DOMjudge

An automated judge system for programming contests

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DOMjudge in a nutshell

- follows KISS principle
- depends on standard software (MySQL, Apache, PHP)
- uses a simple web interface as frontend for teams, jury and general public
  - problem submission
  - clarification requests
  - (re)judging
  - ...
- provides a modular system for plugging in different programming languages
- supports distributed and fully automated judging
- stores problems, submissions, testdata in a database

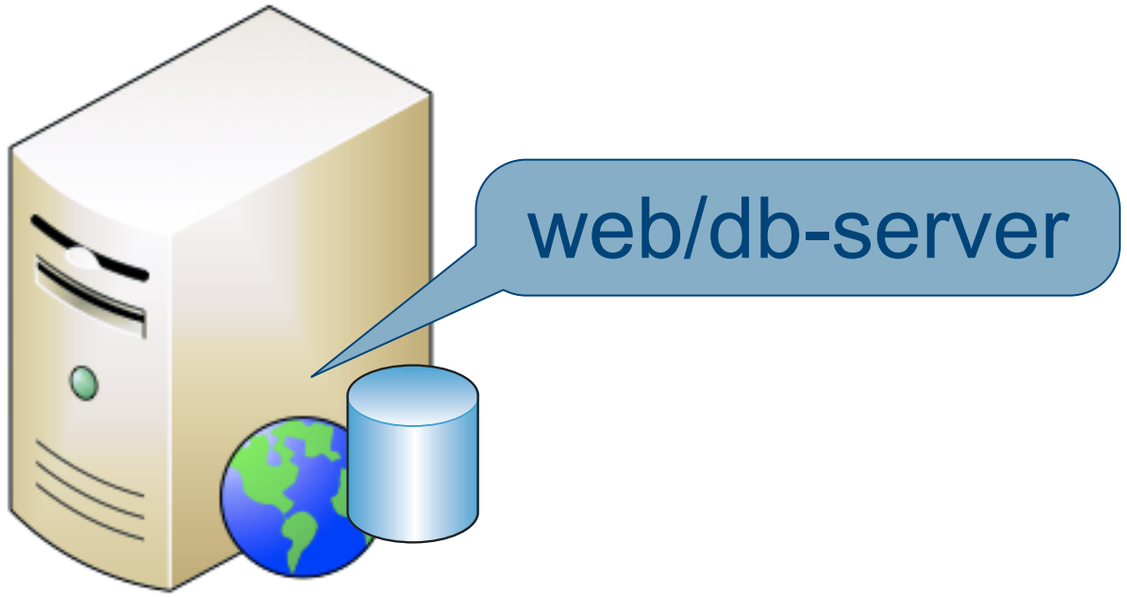
DOMjudge - where to use it?

- designed to be used in programming contests like the ACM ICPC
- fixed problem set and timeframe
- has been used in several live contests
  - North Western European Regional 2007-2009
  - South Western European Regional 2008
  - Benelux Algorithm Programming Contest 2004,’06,’07,’09
  - several local contests
- *not* designed for online submission systems, but we (and others) have a modified version

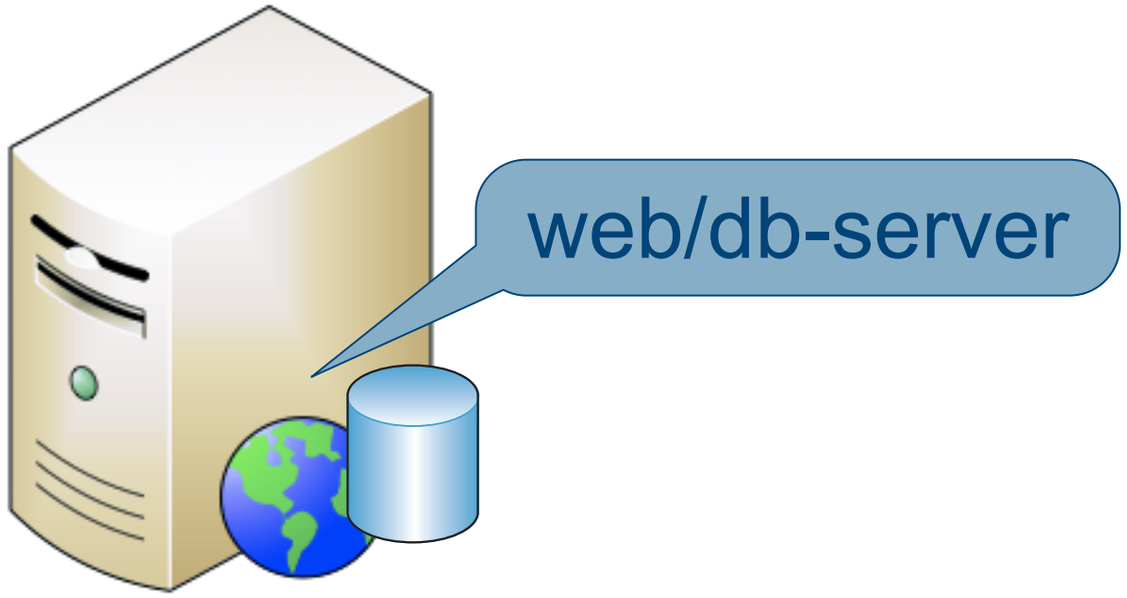
DOMjudge is Open Source Software

- originally developed by the Study Association of the University Utrecht
- licensed under the GNU General Public License
- modified versions:
  - P.J.S. University in Kosice (courseware)
  - ETH Zurich (automatic exam judging software)
  - FAU Erlangen-Nuremberg (courseware)
- DOMjudge is under active development
- Patches with bug fixes / new features from forks are applied to the original tree
- no security through obscurity, but true security as important design goal

