



MikeMirzayanov's blog

Interactive Problems: Guide for Participants

By [MikeMirzayanov](#), 23 months ago, translation, , 

Sometimes you can meet *interactive problems* on programming contests (including Codeforces).

In problems of this type, the input data given to your program may be not predetermined but is built specifically for your solution. Jury writes a special program — *interactor*, such that its output is transferred to the input of your solution, and the output of your program is sent to interactor's input. In the other words, your solution and the interactor exchange the data and my decide what to print based on the "history of communication".

When you write the solution for the interactive problem it is important to keep in mind that if you output some data it is possible that this data is first placed to some internal buffer and may be not directly transferred to the interactor. In order to avoid such situation you have to use special `flush` operation *each time* you output some data. There are these `flush` operations in standard libraries of almost all languages. For example, in C++ you may use `fflush(stdout)` or `cout << flush` (it depends on what do you use for output data — `scanf/printf` or `cout`). In Java you can use method `flush` for output stream, for example, `System.out.flush()`. In Python you can use `stdout.flush()`. In Pascal you can use `flush(output)`.

There are some features for interactive problems:

- Input/output in interactive problems works much slower than in usual problems — try to use `scanf/printf` instead of `cin/cout` in C++, `BufferedReader/PrintWriter` in Java and etc.
- Usually, manual testing of the solutions for interactive problems much more difficult, because the participant needed to be in the role of interactor during testing.
- The "Custom invocation" tab does not know about the interactor for the problem, so you can't fully testing your solution.
- Sometimes on the Codeforces Rounds interactive problems will use. In this case the format of tests for hacks will be described in the statements of the problems.
- Output `endl` in `cout` in C++ performs flush operation automatically.

Let's consider the following interactive problem. You can try to solve it here <http://codeforces.com/gym/101021/problem/A>

Problem

Guess the number

Statement

In this problem there is some hidden number and you have to interactively guess it. The hidden number is always an integer from 1 and to 1 000 000.

You can make queries to the testing system. Each query is one integer from 1 to 1 000 000. Flush output stream after printing each query. There are two different responses testing program can provide:

- string `<` (without quotes), if the hidden number is less than the integer in your query;
- string `>=` (without quotes), if the hidden number is greater than or equal to the integer in your query.

When your program wants to guess the hidden number, print string `! x`, where x is the answer, and **terminate your program** immediately after flushing the output stream.

→ Pay attention

Before contest

[Codeforces Round #479 \(Div. 3\)](#)

18:25:05

[Register now »](#)

*has extra registration

Like

476 people like this. [Sign Up](#) to see what your friends like.

→ Top rated

#	User	Rating
1	Petr	3353
2	Um_nik	3278
3	Syloviaely	3274
4	V--o_o--V	3236
5	tourist	3235
6	00000000000000...0	3201
7	Radewoosh	3197
8	fateice	3172
9	mnbvmar	3096
10	dutorya	3086

[Countries](#) | [Cities](#) | [Organizations](#)

[View all →](#)

→ Top contributors

#	User	Contrib.
1	tourist	179
2	rng_58	169
3	csacademy	160
4	Petr	159
5	Iewin	151
6	Swistakk	149
7	matthew99	141
7	BledDest	141
9	Errichto	140
10	adamant	139

[View all →](#)

→ Find user

Handle:

Find

→ Recent actions

[DrSwad](#) → [MathMash — Round 14 \(based on ARML TST\)](#) 

[Bholu27](#) → [Suffix-Array](#) 

[vlecomte](#) → [Original Gym contest: Geometry Special 2018](#) 



Your program is allowed to make no more than 25 queries (not including printing the answer) to the testing system.

Input

Use standard input to read the responses to the queries.

The input will contain responses to your queries — strings `<` and `>=`. The i -th string is a response to the i -th your query. When your program will guess the number x , print `! x`, where x is the answer and terminate your program.

The testing system will allow you to read the response on the query only after your program print the query for the system and perform `flush` operation.

Output

To make the queries your program must use standard output.

Your program must print the queries — integer numbers x_i ($1 \leq x_i \leq 10^6$), one query per line. After printing each line your program must perform operation `flush`.

Each of the values x_i mean the query to the testing system. The response to the query will be given in the input file after you flush output. In case your program guessed the number x , print string `! x`, where x — is the answer, and terminate your program.

