**Week 1 (15 Apr - 19 Apr)**

**Day 1 :** Intro + problems + motivation

**Day 2 :** Math and Array - Class 1

**Day 3 :** HLD Introduction

**Day 4 :** LLD Introduction

**Day 5:** Celeb talk + How to 10X and Networking

**Week 2 (22 Apr - 26 Apr)**

**Day 1:** Math and Array part 2 || 6 questions

**Day 2:** Math and Array part 3 || 6 questions

**Day 3 :** 2 pointers || 8 questions

**Day 4:** BIT Manipulation and good XOR based questions

**Day 5:** Interview Tactics (1.5 hr by Abhimanyu) + Resume review session with sample resumes.

**Saturday:** Contest on taught topics (1.5 hr).

**Week 3 (29 Apr - 3rd May)**

**Day 1:** Binary search, Ternary search. Search for answers using binary search.

**Day 2:**  Recursion and backtracking.

**Day 3:** <Holiday> : Labor day.

**Day 4:** Math for HFT

**Day 5:** Sorting Algorithms and Problems. Includes medium to hard problems. Sorting and binary search together as well. Bucket / Count sort to be covered quickly.

Review Test using the above concepts.

**Week 4 (6th - 10th May)**

**Day 1:** Hashing and Hashmaps || Medium to hard problems.

**Day 2:** String & theory, Ascii values, sorting and searching on string.

**Day 3:** Pattern search algo on strings (Include KMP)

**Day 4:** Basic Stack and Queues || Basic questions based on both.

**Day 5:** Importance of Corner cases.

**Week 5 (13th - 17th May)**

**Day 1:** Advanced Stacks and queues. Standard questions on stacks, example next greater element, stock span, histogram, 0-1 matrix, parenthesis, reverse polish notation, recursion using stacks.

**Day 2:** Intro to LinkedList. Comparison with arrays. Medium to hard problems.

**Day 3:** Weekly contest discussion

**Day 4:** Tree-1

**Day 5:** Math for Quant roles.

**Week 6 (20 - 24th May)**

**Day 1:** Segment Tree

**Day 2:** Trie

**Day 3:** Tree-2

**Day 4:** Guest Lecture by Anudeep + Intro to Web

**Day 5:** LCA

**Week 7 (27th - 31st May):**

**Day 1:** Heaps. Heap sort. Problems using Heap / Priority Queue.

**Day 2:** Greedy and basic problems on greedy

**Day 3:** DP basics. Classical 1-D DP.

**Day 4:** Problems like LIS, 0-1 Knapsack, Coin change, Rod cutting, Grid.

**Day 5:** 2-D grid problems + Subset sum problems.

**Week 8 (3rd June - 7th June):**

**Day 1:** DP - 4

**Day 2:** DP - 5

**Day 3:** Eid Holiday

**Day 4:** DP - 6

**Day 5:** Business sense for software developers.

**Week 9 (10th June - 14th June):**

**Day 1:** Graph - BFS + DFS

**Day 2:** Dijsktra + More shortest path problems.

**Day 3:** Disjoint set.

**Day 4:** DFS tree + bridges + hard problems.

**Day 5:** Topo sort + Miscellaneous problems.

**Week 10 (17th June - 21st June):**

**Day 1:** Matrix exponentiation and co-ordinate compression

**Day 2:** Google and FB interview questions

**Day 3:** Amazon + Microsoft interview questions

**Day 4:** Goldman Sachs interview questions

**Day 5: Contest**

**Week 11 ( 2.5 hour teaching and 30 mins assignment session): (24 jun - 28 jun)**

**Day 1-4:** OOPS and low level class diagrams.

**Day 5:** Celeb Talk

**Week 12 (2.5 hours teaching and 30 mins assignment session): (1 Jul - 5 Jul)**

**Day 1-2 :** DBMS-1 DBMS-2

**Day 3-5 :** OS**,** Computer Networks

**Month 4 (5 Jul - 4 Aug)**

**Hackathon week : 3 weeks [Project Building weeks]**

**System Design : 1 week**