Requirements

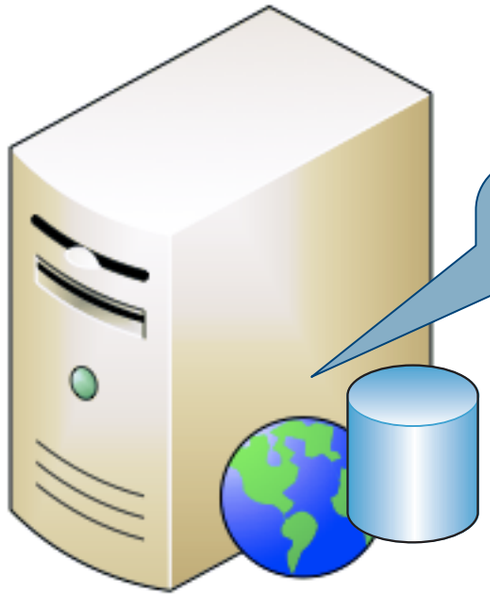


Requirements

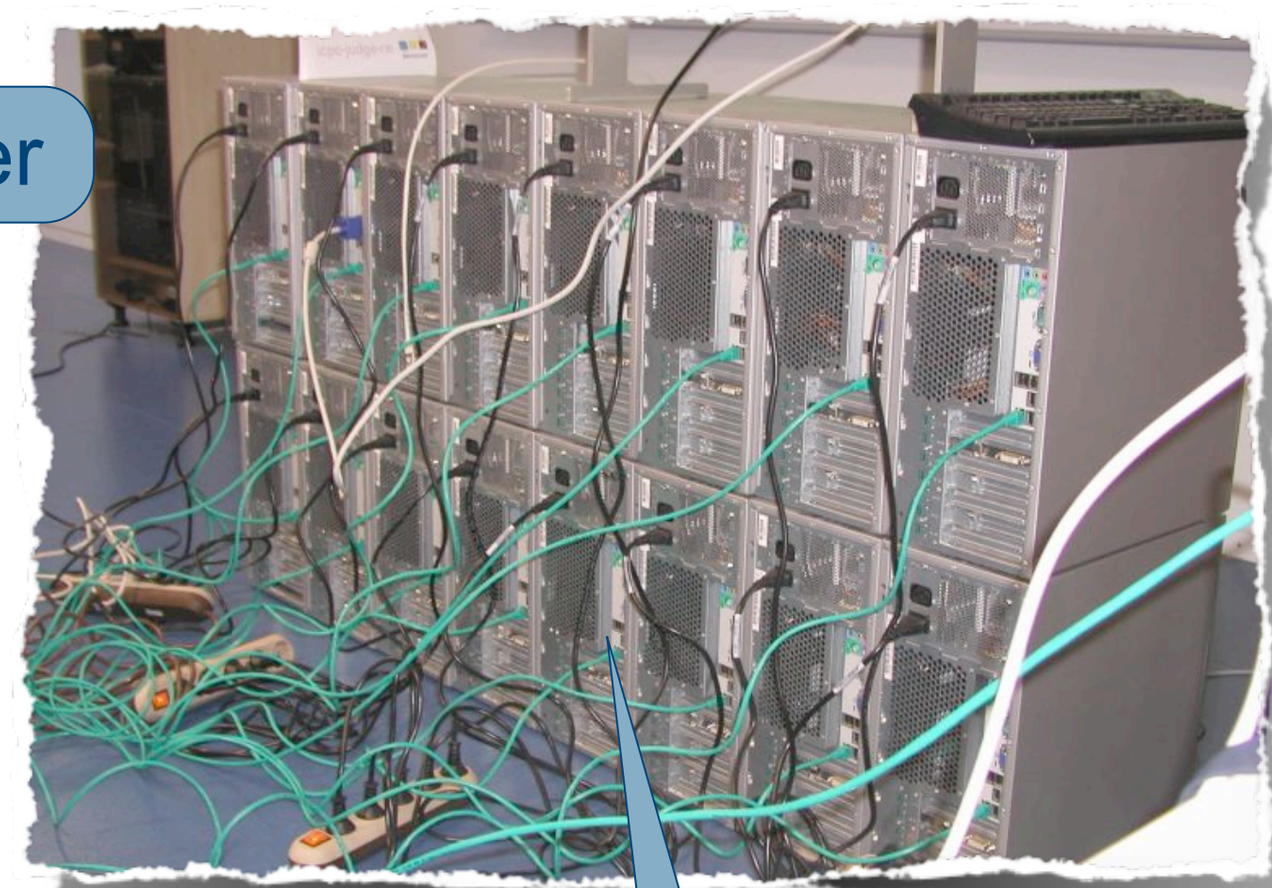


team and jury workstations

Requirements



web/db-server



one or more judgehosts

team and jury workstations

Scoreboard

Scoreboard NWERC Contest

final standings

#	AFFIL.	TEAM	SCORE		A	B	C	D	E	F	G	H
1		Marta, Irena & Sirup	8	1044	1 (31 + 0)	2 (260 + 20)	1 (48 + 0)	0	2 (111 + 20)	0	2 (156 + 20)	1 (85
2		Java the ^	7	797	3 (52 + 40)	1 (179 + 0)	2 (70 + 20)	3	1 (114 + 0)	0	2 (155 + 20)	1 (98
3		Barton Fan Club	7	950	2 (81 + 20)	1 (268 + 0)	2 (34 + 20)	7	1 (119 + 0)	0	1 (179 + 0)	2 (16
4		Random Oracles	7	1155	4 (131 + 60)	1 (196 + 0)	4 (106 + 60)	2	2 (97 + 20)	0	1 (261 + 0)	1 (19
5		Jacobs University	6	729	1 (37 + 0)	10	1 (113 + 0)	0	3 (108 + 40)	0	4 (257 + 60)	1 (78
6		CU Zero	6	864	1 (19 + 0)	1 (123 + 0)	1 (45 + 0)	0	4 (218 + 60)	0	1	7 (24
7		A-Cognito	6	871	1 (116 + 0)	3 (98 + 40)	1 (188 + 0)	2	4	0	1	2 (10
8		Murphys ⓪nglar	6	1316	1 (109 + 0)	1 (221 + 0)	4 (132 + 60)	7 (268 + 120)	0	0	3	3 (24
9		Knuth shot first	6	1411	1 (51 + 0)	1 (270 + 0)	4 (227 + 60)	0	2 (190 + 20)	0	0	7 (29
10		Kill Dash Nine	5	775	2 (45 + 20)	3 (241 + 40)	2 (102 + 20)	0	7	0	1	4 (19
11		Prime Suspects	5	863	1 (57 + 0)	7	1 (145 + 0)	2	3	0	0	2 (29
12	RWTH	Aachen Mice	5	911	1 (124 + 0)	1	1 (94 + 0)	0	2 (209 + 20)	0	0	2 (25
13		Schwenker	5	1107	1 (233 + 0)	1 (176 + 0)	1 (256 + 0)	0	7 (274 + 120)	0	0	3
14		Team Evil	4	648	1 (77 + 0)	1 (228 + 0)	4 (239 + 60)	0	0	0	0	6
15		Team BAP	4	680	2 (198 + 20)	0	1 (272 + 0)	0	0	0	0	3 (82

Scoreboard

Scoreboard NWERC Co

solved problems / time

final standings

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#submissions (time + penalty time)

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possibility to freeze/ unfreeze

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all data on scoreboard is cached

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solved problems / time

#submissions (time + penalty time)

possibility to freeze/ unfreeze

cells are clickable & filter submissions

all data on scoreboard is cached

Programming Languages

ID	name	extension	allow submit	allow judge	timefactor	
bash	Bash	.sh	no	yes	1	
c	C	.c	yes	yes	1	
cpp	C++	.cpp	yes	yes	1	
haskell	Haskell	.hs	no	yes	2	
java	Java	.java	yes	yes	1.5	
pascal	Pascal	.pas	no	yes	1	
perl	Perl	.pl	no	yes	1	

Programming Languages

ID	name	extension	allow submit	allow judge	timefactor
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c	C	.c	yes	yes	1
cpp	C++	.cpp	yes	yes	1
haskell	Haskell	.hs	no	yes	2
java	Java	.java	yes	yes	1.5
pascal	Pascal	.pas	no	yes	1
perl	Perl	.pl	no	yes	1

Autodetect language by suffix

Programming Languages

factor for slower languages

ID	name	extension	allow submit	allow judge	timefactor
bash	Bash	.sh	no	yes	1
c	C	.c	yes	yes	1
cpp	C++	.cpp	yes	yes	1
haskell	Haskell	.hs	no	yes	2
java	Java	.java	yes	yes	1.5
pascal	Pascal	.pas	no	yes	1
perl	Perl	.pl	no	yes	1

Autodetect language by suffix

Problems Overview

home | problems | judgehosts | teams | clarifications | submissions | scoreboard

Problems

ID	name	contest	allow submit	allow judge	timelimit	colour
#2	really old problem	c1	yes	yes	2	
#3	practice problem	c1	no	yes	3	
#4	warmup	c1	no	yes	1	
#5	challenge	c1	no	yes	100	
#6	foo	c1	no	yes	3	
#7	old problem	c1	no	yes	3	
BAP	test	c2	yes	yes	3	
FLTCMP	Float special compare test	c2	yes	yes	2	
HELLO	Hello World	c2	yes	yes	1	
A	An industrial spy	c3	yes	yes	2	
B	Comon Subexpression Elimination	c3	yes	yes	7	
C	Divisible Subsequences	c3	yes	yes	2	
D	Fractal	c3	yes	yes	3	
E	Mountain Road	c3	yes	yes	5	
F	Moving to Nuremberg	c3	yes	yes	4	
G	Room Assignments	c3	yes	yes	1	
H	Settlers of Catan	c3	yes	yes	5	
I	Simple Polygon	c3	yes	yes	2	
J	Wormholes	c3	yes	yes	3	