Solution

Of course, this problem can be solved using binary search. Here is an example of the C++ solution:

```
#include <cstdio>
#include <cstring>

using namespace std;

int main() {
    int l = 1, r = 1000000;
    while (l != r) {
        int mid = (l + r + 1) / 2;
        printf("%d\n", mid);
        fflush(stdout);

        char response[3];
        scanf("%s", response);
        if (strcmp(response, "<") == 0)
            r = mid - 1;
        else
            l = mid;
    }

    printf("! %d\n", l);
    fflush(stdout);
}
```

We wish you accepted solutions. Once again, you can solve simple interactive problem here <http://codeforces.com/gym/101021/problem/A>

interactive

+293



[MikeMirzayanov](#)



23 months ago



103



Comments (103)

[Write comment?](#)

[Vovuh](#) → [Codeforces Round #479 \(Div. 3\)](#)

[seland](#) → [Codeforces Round #303 \(Div.2\) editorial](#)

[_AymanSalah](#) → [A new guide for newcomers in CP \(Arabic and English references\)](#)

[serhatgiydiren](#) → [Google Code Jam 2018 Country Stats : After 1C](#)

[E869120](#) → [AtCoder Beginner Contest 096](#)

[redocyz](#) → [Google Code Jam Round 1C](#)

[KAN](#) → [Analysis of Codeforces Round #476 \(Div. 2\) \[Thanks, Telegram!\]](#)

[raahulpadhy](#) → [Euler-Totient](#)

[mohammedawni](#) → [Runtime Error, Python 3](#)

[MikeMirzayanov](#) → [Codeforces: Updates in rating and rounds](#)

[GreenGrape](#) → [Codeforces Round #471 \(Div. 2\)](#)

[H3X](#) → [How to use a binary search tree to compute a range sum](#)

[kayak](#) → [Is builtin_popcount O\(1\) or O\(log 2 k\)?](#)

[JacobianDet](#) → [TLE IN SPOJ GCDEX](#)

[Jasperr](#) → [CHelper Companion — An alternative to the original CHelper extension](#)

[LLI_E_P_JI_O_K](#) → [Optimized LCS for short sequence case](#)

[Tima](#) → [Google Code Jam Round 1A](#)

[I_love_HellHoleStudios](#) → [The bad contest time](#)

[AlexArdelean](#) → [Having trouble with 475 \(Div. 2\) C](#)

[learner_321](#) → [How to solve this problem \(Online Coding Test\)?](#)

[Rollo](#) → [Codeforces Round #478 \(Div. 2\), Editorial](#)

[Get-1](#) → [Why Can't I delete a message I send or received?](#)

[Detailed →](#)



Mister.bit

23 months ago, # |

▲ +20 ▼

can i use "ios::sync_with_stdio(false)" with cin/cout instead of scanf/printf in c++ or it's Better to Use scanf/printf ?

→ [Reply](#)

Errichto

23 months ago, # ^ |

▲ +19 ▼

You can use cin/cout but still you should flush the output.

→ [Reply](#)

Mister.bit

23 months ago, # ^ |

← Rev. 2

▲ +2 ▼

Okay , Thank You **Errichto**

→ [Reply](#)

Swistakk

23 months ago, # ^ |

← Rev. 2

▲ +19 ▼

"endl" flushes automatically for you. cout<<endl is more or less the same as cout<<"n", fflush(stdout) (already written by Mike, but I think that needs emphasizing).

→ [Reply](#)

tom

23 months ago, # ^ |

▲ +9 ▼

I suspect that if you don't write `cin.tie(0)` , `cin >>` `x` also flushes automatically.

→ [Reply](#)

tera_coder

17 months ago, # ^ |

▲ +8 ▼

Do we need to flush cin?

→ [Reply](#)

vignesh_m

17 months ago, # ^ |

▲ +5 ▼

No, we need to flush cout only because the output is buffered and not actually printed sometimes.

So, you do NOT need to flush cin

→ [Reply](#)

FanOfTourist

23 months ago, # |

▲ +5 ▼

how would you test these kinds of problems on your local computer?

→ [Reply](#)

Errichto

23 months ago, # ^ |

← Rev. 2

▲ 0 ▼

You can take a solution from the blog above and run it on your computer. The program will ask you queries and you should print responses `<` and `>=` .

