



Send!

Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
313	4:39:34	167	Α	g++	OK	100	100	View
181	2:12:55	174	Α	g++	OK	100	100	<u>View</u>

Info	Summary	Submissions	Standings	Clars	Settings	Logout [pp123_23B031187]
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22:29:10 / RUNNING / Remaining: 65:14:13

A B C D E F G H I J K L M N O P Q R S T U

Submit a solution for B-186901. Ashift.

Full score: 100

Time limit: 3 s

Real time limit: 6 s

Memory limit: 256M

Problem B: 186901. Ashift.

Freshmen have midterms. Therefore, Professor Akshabayev asked Asman to move the tables and chairs to make everyone feel comfortable. Asman began to move the furniture and the podium, but what if you move the array? What is it to shift an array to the left or right?

Input format

You are given n - number of elements in the array. Next line contains n integers - elements of the array. The last line contains an integer z (-n < z < n).

Output format

Cyclically shift the array to the right by z positions and print the resulted aray.

Examples

Input

```
5
1 2 3 4 5
2
```

Output

45123

Input

6 1 2 3 4 5 6 -2

Output

3 4 5 6 1 2

Input

4 1 1 2 7

Output

1127

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Submit a solution

Language: g++ - GCC 13.1 c++17

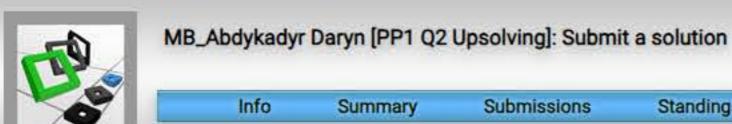
File Выберите файл Файл не выбран

Previous submissions of this problem

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Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
1270	48:05:51	273	В	g++	ок	100	100	<u>View</u>
1269	48:03:24	273	В	g++	Partial solution	56	56	<u>View</u>
318	4:44:56	314	В	g++	OK	100	100	<u>View</u>
194	2:36:40	591	В	g++	ок	100	100	<u>View</u>
187	2:19:57	587	В	g++	Partial solution	56	56	<u>View</u>
185	2:19:10	549	В	g++	Partial solution	56	56	View

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Info Summary Submissions Standings Clars Settings Logout [pp123_23B031187]

22:30:10 / RUNNING / Remaining: 65:13:13

ABCDEFGHIJKLMNOPQRSTU

Submit a solution for C-186813. Fully symmetric array

Full score: 100
Time limit: 3 s
Real time limit: 6 s
Memory limit: 256M

Problem C: 186813. Fully symmetric array

Array of numbers is called fully symmetric if its' first half equals to reversed second part (with numbers reversed too). Determine if given array is fully symmetric or not.

Input format

The first line contains an even integer n ($2 \le n \le 10^6$), number of elements in the array. The next line contains n integers, elements of the array ($1 \le a_i \le 10^9$).

Output format

Print "YES" if the array is fully symmetric, and "NO" otherwise.

Examples

Input

8 92 24 19 1 1 910 42 29

Output

YES

Input

No.

1 2 3 6 2 11

Output

NO

Input

6 1 1 1 1000 100 10

Output

YES

Notes

In the first example, the array is fully symmetric, because if we reverse its' second part we will get [92, 24, 019, 1] which is equal to the first part of the array. Note that leading zeros are not important, so 019 = 19.

In the second example, the array is NOT fully symmetric, because its' first part is not equal to the reversed second one.

In the third example, the array is fully symmetric, because if we reverse its' second part we will get [01,001,0001] which is equal to the first part of the array.

Submit a solution

Language: g++-GCC 13.1 c++17

File

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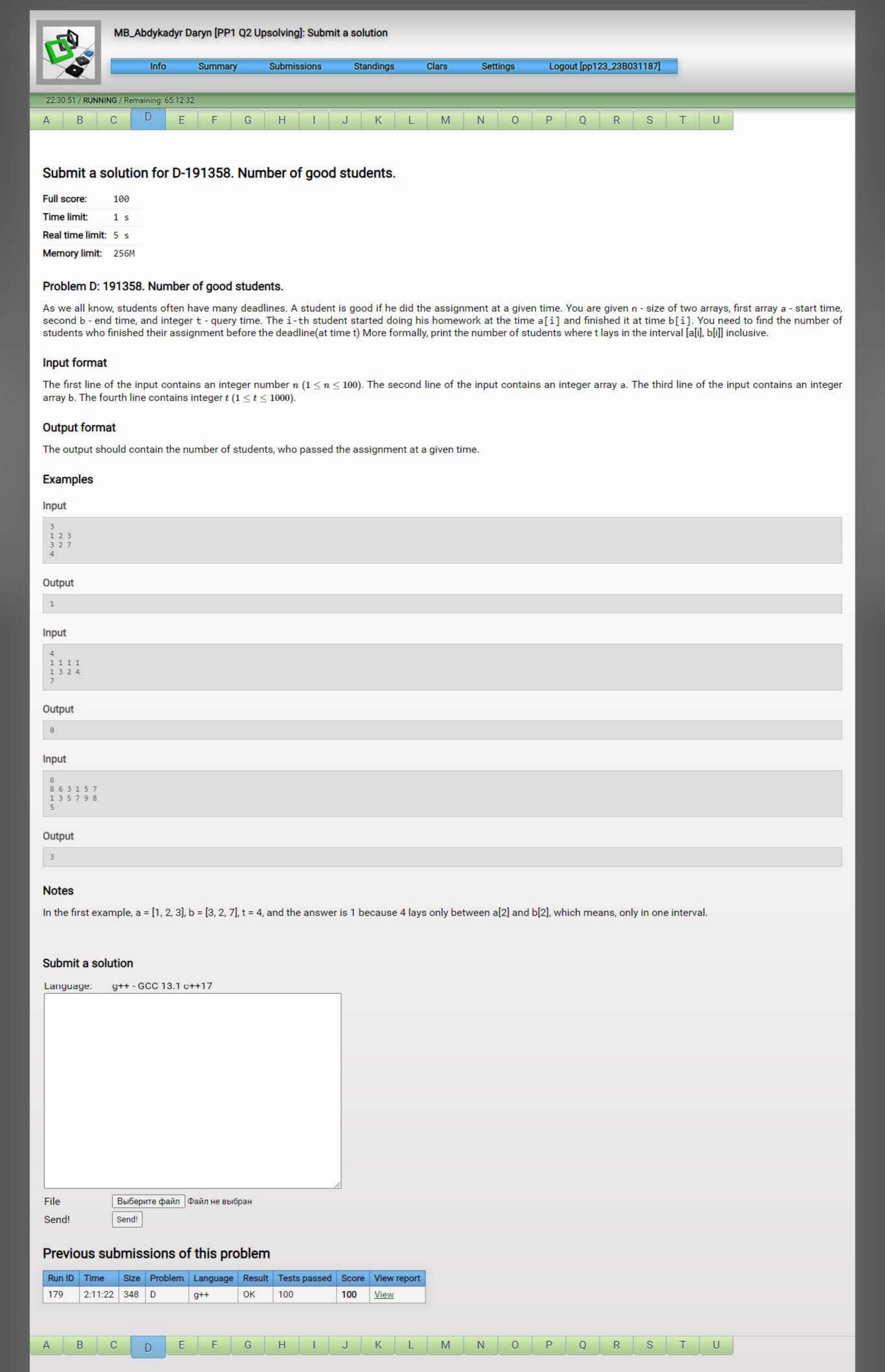
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Previous submissions of this problem