Problems Overview

home | problems | judgehosts | teams | clarifications | submissions | scoreboard

Problems

old problems grayed out

	name	contest	allow submit	allow judge	timelimit	colour
	lly old problem	c1	yes	yes	2	
	ctice problem	c1	no	yes	3	
	mup	c1	no	yes	1	
#5	llenge	c1	no	yes	100	
#6	foo	c1	no	yes	3	
#7	old problem	c1	no	yes	3	
BAP	test	c2	yes	yes	3	
FLTCMP	Float special compare test	c2	yes	yes	2	
HELLO	Hello World	c2	yes	yes	1	
A	An industrial spy	c3	yes	yes	2	
B	Comon Subexpression Elimination	c3	yes	yes	7	
C	Divisible Subsequences	c3	yes	yes	2	
D	Fractal	c3	yes	yes	3	
E	Mountain Road	c3	yes	yes	5	
F	Moving to Nuremberg	c3	yes	yes	4	
G	Room Assignments	c3	yes	yes	1	
H	Settlers of Catan	c3	yes	yes	5	
I	Simple Polygon	c3	yes	yes	2	
J	Wormholes	c3	yes	yes	3	

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Problems

old problems grayed out

	name	contest	allow submit	allow judge	timelimit	colour
	lly old problem	c1	yes	yes	2	
	ctice problem	c1	no	yes	3	
	mup	c1	no	yes	1	
#5	llenge	c1	no	yes	100	
#6	foo	c1	no	yes	3	
#7	old problem	c1	no	yes	3	
BAP	test	c2	yes	yes	3	
FLTCMP	Float special compare test	c2	yes	yes	2	
HELLO	Hello World	c2	yes	yes	1	
A	An industrial spy	c3	yes	yes	2	
B	Comon Subexpression Elimination	c3	yes	yes	7	
C	Divisible Subsequences	c3	yes	yes	2	
D	Fractal	c3	yes	yes	3	
E	Mounta		yes	yes	5	
F	Moving		yes	yes	4	
G	Room		yes	yes	1	
H	Settler		yes	yes	5	
I	Simple		yes	yes	2	
J	Wormholes	c3	yes	yes	3	

discontinue submissions/ judgings

Edit/Create Problems

home | problems | judgehosts | teams | clarifications | submissions | scoreboard

Edit problem

Problem ID:	D
Contest:	NWERC 2009
Problem name:	Fractal
Allow submit:	yes no
Allow judge:	yes no
Testcases:	5 details/edit
Timelimit:	1 sec
Balloon colour:	blue
Special run script:	
Special compare script:	fractal
Upload problem archive:	Browse...

Save Cancel

Edit/Create Problems

home | problems | judgehosts | teams | clarifications | submissions | scoreboard

Edit problem

Problem ID:	D
Contest:	NWERC 2009
Problem name:	Fractal
Allow submit:	yes no
Allow judge:	yes no
Testcases:	5 details/edit
Timelimit:	1 sec
Balloon colour:	blue
Special run script:	
Special compare script:	fractal
Upload problem archive:	Browse...

Save Cancel

corrector program that follows the ICPC validator standard

Edit/Create Problems

home | problems | judgehosts | teams | clarifications | submissions | scoreboard

Edit problem

Problem ID:	D
Contest:	NWERC 2009
Problem name:	Fractal
Allow submit:	yes no
Allow judge:	yes no
Testcases:	5 details/edit
Timelimit:	1 sec
Balloon colour:	blue
Special run script:	
Special compare script:	fractal
Upload problem archive:	Browse...

Save Cancel

multiple testcases stored in database

corrector program that follows the ICPC validator standard

Edit/Create Problems

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Edit problem

Problem ID:	D
Contest:	NWERC 2009
Problem name:	Fractal
Allow submit:	yes no
Allow judge:	yes no
Testcases:	5 details/edit
Timelimit:	1 sec
Balloon colour:	blue
Special run script:	
Special compare script:	fractal
Upload problem archive:	

Save Cancel

multiple testcases stored in database

corrector program that follows the ICPC validator standard

upload problem incl. test data as zip archive (wip)

Problem Overview

Problem D

ID:	D
Name:	Fractal
Contest:	NWERC 2009 (c3)
Allow submit:	yes toggle
Allow judge:	yes toggle
Testcases:	5 details/edit
Timelimit:	1 sec
Colour:	blue

Special compare script: `fractal`

REJUDGE ALL for problem D

Submissions for D

ID	time	team	problem	lang	result	verified	last judge
s707	20:54	Ulm 1	D	CPP	RUN-ERROR	yes	h1655266
s706	20:54	Worthless Peons	D	CPP	CORRECT	yes	h1655266
s703	20:54	Ulf	D	CPP	CORRECT	yes	h1655266

Problem Overview

Problem D

ID:	D
Name:	Fractal
Contest:	NWERC 2009 (c3)
Allow submit:	yes toggle
Allow judge:	yes toggle
Testcases:	5 details/edit
Timelimit:	1 sec
Colour:	blue
Special compare script:	`fractal`

REJUDGE ALL for problem D

rejudge problems (e.g. in case of invalid test data)

Submissions for D

ID	time	team	problem	lang	result	verified	last judge
s707	20:54	Ulm 1	D	CPP	RUN-ERROR	yes	h1655266
s706	20:54	Worthless Peons	D	CPP	CORRECT	yes	h1655266
s703	20:54	Ulf	D	CPP	CORRECT	yes	h1655266

Testcase Overview

Testcases for problem D

- Updated description for testcase 5

back to problem D

#	download	size	md5	upload new	description
1	D1.in	29 B	1688febe45552136f6c68cfce1c9bc67	Browse...	sample
	D1.out	17 B	4d67d62baac2efe8149ee2df7a1ec06b	Browse...	
2	D2.in	103 B	54a597f96fcf46b1ddd8be4f6edd3abb	Browse...	test01
	D2.out	69 B	1bd951ec33a6efde78ad384f9dbe5341	Browse...	
3	D3.in	428 B	0289eb48b757a242f9e705cd8ccbea97	Browse...	test02_boundaries
	D3.out	121 B	1e70811ac543814123d11fd75bd3686a	Browse...	
4	D4.in	5009 B	8b95b31885e9061d49a492b3c1462c86	Browse...	test03_random
	D4.out	266 B	16d52c536b9e989088f02e8b28ea2766	Browse...	
5	D5.in	5535 B	9b0ed0285edaca8b9c7492d9f6b708d2	Browse...	Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
	D5.out	456 B	07a52c067dc98905df17b83885ca4b29	Browse...	

Create new testcase

Input testdata: Browse...

Output testdata: Browse...

