ACM-ICPC
Programming Contest

University of Puerto Rico, Río Piedras campus
Caribbean Local Contest 2016 at UPR-RP Computer Science Department

For any question, please contact

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- Webpage for links and more information:
  http://ccom.uprrp.edu/~rmegret/teaching/icpc2016.html

Today

- Online judges
  - How it works
  - How to train, useful links
- ICPC Competition
  - Organization
  - How to register

Online judge

Programming contest: COJ

Training on COJ

3 simple steps:

- Register
- Log-in
- Solve problems from the 24h archive
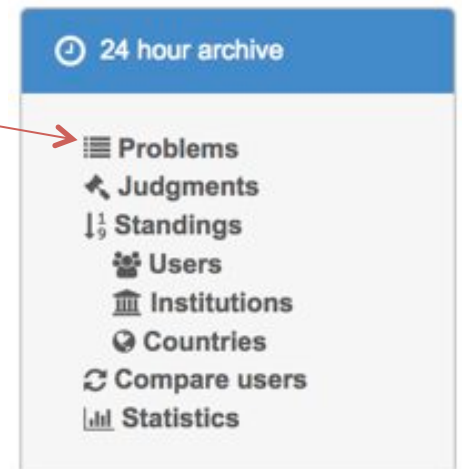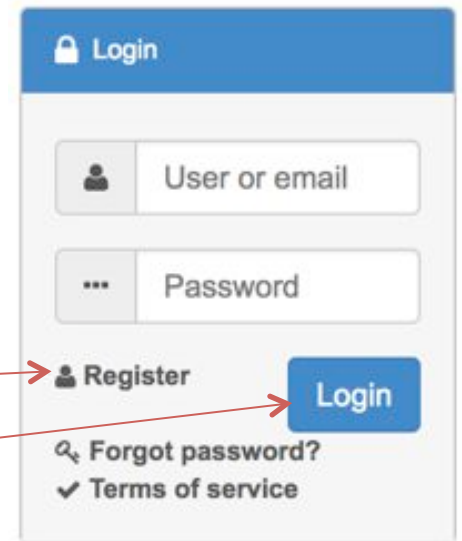
Problem Archive

24 hour archive: Problems

Look for specific problem   Search by topics   Complexity   Solved/Recommended...

Search	All	▾	1	▾	All	▾	Filter

	1	2	3	4	5	6	7	8	▸▸ ▸▸▸

ID	Status	Title	Sub ⇕	AC ⇕	AC% ⇕	Score ⇕
1000 ☆	⊖	A+B Problem	29524	15039	50,94	0,02
1002 ☆		New House	2880	1087	37,74	0,21
1003 ☆		General Election	8781	3922	44,66	0,06
1004 ☆		Traversing Grid	4813	1945	40,41	0,11
1009 ☆		Arranging Amplifiers	1090	225	20,64	1,10
1011 ☆		Army Strength	4704	1105	23,49	0,21
1014 ☆		Traditional BINGO	753	278	36,92	0,65
1016 ☆		Freckles	1931	699	36,20	0,35
1017 ☆		Three powers	542	289	53,32	0,65

Submitted   Accepted   Acceptance rate   Points if you solve it

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Problem page

Submit My submissions Submissions Best solutions PDF Translation

1000 - A+B Problem

Statistics	**Sub:** 29524 | **AC:** 15039 | **AC%:** 50,94 | **Score:** 0,02
Created by	Typical problem (almost every online judge include it)
Added by	cjoa (2011-10-13)
Limits	**Total Time:** 10000 MS | **Test Time:** 2000 MS |**Memory:** 62 MB | **Output:** 64 MB | **Size:** 9 KB
Enabled languages	C++
Available in	

Description

For this problem you must calculate **A + B**, numbers given in the input.

Input specification

The only line of input contain two space separated integers **A, B (0 <= A, B <= 10)**.

Output specification

The only line of output should contain one integer: the sum of **A** and **B**.

Sample input

1 2

Sample output

3

Hint(s)

Read our **FAQs** carefully to see solution samples.