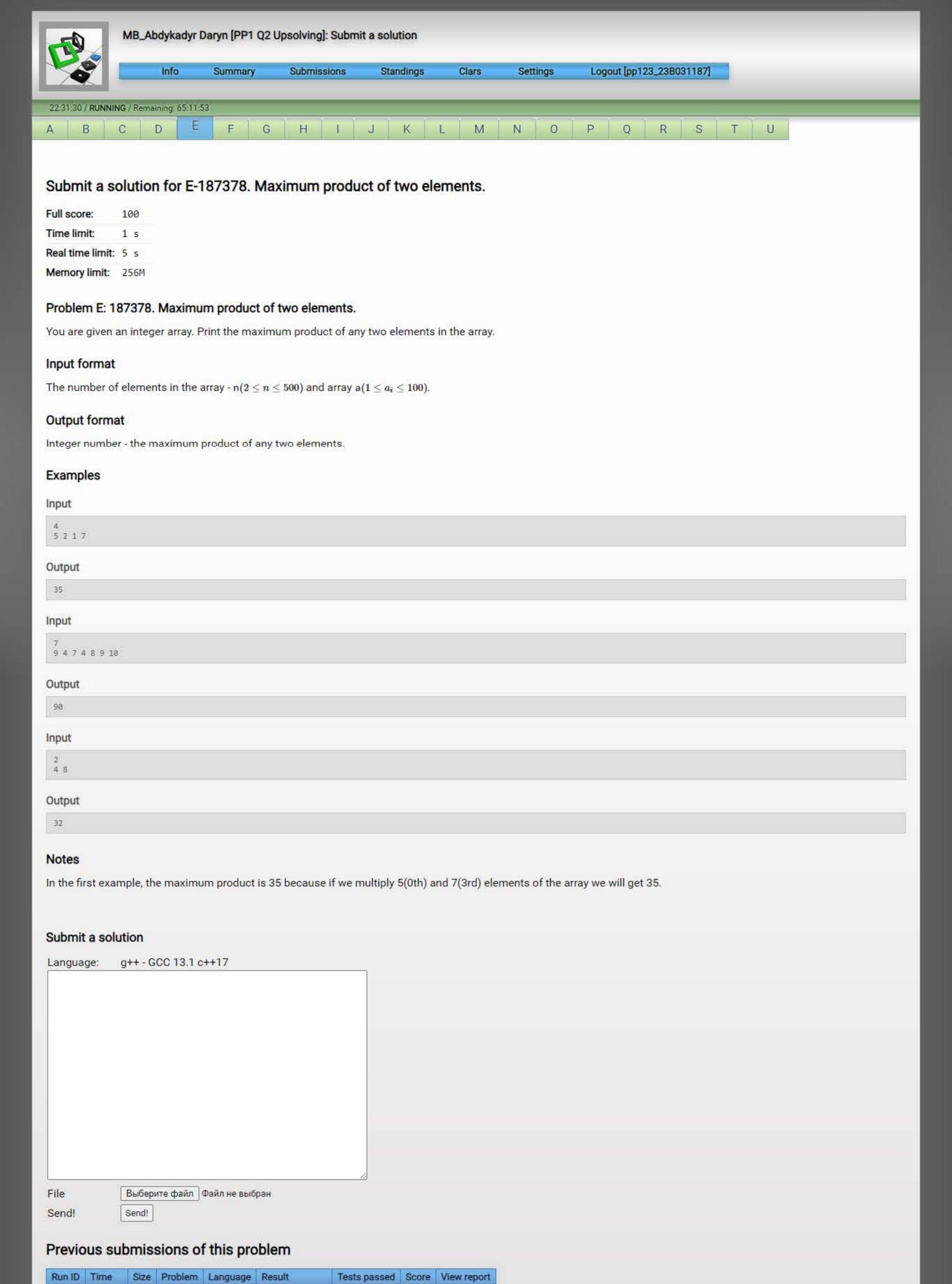
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Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
180	2:11:33	780	С	g++	OK	100	100	View

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82

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100

82

2:11:11 292 E

2:09:18 259 E

178

177

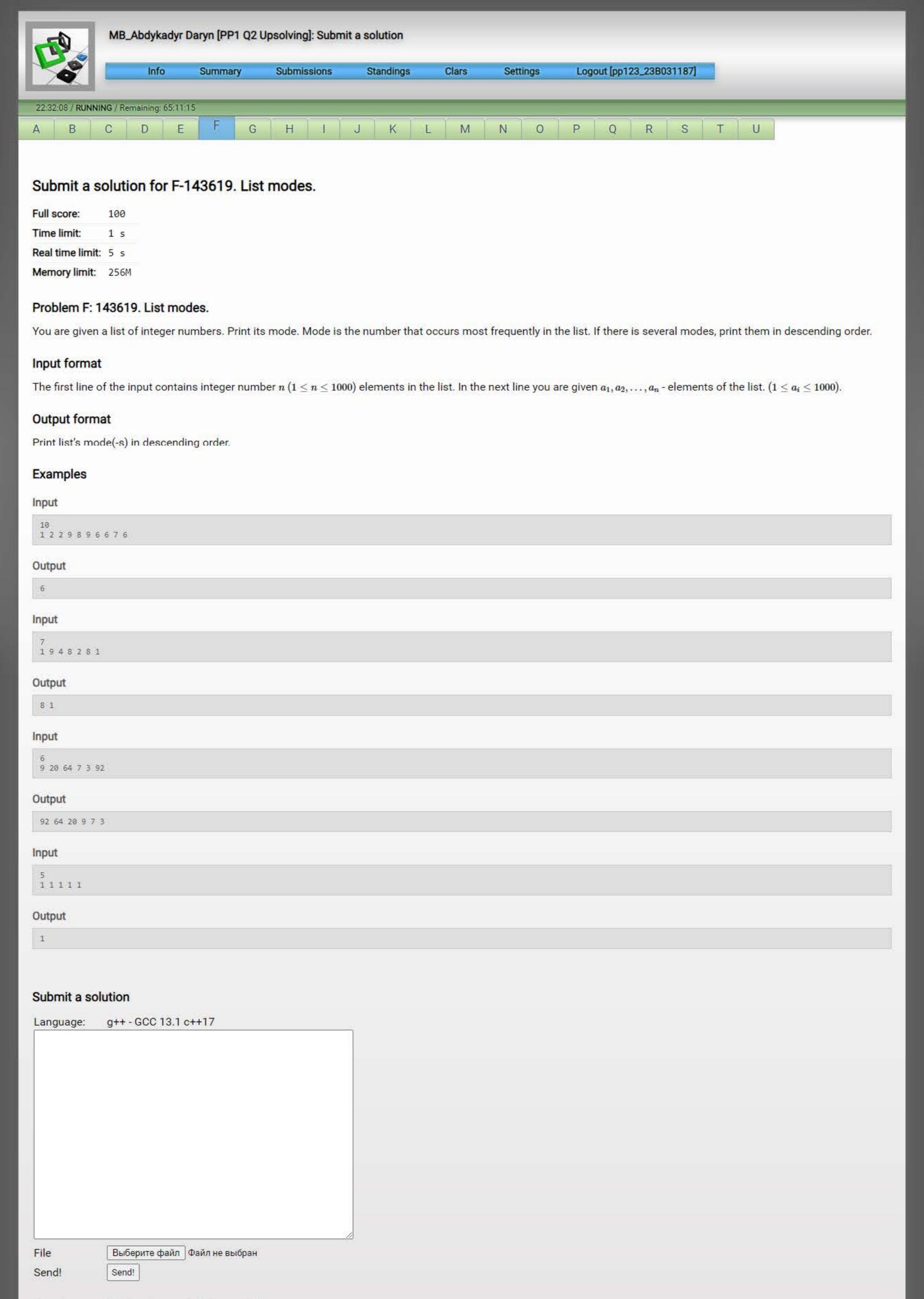
OK

Partial solution

g++

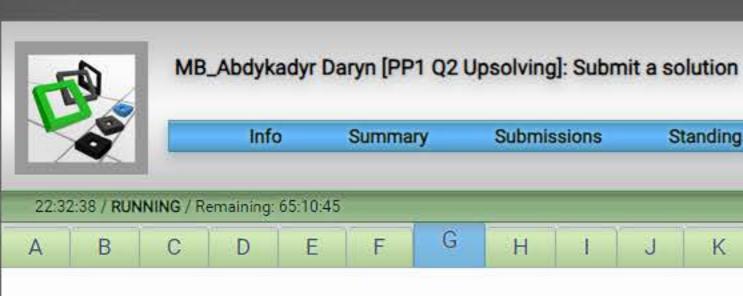
g++

В



Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
176	2:09:07	402	F	g++	OK	100	100	<u>View</u>