→ [Reply](#)

FanOfTourist

23 months ago, # ^ |

▲ 0 ▼

oh I was looking for a faster automated method like `./a.out<input.txt>output.txt` but that method is also ok.

→ [Reply](#)

BitHashTech

23 months ago, # |

▲ 0 ▼

Here is another interactive problem to try from (2012-2013 ACM-ICPC, NEERC, Moscow Subregional Contest):

J. Just Another Disney Problem

→ [Reply](#)



Navara

23 months ago, # |

▲ 0 ▼

You don't need "return 0;" for interactive problems?

→ [Reply](#)

MikeMirzayanov

23 months ago, # ^ |

▲ +16 ▼

In C++ `main` can be left without a return value at which point it defaults to returning 0.→ [Reply](#)

Navara

23 months ago, # ^ |

▲ 0 ▼

I see. Thanks.

→ [Reply](#)

.O.

23 months ago, # |

▲ 0 ▼

In hacks, how would the "output" of model/participant solution be shown?

For some problem like [this](#) or [this](#) it seems we can see the whole process (look at some submissions), but the [example problem from this post](#) just shows the hidden number and the number of queries.

→ [Reply](#)

Errichto

23 months ago, # ^ |

▲ +16 ▼

In the problem above (from this blog) the input for hacking would be the hidden number. In the round today, the information about hacking will be in the statement.

→ [Reply](#)

aakalhor

23 months ago, # |

▲ +3 ▼

It is very funny :D using binary search (the exact code of blog) with `L = 1, R = 1e6+6` got wrong answer on test 6, but `L = 1, R = 1e6` got Accepted!

`L = 1, R = 1e6+6` : [submission](#) `L = 1, R = 1e6` : [submission](#)

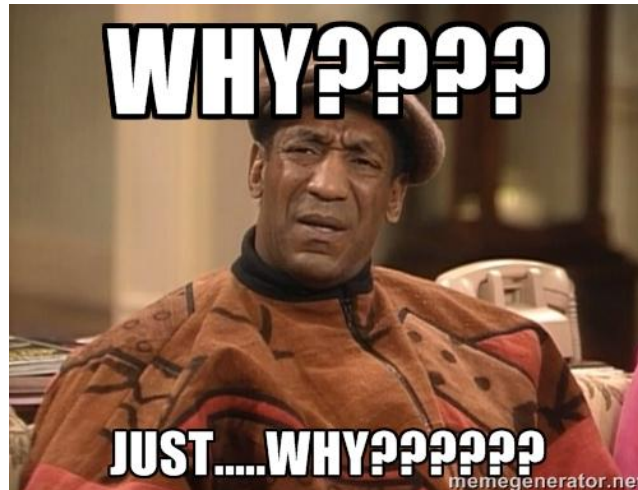
→ [Reply](#)

23 months ago, # ^ |

▲ -8 ▼



aakalhor

→ [Reply](#)

darry140

23 months ago, # ^ |

▲ +8 ▼

Your program must print the queries — integer numbers x_i ($1 \leq x_i \leq 10^{**6}$), one query per line.

→ [Reply](#)

23 months ago, # ^ |

▲ +10 ▼

Range of the input numbers is 1 to 1000000. That's why



kunal23

range of the input numbers is 1 to 100000. That's why.

→ [Reply](#)



faheel

23 months ago, # ^ |

▲ 0 ▼

That's because, $1e6+6 = (1e6)+6 = 1000006$, not 1000000 .

→ [Reply](#)



faheel

23 months ago, # ^ |

▲ 0 ▼

Why the downvotes?! If I'm wrong, do let me know.

→ [Reply](#)

23 months ago, # ^ |

← Rev. 2 ▲ 0 ▼

Why I always can't see other's people submission by links like this <http://codeforces.com/gym/101021/submission/18299998?>



lebedkin

age: GNU G++11 5.1.0

You are not allowed to view the requested page

Choose File No file chosen

Submit

→ [Reply](#)

23 months ago, # |

▲ 0 ▼



inactive06

Here's another interactive problem.

<https://www.codechef.com/MAY16/problems/CHBLLS> Anyone interested may take a look. My first interactive problem. I enjoyed the solution but didn't like that flushing part somehow :v Even if someone understands the logic, he has the chance to get a wrong verdict for the syntax.

