



# Competitive Programming

From Problem 2 Solution in  $O(1)$

## Online Judge - UVA, SPOJ and others

**Mostafa Saad Ibrahim**

PhD Student @ Simon Fraser University

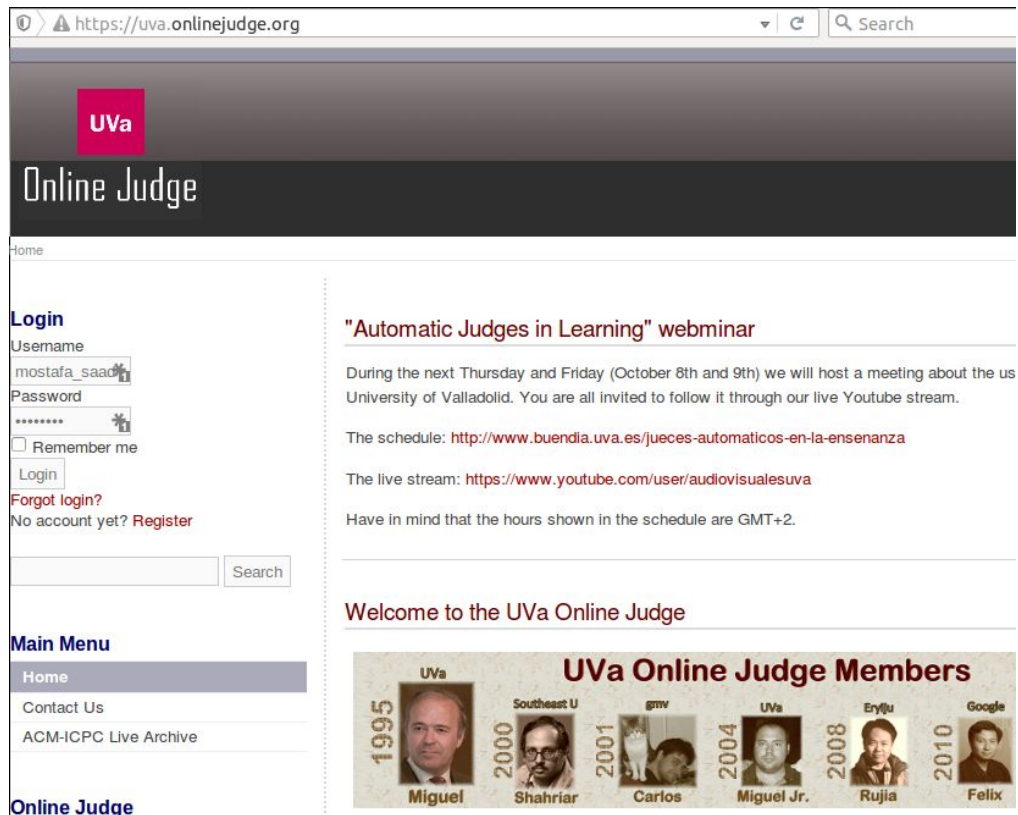


# OJs

- So far we clarified the most 2 important OJs for juniors to start training
- You can **optionally**, listen to this video now
- Or later when you practice enough on other judges
- Every judge has its special theme for problems. The diversity of judges enhance several knowledge and skills for you

# UVA Online judge

- <https://uva.onlinejudge.org/>
- University of Valladolid
- Do normal registration



The screenshot shows the UVA Online Judge website. At the top, there's a navigation bar with the UVA logo and the text "Online Judge". Below this, there's a "Login" section with fields for "Username" (containing "mostafa\_saad") and "Password" (masked with dots). There's a "Remember me" checkbox and a "Login" button. Below the login section, there's a "Forgot login?" link and a "No account yet? Register" link. To the right of the login section, there's a "Search" button. Below the login section, there's a "Main Menu" section with links for "Home", "Contact Us", and "ACM-ICPC Live Archive". At the bottom, there's a "Welcome to the UVA Online Judge" message. To the right of the welcome message, there's a section titled "Automatic Judges in Learning" webinar, which includes text about a meeting on October 8th and 9th, a schedule link, a live stream link, and a note about GMT+2. Below this, there's a "UVa Online Judge Members" section with a timeline of members from 1995 to 2010, including Miguel, Shahriar, Carlos, Miguel Jr., Rujia, and Felix.

https://uva.onlinejudge.org

UVA

Online Judge

Home

Login

Username

mostafa\_saad

Password

Remember me

Login

Forgot login?