A B C D E F G H I J K L M N O P Q R S T U



Info	Summary	Submissions	Standings	Clars	Settings	Logout [pp123_23B031187]
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Submit a solution for G-193529. Order.

Full score: 100 Time limit: 1 s Real time limit: 5 s Memory limit: 256M

Problem G: 193529. Order.

Daniil and Vanya decided to play a game. N cards were put in a row on the table. Daniil takes all cards with even number on it, and transfers them to the left edge of the row, without changing their order of sequence. And Vanya takes cards with odd numbers, and transfers them to the right without changing their sequence. Help automate this process, write your program!

K L M N O

U

Input format

First line integer n - amount of cards $(0 \le n \le 100)$.

Next line n integers a_i - number on the i-th card $(0 \le a_i \le 100000)$.

Output format

Sequence of numbers in the right order.

Examples

Input

5 12345

Output

2 4 1 3 5

Input

10 345 1 2 3 4 4 3 2 1 345

Output

Send!

2 4 4 2 345 1 3 3 1 345

Submit a solution

g++ - GCC 13.1 c++17 Language: File Выберите файл Файл не выбран

Previous submissions of this problem

Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
175	2:08:56	282	G	g++	OK	100	100	<u>View</u>

Info	Summary	Submissions	Standings	Clars	Settings	Logout [pp123_23B031187]

22:33:14 / RUNNING / Remaining: 65:10:09

ABCDEFGHIJKLMNOPQRSTU

Submit a solution for H-143757. Cocktail max and min.

Full score: 100
Time limit: 1 s
Real time limit: 5 s
Memory limit: 256M

Problem H: 143757. Cocktail max and min.

Lets do mix with maxima and minima elements from array.

Input format

The first line contains integers N, M where $1 \le N, M \le 100$. Your task is to rearrange array of integers.

Output format

Output changed 2D array, check Notes.

Examples

Input

3 4 0 1 2 3 4 5 6 7 8 9 10 11

Output

11 0 10 1 9 2 8 3 7 4 6 5

Notes

Send!

In final array, first element should be maximum value, second minimum value, third second maximum value, fourth second minimum value, fifth third maximum value and so on.

Submit a solution

Language: g++ - GCC 13.1 c++17

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Previous submissions of this problem

Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
326	4:52:58	762	H	g++	OK	100	100	<u>View</u>
325	4:52:20	762	Н	g++	Partial solution	3	3	View
220	3:25:02	829	H	g++	ОК	100	100	View
193	2:30:28	485	Н	g++	Partial solution	58	58	View
192	2:28:47	484	Н	g++	Partial solution	59	59	<u>View</u>
190	2:25:29	467	Н	g++	Partial solution	59	59	View
189	2:23:25	351	Н	g++	Partial solution	2	2	<u>View</u>

Full score: 100
Time limit: 1 s
Real time limit: 5 s
Memory limit: 256M

Problem I: 193586. Art.

One day Daniil decided to paint art. He had a canvas with a width w and height h. Since Daniil is not a humanist, he started with an easy one - to draw rectangle. He measured them by 4 coordinates x1, y1, x2, y2. (x1, y1) - coordinates of the upper left corner. Coordinates (x2, y2) - coordinates of the lower right corner. Find unpainted area of the canvas

Input format

First line integers w,h - width and height of the canvas $(0 \le w,h \le 100)$

Next line integer n ($1 \le n \le 10$)

Next n lines integers x1, y1, x2, y2 - coordinates of rectangle $(0 \le (x1, y1, x2, y2) \le w, h)$