Description:

Submit all changes

Testcase Overview

Testcases for problem D

- Updated description for testcase 5

change order in which the testcases are judged

back to problem D

#	download	size			description
1	D1.in	29 B	1688febe4552	Browse...	sample
	D1.out	17 B	4d67d62baac2efe8149ee2df7a1ec06b	Browse...	
2	D2.in	103 B	54a597f96fcf46b1ddd8be4f6edd3abb	Browse...	test01
	D2.out	69 B	1bd951ec33a6efde78ad384f9dbe5341	Browse...	
3	D3.in	428 B	0289eb48b757a242f9e705cd8ccbea97	Browse...	test02_boundaries
	D3.out	121 B	1e70811ac543814123d11fd75bd3686a	Browse...	
4	D4.in	5009 B	8b95b31885e9061d49a492b3c1462c86	Browse...	test03_random
	D4.out	266 B	16d52c536b9e989088f02e8b28ea2766	Browse...	
5	D5.in	5535 B	9b0ed0285edaca8b9c7492d9f6b708d2	Browse...	Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
	D5.out	456 B	07a52c067dc98905df17b83885ca4b29	Browse...	

Create new testcase

Input testdata: Browse...

Output testdata: Browse...

Description:

Submit all changes

Team Overview

login	teamname	category	affiliation	host	room	status
domjudge	DOMjudge	Organisation	DHBW	wlan-fau-staff-002		0 / 0
icpc01	DHBW Mannheim	Participants	DHBW	client001	0.422	2 / 6
icpc02	Semper Avans	Participants	AHH	client002	0.422	5 / 13
icpc03	0divison	Participants	CAU	client003	0.422	2 / 7
icpc04	[Off to get pepernoten]	Participants	DEL	client004	0.422	3 / 9
icpc05	deFAUlt	Participants	FAU	client005	0.422	3 / 14
icpc06	Team TA	Participants	DTU	client006	0.422	1 / 8
icpc07	We came for free lunch	Participants	DUT	client007	0.422	1 / 10
icpc08	0x07	Participants	AU	client008	0.422	6 / 17
icpc09	The Chipmunks	Participants	HUT	client009	0.422	3 / 10
icpc10	Stack Smashers	Participants	ICL	client010	0.422	4 / 16
icpc11	Jacobs University	Participants	JUB	client011	0.422	3 / 12
icpc12	Fan Club	Participants	TKK	client012	0.422	2 / 12
icpc13	Worthless Peons	Participants	TUM	client013	0.422	2 / 14
icpc14	...	Participants	KU	client014	0.422	5 / 10
icpc15	++c;	Participants	UiO	client015	0.422	2 / 10
icpc16	We're coders, but that's ok	Participants	LU	client016	0.422	4 / 15
icpc17	/dev/mlu	Participants	MLU	client017	0.422	4 / 7

Team Overview

login	teamname	category	affiliation	host	room	status
domjudge	DOMjudge	Organisation	DHBW	wlan-fau-staff-002		0 / 0
icpc01	DHBW Mannheim	Participants	DHBW	client001	0.422	2 / 6
icpc02	[illegible]	Participants	AHH	client002	0.422	5 / 13
icpc03	[illegible]	Participants	CAU	client003	0.422	2 / 7
icpc04	[illegible]	Participants	DEL	client004	0.422	3 / 9
icpc05	deFAUlt	Participants	FAU	client005	0.422	3 / 14
icpc06	Team TA	Participants	DTU	client006	0.422	1 / 8
icpc07	We came for free lunch	Participants	DUT	client007	0.422	1 / 10
icpc08	0x07	Participants	AU	client008	0.422	6 / 17
icpc09	The Chipmunks	Participants	HUT	client009	0.422	3 / 10
icpc10	Stack Smashers	Participants	ICL	client010	0.422	4 / 16
icpc11	Jacobs University	Participants	JUB	client011	0.422	3 / 12
icpc12	Fan Club	Participants	TKK	client012	0.422	2 / 12
icpc13	Worthless Peons	Participants	TUM	client013	0.422	2 / 14
icpc14	...	Participants	KU	client014	0.422	5 / 10
icpc15	++c;	Participants	UiO	client015	0.422	2 / 10
icpc16	We're coders, but that's ok	Participants	LU	client016	0.422	4 / 15
icpc17	/dev/mlu	Participants	MLU	client017	0.422	4 / 7
[illegible]	[illegible]	Participants	NTNU		[illegible]	[illegible]

sort tables with javascript

Team Overview

login	teamname	category	affiliation	host	room	status
domjudge	DOMjudge	Organisation	DHBW	wlan-fau-staff-002		0 / 0
icpc01	DHBW Mannheim	Participants	DHBW	client001	0.422	2 / 6
icpc02	[illegible]	Participants	AHH	client002	0.422	5 / 13
icpc03	[illegible]	Participants	CAU	client003	0.422	2 / 7
icpc04	[illegible]	Participants	DEL	client004	0.422	3 / 9
icpc05	deFAUlt	Participants	FAU	client005	0.422	3 / 14
icpc06	Team TA	Participants	DTU	client006	0.422	1 / 8
icpc07	We came for free lunch	Participants	DUT	client007	0.422	1 / 10
icpc08	0x07	Participants	AU	client008	0.422	6 / 17
icpc09	The Chipmunks	Participants	HUT	client009	0.422	3 / 10
icpc10	Stack Smashers	Participants	ICL	client010	0.422	4 / 16
icpc11	Jacobs University	Participants	JUB	client011	0.422	3 / 12
icpc12	Fan Club	[illegible]	[illegible]	client012	0.422	2 / 12
icpc13	Worthless Peons	[illegible]	[illegible]	client013	0.422	2 / 14
icpc14	...	[illegible]	[illegible]	client014	0.422	5 / 10
icpc15	++c;	[illegible]	[illegible]	client015	0.422	2 / 10
icpc16	We're coders, but that's ok	Participants	LU	client016	0.422	4 / 15
icpc17	/dev/mlu	Participants	MLU	client017	0.422	4 / 7
[illegible]	Excore	Participants	NTNU	[illegible]	[illegible]	[illegible]

sort tables with javascript

strict IP checking possible

Team Overview

login	teamname	category	affiliation	host	room	status
domjudge	DOMjudge	Organisation	DHBW	wlan-fau-staff-002		0 / 0
icpc01	DHBW Mannheim	Participants	DHBW	client001	0.422	2 / 6
icpc02	[illegible]	[illegible]	[illegible]	[illegible]	0.422	5 / 13
icpc03	[illegible]	[illegible]	[illegible]	[illegible]	0.422	2 / 7
icpc04	[illegible]	[illegible]	[illegible]	[illegible]	0.422	3 / 9
icpc05	deFAUlt	Participants	FAU	client005	0.422	3 / 14
icpc06	Team TA	Participants	DTU	client006	0.422	1 / 8
icpc07	We came for free lunch	Participants	DUT	client007	0.422	1 / 10
icpc08	0x07	Participants	AU	client008	0.422	6 / 17
icpc09	The Chipmunks	Participants	HUT	client009	0.422	3 / 10
icpc10	Stack Smashers	Participants	ICL	client010	0.422	4 / 16
icpc11	Jacobs University	Participants	JUB	client011	0.422	3 / 12
icpc12	Fan Club	[illegible]	[illegible]	client012	0.422	2 / 12
icpc13	Worthless Peons	[illegible]	[illegible]	client013	0.422	2 / 14
icpc14	...	[illegible]	[illegible]	client014	0.422	5 / 10
icpc15	++c;	[illegible]	[illegible]	client015	0.422	2 / 10
icpc16	We're coders, but that's ok	Participants	LU	client016	0.422	4 / 15
icpc17	/dev/mlu	Participants	MLU	client017	0.422	4 / 7
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

sort tables with javascript

status light for login, submissions, AC

strict IP checking possible

Clarification Requests

Send Clarification

View New Clarification Requests

View Old Clarification Requests

View General Clarifications

New Requests:

ID	from	to	subject	time	text
359	nwerc70	Jury	problem F	22:36	Are there cases with non-negative values for n?

