

# Roadmap For Competitive Programming

- Motive Behind Competitive Programming
  - Excellent Problem Solving Skills
  - Standout Amongst Others If You Have Done Well
  - Helps In Company's Online Round
- Language?
  - C++
  - Java
  - Python
- Pre Requisites
  - Basics Of Data Structures and Algorithms
    - Arrays
    - Strings
    - Recursion
    - Linked List
    - Stacks
    - Queues
    - Trees
    - Hashmap
    - Graphs
    - Priority Queue
    - Basic Dynamic Programming
- Resources
  - Guide to cp Book
    - <https://duoblogger.github.io/assets/pdf/memonvyftw/guide-t-cp.pdf>
    - CSES problem set
  - Cp Algorithms
    - <https://cp-algorithms.com/>
  - Codestudio (Coming soon)
- Path
  - STL/Collections
  - Binary Search Applications

- <https://www.codingninjas.com/codestudio/guided-paths/data-structures-algorithms/content/118621/offering/1377974>
- Bit Manipulation
  - <https://www.codingninjas.com/codestudio/guided-paths/data-structures-algorithms/content/118825/offering/1381968>
- Greedy Algorithms
  - <https://www.codingninjas.com/codestudio/guided-paths/data-structures-algorithms/content/118520/offering/1380954>
- Modulo Arithmetic
- Dynamic Programming
  - <https://www.codingninjas.com/codestudio/guided-paths/data-structures-algorithms/content/118824/offering/1382148>
- Segment Tree
- Graphs
  - BFS DFS
  - Graph Algorithms
  - <https://www.codingninjas.com/codestudio/guided-paths/data-structures-algorithms/content/118511/offering/1376643>
- Number Theory
- Start Giving Contests FROM here
  - Codeforces Div 3 Contests
  - Codeforces Virtual Contests
- String Processing
  - KMP
  - Z Algo
  - Manacher's Algorithm
  - <https://www.codingninjas.com/codestudio/guided-paths/data-structures-algorithms/content/118796/offering/1382154>
- DP With Bitmasking
- Game Theory
- Computational Geometry
- Fenwick Tree
- Mixed Problems Of DP and Graphs
- HLD, FFT (Optional)
- How To Practice In Contests?

- Give Full Time On Contest
- Do not go here and there.
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