Output format

Integer - unpainded area of the canvas

Examples

Input

10 10 3 1 1 3 3 4 4 5 5 0 0 2 2

Output

92

Input

5 6 2 1 1 2 1 2 1 3 3

Output

28

Submit a solution

Language: g++ - GCC 13.1 c++17

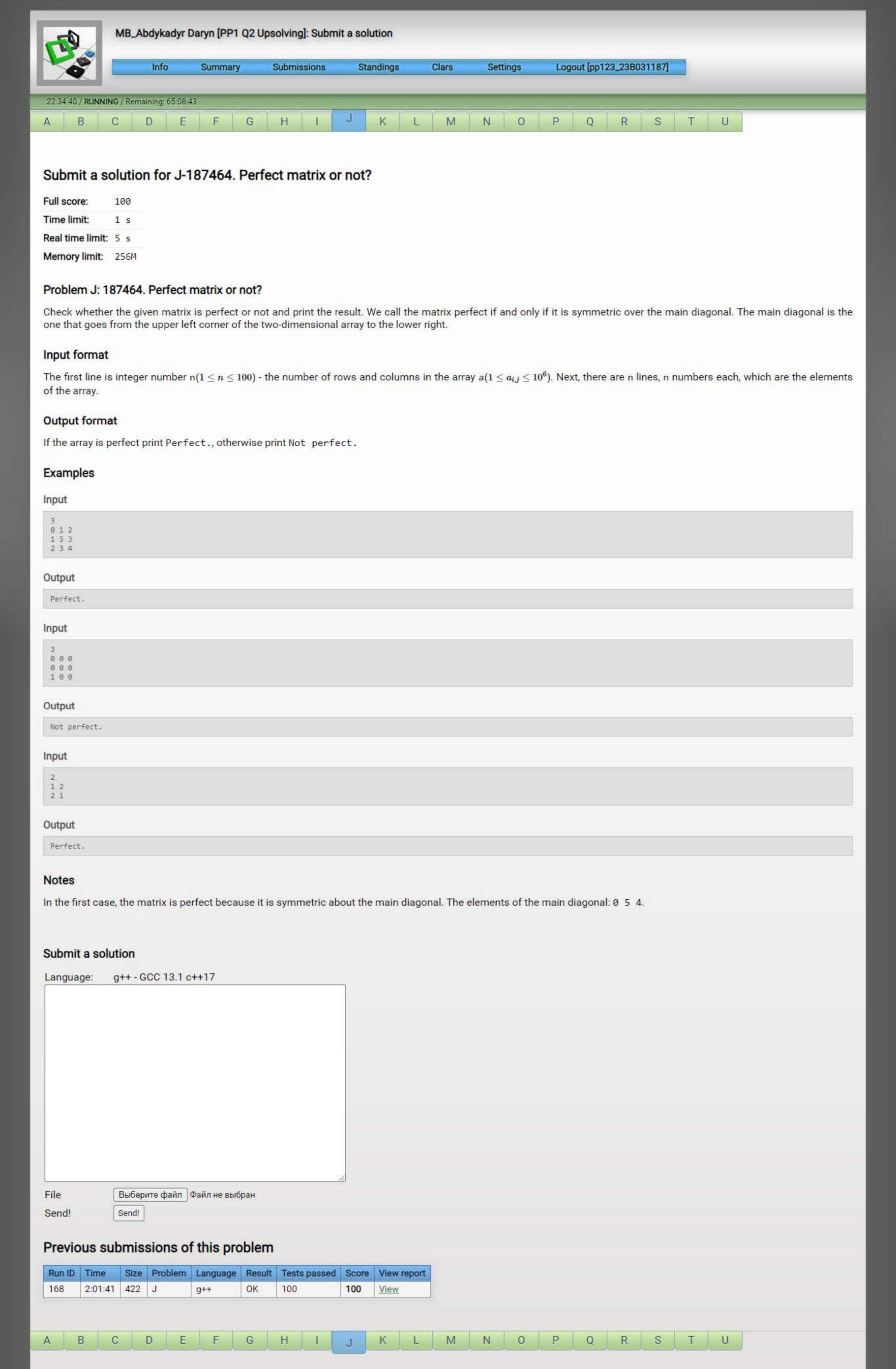
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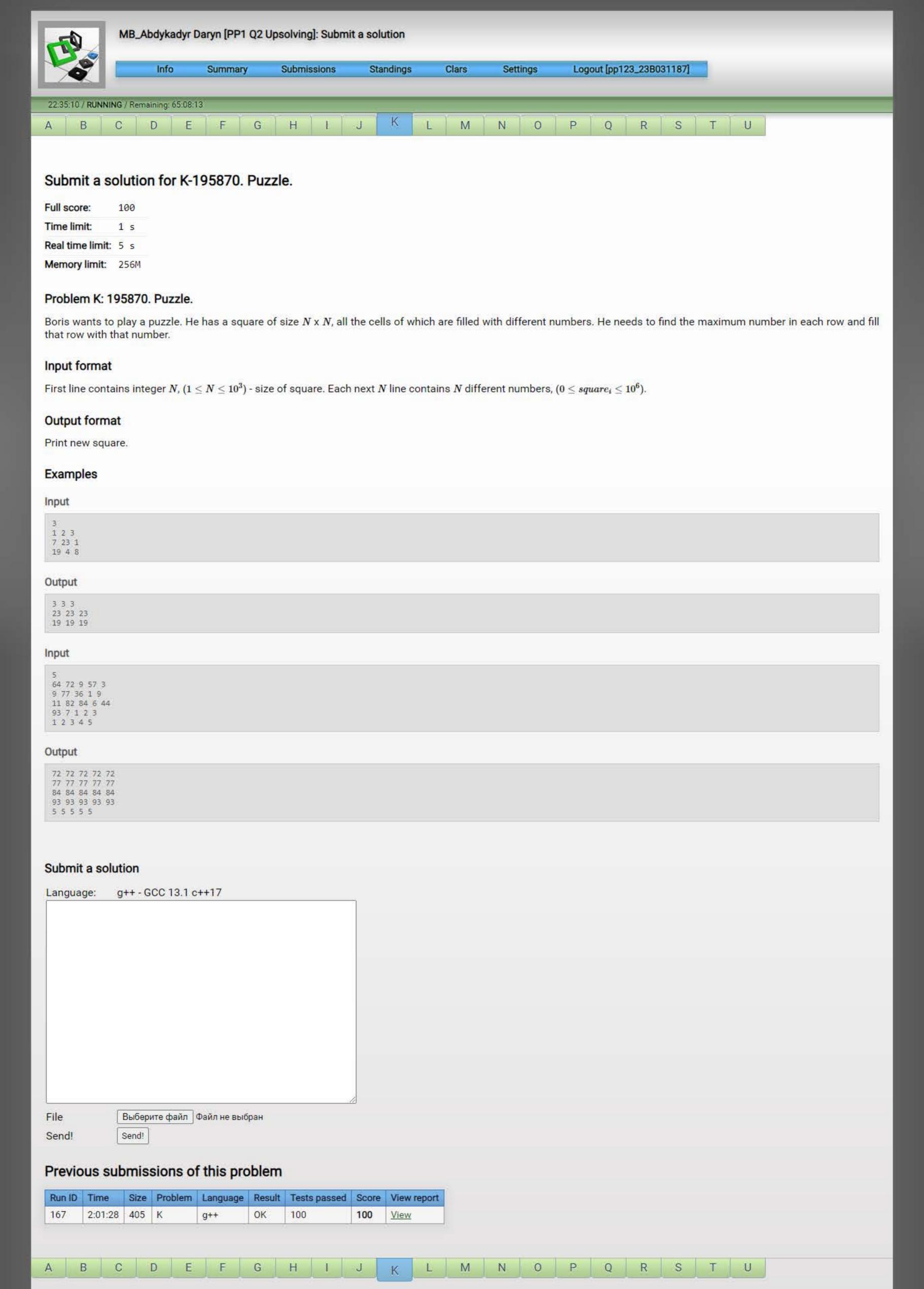
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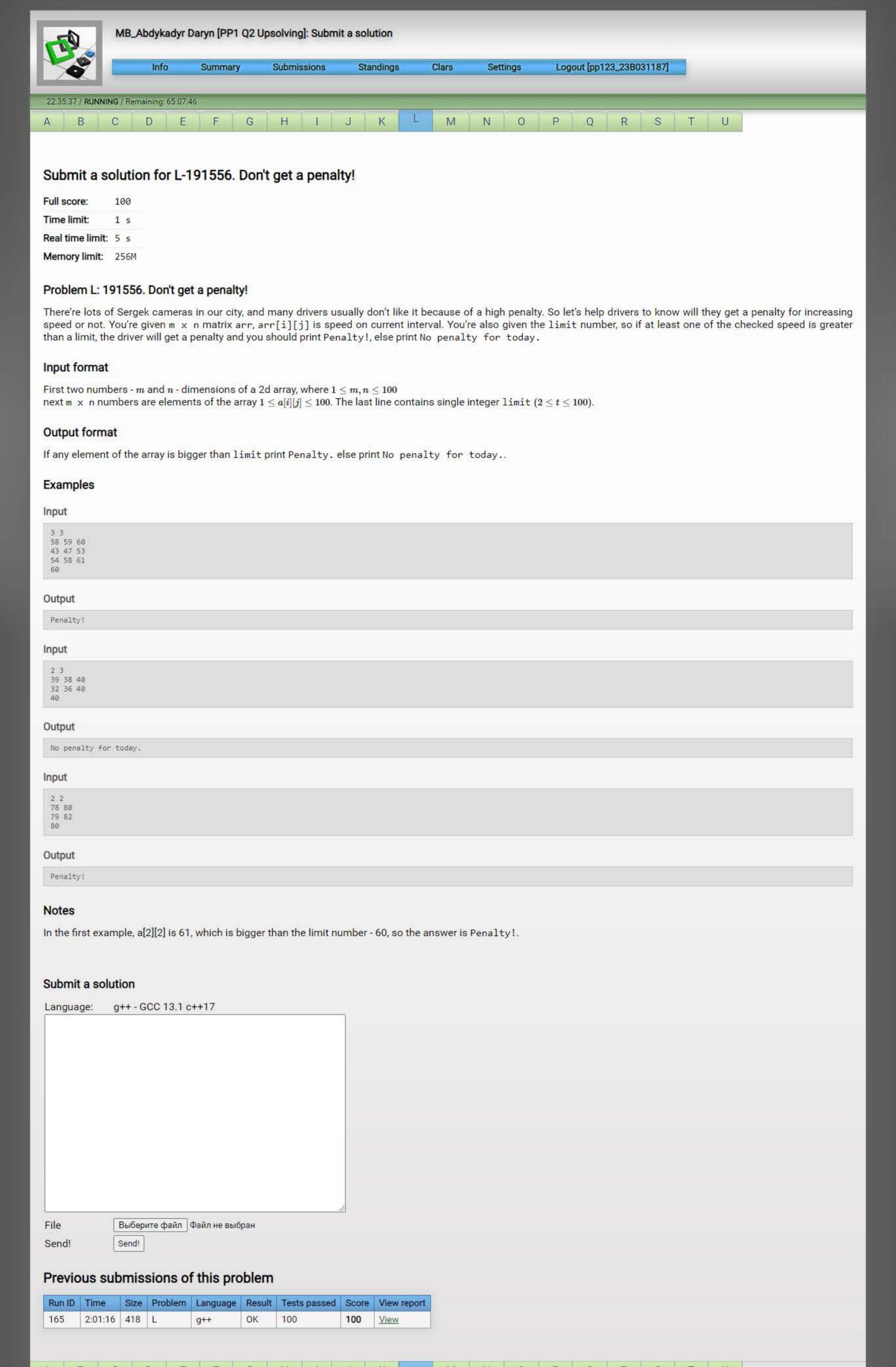
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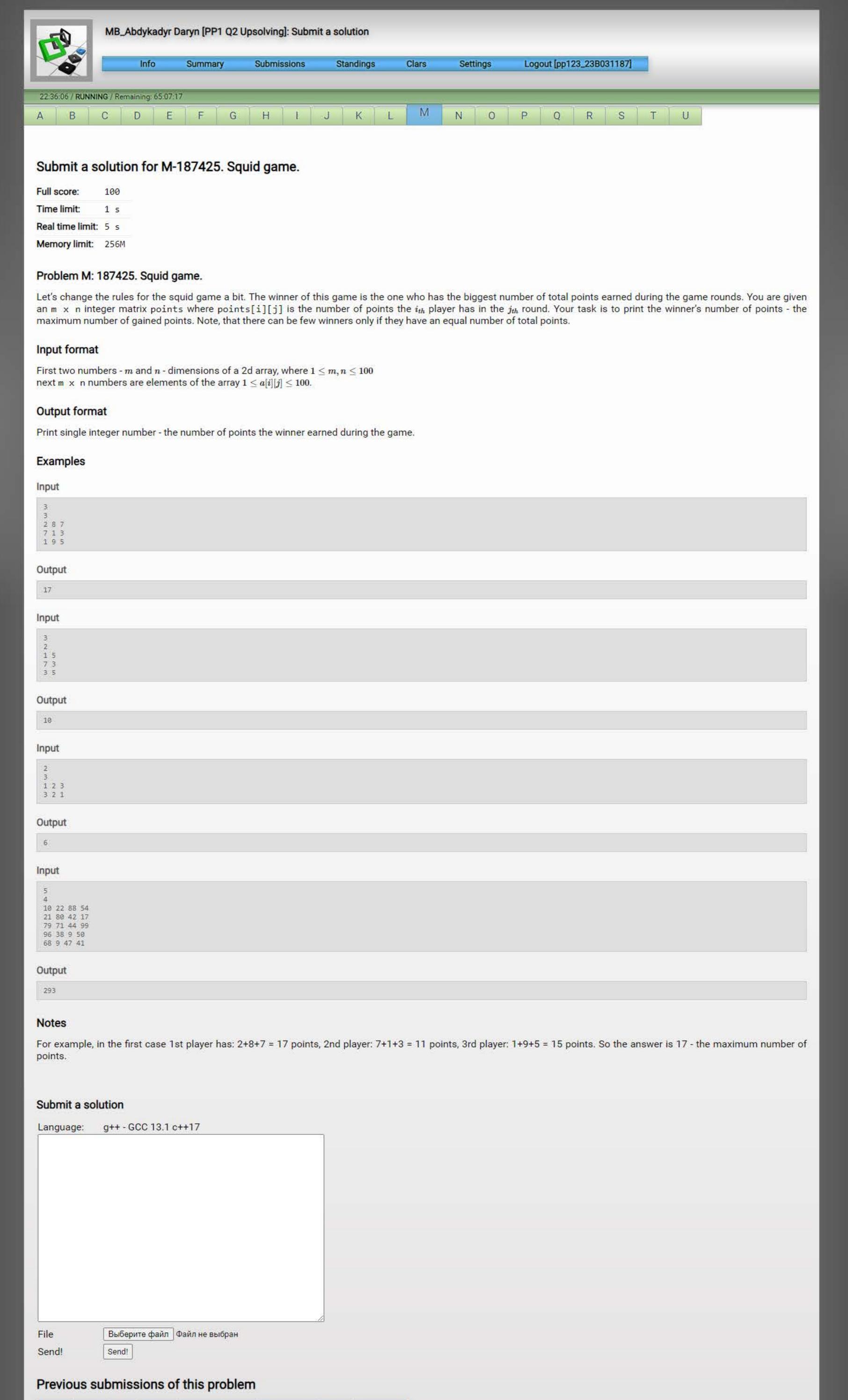
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Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
328	4:53:39	629	L	g++	ок	100	100	View
327	4:53:26	533	T.	g++	ОК	100	100	View
306	4:35:28	457	E	g++	Partial solution	82	82	View
305	4:34:55	533	ř	g++	OK	100	100	<u>View</u>
304	4:34:20	635	L	g++	ок	100	100	View
300	4:32:51	557	I.	g++	Partial solution	67	67	<u>View</u>
174	2:08:26	629	I.	g++	ок	100	100	<u>View</u>
173	2:08:02	648	Ē	g++	Partial solution	67	67	View
172	2:06:21	748	Ü	g++	ок	100	100	View
171	2:05:37	653	L	g++	Partial solution	5	5	<u>View</u>
170	2:03:13	550	I.	g++	Partial solution	82	82	<u>View</u>
169	2:01:53	550	I.	g++	Partial solution	82	82	View