→ [Reply](#)

23 months ago, # |

← Rev. 2 ▲ 0 ▼

My solution gets **Idleness Limit Exceeded**, even though I flush the buffer. Where do you think the problem is?

18300219

UPD: I've found the error! I should've printed one query per line.

→ [Reply](#)



determinism

23 months ago, # |

← Rev. 2 ▲ 0 ▼

hello,

any one could tell me why this code gets TLE on test 2 whilst the same code in the blog gets AC which just differs in reckoning of **mid**, while I make r equals to $1e6+1$ to evade that.

any help would be highly appreciated

```
int main() {
    int l = 1, r = 1e6+1;
    while(l < r){
        int mid = (l+r)>>1;
        printf("%d\n",mid); fflush(stdout);
        char s[10]; scanf("%s",s);
        if(s[0]=='<') r = mid-1;
        else l = mid;
    }
    printf("! %d\n",l); fflush(stdout);
```

return 0;



return v,
}
→ [Reply](#)



Errichto

23 months ago, # ^ |

▲ +4 ▼

if `l+1==r` then your code runs forever.

→ [Reply](#)



spk

23 months ago, # ^ |

▲ 0 ▼

If response were `<=` and `>` then `mid=(l+r)/2` would work, right?

→ [Reply](#)

17 months ago, # ^ |

▲ 0 ▼

It doesnt work beacuse of overflow. For instance if `l=9` and `r=10`, `(l+r)/2` will be 9 So mid doesnt change and `l<r` is true forever.



vignesh_m

This is why the above code does `(l+r+1)/2`

→ [Reply](#)



Owaski

23 months ago, # ^ |

▲ 0 ▼

`mid = (l+r+1)>>1`

→ [Reply](#)



Deathly_Hallows

23 months ago, # |

▲ +69 ▼

why in this round ? you could use it in the educational first

→ [Reply](#)



Mr.Struggler

23 months ago, # |

▲ 0 ▼

Getting Idleness limit exceeded on test 1 in the first given problem. Here is my code. How can I fix it?

→ [Reply](#)



huansuz1

23 months ago, # ^ |

▲ +10 ▼

Read the task.

→ [Reply](#)



Fekete

23 months ago, # ^ |

▲ 0 ▼

Read the example code by Mike.

→ [Reply](#)



Mr.Struggler

23 months ago, # ^ |

▲ 0 ▼

ohh... I missed the example code. I am not used to this system. why this???

→ [Reply](#)



Fekete

23 months ago, # ^ |

▲ +3 ▼

Because it is very interesting and new for CF community

→ [Reply](#)

23 months ago, # ^ |

▲ 0 ▼

please clear me 2 things.

1 the given output is my input



Mr.Struggler

1. the given output is my input
2. I need to use flush after every output.

right? anything else?

I have not idea about it. so please clear me.

→ [Reply](#)

23 months ago, # [^](#) [v](#) Rev. 3 [▲](#) 0 [▼](#)



Fekete

Your program must send requests(input) to interactor, and interactor answers for request(output). If you test your code local, you should answer for request by using input.

→ [Reply](#)



Mr.Struggler

23 months ago, # [^](#) [v](#) | [▲](#) 0 [▼](#)

Oww.. thats interesting. sounds different. Thank you for explanation :)

→ [Reply](#)



Fekete

23 months ago, # [^](#) [v](#) | [▲](#) 0 [▼](#)

You should use flush for correct interactive work.

→ [Reply](#)



ssavi

23 months ago, # [^](#) [v](#) | [▲](#) +6 [▼](#)

An Educational Round on this type of Problems would be better to understand the Submit / Hacking System .

→ [Reply](#)

23 months ago, # [^](#) [v](#) | [▲](#) +37 [▼](#)

Mike don't get me wrong it sounds like this contest is gonna be brilliant but couldn't you post this earlier like a day or two earlier.

or you could have tried it with educational rounds first like [Deathly_Hallows](#) said.

Nevertheless I wish happy coding for everyone and high ratings good luck.

:)

→ [Reply](#)



M.A.H.M.O.O.D

23 months ago, # [^](#) [v](#) | [▲](#) +14 [▼](#)



brucewayne123

hi.. actually users facing interacting problems for the first time may experience significant drop in ratings.. so please make the announcements a bit before or we can have a testing round or educational for such purposes.. its nice that codeforces comes up with newer challenges.. thanks.. :)

→ [Reply](#)



sahedsohel

23 months ago, # [^](#) [v](#) | [←](#) Rev. 2 [▲](#) +6 [▼](#)

what will be the verdict for making more than 25 queries???!!