Recommendation

We have carefully selected several similar problems for you: 1049 | 1028 | 3599 | 1960 | 3314 | 3662

Close

COJ
Thinking better!

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Submit page

Problem ID   1000   Filled automatically when you arrive on the page

Programming language   C++ (g++ 4.8.2)   Change language to your preference

Upload ⟶ **Source code**   [Upload file]

or

Type the code directly ⟶

```
#include <iostream>
using namespace std;

int main() {
  int a,b,c;

  cin >> a >> b;
  cout << a+b << endl;
}
```
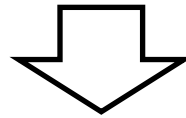
When done, press Submit ⟶ [Submit] [Reset]

Automatic judging by COJ

ID	Date	User	Problem	Judgment	Time	Mem	Size	Lang
977942	2016-08-29 10:24:19	remi	1000	**Judging**	...	...	...	C++

Wait a bit, refresh the page   Resubmit
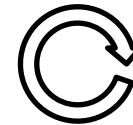
ID	Date	User	Problem	Judgment	Time	Mem	Size	Lang
977943	2016-08-29 10:32:43	remi	1000	**Compilation Error**	...	...	117 bytes	C++

Uh ?

ID	Date	User	Problem	Judgment	Time	Mem	Size	Lang
977946	2016-08-29 10:37:29	remi	1000	**Wrong Answer** *Test 1*	36	1 MB	120 bytes	C++

Oops…

ID	Date	User	Problem	Judgment	Time	Mem	Size	Lang
977942	2016-08-29 10:24:19	remi	1000	**Accepted**	32	1 MB	120 bytes	C++

Yeah !!!

Compilation error

24 hour archive: Submission

ID	Date	User	Problem	Judgment	Time	Mem	Size	Lang
977940	2016-08-29 10:23:00	remi	1000	Compilation Error	...	...	114 bytes	C++

Click on submission ID to access submission page

Click on error to see compilation output

```
1  #include <stdio>
2  using namespace std;
3
4  int main() {
5    int a,b,c;
6
7    cint >> a >> b;
8    cout << c << endl;
9  }
```

??? we need iostream here, not stdio !!!

24 hour archive: Compile info

```
1  /root/tmp/977940/977940.cpp:1:17: fatal error: stdio: No such file or directory #include
   <stdio>              ^compilation terminated.
```

Wrong answer

ID	Date	User	Problem	Judgment	Time	Mem	Size	Lang
977946	2016-08-29 10:37:29	remi	1000	**Wrong Answer**	36	1 MB	120 bytes	C++

AC tests	Total time (ms)	Ave time (ms)	Min test time (ms)	Max test time (ms)
1 / 4	...	...	8	11

Test case verdict details

Test	Judgment	Time	Mem
1	**Wrong Answer**	8 ms	1 MB
2	**Wrong Answer**	11 ms	1 MB
3	**Wrong Answer**	8 ms	1 MB
4	**Accepted**	9 ms	1 MB

Edit Download Fraud

```
1  #include <iostream>
2  using namespace std;
3
4  int main() {
5    int a,b,c;
6
7    cin >> a >> b;
8    cout << 2*a << endl;
9  }
10
```

Some tests may give the correct answer by chance…!
In this case, test case 4 seem to have a==b, so that
2*a == a+b

Correct solution: a+b

Links

- Competitive programming book:
  https://sites.google.com/site/stevenhalim/

- Advices on training the team
  http://lavergne.gotdns.org/CII/papers/TrainingICPC.pdf

- Cookbooks
  - https://apps.topcoder.com/forums/?module=Category&categoryID=4532
  - https://github.com/ntuorangejuice/cheat-sheet
  - https://github.com/jaehyunp/stanfordacm

ICPC Contest

Calendar

- **Sep 5-24 2016**: Registration to CLC
- **Oct 1st 2016**: Caribbean Local Contest (CLC 2016) UPR-RP
  - Qualify at least 2 teams to CNC
  - Organized at CCOM department

