML)

Explore Open source + Build Linkedin profile (V IMP)

Vacation - try internships?

**3rd Year:**

Pursue interest (dev) & DSA (CP)

Resume heavy karo

Vacation - try internships?, GSOC?, **Start placement prep.**

**Guide for Core Prep**

1. OOPS:

Java - Oracle Certified Java Programmer (2,7,8,9)

C++ - Balaguruswamy

C - Let us C, GFG ka C page

2. OS

Videos from Sanchit Jain, Ravindrababu

GFG!

Book: Galvin

3. DBMS

1. Sanchit Jain Videos, W3 Schools, Interviewbit tuts,

2. book: Korth/Navathe

(SQL, Normalisation, Indexes)

4. System Design

Gourav Sen Videos

5. GFG puzzles

**For Offcampus**: Strategize your connections on linkedin, Keep an eye on job postings, Don't self reject! Apply anyway!