→ [Reply](#)



Errichto

23 months ago, # [^](#) [v](#) | [▲](#) +10 [▼](#)

should be WA but you can check it.

→ [Reply](#)

23 months ago, # [^](#) [v](#) | [▲](#) +10 [▼](#)

Wrong Answer



MikeMirzayanov

Wrong Answer
→ [Reply](#)



cg4ever

23 months ago, # |

▲ +8 ▼

The example section looks a bit misleading: why ">=" / "<" are output instead of input? And I think it'd be better to arrange them chronologically, like [this](#).

→ [Reply](#)



Errichto

23 months ago, # ^ |

▲ +5 ▼

TL;DR — you are right, but it isn't important, right?

You are right that it's misleading and should be other way around. It's my mistake. It will be displayed correctly in the round (with ">=" as input in this case).

→ [Reply](#)



kingofnumbers

23 months ago, # ^ |

▲ +10 ▼

This is not TL;DR, it's FL;DU (Foreign language; didn't understand) :D

→ [Reply](#)



Errichto

23 months ago, # ^ |

▲ 0 ▼

Actually I don't get your comment ;p

Did I write something not clear? If yes then I will rewrite it.

→ [Reply](#)



kingofnumbers

23 months ago, # — Rev. 2

▲ +20 ▼

The link which **cg4ever** provided is FL;DU not TL;DR :D

→ [Reply](#)



Errichto

23 months ago, # ^ |

▲ +3 ▼

So, what do you think about the format we used? There were tables in the Notes section. Any better solution?

→ [Reply](#)



cg4ever

23 months ago, # ^ |

▲ 0 ▼

It looks perfect. (The only issue may be that we can't copy-paste since it is a picture, but for that specific problem it is ok.)

→ [Reply](#)



Errichto

23 months ago, # ^ |

▲ 0 ▼

Huh. I've just realized that it's impossible to copy-paste. Strange — because it's not a picture, it's an HTML table.

→ [Reply](#)



TouchMe

23 months ago, # |

▲ 0 ▼

Why's that `"r = mid - 1"` and `"l = mid"` gets AC and `"r = mid - 1"` and `"l = mid + 1"` gets WA? Can someone explain it?

→ [Reply](#)



23 months ago, # ^ |

▲ 0 ▼

for mid if response is < then hidden number is less than mid so r = mid



spk

for mid if response is < then hidden number is less than mid so $l = mid - 1$
 - 1 if response is \geq then hidden number is mid or greater than mid so $l = mid$
 → [Reply](#)



TouchMe

23 months ago, # ^ |

▲ 0 ▼

Got it, thank you

→ [Reply](#)

seeker

23 months ago, # ^ |

▲ 0 ▼

because on doing $l = mid + 1$, you are ignoring the current mid value which is giving boolean value 1 for objective function.

→ [Reply](#)

dush1729

23 months ago, # ^ |

▲ 0 ▼

You can do `l = mid + 1` and `ans = mid`. And print ans in the end.

→ [Reply](#)

dreamzor

23 months ago, # |

▲ +9 ▼

I recommend not to penalize errors on 1 test for the interactive problem as many people might get confused initially.

→ [Reply](#)

AlexDmitriev

23 months ago, # ^ |

▲ +34 ▼

Errors on 1st test are not penalized even for other problems

→ [Reply](#)

dreamzor

23 months ago, # ^ |

▲ 0 ▼

Nice to know, thanks.

→ [Reply](#)

YueHuo

23 months ago, # |

▲ 0 ▼

I guess Input and Output were mutually misplaced?

I need to Input ' \leq ' and ' $>$ ' and let computer to guess and Output the number?

→ [Reply](#)

Errichto

23 months ago, # ^ |

▲ 0 ▼

Input and Output are displayed swapped in this problem, sorry. It will be displayed correctly during the round.

→ [Reply](#)

STL_MAN

23 months ago, # |

▲ 0 ▼

All the problems will be "Interactive"? All 5 from today's contest?

→ [Reply](#)

Errichto

23 months ago, # ^ |

▲ +3 ▼

No.