> Note: CLC date just changed to avoid Sep. 24 extended week-end

- Oct 15 2016: Caribbean National Contest (CNC 2016)
  - Puerto Rican CNC hosted by UMET
- Nov 12 2016: Caribbean Regional Finals (RF 2016)
  - Hosted by PUCMM, Dominican Republic
- May 20-25 2017: World finals (WF 2017) in South Dakota

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Team composition

- 1 Team
  - 1 Name
  - 3 Students
  - 1 Coach (non-competing student or faculty)
  - Composition does not change from locals to finals

- Eligibility constraints
  - Started University in 2012 or later (i.e. 4th year max)
  - Born in 1993 or later (i.e. 23 years old max)

Detailed rules : https://coj-forum.uci.cu/viewtopic.php?f=38&t=3072

(Tentative) Contest organization

October 1st, 2016. Computer Science Department UPR-RP

Time	Activity	Room	Participants
08:30 a.m. – 09:00 a.m.	**Account setup***	Contest room	Contestants, Coaches
09:00 a.m. – 09:20 a.m.	**Opening and instructions***	Contest room	All
09:30 a.m. – 09:50 a.m.	**Practice contest***	Contest room	Contestants
10:00 a.m. – 02:00 p.m.	**Real contest (4h) ***	Contest room	Contestants
10:00 a.m. – 02:00 p.m.	Spectator gallery	Spectator room	Public, including coaches
11:30 a.m. - 12:00 p.m.	Snacking	Corridor	Contestants, Coaches and Organizers
02:00 p.m. - 03:00 p.m.	**Lunch**	Corridor	Contestants, Coaches and Organizers
03:30 p.m. - 04:00 p.m.	**Prize ceremony***	Contest room	All
04:00 p.m. - 05:00 p.m.	**Analysis of solutions**	Contest room	All

Activities marked with * are mandatory for contestants

Real contest: equipment

- Provided: preinstalled computer
  - Linux system
  - Code editors (Emacs, Vi, gedit, Eclipse…)
  - Local compilers: GCC, Java, Python
  - Documentation: man pages, Java SDK doc,
    C++ STL doc…

- Allowed: paper documentation
  - Dictionary, printed books, personal notes…

- Not allowed: any other electronic devices
  - Mobile phone, laptop, computer peripherals (USB key, mouse…),
    audio/video recorder, calculator…

Real contest: dynamic

- Number of problems: at least 8
  - In Caribbean contests, given both in English and Spanish.
  - Language for submissions: C, C++, Java
- Duration 4h
  - First 3h10: normal time
    - teams can see ranking and judgments of everyone
  - Last 48 minutes: frozen time
    - ranking is not updated
    - teams can see only their own judgment
  - Last 12 minutes: dead time
    - neither ranking nor judgments are visible

- You get a colored balloon each time you solve a problem :-)

Standings (rank)

- First ranked by number of problems solved

- If equal, sort by accumulated time for solving
  - Ex: If solved 2 problems,
    P5 at time 1:30 and P2 at time 2:00
    then accumulated time will be 1:30+2:00=3:30

- If equal, sort by time to solve last problem

- Penalties
  - Each rejected submission for a problem adds 00:20
    (not counted if problem is not solved in the end)

Prizes

- Local contest
  - Best three teams

- Qualification to next round
  - First 2 UPR-RP teams qualify for Puerto Rican National Contest, held Oct 15.
  - Depending on availability, more teams may be invited (must solve at least one problem)

Links

- UPR-RP Local page:
  - http://ccom.uprrp.edu/~rmegret/teaching/icpc2016.html
- COJ:
  - http://coj.uci.cu/index.xhtml
  - http://coj.uci.cu/contest/contestview.xhtml?cid=1495
- ICPC 2016 Forum:
  - https://coj-forum.uci.cu/viewforum.php?f=38
- How to register to ICPC:
  - https://coj-forum.uci.cu/viewtopic.php?f=38&t=3078