

Category 1:

1. You don't know any programming language.
2. You're weak in math.
3. Don't have any idea about competitive programming.

Work you need to do:

1. Do some research on google and try to know some basic pros and facts of cp(competitive programming)
2. Now you need to start learning a programming language. I prefer C.
3. I think "C programming first part" of Tamim Shahrear Shubeen is the best book for starting. You have to complete the book or the topics(i.e. If you find it difficult to learn any topic of the book you just try to see some video tutorial on youtube on this topic) within 2 months.(it's more than enough).

After two months you are ready to solve basic problems on any online judge.
If you don't have any idea about online judges just google it.

Category 2:

1. You know the basics of the C language.
2. Still You're weak in math.

Work you need to do:

1. Start Solving problem from "52 programming problem" by Tamim Shahrear Shubeen.
2. Solve 50+ adhoc problems in Uva.
3. Create an account on Codeforces, Uva, Hackerrank, Hackerearth.
4. To know about CF(codeforces) vist this: https://www.youtube.com/watch?v=WeASZ_KtRs
5. Start solving problem on this topics on codeforces:

Problem tag: Ad-hoc, Greedy, Implementation, Brute force, Math.

Problem rating: 800-1000 (visit the link i provide in 3 for better understand)

Solve 100 problems. If you think that you can solve this kind of problem within 30-40 min .. you are now ready for the next step. Or try to solve 50 more problems on rating 1000.

***** Try to see the code of some good programmers after solving a problem.**

***** Try to think about a problem for at least 3 or 4 hours.**

***** If you can't get any idea after thinking 3 or 4 hours, seek help from your friend or seniors.**

***** Try to read blogs as much as you can. It will be very helpful for you.**

***** Check this :**

https://codeforces.com/group/MWSDmqGsZm/contest/219158?fbclid=IwAR0PT3XMEdhjBqIHJx5DSXjBHdwaMRFE-5wu1s8_I6hL92d1oXR6nqeo4

<https://codeforces.com/group/MWSDmqGsZm/contests?fbclid=IwAR3X-cv12HtfwAZQCdtH9qihLw49VHoeKt34gQmMHFVU2FQhwPZbvpe8E90>

Category 3:

Work you need to do:

1. Start solving problems on rating: 1100 - 1200.

Problem tag: String, Two pointer, Greedy, Implementation, Brute force, Math.

Solve 50 problems on rating 1100 and 50 from 1200.

2. Now you have to know some technique:

- * **Greedy**

- * **Two Pointer**

- * **Sliding Window**

- * **Cumulative sum**

3. **Number Theory:**

- * <http://www.progkriya.org/gyan/basic-number-theory.html>

- * **Video course :**

<https://www.youtube.com/watch?v=eRkqvQtm4DU&list=PL2q4fbVm1Ik4liHX78IRsIXzUr8z5QxsG>

***** Try to Solve A, B, C of div3 and A,B of div2**

**** Start participating in Atcoder Beginner Contest**

You are now ready for the next step.

Category 4:

1. Start solving problems from Uva.

2. Introduction video on Uva .. <https://youtu.be/YqU6IZM41nU>

3. Solve the problems of Number theory from Uva.

4. Start "C Programming 2nd part" - Tamim Shahrear Shubeen.

5. Solve Beginner problems from Light Oj

***** Try to Solve A, B, C of div3 and A,B of div2**

***** Start participating in contest of codechef, codeforces, atcoder.**

***** solve at least a problem everyday.**

Category 5:

Work you need to do:

1. Complete chapter 1-4 of the book : “Data structure and algorithm”- by Mahbulul hasan shanto.
2. You should Start C++ now.
3. Learn the basic structure of C++, sort, Map, Vector, set, upper_bound, lower_bound. (it's enough for now)

Problem rating : 1200 - 1500

Problem tag: Number theory, Greedy, math, Implementation, Binary search, string.

***** Solve at least 250 problems.**

***** Try to Solve A, B, C, D of div3 and A,B,C of div2**

***** Try to think about a problem for at least 24 hours before seeking any help.**

Category 6:

Work you need to do:

1. Start learning Graph.

Video course:

<https://www.youtube.com/watch?v=VW85xQ6GJP4&list=PL2q4fbVm1Ik6DCzm9XZJbNwyHtHGclcEh>

2. Solve 50-80(rating 1400-1800) Graph related problem.
3. Learn basic data structures : Stack, Queue, Linked list...

Video Course:

https://www.youtube.com/watch?v=Mz9BlmST31w&list=PLym69wpbTIIEOesItWGUsVnY9HDWbJit_

4. Solve problems as much as you can.

Some useful links :

<https://github.com/me-shaon/bangla-programming-resources?fbclid=IwAR3SKspeceqFI5GhbQe43xd6qhSu8Jdnx9A0ouBKrJjlulKab0Plnmlhrww>
<https://www.youtube.com/channel/UC0zvY3yIBQTrSutsV-4yscQ>