No account yet? Register

Search

Main Menu

Home

Contact Us

ACM-ICPC Live Archive

Online Judge

"Automatic Judges in Learning" webinar

During the next Thursday and Friday (October 8th and 9th) we will host a meeting about the us University of Valladolid. You are all invited to follow it through our live Youtube stream.

The schedule: <http://www.buendia.uva.es/jueces-automaticos-en-la-ensenanza>

The live stream: <https://www.youtube.com/user/audiovisualesuva>

Have in mind that the hours shown in the schedule are GMT+2.

Welcome to the UVA Online Judge

UVa Online Judge Members

1995 Miguel

2000 Shahriar

2001 Carlos

2004 Miguel Jr.

2008 Rujia

2010 Felix

# UVA Main Menu

- Quick Submit
  - Fast submission without open problem
- Migrate: For old users
- Electronic Board: Qs Forum
- My uHint: External tool
- Search utility
- And others...explore

## Contests

- Running contests
- Coming contests
- Past contests
- Contest ranking

## Online Judge

- Quick Submit
- Migrate submissions
- My Submissions
- My Statistics
- My uHint with Virtual Contest Service
- Browse Problems
- Quick access, info and search
- Problemsetters' Credits
- Live Rankings
- Site Statistics
- Contests
- Electronic Board
- Additional Information
- Other Links

# UVA: Browse Problems

Problem Set Volumes (100...1999)
Contest Volumes (10000...)
Prominent Problemsetters
ACM-ICPC World Finals
ACM-ICPC Dhaka Site Regional Contests
Western and Southwestern European Regionals
Programming Challenges (Skiena & Revilla)
Rujia Liu's Presents
AOAPC I: Beginning Algorithm Contests (Rujia Liu)
AOAPC I: Beginning Algorithm Contests -- Training Guide (Rujia Liu)
AOAPC II: Beginning Algorithm Contests (Second Edition) (Rujia Liu)
Competitive Programming: Increasing the Lower Bound of Programming Contests (Steven & Felix Halim)
Competitive Programming 2: This increases the lower bound of Programming Contests. Again (Steven & Felix Halim)
Competitive Programming 3: The New Lower Bound of Programming Contests (Steven & Felix Halim)

Volume 1 (100-199)
Volume 2 (200-299)
Volume 3 (300-399)
Volume 4 (400-499)
Volume 5 (500-599)
Volume 6 (600-699)
Volume 7 (700-799)
Volume 8 (800-899)
Volume 9 (900-999)
Volume 10 (1000-1099)
Volume 11 (1100-1199)
Volume 12 (1200-1299)
Volume 13 (1300-1399)
Volume 14 (1400-1499)
Volume 15 (1500-1599)
Volume 16 (1600-1699)
Volume 17 (1700-1799)

✓	100 - The $3n + 1$ problem
✓	101 - The Blocks Problem
✓	102 - Ecological Bin Packing
✓	103 - Stacking Boxes
✓	104 - Arbitrage
✓	105 - The Skyline Problem
✓	106 - Fermat vs. Pythagoras
✓	107 - The Cat in the Hat
✓	108 - Maximum Sum
✓	109 - SCUD Busters
✓	110 - Meta-Loopless Sorts
✓	111 - History Grading

For faster browsing, you may use <https://uva.onlinejudge.org/external/>

# UVA: Quick Submit

## Quick Submit

Problem ID

100



Language

- ☐ ANSI C 4.8.2 - GNU C Compiler with options: -lm -lcrypt -O2 -pipe -ansi -DONLINE\_JUDGE
- ☐ JAVA 1.7.0 - Java Sun JDK
- ☐ C++ 4.8.2 - GNU C++ Compiler with options: -lm -lcrypt -O2 -pipe -DONLINE\_JUDGE
- ☐ PASCAL 2.6.2 - Free Pascal Compiler
- ☒ C++11 4.8.2 - GNU C++ Compiler with options: -lm -lcrypt -O2 -std=c++11 -pipe -DONLINE\_JUDGE

Paste your code...

```
int main()
{
    int s, e, i, temp, max;
    while(cin>>s>>e)
    {
        cout<<s<<" "<<e<<" ";
        if(s > e)
            temp = s, s = e, e = temp;
    }
}
```