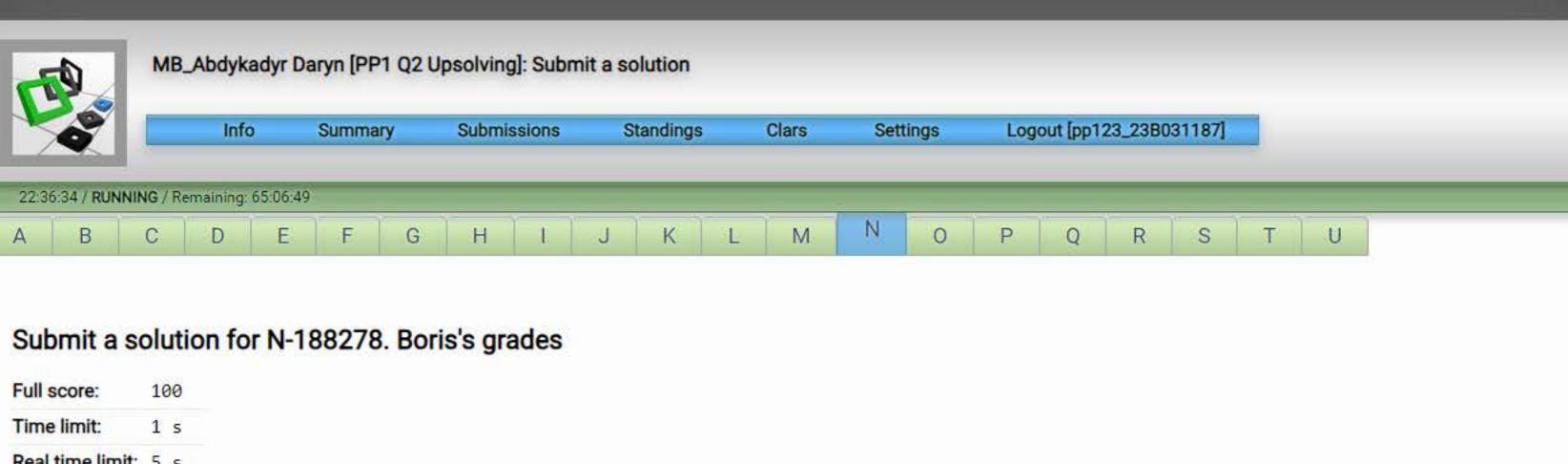




Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
217	3:20:35	313	M	g++	OK	100	100	<u>View</u>

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Real time limit: 5 s Memory limit: 256M

Problem N: 188278. Boris's grades

The last bell rang and Boris realized that the holidays were beginning! Finally, he received his grades diary. However, in order to make happy his mother, he needs to know his average mark in each subject. Unfortunately, the teacher forgot to do this ... Help Boriska find out his grades!