→ [Reply](#)

STL_MAN

23 months ago, # ^ |

▲ 0 ▼

thanks

→ [Reply](#)

23 months ago, # ^ |

▲ +1 ▼

only 1 out of 5 !

→ [Reply](#)



spk

→ [Reply](#)

STL_MAN

23 months ago, # ^ |

▲ 0 ▼

thanks

→ [Reply](#)

UncleGrandpa925

23 months ago, # ^ |

▲ +1 ▼

I don't think so because it's not quite easy to solve an interactive problem especially with the difficulty of A and B div 2.

→ [Reply](#)

Isfandiyor

23 months ago, # |

▲ +4 ▼

Would it be possible to hack an interactive problem?

→ [Reply](#)

up-and-down

23 months ago, # ^ |

▲ 0 ▼

<http://codeforces.com/blog/entry/45307?locale=ru#comment-298510>

→ [Reply](#)

choosemyname

23 months ago, # ^ |

▲ +3 ▼

Sometimes on the Codeforces Rounds interactive problems will use. In this case the format of tests for hacks will be described in the statements of the problems.

→ [Reply](#)

xavier

23 months ago, # |

▲ 0 ▼

All the problems will be interactive?

→ [Reply](#)

up-and-down

23 months ago, # ^ |

▲ 0 ▼

<http://codeforces.com/blog/entry/45307?comment=298587>

→ [Reply](#)

up-and-down

23 months ago, # |

▲ 0 ▼

If you have a question

```
{
    for (int i = 0; i < 100; i++)
    {
        reread the blog;

        reread all comments;

        if you have found the answer

            goodbye;
    }

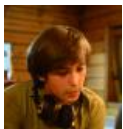
    ask your question in comments;

    goodbye;
}
```

→ [Reply](#)



→ [Reply](#)



loskutov

23 months ago, # |

▲ 0 ▼

Doesn't `std::endl` flush the output buffer in C++ and doesn't `std::cin` flush it as well? I'm pretty much surprised that 18314320 fails while 18315037 gets accepted.

→ [Reply](#)



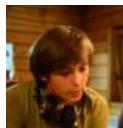
AlexDmitriev

23 months ago, # ^ |

▲ +13 ▼

You have different loop condition, lol

→ [Reply](#)



loskutov

23 months ago, # ^ |

▲ 0 ▼

Oops, sorry :D

That's what happens when one doesn't write contests for a long time!

→ [Reply](#)



Aidar.Babanov

23 months ago, # ^ |

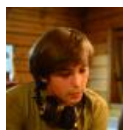
▲ 0 ▼

Thanks, but I made mistake in the understanding of the task.

I should to go on a new line after flush.

I mean: `cout<<flush<<Something<<endl;`

→ [Reply](#)



loskutov

23 months ago, # ^ |

▲ +8 ▼

Actually, `flush` before `Something` just flushes an empty buffer, so it can be omitted.

→ [Reply](#)



yeputons

23 months ago, # |

▲ +31 ▼

It's very important to specify whether the system actually "hides" a fixed integer before interaction starts or the interactor can change the number (or any other information, in general) during testing in a way consistent with previous answers. In the former case, some probabilistic solutions to some problems can pass. In the latter, they won't.

As far as I can see, the only place in the example problem which mentions it is "it's fine to guess — if you guess correctly".

→ [Reply](#)



Errichto

23 months ago, # ^ |

▲ 0 ▼

The second sample clearly shows it. But yes, I agree that it should also be written in the statement. We adjusted this problem in hurry and it isn't perfect (we decided to show the guide in the day of the contest).

Also, in some problems the system may be smarter/malicious and answer to more likely fail a participant. But we didn't want it in "prime 100" problem.

→ [Reply](#)



hellman_

23 months ago, # |

▲ +13 ▼

Maybe there should be another status for protocol failure (e.g. query limit exceeded)? Even Runtime Error would be much better than WA.

→ [Reply](#)



23 months ago, # ^ |

▲ +9 ▼

I don't see a reason. In standard problems there shouldn't be "WA because your answer is too small" or "WA because an edge you printed

doesn't exist" So, why should we get extra info here?



Errichto

doesn't exist. So, why should we get extra time here?
→ [Reply](#)

23 months ago, # [^](#) | [+3](#)



Noobgam

But there is in fact presentation error if you violate output protocol (e.g. give less integers than needed)

I'd really like to see query limit as PE than as WA, because you're actually violating protocol by printing more queries than it was possible.