# UVA Forums

<https://uva.onlinejudge.org/board/index.php>

**phpBB®**  
creating communities

**UVa OJ Board**  
The UVa Online Judge board

Quick links  FAQ

 **Board index**

## REAL TIME CONTESTS AND LAST MINUTE INFORMATION

### General



General topic about Valladolid Online Judge

**Moderator:** Board moderators

### Real Time Clarification



This board is read/only, and you will be able to read the possible clarifications of the run clarification request, please send an email to the organizer of the contest (NOT to the Judge). There is no contest defined at this time. This board will become active when a contest is



site:uva.onlinejudge.org 3n+1 problem

**Web**

Videos

Images

News

Maps

M

About 272 results (0.56 seconds)

**The 3n + 1 problem - UVa Online Judge - A**

<https://uva.onlinejudge.org/index.php?...8...problem&p>

Background. **Problems** in Computer Science are often clas certain class of **problems** (e.g., NP, Unsolvable, Recursive)

**100 - The 3n + 1 problem - Page 92 - UVa O**

<uva.onlinejudge.org> > ... > **Help on the Problemset > Vol**

Jun 27, 2014 - I solved the **3n+1 problem** with two methods limit exceeded. The other is set a cache[] array to save the

**Volume 1 (100-199) - UVa Online Judge - A**

[https://uva.onlinejudge.org/index.php?option=com\\_onli](https://uva.onlinejudge.org/index.php?option=com_onli)

Results 1 - 100 of 100 - 100 - The 3n + 1 problem, 664825.

# UVA: uhint: compare

uhint a tool developed by **felix halim**, brother of **steven halim**, the author of Competitive Programming books.

Steven also has a nice site (world of seven) to give hints about UVA problems

The available operators are: union **+**, subtraction **-**, intersection **&**, and brackets **()** to force operator precedence.

Expression:  \*

**Result of *mohammadkotb & mostafa\_saad* : (226 items)**

100 103 105 108 109 111 113 116 124 147 148 154 155 156 160 164 167 184 190 191 193 195 200 202 218 231 259 260 263 270 272 273 275 294 315 324 337 357 369 374 378 383 389 401 408 409 417 424 438 439 441 446 459 460 469 476 477 478 481 483 488 495 497 507 530 531 534 536 542 543 544 558 562 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 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2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2818 2819 2820 2821 2822 2823 2824 2825 2826 2827 2828 2829 2830 2831 2832 2833 2834 2835 2836 2837 2838 2839 2840 2841 2842 2843 2844 2845 2846 2847 2848 2849 2850 2851 2852 2853 2854 2855 2856 2857 2858 2859 2860 2861 2862 2863 2864 2865 2866 2867 2868 2869 2870 2871 2872 2873 2874 2875 2876 2877 2878 2879 2880 2881 2882 2883 2884 2885 2886 2887 2888 2889 2890 2891 2892 2893 2894 2895 2896 2897 2898 2899 2900 2901 2902 2903 2904 2905 2906 2907 2908 2909 2910 2911 2912 2913 2914 2915 2916 2917 2918 2919 2920 2921 2922 2923 2924 2925 2926 2927 2928 2929 2930 2931 2932 2933 2934 2935 2936 2937 2938 2939 2940 2941 2942 2943 2944 2945 2946 2947 2948 2949 2950 2951 2952 2953 2954 2955 2956 2957 2958 2959 2960 2961 2962 2963 2964 2965 2966 2967 2968 2969 2970 2971 2972 2973 2974 2975 2976 2977 2978 2979 2980 2981 2982 2983 2984 2985 2986 2987 2988 2989 2990 2991 29



# UVA: uhunt: view user

Your UVA username:  \*

Search Problem Number:  \*

[\[ Sign In \]](#)

[View Live Submissions](#)

## mostafa saad ibrahim (mostafa\_

### Progress over the Years

Year	Progress
06	74
07	148
08	222
09	296
10	370
11	444
12	470
13	490
14	500
15	516

### Submissions Statistics

Category	Count
AC	1148
PE	189
WA	1598
TL	397
ML	58
CE	520
RE	321
OT	82

### Last Submissions

Problem	Verdict
108 - Maximum Sum	Accepted
108 - Maximum Sum	Accepted
108 - Maximum Sum	Compile error
100 - The 3n + 1 problem	Accepted
111 - History Grading	Accepted