Input format

In the first line you are given integer N - number of subjects, M - number of grades for each subject. 1 <= N, M <= 200. The next N lines contain grades X for each subject. 1 <= X <= 200.

Output format

Print the average grade for each subject on one line.

Examples

Input

5 4 1234 1234 2 3 4 5 2222

Output

File

Send!

5 5 4 5

22324

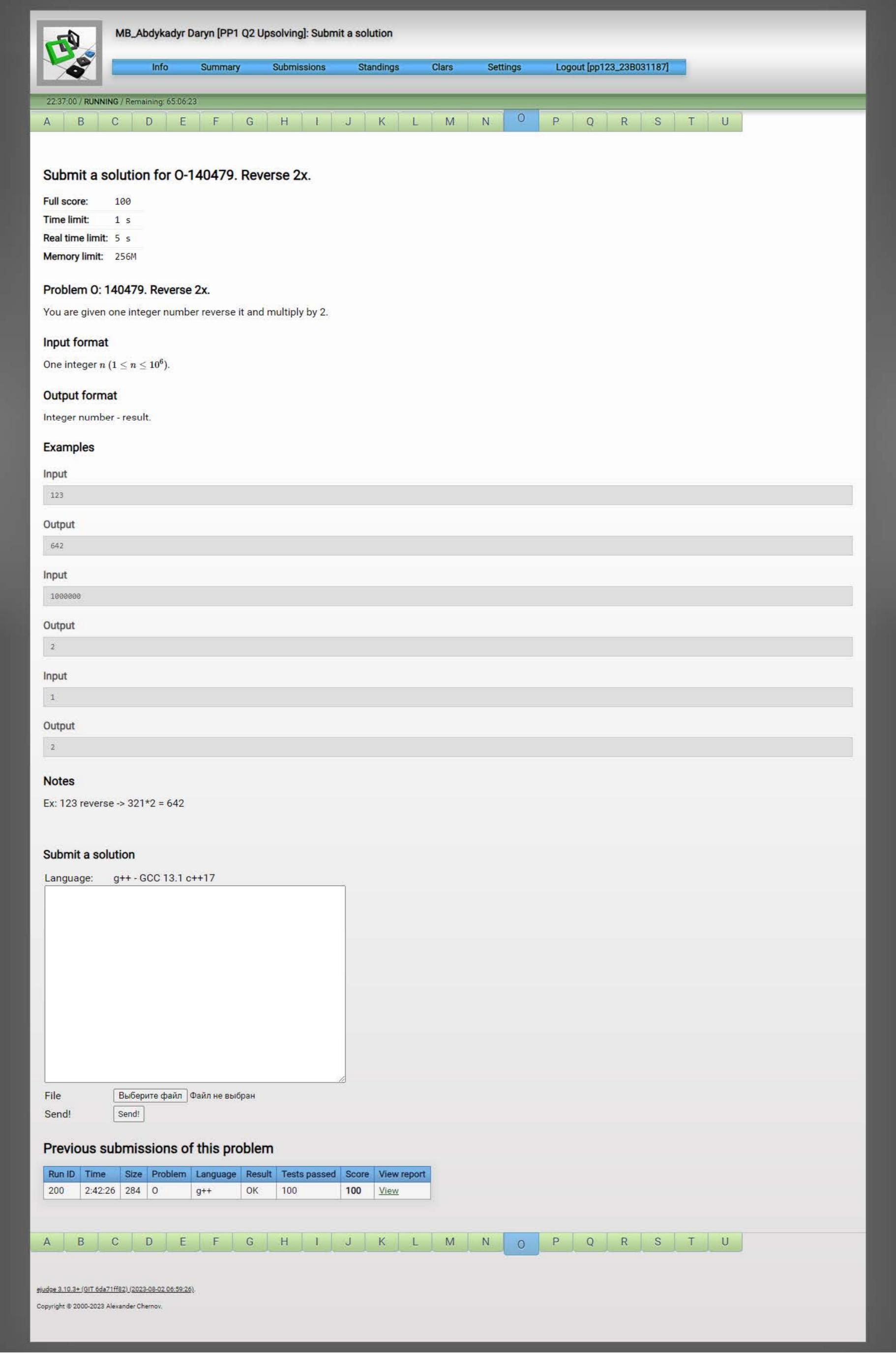
Submit a solution

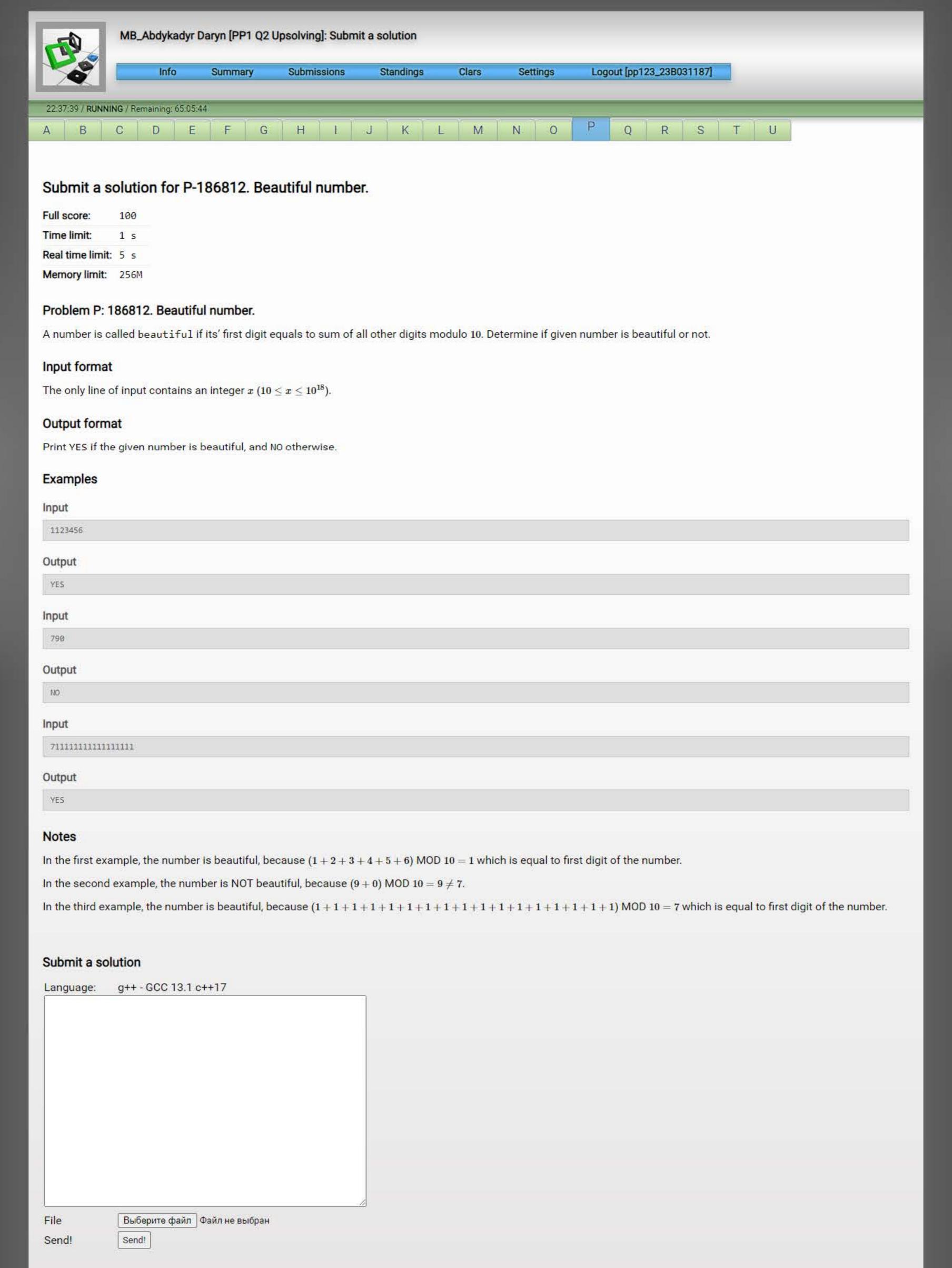
g++ - GCC 13.1 c++17 Language:

