



University Interscholastic League

Computer Science Competition

2015 District Week 2 Programming

JUDGES PACKET - CONFIDENTIAL

I. Instructions

1. The attached printouts of the judge test data are provided for the reference of the contest director and programming judges. Additional copies may be made if needed for this purpose.
2. This packet must remain CONFIDENTIAL. Additional copies may be made and returned to schools when other confidential contest material is returned.

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1. Abacus

Program Name: Abacus.java

Input File: none

Judges Input

There is no input for this problem.

Judges Output

		()	()	()	()	()	()	()	()		
		—	—	—	—	—	—	—	—		
		()	()	()	()	()	()	()	()		
		()	()	()	()	()	()	()	()		
		()	()	()	()	()	()	()	()		
		()	()	()	()	()	()	()	()		

2. Burglary

Program Name: Burglary.java

Input File: burglary.dat

Judges Input

```
7
3
5.00 5.00 5.00
2
100.00 1.00
5
44.90 4.95 60.02 26.65 90.87
10
2.42 1.27 71.44 40.20 12.06 37.92 65.79 63.27 14.96 71.12
20
65.52 338.51 865.11 676.92 140.31 402.07 32.63 277.70 375.28 460.89 442.51
49.56 883.04 664.39 277.96 75.55 887.58 301.30 689.69 15.46
30
2547.57 7679.14 9133.96 2361.28 983.60 3044.23 9886.07 1101.45 3219.19 5107.28
3468.30 846.61 6780.17 797.18 8757.64 3004.01 6261.49 9001.81 509.02 1331.46
6807.82 9204.79 5477.27 5926.59 2994.73 9220.81 2587.25 7049.53 8146.36
4601.74
25
5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00
5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00 5.00
```

Judges Output

```
2 13.50
0 100.00
4 181.91
9 209.25
10 2038.72
6 24945.09
9 27.50
```

Note: Accept a tolerance of plus or minus one cent on the output of contestant programs.

3. Christmas

Program Name: Christmas.java

Input File: christmas.dat

Judges Input

```
4
2
0 0 1
0 0 2
2
A 0 0 2 40
B 0 0 1 25
5
57 82 54
57 83 73
43 40 47
61 40 90
3 13 24
3
A 56 2 26 10
B 45 11 57 52
C 63 19 10 33
4
78 2 67
98 11 4
10 21 96
98 66 65
4
A 40 41 48 63
B 1 4 41 12
C 54 15 49 70
D 21 36 34 45
4
89 1 56
63 80 49
37 35 74
15 20 61
6
A 7 62 13 50
B 50 19 15 60
C 30 11 9 40
D 19 28 59 70
E 39 49 66 100
F 60 46 37 80
```

Judges Output

```
B 75
C 957
C 490
F 560
```

4. General Fibonacci

Program Name: GeneralFib.java

Input File: generalfib.dat

Judges Input

```
10
0 1 1 1 5
2 1 1 1 7
0 1 1 2 6
23 30 7 7 6
13 27 11 12 5
0 11 8 6 9
10 18 9 0 10
19 22 0 12 10
31 33 11 7 5
0 9 2 7 16
```

Judges Output

```
3
18
11
175371
63813
38148352
774840978
456192
76781
885074751
```

5. History Grading

Program Name: History.java

Input File: history.dat

Judges Input

```
8 5
1 2 3 4 5
5 4 3 2 1
33 29 47 52 19
403 256 38 575 14
3002 108 4267 5422 8543
123 321 234 432 456
246 357 468 975 753
21 1 2 22 3
```