**Solved : 516, Submissions : 4313**

100 101 102 103 104 105 106 107 108 109 111 112 113 115 116 117 **118** 142 144 146 147 148 151 **153** 154 155 156 **160** 164 167 180 183 184 **187** 259 260 263 264 270 271 272 273 275 280 290 **291** 294 **299** 302 304 305 357 362 369 371 374 **378** 382 **383** 386 389 400 401 406 408 409 412 **413** 458 459 **460** 464 465 466 469 471 476 477 478 481 483 486 488 492 **494** 536 537 541 542 543 544 558 562 568 571 572 575 579 583 588 **591** 599 681 684 686 694 699 706 713 719 727 732 737 755 757 759 763 776 784 7 889 895 897 898 10000 10002 10003 10004 10006 10007 **10008** 10009 10038 10041 10042 10048 10054 10055 10062 10065 10066 10071 10074

# UVA: uhunt: CP books

## Exercises

### Competitive Programming Exercises



[FB Page](#) | [Info](#) | [Buy](#)  
Edition: **1st**, **2nd**, **3rd**

[Steven Halim](#) and I published the [Competitive Programming](#) book which is targetted to help regular computer science students to quickly get up and running for the [ACM ICPC](#) as well as [IOI](#). The book discusses the types of problems that are frequently occurs in programming contests. The exercises have been integrated to this uHunt tool so that you can keep track of your progress. To get started, select a chapter from the table on the right. Each chapter has starred problems (i.e., a must try problem). Happy solving :)



#### 3rd Edition's Exercises (switch to: **1st**, **2nd**, **3rd**)

Book Chapters	Starred ★	ALL
1. Introduction	<div><div></div></div> 23%	<div><div></div></div> 17%
2. Data Structures and Libraries	<div><div></div></div> 29%	<div><div></div></div> 23%
3. Problem Solving Paradigms	<div><div></div></div> 24%	<div><div></div></div> 25%
4. Graph	<div><div></div></div> 31%	<div><div></div></div> 32%
5. Mathematics	<div><div></div></div> 42%	<div><div></div></div> 36%
6. String Processing	<div><div></div></div> 30%	<div><div></div></div> 32%
7. (Computational) Geometry	<div><div></div></div> 16%	<div><div></div></div> 30%
8. More Advanced Topics	<div><div></div></div> 7%	<div><div></div></div> 10%
9. Rare Topics	<div><div></div></div> 29%	<div><div></div></div> 32%

#### Ad Hoc Mathematics Problems (12/33 = 36%)

##### The Simpler Ones (0/3)

- 10773 - Back to Intermediate ... ★ | [discuss](#) Lev 3 --- ? ---
- 11723 - Numbering Roads ★ | [discuss](#) Lev 3 --- ? ---
- 11875 - Brick Game ★ | [discuss](#) Lev 2 --- ? ---

##### Mathematical Simulation (Brute Force), easier (2/3)

- 382 - Perfection ★ | [discuss](#) Lev 1 ✓ 0.002s/3112
- 1225 - Digit Counting ★ | [discuss](#) Lev 2 --- ? ---
- 10346 - Peter's Smokes ★ | [discuss](#) Lev 1 ✓ 0.000s/1488

#### Java BigInteger Class (5/12 = 41%)

##### Basic Features (1/3)

- 713 - Adding Reversed Num... ★ | [discuss](#) Lev 2 ✓ 0.008s/2361(6)
- 10523 - Very Easy !!! ★ | [discuss](#) Lev 3 --- ? ---
- 11879 - Multiple of 17 ★ | [discuss](#) Lev 3 --- ? ---

##### Bonus Features: Base Number Conversion (3/3)

- 343 - What Base Is This? ★ | [discuss](#) Lev 3 ✓ 0.092s/1177(1)
- 389 - Basically Speaking ★ | [discuss](#) Lev 2 ✓ 1.990s/3077(11)
- 10551 - Basic Remains ★ | [discuss](#) Lev 3 ✓ 0.049s/787

# UVA: Steven: Methods to Solve

Maintained by Steven halim:

- **1000+** hints over problems
- Problem Level and Category

## VOL: AVAILABLE HINTS

[100: 44](#)  
[101: 43](#)  
[102: 31](#)  
[103: 30](#)  
[104: 27](#)  
[105: 36](#)  
[106: 53](#)  
[107: 30](#)  
[108: 30](#)  
[109: 37](#)  
[110: 44](#)  
[111: 35](#)  
[112: 40](#)  
[113: 30](#)  
[114: 41](#)  
[115: 55](#)  
[116: 00](#)