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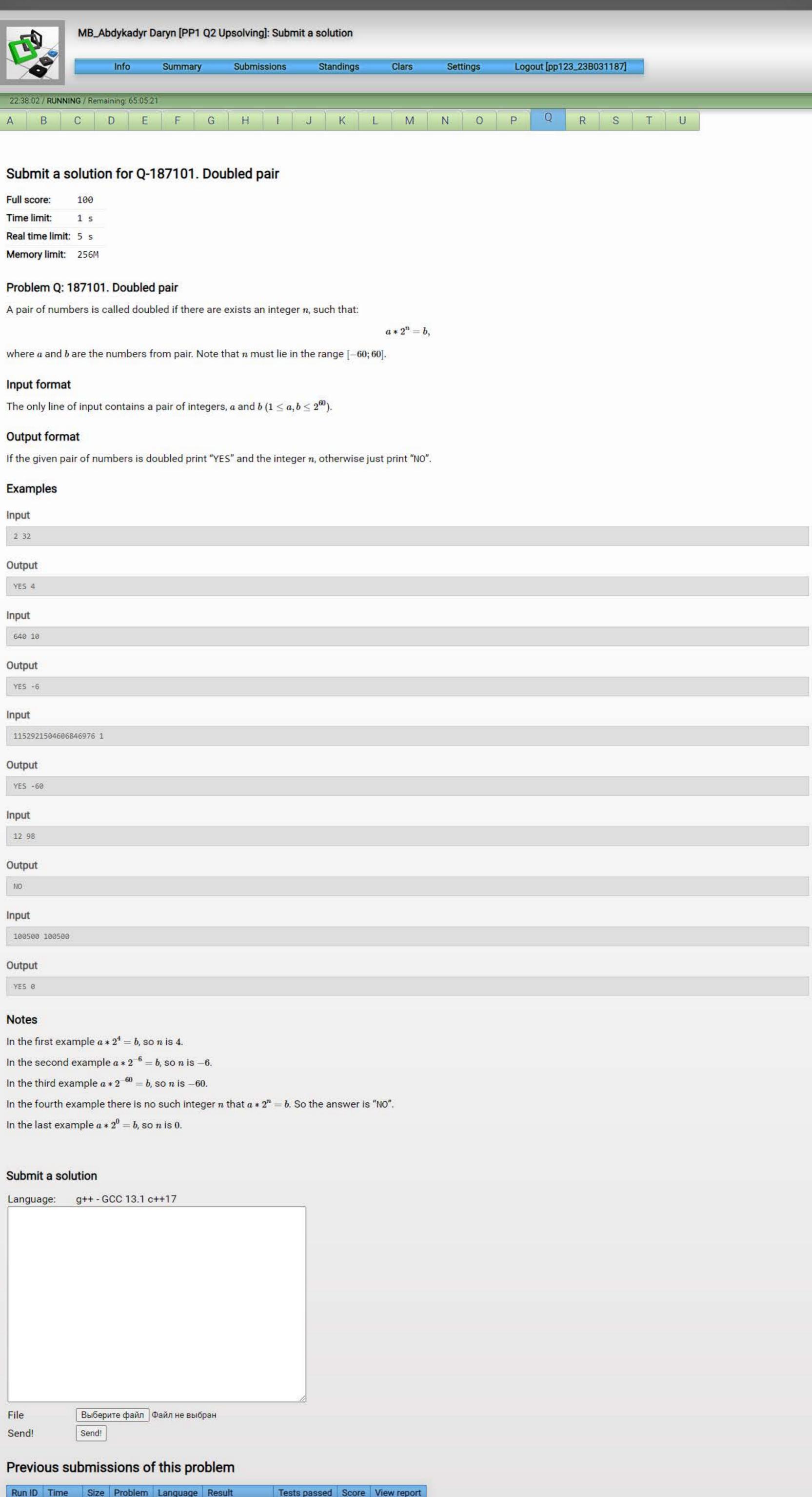
Previous submissions of this problem

Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
164	2:00:25	301	N	g++	OK	100	100	View

