

Starting soon!

Intro to CCC

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Introduction

What is CCC?



CCC

What is it?

- Canadian Computing Competition
- Yearly during February
- University of Waterloo
- Two divisions
- [Rules](#)
- Solve problem

How to do it?

- Input from stdin, output to stdout
- **Match output exactly!**
- Practice on DMOJ.ca

Faster Input/Output

Python

```
1 import sys
2 input = sys.stdin.readline
3
4 x = input()
```

Java

[Java Fast I/O
Template](#)

C++

```
1 #include <bits/stdc++.h>
2
3 using namespace std;
4
5 int main() {
6     cin.tie(0); cin.sync_with_stdio(0);
7     return 0;
8 }
```

Example 1

CCC '22 S2 - Good Groups

Approach

- Read requirements
- Read groups
- Check which requirements aren't met
- Output answer

Human Simulation

Run your idea on paper!

Map

A data structure that links associates one value with another value

Key - Ex. Name	Value - Ex. Score
Bob	1
Jeff	3
Sally	2

Code Simulation

Put your idea into code

Example 2

CCC '21 S2 - Modern Art

Approach

- DON'T Simulate the entire process
- Keep track of the color of rows and columns
- Loop through the entire canvas and count the number of gold cells based on the color of the row and column the cell resides in
- Output answer

Example 3

CCC '16 S2 - Tandem Bicycle

Approach

- Read Input
- Sort arrays
- Reverse array depending on input
- Calculate speeds
- Output total speed