Old Requests:

ID	from	to	subject	time	text
357	nwerc25	Jury	general	14:12	In problem J, there is no constraint on the order that the vertices are input (i…
356	runners	Jury	general	14:05	TECH Balloon interface is still online, so thanks for pointing it out. j/k, g…
352	runners	Jury	general	13:28	TECH: Greyhound maakt herrie en print niet, storing in lade 3.
350	nwerc43	Jury	general	13:16	This gives the same problem.
347	nwerc43	Jury	general	13:03	Printing doesn't work. Print jobs stay in the printqueue, with status "spooling".
345	runners	Jury	general	12:59	TECH: Niet voor tijdens de wedstrijd, maar in het ballonnensysteem zie je de wit…
343	nwerc03	Jury	general	12:56	In A, can we assume that the input is sorted by type?
341	nwerc37	Jury	general	12:17	And it now responds again... Gets annoying.

Clarification Requests

Send Clarification

View New Clarification Requests

View Old Clarification Requests

View General Clarifications

new requests are highlighted with AJAX

clarifications (1 new)

New Requests:

ID	from	to	subject	time	text
359	nwerc70	Jury	problem F	22:36	Are there cases with non-negative values for n?

Old Requests:

ID	from	to	subject	time	text
357	nwerc25	Jury	general	14:12	In problem J, there is no constraint on the order that the vertices are input (i…
356	runners	Jury	general	14:05	TECH Balloon interface is still online, so thanks for pointing it out. j/k, g…
352	runners	Jury	general	13:28	TECH: Greyhound maakt herrie en print niet, storing in lade 3.
350	nwerc43	Jury	general	13:16	This gives the same problem.
347	nwerc43	Jury	general	13:03	Printing doesn't work. Print jobs stay in the printqueue, with status "spooling".
345	runners	Jury	general	12:59	TECH: Niet voor tijdens de wedstrijd, maar in het ballonnensysteem zie je de wit…
343	nwerc03	Jury	general	12:56	In A, can we assume that the input is sorted by type?
341	nwerc37	Jury	general	12:17	And it now responds again... Gets annoying.

Clarification Requests

Clarification 359

From: nwerc70: DOMjudge testteam
To: Jury
Subject: Problem F: Flight Safety
Time: 22:36

```
Are there cases with non-negative values for n?
```

Set answered

Send Response

Send to: (select...)
(select...)
ALL
nwerc70: DOMjudge testteam

Subject:

Text:

```
on-negative values for n?

read the problem statement carefully
```

Send

Balloon Interface

Time	Solved		Team	Room	Total	
20:54	B	icpc33	Joy	0.422		done
20:54	G	icpc22	Help Desk Ugly Ogres	0.422		done
20:54	C	icpc20	Oxford Surprise	0.422		done
20:54	C	icpc51	JOak	0.421		done
20:54	H	icpc51	JOak	0.421		done
20:54	G	icpc19	Team Red LS64-1	0.422		done
20:54	I	icpc51	JOak	0.421		done
20:54	J	icpc18	Excors	0.422		done
20:54	J	icpc29	KAnu - Drei Mann in einem Boot	0.422		done
20:54	I	icpc52	(>'.')>	0.421		done
20:54	C	icpc53	Codeweavers	0.421		done
20:54	A	icpc18	Excors	0.422		done

Submission Overview

newest unverified all

ID	time	team	problem	lang	result	verified	last judge
s707	20:54	Ulm 1	D	CPP	QUEUED		
s706	20:54	Worthless Peons	D	CPP	JUDGING		h1655266
s705	20:54	Team Red LS64-1	E	CPP	WRONG-ANSWER	no	h1655266
s704	20:54	We came for free lun…	B	JAVA	RUN-ERROR	yes	h1655266
s703	20:54	Ulf	D	CPP	CORRECT	no	h1655266
~~s702~~	~~20:54~~	~~Help Desk Ugly Ogres~~	~~D~~	~~JAVA~~	~~RUN-ERROR~~	~~yes~~	~~h1655266~~
s701	20:54	Wietse en Marije en …	D	CPP	CORRECT	yes	h1655266
s700	20:54	Stack Smashers	A	CPP	RUN-ERROR	yes	h1655266
s699	20:54	const int ance;	D	CPP	CORRECT	yes	h1655266
s698	20:54	We came for free lun…	D	CPP	CORRECT	yes	h1655266
s697	20:54	<s>GELIMBO</s>GEPWN…	D	CPP	CORRECT	yes	h1655266
s696	20:54	Geen Commentaar	B	CPP	COMPILER-ERROR	yes	h1655266
s695	20:54	Green IT	B	CPP	CORRECT	yes	h1655266
s694	20:54	Worthless Peons	I	CPP	RUN-ERROR	yes	h1655266

Submission Overview

newest unverified all

ID	time	team	problem	lang	result	verified	last judge
s707	20:54	Ulm 1	D	CPP	QUEUED		
s706	20:54	Worthless Peons	D	CPP	JUDGING		h1655266
s705	20:54	Team Red LS64-1	E	CPP	WRONG-ANSWER	no	h1655266
s704	20:54	We came for free lun…	B	JAVA	RUN-ERROR	yes	h1655266
s703	20:54	Ulf	D	CPP	CORRECT	no	h1655266
~~s702~~	~~20:54~~	~~Help Desk Ugly Ogres~~	~~D~~	~~JAVA~~	~~RUN-ERROR~~	~~yes~~	~~h1655266~~
s701	20:54	Wietse en Marije en …	D	CPP	CORR		266
s700	20:54	Stack Smashers	A	CPP	RUN		66
s699	20:54	const int ance;	D	CPP	COR		66
s698	20:54	We came for free lun…	D	CPP	CORRECT	yes	h1655266
s697	20:54	<s>GELIMBO</s>GEPWN…	D	CPP	CORRECT	yes	h1655266
s696	20:54	Geen Commentaar	B	CPP	COMPILER-ERROR	yes	h1655266
s695	20:54	Green IT	B	CPP	CORRECT	yes	h1655266
s694	20:54	Worthless Peons	I	CPP	RUN-ERROR	yes	h1655266

optional manual verification

Submission Overview

newest | unverified | all

ID	time	team	problem	lang	result	verified	last judge
s707	20:54	Ulm 1	D	CPP	QUEUED		
s706	20:54	Worthless Peons	D	CPP	JUDGING		h1655266
s705	20:54	Team Red LS64-1	E	CPP	WRONG-ANSWER	no	h1655266
s704	20:54	We came for free lun…	B	JAVA	RUN-ERROR	yes	h1655266
s703	20:54	Ulf	D	CPP	CORRECT	no	h1655266
~~s702~~	~~20:54~~	~~Help Desk Ugly Ogres~~	~~D~~	~~JAVA~~	~~RUN-ERROR~~	~~yes~~	~~h1655266~~
s701	20:54	Wietse en Marije en …	D	CPP	CORRECT	[illegible]	[illegible]266
s700	20:54	Stac[illegible]	A	CPP	RUN[illegible]	[illegible]	[illegible]66
s699	20:54	const[illegible]	[illegible]	CPP	COR[illegible]	[illegible]	[illegible]66
s698	20:54	We came for free lun…	D	CPP	CORRECT	yes	h1655266
s697	20:54	<s>GELIMBO</s>GEPWN…	D	CPP	CORRECT	yes	h1655266
s696	20:54	Geen Commentaar	B	CPP	COMPILER-ERROR	yes	h1655266
s695	20:54	Green IT	B	CPP	CORRECT	yes	h1655266
s694	20:54	Worthless Peons	I	CPP	RUN-ERROR	yes	h1655266