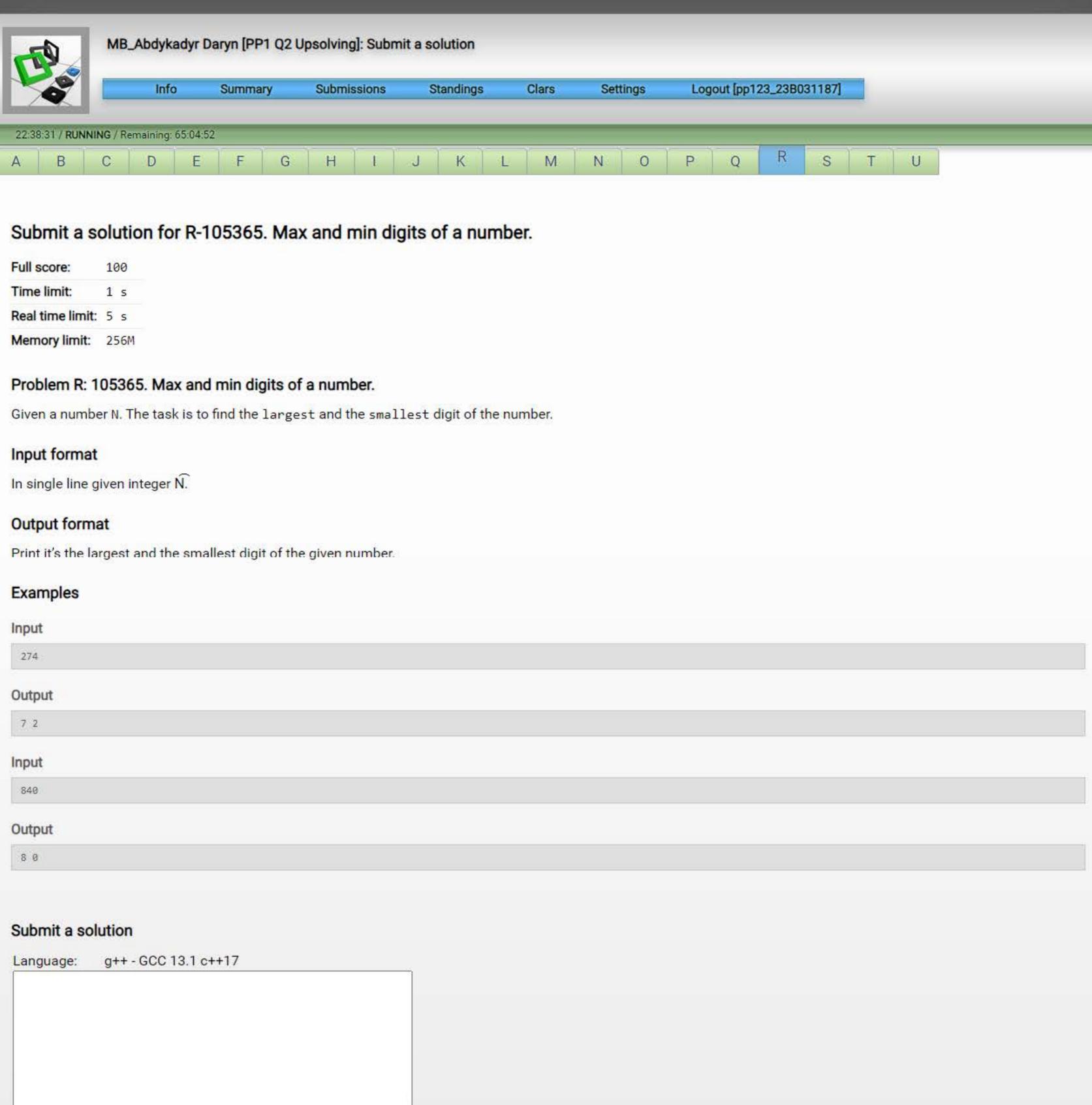




Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
160	1:59:08	232	Р	g++	ОК	100	100	<u>View</u>



Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
159	1:58:57	379	Q	g++	ОК	100	100	<u>View</u>
158	1:58:28	381	Q	g++	Partial solution	78	78	View
153	1:55:33	379	Q	g++	Partial solution	49	49	View





Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
152	1:55:19	329	R	g++	OK	100	100	<u>View</u>



Info	Summary	Submissions	Standings	Clars	Settings	Logout [pp123_23B031187]
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22:39:01 / RUNNING / Remaining: 65:04:22

ABCDEFGHIJKLMNOPQR<mark>S</mark>TU

Submit a solution for S-187658. Fouramida.

Full score: 100
Time limit: 1 s
Real time limit: 5 s
Memory limit: 256M

Problem S: 187658. Fouramida.

You are not from planet Earth and you meet earthlings who built something similar to a triangle, they called them a pyramid, your goal is to help them build a pyramid, you must program a program to calculate how many cubes are needed fir a specific pyramid height and advise architectures

Input format

1st line N is height of fouramida $1 \le N \le 100$.

Output format

Output every block and height with symbol "*"

Examples

Input

7

Output

File

Send!

Submit a solution

Language: g++ - GCC 13.1 c++17

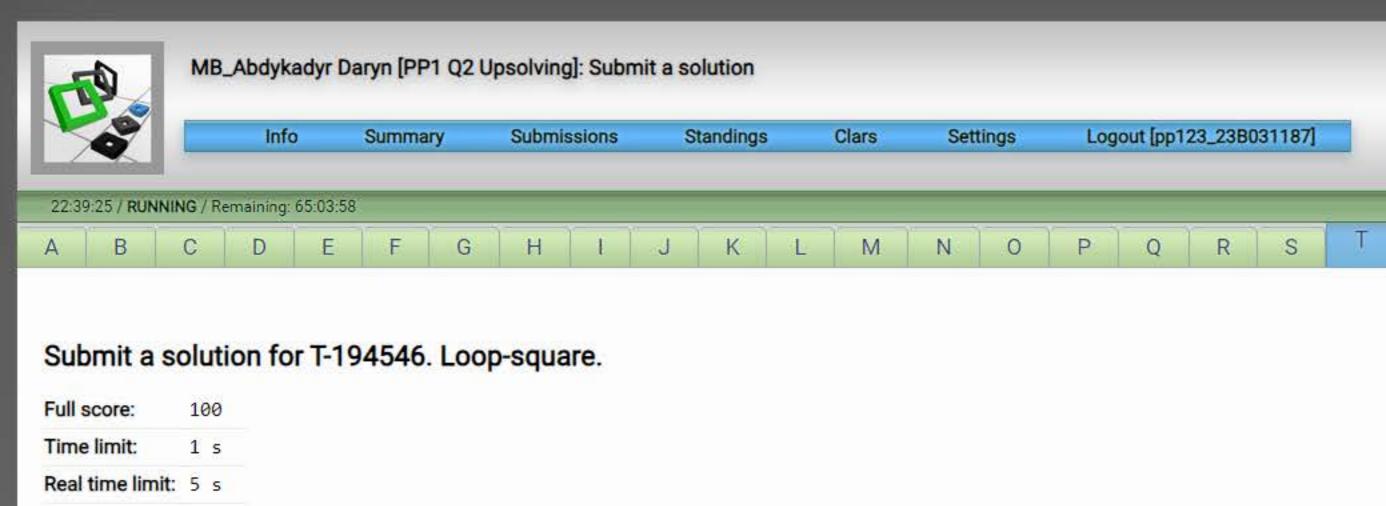
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Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
332	5:00:31	693	S	g++	OK	100	100	<u>View</u>
207	2:59:46	670	S	g++	OK	100	100	View
205	2:58:29	694	S	g++	OK	100	100	<u>View</u>
204	2:57:54	692	s	g++	OK	100	100	View

ABCDEFGHIJKLMNOPQRSTU



Memory limit: 256M

Problem T: 194546. Loop-square.

Asman decided to give a simple task to his students. All that is needed is to print the numbers from n to m which have integer square root.

Input format

You are given n(1 <= n <= 1000), m(1 <= m <= 10000), direction(If 1, then output the sequence in the ascending order, if -1, then print the sequence in descending order.).

U

Output format

Sequence of numbers.

Examples

Input

1 100 1

Output

1 4 9 16 25 36 49 64 81 100

Input

1 100 -1

Output

100 81 64 49 36 25 16 9 4 1

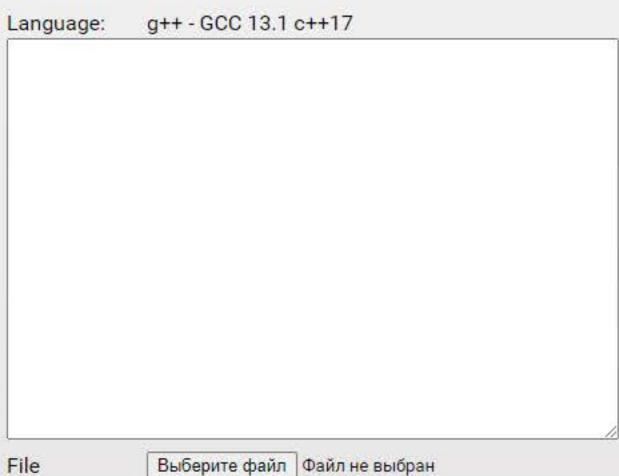
Input

491

Output

4 9

Submit a solution



Send! Send!

Run ID	Time	Size	Problem	Language	Result	Tests passed	Score	View report
149	1:54:59	369	T	g++	OK	100	100	<u>View</u>