Judges Output

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

6. ImageFlip

Program Name: ImageFlip.java

Input File: imageflip.dat

Judges Input

10
2 2 H
AB
CD
3 3 V
XYZ
WAB
CDE
3 1 V
A
B
C
1 3 H
ABC
3 4 H
ASYD
WJRM
ULTC
19 10 H
LGTSMSWPKM
GWBTYUJEHV
EGHAFRWKMI
MHBBPDOWVY
AQLNMLRSZY
HWXZGUQMA
YZHAVJJNUR
JIRVEIAOZK
BPSCPSBLQQ
RFINQXOUIL
HWKXFUHPAW
RBULJVEJLQ
KUUFETUAST
RIBSKMQRNP
CZMMCWYLEK
SZBTEITYDK
EHDIBOXOYL
KWAXYHQJSJ
PGZMKRZNGD
14 16 V
LBWHEVRCYIYATI
BSVQYLRVIRYVLH
NCOFJVYSLIVHGC
PYLKCUKJTEXAFF
NDORVQTCOEMHJUF
GAPGPGHTSGTZWL
YFEQCQBVEPNWJT
KPFSIMMJPECKABI
TYAFCHNUXHNAXDI
MEGLDPBHRPKOXUP
ADGMGILOSHNMTNLI
ZYBMQDKYSDKBVRC
BEZSEOWOMJQXTVOK
TUPKTEJLTRYJLYIB

15 7 H
BEGTKXI
BIMZDDG
XNBZDBK
IHZHWNQ
LTUAPQU
XTISDPO
RGAVVGN
AFTGROE
XSTIILF
GEEQXJZ
BAFGYUY
VNRWANW
EROYFPG
NXHDJOF
WSGYXGC
9 13 V
GIKSCGWSJVIBF
FGNEWJYEHQBGD
PJAQYXLFDPBTT
AFLGGJNJOYYRV
TGZTPFPTVHXUM
WMZVKWMLAXUQI
HJTMSURNJVPRQ
RYQXBVTNIWUEB
BEDZTIHBKRTIX
18 10 V
FYGKSDSMSB
HLHSEDHRXY
JHPWCPEYI
OJCEERKVEI
NLTPCARVIF
RHWJGNRCQD
ZHUMXZHIIL
KDSZOTQNGW
FAJTTAZLGE
TMWMBZPJNE
MCZWHTXFYJ
ZMLVCENXYQ
NEEBEYWPVF
PPNZHIMXLG
HSCPYLIIID
BGHZYASCTR
OKAFGIMUFL
AYNDEFNYRE

Judges Output

BA	IXKTGEB
DC	GDDZMIB
	KBDZBNX
	QNWZHZI
CDE	UQPAUTL
WAB	OPDSITX
XYZ	NGVVAGR
	EORGTFA
C	FLIITSX
B	ZJXQEEG
A	YUYGFAB
	WNAWRNV
CBA	GPFFYORE
	FOJDHXN
DYSA	CGXYGSW
MRJW	
CTLU	BEDZTIHBKRTIX
	RYQXBVTNIWUEB
MKPWSMSTGL	HJTMSURNJVPRQ
VHEJUVTBWG	WMZVKWMLAXUQI
IMKWRFAHGE	TGZTFPFTVHXUM
YVWODPBBHM	AFLGGJNJOYYRV
YZSRLMNLQA	PJAOYXLFDPBTT
AHMQUGZXWH	FGNEWJYEHQBGD
RUNJJVAHZY	GIKSCGWSJVIBF
KZOAIEVRIJ	
QQLBSPCSPB	AYNDEFNYRE
LIUOXQNIFR	OKAFGIMUFL
WAPHUFXKWH	BGHZYASCTR
QLJEVJLUBR	HSCPYLIIID
TSAUTEFUUK	PPNZHIMXLG
PNRQMKSBIR	NEEBEYWPVF
KELYWCMMZC	ZMLVCENXYQ
KDYTIETBZS	MCZWHTXFYJ
LYOXOBIDHE	TMWMBZPJNE
JSJQHYXAWK	FAJTTAZLGE
DGNZRKMZGP	KDSZOTQNGW
	ZHUMXZHIIL
TUPKTEJLTRYJLYIB	RHWJGNRCQD
BEZSEOWOMJQXTVOK	NLTPCARVIF
ZYBMQDKYSDKBVRJC	OJCEERKVEI
ADGMGILOSHNMTNLI	JHPWCPEYI
MEGLDPBHRPKOXUPV	HLHSEDHRXY
TYAFCHNUXHNAZXDI	FYGKSDSMSB
KPFSIMMJPECKABID	
YFEQCQBVEPNWJTNT	
GAPGPGHTSGTZWLPR	
NDORVQTCOEMHJUFV	
PYLKCUKJTEXAFFAP	
NCOFJVYSLIVHGCWO	
BSVQYLRVIRYVLHQW	
LBWHEVRCYIYATIUIJ	