→ [Reply](#)

23 months ago, # [^](#) | ← Rev. 2 [0](#)

Are you sure about PE? I thought that there is no PE in CF rounds — [source](#).



Errichto

And I don't think it's possible to create some exact rules what is PE and what is WA. For example, a participant should print the number of vertices satisfying something — then what if he/she prints -1 or $n+1$? Should it be WA or PE? It's only an example.

→ [Reply](#)

20 months ago, # [^](#) | ← Rev. 2 [+1](#)

Please Help Me Out ..

I am trying to solve the Interactive Problem given in the above Link as there may be an Interactive Problem in today's Round . I have submitted a Code for practice several times. But Its showing **WA at Test 1** . Don't know why .

Problem: <http://codeforces.com/gym/101021/problem/A>

Here is My code: <http://pastebin.ubuntu.com/23172422/>

It'd be very helpful if you please point me out the erroneous point of my Code .

Thanks in Advance .

→ [Reply](#)



ssavi



ssavi

20 months ago, # [^](#) | [0](#)

Just Got AC .

→ [Reply](#)

20 months ago, # [^](#) | ← Rev. 2 [-13](#)

in the name of allah, most mercifull

hi

my question about question A that exist in blog and my logic is true

i don't know why this code doesn't work.

→ [Reply](#)



aminnajaftvand



1-i

20 months ago, # [^](#) | [0](#)

Is writing `fflush(stdout);` at the end of main() necessary or redundant?

→ [Reply](#)

20 months ago, # [^](#) | [0](#)

You need to use 'flush' operation only after every print.

→ [Reply](#)



arsiyo

→ [Reply](#)

20 months ago, # ^ |

▲ +8 ▼

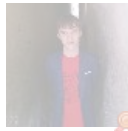
I meant, what about the last print. eg: in the code given in the blog,



1-i

```
printf("! %d\n", l); fflush(stdout);
```

is fflush(stdout) needed here?

→ [Reply](#)

arsiyo

20 months ago, # ^ |

▲ -11 ▼

Yes, you need.

→ [Reply](#)

20 months ago, # ^ |

▲ 0 ▼

Actually not. At the shutdown of the program stdout is automatically flushed. Though it is a good practise in an interactive problem to flush after any print because it doesn't make anything worse but prevents you from forgetting about some important flush.



Zlobober

[More details.](#)

→ [Reply](#)

shaikhtahmidurrahman1

17 months ago, # |

▲ 0 ▼

I don't understand the interactive process clearly. Can someone explain who gives the input, who gives output, who writes the code....it seems confusing to me. Thanks!

→ [Reply](#)

pmsh_93

12 months ago, # |

▲ 0 ▼

In Python 3, print() is a function and it has an optional parameter "flush" with a default value false. So you can just set it to true when needed to flush the output stream. print("blah blah", flush = True)

→ [Reply](#)

11 months ago, # |

▲ 0 ▼

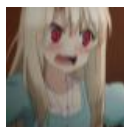
Any idea what this error means



1-i

```
wrong output format Unexpected end of file - token expected
```

[submission](#)

→ [Reply](#)

Len

11 months ago, # ^ |

▲ 0 ▼

You are outputting nothing.

→ [Reply](#)

1-i

11 months ago, # ^ |

← Rev. 3

▲ 0 ▼

Yeah, I just realized my code skips all ifs. I am new to this type of problem.

→ [Reply](#)



remidinishanth

7 months ago, # |

▲ 0 ▼

Even this works

`cout.flush();`→ [Reply](#)

hsmfawaz

5 months ago, # |

← Rev. 2 ▲ -10 ▼

Can some one explain why this

`int mid = (r+1+l)/2; (work)``int mid = 1+(r-l)/2; (not work)`→ [Reply](#)

Errichto

5 months ago, # ^ |

▲ +9 ▼

It isn't equivalent. One rounds up, the other rounds down. Consider what happens when $l + 1 = r$.

→ [Reply](#)

[Codeforces](#) (c) Copyright 2010-2018 Mike Mirzayanov
The only programming contests Web 2.0 platform
Server time: May/06/2018 00:57:55^{UTC+5.5} (d1).
Desktop version, switch to [mobile version](#).
[Privacy Policy](#).