Module-2: Codeforces

CRUx Bootstrap

2.A: Codeforces

Codeforces is the most popular platform for competitive coding.

You must have used the platform already for doing Module-1 problems and taking part in the recent Division 3 contest.

In the first few sections of this module, we will discuss some important details about the platform.

2.B: Rating

Every Codeforces user has an associated “rating”, which is a number indicative of how good they are, based on their performances in previous Codeforces contests.

This is similar to the Elo rating system used in Chess.

On the basis of rating, Codeforces users are divided into different rating ranges.

Rating Bounds	Color	Title	Division	Number	Number (by color)
≥ 3000	Red	Legendary Grandmaster	1	14	261
2600 — 2999	Red	International Grandmaster	1	90	
2400 — 2599	Red	Grandmaster	1	157	
2300 — 2399	Orange	International Master	1	134	792
2100 — 2299	Orange	Master	1	658	
1900 — 2099	Violet	Candidate Master	1/2	2101	2101
1600 — 1899	Blue	Expert	2	5186	5186
1400 — 1599	Cyan	Specialist	2/3	10408	10408
1200 — 1399	Green	Pupil	2/3	15584	15584
≤ 1199	Gray	Newbie	2/3	6250	6250

2.C: Contests

Codeforces contests take place roughly every 2-4 days, at 8 PM IST.

Participation in these contests ranges from 20k to 30k from around the world.

There are three major types of contests - Div 1, Div 2, and Div 3.

Div 1 contests are the hardest and you need to be at least 1900 rated to participate in them.

On the other side of the spectrum, Div 3 contests are relatively easy (albeit still difficult for beginners).

By the end of this workshop, we hope that you get to a level where you can solve 3 and 4 problems in Div 2 and Div 3 contests respectively.

It may not seem like much, but this is pretty good, given that you solve the problems quick enough.

2.D: Submission verdicts

When you make a submission to a Codeforces problem, one of several things can happen.

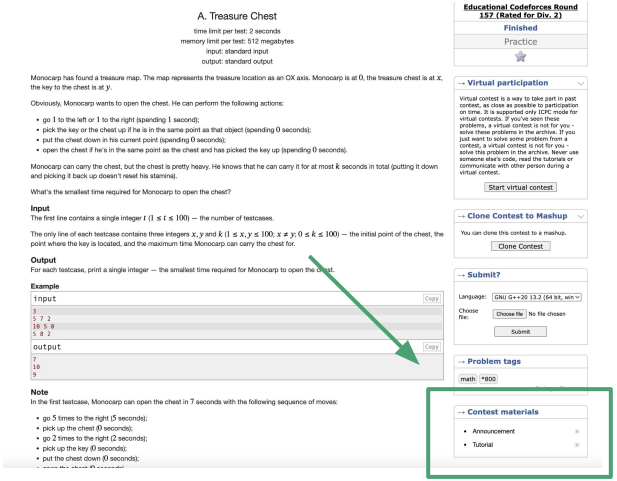
Here are the important and common ones.

Accepted	Your code produces the correct output for all test cases
Wrong Answer	Your code gives the wrong answer on a test case
Time Limit Exceeded	Your code takes too long to run - it is inefficient (we will teach you more about this in the coming module)

2.E: Stuck on a problem?

At the end of every Codeforces contest, the contest writers make a Codeforces blog post in which they explain the solutions of the contest problems.

If you are stuck on a particular problem, you can find its corresponding solution by clicking on the “Tutorial” link on the sidebar at the right.



Note: When you are practicing problems, it is advisable to read the tutorial only after you’ve spent a decent chunk of time (like a day) on the problem.

2.F: More about Codeforces

1. General rules of contests
2. Scoring in contests
3. Rating and rating ranges

2.G: Why should I do CC?

1. Ideal case - you have a knack for solving puzzles.
2. Money - you are a CS student (or) you want to pursue a career in IT - CC is important for passing Online Assessment rounds of both placements and summer internships (most of us at CRUx do CC for this very reason).
3. To become a better programmer in general.

2.1: Codeforces 1895A: Treasure Chest

2.2: Codeforces 1335A: Candies and Two Sisters

2.3: Codeforces 1761A: Two Permutations

2.4: Codeforces 472A: Design Tutorial: Learn from Math