ignored submission

optional manual verification

Submission Overview

newest unverified all

ID	time	team	problem	lang	result	verified	last judge
s707	20:54	Ulm 1		CPP	QUEUED		
s706	20:54	Worthl		CPP	JUDGING		h1655266
s705	20:54	Team		CPP	WRONG-ANSWER	no	h1655266
s704	20:54	We came for free lun…	B	JAVA	RUN-ERROR	yes	h1655266
s703	20:54	Ulf	D	CPP	CORRECT	no	h1655266
~~s702~~	~~20:54~~	~~Help Desk Ugly Ogres~~	~~D~~	~~JAVA~~	~~RUN-ERROR~~	~~yes~~	~~h1655266~~
s701	20:54	Wietse en Marije en …	D	CPP	CORRECT		266
s700	20:54	Stac		CPP	RUN		66
s699	20:54	const		CPP	COR		66
s698	20:54	We came for free lun…	D	CPP	CORRECT	yes	h1655266
s697	20:54	<s>GELIMBO</s>GEPWN…	D	CPP	CORRECT	yes	h1655266
s696	20:54	Geen Commentaar	B	CPP	COMPILER-ERROR	yes	h1655266
s695	20:54	Green IT	B	CPP	CORRECT	yes	h1655266
s694	20:54	Worthless Peons	I	CPP	RUN-ERROR	yes	h1655266

status of judge queue

ignored submission

optional manual verification

FAU: Submission Overview Changes

filter options, default filter (unverified, not ignored from all users) , clear filter (show all)

AUTOMATED RELOAD IS OFF

problem->chocolate->balloon
runtime error
Spaghetti Code Monsters
Team Awesome
Team Blue
TEAM KANTHOLZ
Team Predator
Team Red
TFAU - schau mer mal
throw new Exception

A - Alien Genealogy
B - Breaking the Code
C - Clones
D - Heisenberg Uncertainty Principle
E - Invasion Force
F - Monsters on Train Trip
G - Self Replicating Worms
H - Shields
I - Space Slugs
J - Susan likes Skating

☑ unverified ☐ verified ☑ unignored ☐ ignored preview filter apply filter

s316	2010-01-23 14:30:35	argenTUM	H - Shields	cpp	CORRECT	yes	Tobias Werth
s317	2010-01-23 14:31:05	foo()-fighters	E - Invasion Force	java	TIMELIMIT	yes	Armin Heckmann
s318	2010-01-23 14:31:36	runtime error	G - Self Replicating Worms	cpp	WRONG-ANSWER	viewed	Tobias Werth, Thorsten Meinl
s319	2010-01-23 14:33:31	ctrl vs. esc	B - Breaking the Code	cpp	RUN-ERROR	viewed	Tobias Werth, Daniel Brinkers, Stephan Ritscher
s320	2010-01-23 14:34:47	0xBADF00D	E - Invasion Force	cpp	WRONG-ANSWER	viewed	Tobias Werth, Armin Heckmann
s321	2010-01-23 14:34:48	ChubbChubbs!	G - Self Replicating Worms	java	TIMELIMIT	yes	Thorsten Meinl

FAU: Submission Overview Changes

filter options, default filter (unverified, not ignored from all users) , clear filter (show all)

AUTOMATED RELOAD IS OFF

filter options

problem->chocolate->balloon
runtime error
Spaghetti Code Monsters
Team Awesome
Team Blue
TEAM KANTHOLZ
Team Predator
Team Red
TFAU - schau mer mal
throw new Exception

A - Alien Genealogy
B - Breaking the Code
C - Clones
D - Heisenberg Uncertainty Principle
E - Invasion Force
F - Monsters on Train Trip
G - Self Replicating Worms
H - Shields
I - Space Slugs
J - Susan likes Skating

☑ unverified ☐ verified ☑ unignored ☐ ignored preview filter apply filter

s316	2010-01-23 14:30:35	argenTUM	H - Shields	cpp	CORRECT	yes	Tobias Werth
s317	2010-01-23 14:31:05	foo()-fighters	E - Invasion Force	java	TIMELIMIT	yes	Armin Heckmann
s318	2010-01-23 14:31:36	runtime error	G - Self Replicating Worms	cpp	WRONG-ANSWER	viewed	Tobias Werth, Thorsten Meinl
s319	2010-01-23 14:33:31	ctrl vs. esc	B - Breaking the Code	cpp	RUN-ERROR	viewed	Tobias Werth, Daniel Brinkers, Stephan Ritscher
s320	2010-01-23 14:34:47	0xBADF00D	E - Invasion Force	cpp	WRONG-ANSWER	viewed	Tobias Werth, Armin Heckmann
s321	2010-01-23 14:34:48	ChubbChubbs!	G - Self Replicating Worms	java	TIMELIMIT	yes	Thorsten Meinl

FAU: Submission Overview Changes

filter options, default filter (unverified, not ignored from all users) , clear filter (show all)

AUTOMATED RELOAD IS OFF

filter options

problem->chocolate->balloon
runtime error
Spaghetti Code Monsters
Team Awesome
Team Blue
TEAM KANTHOLZ
Team Predator
Team Red
TFAU - schau mer mal
throw new Exception

A - Alien Genealogy
B - Breaking the Code
C - Clones
D - Heisenberg Uncertainty Principle
E - Invasion Force
F - Monsters on Train Trip
G - Self Replicating Worms
H - Shields
I - Space Slugs
J - Susan likes Skating

☑ unverified ☐ verified ☑ unignored ☐ ignored preview filter apply filter

judge tracking

s316	2010-01-23 14:30:35	argenTUM	H - Shields	[illegible]	[illegible]	yes	Tobias Werth
s317	2010-01-23 14:31:05	foo()-fighters	E - Invasion Fo[illegible]	[illegible]	[illegible]	yes	Armin Heckmann
s318	2010-01-23 14:31:36	runtime error	G - Self Replicating Worms	cpp	WRONG-ANSWER	viewed	Tobias Werth, Thorsten Meinl
s319	2010-01-23 14:33:31	ctrl vs. esc	B - Breaking the Code	cpp	RUN-ERROR	viewed	Tobias Werth, Daniel Brinkers, Stephan Ritscher
s320	2010-01-23 14:34:47	0xBADF00D	E - Invasion Force	cpp	WRONG-ANSWER	viewed	Tobias Werth, Armin Heckmann
s321	2010-01-23 14:34:48	ChubbChubbs!	G - Self Replicating Worms	java	TIMELIMIT	yes	Thorsten Meinl

Submission

Submission

Contest: NWERC 2009
Team: icpc36: Ulf
Problem: D: Fractal
Language: C++
Submitted: 2010-01-26 20:54:56
Source: view source code
Max runtime: 1 sec

Judgings

ID	start	judgehost	result
j795	21:22	h1655266	WRONG-ANSWER
→ j800	23:06	h1655266	CORRECT

REJUDGE this submission
IGNORE this submission

Judging j800

Verified: **no**; mark verified by _____ or Tobi

Judging started: 2010-01-26 23:06:25, ended: 2010-01-26 23:06:33 (judging took 8 s)

Compilation output

There were no compiler errors or warnings.