No	Problem Name	*	Algorithm
100-117: Unknown Source			
100	<a href="#">The 3n + 1 Problem</a>	2.5	Ad Hoc
101	<a href="#">The Blocks Problem</a>	4.5	Simulation
102	<a href="#">Ecological Bin Packing</a>	2.5	Ad Hoc, Complete Search
103	<a href="#">Stacking Boxes</a>	5.0	Ad Hoc, DAG, Topological Sort
104	<a href="#">Arbitrage</a>	5.0	Floyd Warshall
105	<a href="#">The Skyline Problem</a>	4.0	Ad Hoc
106	<a href="#">Fermat vs. Pythagoras</a>	6.5	Math
107	<a href="#">The Cat in the Hat</a>	*	-
108	<a href="#">Maximum Sum</a>	7.0	DP

## 100 - The 3n+1 Problem

One of the simplest problem in this online judge. Simply follows the problem description. The only trap numbers between  $i$  and  $j$  if  $i < j$  or between  $j$  and  $i$  if  $j > i$ .



# UVA: uvatoolkit tool

- [See Categories...](#)Execute a test case

The screenshot shows the UVA toolkit website at `uvatoolkit.com/problemsolve.php`. The page has a dark blue header with the text "UVA toolkit" and "Problem database & solver". Below the header is a promotional banner for a \$5 exchange offer with free shipping, featuring a small image of a man and a box of coins. To the right of the banner are the details "EXCLUSIVE OFFER" and "LIMITED QUANTITIES", along with a red "GET YOURS" button. Below the banner is a search bar with the text "Search:" and a white input field. Below the search bar, it says "Showing 1464 problems." and a table of problems.

ID	Title	
100	The $3n + 1$ problem	ad hoc, simulation.
101	The Blocks Problem	ad hoc, simulation.
102	Ecological bin packaging	greedy, ad hoc.
103	Stacking Boxes	DP, graph theory, longest path, DA
104	Arbitrage	graph theory, all-pairs shortest paths

# UVA: Finally

- UVA Forums are so good..learn by read/ask
- Many authors published their code on web .. so search for solutions (e.g. [See 1](#))
  - Google UVA 100  $3n+1$  filetype:c++
- Many websites describes classification for UVA problems types...and [tools](#)
- Little sites give problem level (e.g. steven)
- Many books gives some order to solve the problems (e.g. CP, Programming Challenge)

# UVA: Finally

- When UVA site doesn't open => from your browser and remove any cookie related to UVA (E.g. search name **UVA** and also **judge**)
  - If don't know how to remove cookies, please search **Google** (E.g. how to remove cookies in Firefox)
- UVA doesn't provide test cases..neither seeing others code. It also doesn't give access to your submitted codes :(



# SPOJ

- SPOJ is another popular OJ. Similar to UVA style. It has collection of problems to try
- In SPOJ, you can see you previous codes
- Sorting by # of solved may be good indicator

## list of classical problems

S	ID	NAME	QUALITY	USERS	ACC %
✓	1	Life, the Universe, and Everything	👍 78	82317	33.35
✓	42	Adding Reversed Numbers	👍 15	30488	48.12
✓	11	Factorial	👍 30	25649	45.50
—	2	Prime Generator	👍 113	25433	15.77
✓	24	Small factorials	👍 24	21059	30.35

# SPOJ

## Most popular tags

#dynamic-programming (172) #ad-hoc-1 (150)  
#number-theory (66) #math (61)  
#binary-search (58) #tree (50)  
#bitmasks (44) #bfs (35) #graph-theory (30)  
#basics (27) #big-numbers (26)  
#simple-math (24) #recursion (22)  
#geometry (19) #sorting (19)  
#shortest-path (16) #max-flow (16)  
#convex-hull (16) #scc (16) #dfs (15) and  
**155** more...

 Submit solution!

Added by: [adrian](#)  
Date: 2004-05-28  
Time limit: 1s  
Source limit: 2000B  
Memory limit: 1536MB  
Cluster: [Cube \(Intel Pentium G860 3GHz\)](#)  
Languages: All

ID		DATE	PROBLEM	RESULT
3787443		2010-07-02 21:55:54	Small factorials	<b>accepted</b> <a href="#">edit</a> <a href="#">ideone it</a>
936494		2007-06-29 01:14:01	Small factorials	<b>accepted</b> <a href="#">edit</a> <a href="#">ideone it</a>

