

Strategy to do well in NGPC'21

- 1) Read blogs, watch videos to improve your basic and know about NGPC.
- 2) Solve at least 2 problems from each category from the list.

First 1 week: Solve the basic problems (implementation, Codeforces → a,b,c).

After that: Basic graph, BFS, DFS, Dijkstra, Number theory, prime, prime factor.

For CP Algo: <https://cp-algorithms.com/>

Uva:

Easy 50 list: <https://codinghousebd.com/blog/uva-easy-problem-list-for-beginner-level-programmer-to-solve/>

Easy 101 problems: <https://forum.daffodilvarsity.edu.bd/index.php?topic=421.0>

Code Forces:

Problem set: https://codeforces.com/problemset?order=BY_SOLVED_DESC

<https://codeforces.com/group/zMOq8sIMJT/contests>

CF contest list: <https://contestmania.web.app/codeforces?category=Div2&filter=0>

Practice:

1. **Uva:** <https://codinghousebd.com/blog/uva-easy-problem-list-for-beginner-level-programmer-to-solve/>

101 problems: <https://forum.daffodilvarsity.edu.bd/index.php?topic=421.0>

2. **Code forces:** <https://codeforces.com/blog/entry/82143>

Contest: <https://codeforces.com/group/MWSDmqGsZm/contests>

-
3. **Codemonk/ Hacker earth:** <https://www.hackerearth.com/practice/codemonk/>
 4. **CodeChef:** <https://www.codechef.com/problems/school>
 5. **AtCoder Beginner contest:** A, B solve
 6. **Hackerrank:** <https://www.hackerrank.com/domains/cpp>

30-day challenge for logic building sheet follow.

NGPC Practice contest:

<https://toph.co/contests>

<https://toph.co/c/ada-lovelace-ngpc-2020/standings>

<https://algo.codemarshal.org/contests?page=2>

<https://cseweek.bdosn.org/national-girls-programming-contest>

<https://www.hackerrank.com/contests/archived> (give women contest from there)

YT videos

<https://www.codechef.com/getting-started>

Courses:

<https://web.stanford.edu/class/cs97si/>

NGPC Problem Pattern

1. string, array problems
2. Number theory (1 problem)
3. Graph theory (1 problem)
4. Geometrical problem (must 2)

Problems that one face

- a) **Freezing out:** Looking at the question you can feel like this is not for me or I will not be able to do this.

Motivation: You did not prepare gradually to crack down the questions. So, learn from level 0.

Why should learn competitive programming?

- ➔ To increase our logical ability and solve problems in an optimize way.
- ➔ And be able to write code for the challenging situation.
- ➔ There are 2 approaches for that: i) Project based ii) Challenge based (CP).

Some Tips

- a) For beginners, the best online site for practicing is UVA Online Judge that has a compilation of more than 4000 basic problems.
- b) It's preferable to stick to one or two sites and climb up their rankings. Regularity is the key.
- c) There are plenty of resources on the internet if you ever get stuck, but plagiarism will be beneficial to no party.

d) You also need to keep in mind their many rules and restrictions to participate in a contest.

e) Getting ready for big contests like this require more than solving problems. You need teamwork and persistence to solve for 5 hours straight.

Advice from senior

- 1) URI- 50 solves (implementation, if-else, loop).
- 2) Uva- First easy 50 problem solve.
- 3) Practice a lot if you can't solve problem easily. Practice! Practice! And Practice!
- 4) Become logically strong. (Math, physics).
- 5) Capability of sorting problem during a contest.
- 6) Make a note → syntax, algorithm, STL (based on these).
 - ➔ Make a code snippet. It will reduce the time.

NGPC Team meeting problem solutions

Codeforces

Meeting-1

<https://codeforces.com/problemset/problem/112/A>

<https://codeforces.com/problemset/problem/1110/A>

<https://codeforces.com/contest/733/problem/A>

topics:

<https://www.geeksforgeeks.org/stdstringcompare-in-c/>

<https://www.geeksforgeeks.org/conversion-whole-string-uppercase-lowercase-using-stl-c/>

https://www.w3schools.com/cpp/cpp_strings_length.asp

<https://www.javatpoint.com/cpp-string-compare-function>

lexicographical order problem in c++

function to lower to upper case in c

string compare function c++

string length c++

Meeting-2

<https://codeforces.com/problemset/problem/1593/A>

<https://codeforces.com/problemset/problem/443/A>

<https://codeforces.com/problemset/problem/118/A>

<https://codeforces.com/problemset/problem/1516/A>

<https://codeforces.com/problemset/problem/1593/A>

Meeting-3

<https://vjudge.net/contest/413868#problem/D>

<https://acm.timus.ru/problem.aspx?space=1&num=1207>

<https://vjudge.net/contest/462565>

Meeting-4

IEEE Xtreme problem solve

(doc, ba)

Meeting-4

Timus:

<https://acm.timus.ru/problem.aspx?space=1&num=1005>

<https://acm.timus.ru/problem.aspx?space=1&num=1082>

<https://acm.timus.ru/problem.aspx?space=1&num=1083>

<https://acm.timus.ru/problem.aspx?space=1&num=1032>

<https://acm.timus.ru/problem.aspx?space=1&num=1264>

Atcoder:

https://atcoder.jp/contests/abc203/tasks/abc203_a

Meeting-5

<https://codeforces.com/contest/686/problem/A>

<https://codeforces.com/contest/770/problem/A>

<https://algo.codemarshal.org/contests/NGPC18Preli> (A solved, Solve-B,C)

Meeting-6

- https://onlinejudge.org/index.php?option=com_onlinejudge&Itemid=8&page=show_problem&problem=2697
- <https://www.codechef.com/PRACTICE/problems/TWODISH>
- <https://codeforces.com/problemset/problem/1606/C>
- <https://codeforces.com/problemset/problem/1520/B>
- <https://codeforces.com/problemset/problem/1472/B>
- https://onlinejudge.org/index.php?option=com_onlinejudge&Itemid=8&page=show_problem&problem=2126

Meeting-7

Prime number – for preliminary

1. <https://ideone.com/kISWqb>
2. <https://ideone.com/4cDR7F>
3. https://onlinejudge.org/index.php?option=com_onlinejudge&Itemid=8&page=show_problem&problem=1889
4. <https://www.spoj.com/problems/AMR11E/>
5. <https://www.spoj.com/problems/PRIME1/>
6. https://toph.co/p/fun-theory?fbclid=IwAR38_6J1TD2K0SZDQnqPw-yWhYkIVIG-Eic7dhs2MHcCMvllbp2mwwUJcVo
7. <https://codeforces.com/problemset/problem/26/A>

Meeting-8

NGPC practice contest by CUET CC

<https://vjudge.net/contest/467820#overview>

Code forces:

<https://codeforces.com/problemset/problem/31/B>

<https://codeforces.com/problemset/gymProblem/102365/A>

Additional

<https://www.spoj.com/problems/BITMAP/>

<https://codeforces.com/contest/1589/problem/A>

<https://vjudge.net/contest/413868#problem/D>

<https://acm.timus.ru/problem.aspx?space=1&num=1001>

<https://algo.codemarshal.org/contests/NGPC18Prelim>

<https://toph.co/p/fun-theory>

<https://vjudge.net/contest/467820#rank>

<https://lightoj.com/problem/redirect-url>