Testcase runs

#	runtime	result	description
1	0.006	CORRECT	sample
2	0.006	CORRECT	test01
3	0.006	CORRECT	test02_boundaries
4	0.008	CORRECT	test03_random
5	0.009	CORRECT	Lorem ipsum dolor si…

Submission

Submission

Contest: NWERC 2009
Team: icpc36: Ulf
Problem: D: Fractal
Language: C++
Submitted: 2010-01-26 20:54:56
Source: view source code
Max runtime: 1 sec

Judgings

ID	start	judgehost	result
j795	21:22	h1655266	WRONG-ANSWER
→ j800	23:06	h1655266	CORRECT

REJUDGE this submission
IGNORE this submission

multiple judgings

Judging j800

Verified: **no**; mark verified by _____ or Tobi

Judging started: 2010-01-26 23:06:25, ended: 2010-01-26 23:06:33 (judging took 8 s)

Compilation output

There were no compiler errors or warnings.

Testcase runs

#	runtime	result	description
1	0.006	CORRECT	sample
2	0.006	CORRECT	test01
3	0.006	CORRECT	test02_boundaries
4	0.008	CORRECT	test03_random
5	0.009	CORRECT	Lorem ipsum dolor si…

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stored in cookie

Compilation output

There were no compiler errors or warnings.

Testcase runs

#	runtime	result	description
1	0.006	CORRECT	sample
2	0.006	CORRECT	test01
3	0.006	CORRECT	test02_boundaries
4	0.008	CORRECT	test03_random
5	0.009	CORRECT	Lorem ipsum dolor si…

Single testcase result

Run 2

Description: test01_smalleasy
Runtime: 0.006 sec
Result: WRONG-ANSWER

Program output

```
100001
200000
1000
1001
307
210
305
10210
23
6
80
141
```

Diff output

```
### DIFFERENCES FROM LINE 5 ###
  1  '100001' = '100001'
  2  '200000' = '200000'
  3  '1000'   = '1000'
  4  '1001'   = '1001'
  5  '307'    ! '300'
  6  '210'    = '210'
  7  '305'    ! '300'
  8  '10210'  = '10210'
  9  '23'     = '23'
 10  '6'      = '6'
 11  '80'     = '80'
 12  '141'    = '141'
```

Single testcase result

Run 2

Description: test01_smalleasy
Runtime: 0.006 sec
Result: WRONG-ANSWER

Program output

```
100001
200000
1000
1001
307
210
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10210
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  5  '307'    ! '300'
  6  '210'    = '210'
  7  '305'    ! '300'
  8  '10210'  = '10210'
  9  '23'     = '23'
 10  '6'      = '6'
 11  '80'     =
 12  '141'    =
```

line-by-line diff

Single testcase result

Run 2

Description: test01_smalleasy
Runtime: 0.006 sec
Result: WRONG-ANSWER

Program output

```
100001
200000
1000
1001
307
210
305
10210
23
6
80
141
```

Diff output

```
### DIFFERENCES FROM LINE 5 ###
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  3  '1000'   = '1000'
  4  '1001'   = '1001'
  5  '307'    ! '300'
  6  '210'    = '210'
  7  '305'    ! '300'
  8  '10210'  = '10210'
  9  '23'     = '23'
 10  '6'      = '6'
 11  '80'     =
 12  '141'    =
```

line-by-line diff

FAU: LCS diff

```
Monsters
ComplementaryComplimentary Slime for Everyone
Aliens
```

```
Monsters[\n]
Complimentary␣[\t]␣Slime[\t]␣for␣Everyone[\n]
Aliens[\n]
```

View source code

Go to diff to previous submission

Submission s712 source: c3.s712.domjudge.E.cpp (download, edit)

```
1. #include <cstdio>
2. #include <cmath>
3. #include <iostream>
4.
5. using namespace std;
6.
7. int main(int argc, char **argv) {
8.         int c;
9.         cin >> c;
10.        for (; c; --c) {
11.                cout << "Hello World" << endl;
12.        }
13.
14.        return 0;
15. }
16.
```

Diff to submission s711 source: c3.s711.domjudge.E.cpp

```
1. --- /var/www/sitowert/never-mind.eu/spielwiese/domjudge/output/tmp/source-old-s711-8EPYLb
2. +++ /var/www/sitowert/never-mind.eu/spielwiese/domjudge/output/tmp/source-new-s712-HSZRAa
3. @@ -9,5 +9,5 @@
4.         cin >> c;
5.         for (; c; --c) {
6. -               cout << "Hello World\n" << endl;
7. +               cout << "Hello World" << endl;
8.         }
9.
10.
```

View source code

Go to diff to previous submission

Submission s712 source: c3.s712.domjudge.E.cpp (download, edit)

syntax highlighting

```
 1. #include <cstdio>
 2. #include <cmath>
 3. #include <iostream>
 4.
 5. using namespace std;
 6.
 7. int main(int argc, char **argv) {
 8.         int c;
 9.         cin >> c;
10.         for (; c; --c) {
11.                 cout << "Hello World" << endl;
12.         }
13.
14.         return 0;
15. }
16.
```

Diff to submission s711 source: c3.s711.domjudge.E.cpp

```
 1. --- /var/www/sitowert/never-mind.eu/spielwiese/domjudge/output/tmp/source-old-s711-8EPYLb
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 3. @@ -9,5 +9,5 @@
 4.          cin >> c;
 5.          for (; c; --c) {
 6. -                cout << "Hello World\n" << endl;
 7. +                cout << "Hello World" << endl;
 8.          }
 9.
10.
```

View source code

Go to diff to previous submission

Submission s712 source: c3.s712.domjudge.E.cpp (download, edit)

syntax highlighting

```
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 2. #include <cmath>
 3. #include <iostream>
 4.
 5. using namespace std;
 6.
 7. int main(int argc, char **argv) {
 8.         int c;
 9.         cin >> c;
10.         for (; c; --c) {
11.                 cout << "Hello World" << endl;
12.         }
13.
14.         return 0;
15. }
16.
```

Diff to submission s711 source: c3.s711.d

diff to last submission

```
 1. --- /var/www/sitowert/never-mind.eu/spielwiese/domjudge/output/tmp/source-old-s711-8EPYLb
 2. +++ /var/www/sitowert/never-mind.eu/spielwiese/domjudge/output/tmp/source-new-s712-HSZRAa
 3. @@ -9,5 +9,5 @@
 4.         cin >> c;
 5.         for (; c; --c) {
 6. -               cout << "Hello World\n" << endl;
 7. +               cout << "Hello World" << endl;
 8.         }
 9.
10.
```

View source code

Go to diff to previous submission

Submission s712 source: c3.s712.domjudge.E.cpp (download, edit)

```
 1. #include <cstdio>
 2. #include <cmath>
 3. #include <iostream>
 4.
 5. using namespace std;
 6.
 7. int main(int argc, char **argv) {
 8.         int c;
 9.         cin >> c;
10.         for (; c; --c) {
11.                 cout << "Hello World" << endl;
12.         }
13.
14.         return 0;
15. }
16.
```

syntax highlighting

download, or edit & resubmit source

Diff to submission s711 source: c3.s711.d

diff to last submission

```
 1. --- /var/www/sitowert/never-mind.eu/spielwiese/domjudge/output/tmp/source-old-s711-8EPYLb
 2. +++ /var/www/sitowert/never-mind.eu/spielwiese/domjudge/output/tmp/source-new-s712-HSZRAa
 3. @@ -9,5 +9,5 @@
 4.          cin >> c;
 5.          for (; c; --c) {
 6. -                cout << "Hello World\n" << endl;
 7. +                cout << "Hello World" << endl;
 8.          }
 9.
10.
```

Submit via Webinterface

submissions | clarifications | scoreboard | submit

Tue 26 Jan 2010 23:45:34
time left: 14:26

New Submission

Problem: F: Moving to Nuremberg

Language: by extension

- by extension
- C
- C++
- Java

File: Browse...