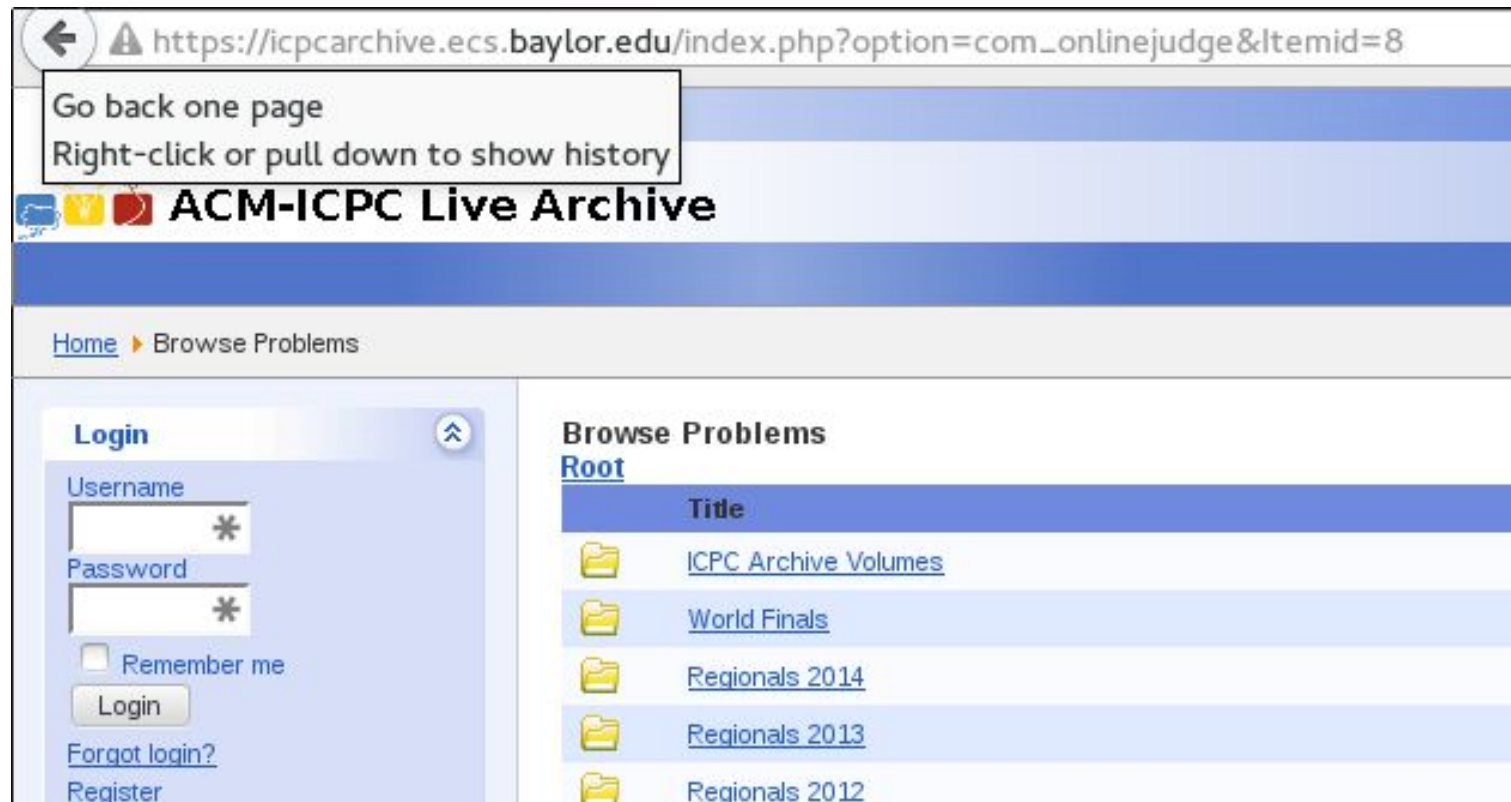
## Source code 3787443

SPOJ submission 3787443 (C++ 5) [plaintext](#) [list](#) [stats](#)

```
1. # include<iostream>
2. # include<vector>
3. # include<string>
4. using namespace std;
5. int get(int &num)
6. {
7.     int r=(num%10);
8.     num=num/10;
9.     return r;
10. }
11. vector<int> reverse(int n)
```

# ACM ICPC Archive

Live Archive has set of contests for Regionals and World Finals. It is good source for **team competitions**. Its style is like any web OJ.