Submit solution

PROBLEM	SCORE
A	1
B	0
C	1 (411 + 0)
D	2
E	0
F	1 (466 + 0)
G	0
H	1 (466 + 0)
I	2
J	0
SUMMARY	3 / 1343

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mini-scoreboard on every page

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select language by filename suffix

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Language: by extension

File: Browse...

by extension
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C++
Java

alternatively submit via command line

select language by filename suffix

mini-scoreboard on every page

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F	1 (466 + 0)
G	0
H	1 (466 + 0)
I	2
J	0
SUMMARY	3 / 1343

Submission details

Problem: Simple Polygon [I]
Submitted: 17:39
Language: C++

Result: COMPILER-ERROR

Compilation output

```
Compiling failed with exitcode 1, compiler output:
source.cpp: In function 'std::string random_label(int, int)':
source.cpp:58: error: 'rand' was not declared in this scope
source.cpp: In function 'std::string random_label_equal(int, int)':
source.cpp:64: error: 'rand' was not declared in this scope
source.cpp: In function 'void random_tree(int, int, int, std::string, int, std::string, int)':
source.cpp:114: error: 'rand' was not declared in this scope
source.cpp: In function 'void random(int, int, int, int, int, std::string, bool, bool)':
source.cpp:138: error: 'rand' was not declared in this scope
source.cpp: In function 'int main()':
source.cpp:146: error: 'srand' was not declared in this scope
```

Compilation failed

Submission details

Problem: Simple Polygon [I]
Submitted: 17:39
Language: C++

Result: COMPILER-ERROR

Compilation output

```
Compiling failed with exitcode 1, compiler output:
source.cpp: In function 'std::string random_label(int, int)':
source.cpp:58: error: 'rand' was not declared in this scope
source.cpp: In function 'std::string random_label_equal(int, int)':
source.cpp:64: error: 'rand' was not declared in this scope
source.cpp: In function 'void random_tree(int, int, int, std::string, int, std::string, int)':
source.cpp:114: error: 'rand' was not declared in this scope
source.cpp: In function 'void random(int, int, int, int, int, std::string, bool, bool)':
source.cpp:138: error: 'rand' was not declared in this scope
source.cpp: In function 'int main()':
source.cpp:146: error: 'srand' was not declared in this scope
```

Compilation failed

can be configured

Judging process

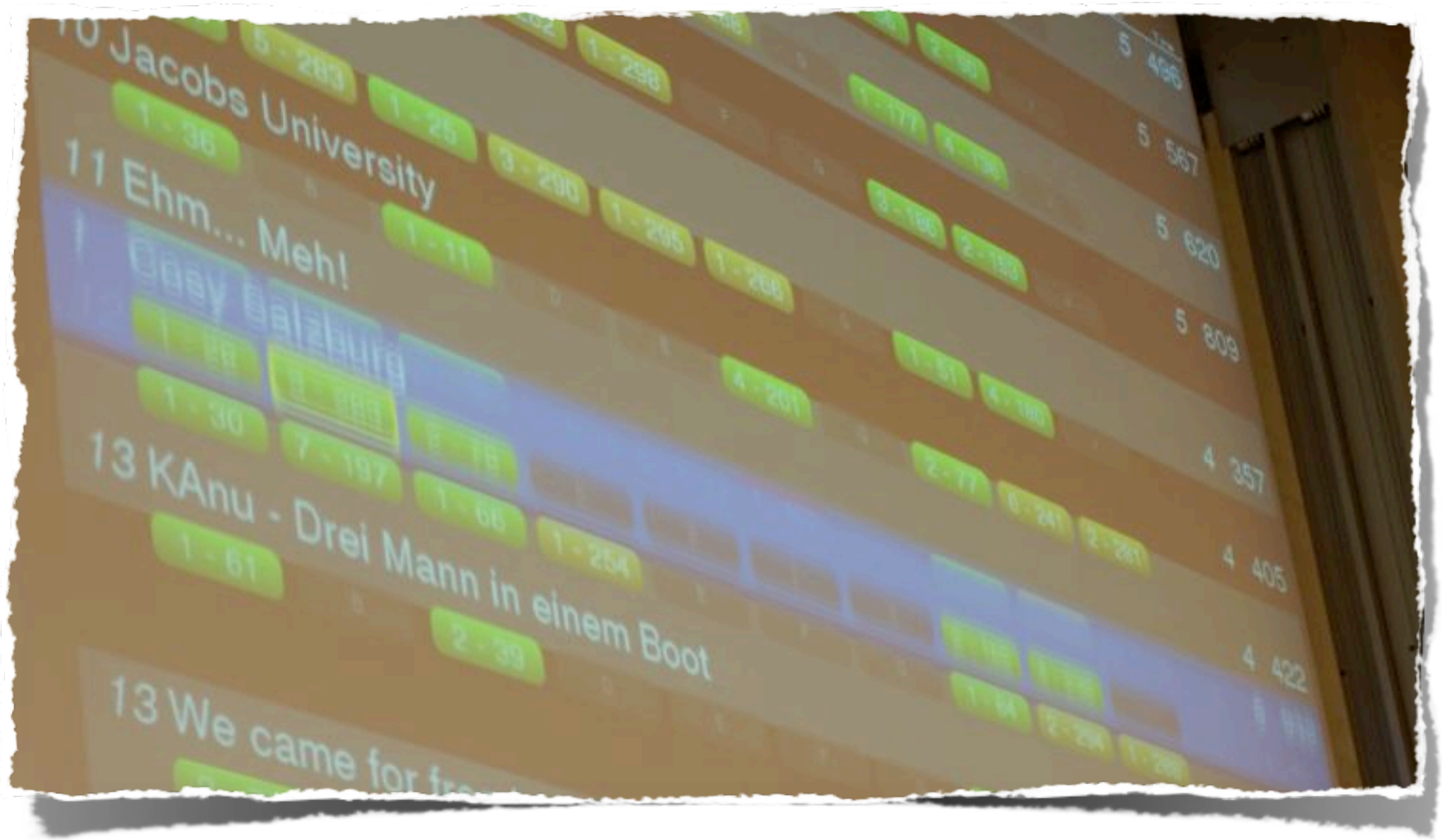
- start judgedaemon
- judgedaemon connects to database
- for every submission:
  - poll source code
  - setup chroot
  - compile source, (+ create run script if necessary)
  - for every testcase:
    - poll test data
    - run submission with test data (with runguard, limited resources and special user)
    - compare results (plain diff or special corrector)
    - write verdict of single run back to database
  - combine verdicts, write back to database

Testdata

- multiple testcases per problem
- stored in database
- testcase cache on each judgehost based on md5sum
- verdicts have an assigned priority
  - verdicts with higher priority are used in combination
  - equal priority: use first verdict
  - optional: returns final result as soon as one verdict with highest priority is found (e.g. TLE, MLE, RTE...)
- Future Plans: remap results (e.g. PE to AC or PE to WA)

Plugin

- output scoreboard, events in XML format
- can be used e.g. for external scoreboards



DOMjudge@FAU

- DOMjudge is used as courseware, for contests and training of our ICPC teams
- “Hello World - for advanced students”:
  - weekly algorithm presentations during summer term
  - five or more corresponding problems of varying difficulty
  - solved in supervised training sessions or at home
  - credit points for presentation and solved problems
- Training:
  - training contests at regular intervals
  - parallel training set in DOMjudge
  - problems can be easily moved from onsite contest to training set

Do try this at home!

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- check out http://domjudge.sourceforge.net for
  - source code download
  - further documentation
  - live demonstration of web frontend

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- Thank you for your attention! Questions?