The screenshot shows the ACM-ICPC Live Archive website. The browser address bar displays the URL: [https://icpcarchive.ecs.baylor.edu/index.php?option=com\\_onlinejudge&Itemid=8](https://icpcarchive.ecs.baylor.edu/index.php?option=com_onlinejudge&Itemid=8). A tooltip for the back button reads: "Go back one page. Right-click or pull down to show history." The page title is "ACM-ICPC Live Archive". Below the title, there is a breadcrumb trail: "Home > Browse Problems". The page is divided into two main sections. On the left is the "Login" section, which includes fields for "Username" and "Password", a "Remember me" checkbox, a "Login" button, and links for "Forgot login?" and "Register". On the right is the "Browse Problems" section, which starts with a "Root" link and a table of problem categories. The table has a header "Title" and lists several categories with folder icons: "ICPC Archive Volumes", "World Finals", "Regionals 2014", "Regionals 2013", and "Regionals 2012".

Go back one page  
Right-click or pull down to show history

ACM-ICPC Live Archive

[Home](#) > [Browse Problems](#)

**Login**

Username \*

Password \*

☐ Remember me






Login

[Forgot login?](#)

[Register](#)

**Browse Problems**

[Root](#)

Title
 <a href="#">ICPC Archive Volumes</a>
 <a href="#">World Finals</a>
 <a href="#">Regionals 2014</a>
 <a href="#">Regionals 2013</a>
 <a href="#">Regionals 2012</a>

# I/O of WF/Regionals

acmacpc.org/archive/y2013

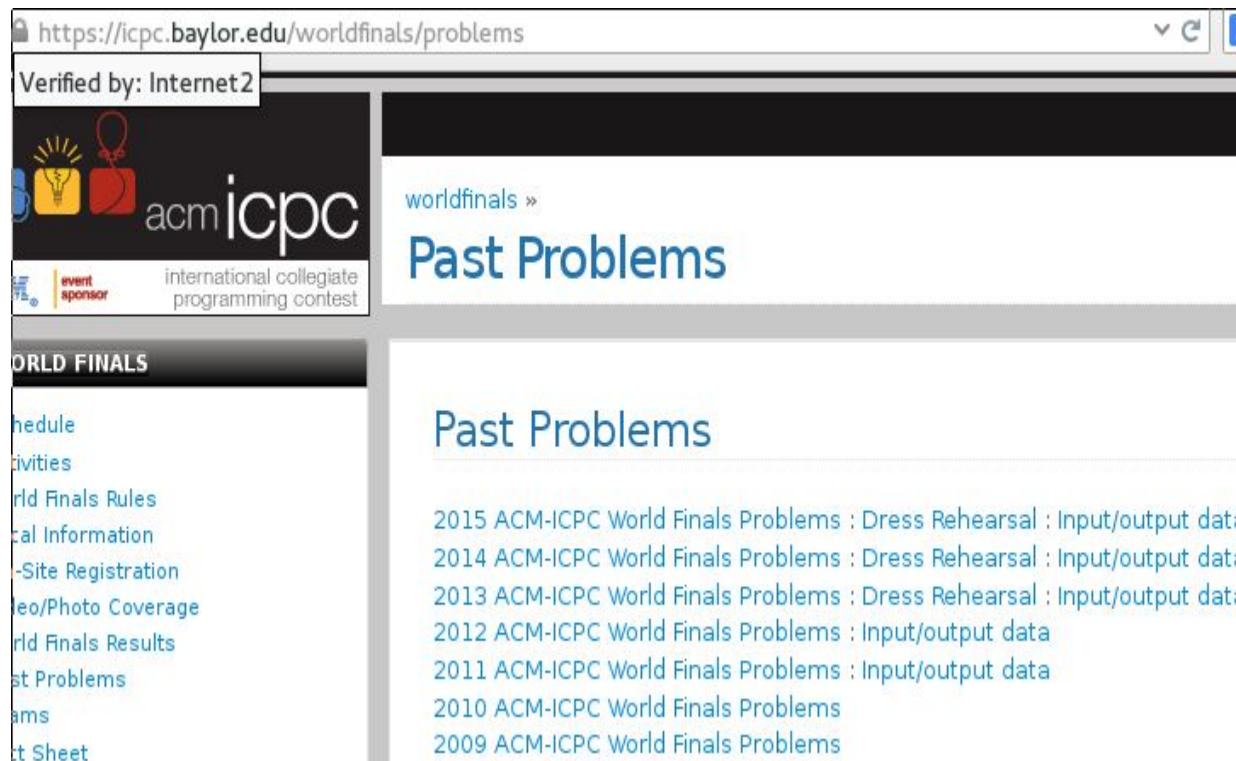
## The Contest

The problem-set was made of 12 problems.

All problems except two problems were solved.  
F. Only two teams managed to solve problem F.

## The Judges I/O

- A. The Alphabet Sticker
- B. Swyper Keyboard
- C. Increasing Shortest Path
- D. Cup of Cowards
- E. Balloons Colors
- F. NASSA's Robot
- G. The Stones Game
- H. Super Ants
- I. Omar Loves Candies
- J. Modified LCS
- K. Mario Kart
- L. Omar's Bug



The screenshot shows a web browser window with the URL <https://icpc.baylor.edu/worldfinals/problems>. The page is titled "Past Problems" and features the ACM-ICPC logo and "international collegiate programming contest" text. A sidebar on the left lists navigation links: "Schedule", "Activities", "World Finals Rules", "Additional Information", "Site Registration", "Video/Photo Coverage", "World Finals Results", "Past Problems", "Teams", and "Contact Sheet". The main content area lists the following past problems:

- 2015 ACM-ICPC World Finals Problems : Dress Rehearsal : Input/output data
- 2014 ACM-ICPC World Finals Problems : Dress Rehearsal : Input/output data
- 2013 ACM-ICPC World Finals Problems : Dress Rehearsal : Input/output data
- 2012 ACM-ICPC World Finals Problems : Input/output data
- 2011 ACM-ICPC World Finals Problems : Input/output data
- 2010 ACM-ICPC World Finals Problems
- 2009 ACM-ICPC World Finals Problems

# a2oj

- Very nice recent online judges. Core feature is the **join** of the many **other online judges**
- Add your **ID** for the other online judges and get whole list of what you solved over them
- Create a contest (public/private(of **new** problems or from the **other** online judges
- Create group of users to do practice on set of problems
- Some tools for TopCoder and CodeJam

# a2oj

- It also has set of **ladders**, each ladder has set of **sorted** problems..blocking style
- Juniors can use them to train
- It also offers **categorization** to problems

[First Time To Solve](#)

[Little Experience](#)

[The Egyptian Olympiad in Informatics](#)

[Codeforces Div. 2, A](#)

[Codeforces Div. 2, B](#)

[DFS & BFS & Dijkstra](#)

[math](#)

[Greedy](#)

[brute force](#)

[data structures](#)



# a2oj

- The site will tell you how to add the IDs
- or [see](#)

GCJ Nickname	:	<input type="text" value="mostafa.saad.fci"/>	
TopCoder Handle	:	<input type="text" value="mostafa_saad"/>	
UVa User ID	:	<input type="text" value="868"/>	<a href="#">How to get it?</a>
Live Archive User ID	:	<input type="text" value="10076"/>	<a href="#">How to get it?</a>
SPOJ Username	:	<input type="text" value="mostafa_saad"/>	
		<input type="checkbox"/> Is using <a href="#">SPOJ Brazil</a>	
		<input type="checkbox"/> Is using <a href="#">SPOJ Poland</a>	
		<input type="checkbox"/> Is using <a href="#">SPOJ Vietnam</a>	
Codeforces Handle	:	<input type="text" value="mostafa.saad.fci"/>	
TJU User ID	:	<input type="text" value="mostafa89"/>	
SGU User ID	:	<input type="text"/>	
PKU User ID	:	<input type="text" value="mostafa_saad"/>	
Timus User ID	:	<input type="text"/>	<a href="#">How to get it?</a>
CodeChef Username	:	<input type="text"/>	
ZOJ User ID	:	<input type="text"/>	<a href="#">How to get it?</a>
URI User ID	:	<input type="text"/>	<a href="#">How to get it?</a>

# USACO

- USACO is the United States of America Computing Olympiad
- It is **not advised** for training of ACM ICPC. You may do it one day later
- Training Gateway
  - 6 chapters, each has problems...**IOI style**..Blocking Style
  - Evaluation over test case...see case you failed in it
  - See analysis after getting Acceptance
  - Many put their solutions on web
- 6 contests per year (Bronze, Silver, and Gold)

# Finally

- We mentioned in the Online Judges videos many other ones
  - E.g. HackRank...CodeChef
- Feel Free to explore them
- As a newcomer...just focus with one of these OJs..and explore others later

# تم بحمد الله

علمكم الله ما ينفعكم

ونفعكم بما تعلمتم

وزادكم علماً