7. Jousting

Program Name: Joust.java

Input File: joust.dat

Judges Input

6
4
Lancelot 10
Galahad 8
Percival 9
Bors 5
4
Caradoc 50
Gawain 55
Lucan 72
Balin 64
8
Gervesin 41
Geronim 32
Willie 98
Memadak 82
Oure 26
Joseph 47
Geroldin 77
Humfrye 14
16
Guarinus 30
Sagar 82
Anselmis 100
Enjorren 91
Lancelin 50
Richeut 53
Hemart 69
Eudo 55
Drouet 86
Androin 15
Mial 88
Johamma 47
Bess 36
Elizabetha 34
Linnet 95
Milla 11
32
Cristan 99
Mareoun 63
Batsuen 38
Thomasinus 39
Thiebaut 56
Blavier 92
Guillemot 31
Derek 35
Sansonnet 18
Gervais 46
Guiraudet 80
Maneld 33
Jocoda 49
Maaline 67

Richoard 8
Tilla 1
Mariote 32
Isota 3
Tatsy 19
Lysia 64
Mahenyld 25
Foulquerent 14
Bricet 34
Arnold 37
Sagar 36
Guimart 66
Ferant 24
Jarín 43
Imbert 57
Alleyn 79
Wilhelm 93
Josh 94
8
Lysia 20
Henyld 18
Cedric 8
Brice 4
Brenold 9
Hagar 6
Guimart 5
Tyrant 2

Judges Output

Case 1:
1: Lancelot
2: Percival
3: Galahad
Case 2:
1: Lucan
2: Gawain
3: Balin
Case 3:
1: Willie
2: Geroldin
3: Joseph
Case 4:
1: Anselmis
2: Linet
3: Mial
Case 5:
1: Cristan
2: Josh
3: Guiraudet
Case 6:
1: Lysia
2: Brenold
3: Cedric

8. Meddlesome Chimpanzees

Program Name: Meddle.java

Input File: meddle.dat

Judges Input

```
9
sogwimovred
4
give
words
some
me
msgqouotgalrea
4
google
quora
moxtra
square
yvzectewmmimwes
7
obsdiitg
llty
smecp
xkhv
yzctems
usjgb
vewmimwe
gprjczkiiiwsethdkxapywghl
7
acds
gpzkkpwl
iietd
rwsxa
pzyynwbo
rtoutk
jcihnygh
cadkpncldgpurldgkpy
7
cdpnlgy
fdieafq
lljxciff
ysafk
acpurl
kgkpy
xectb
mudla
7
svkdghp
skvnrl
vsxg
mudla
mywifdm
inrcpc
tinlw
```

```
lnxcjuhwxtosabddv
7
smylfl
lnxuv
bxqzk
qiaujj
cwxqtoa
jhsbddy
twqihev
kjcwyjtkwuvorchlsrzfugutf
7
idmz
kjcwykf
jtwu
vorclsrt
hvecd
hzfugu
ablxkwk
qicmhruiugqkqfbtdyui
7
qhrup
imiagd
apkcp
ukfbyi
cqtu
wufldpy
tnyhyppd
```

Judges Output

give: YES	idmz: NO
words: NO	kjcwkykf: YES
some: YES	jtwu: YES
me: YES	vorclsrt: YES
	hvecd: NO
google: YES	hzfugu: YES
quora: YES	ablxkwk: NO
moxtra: NO	
square: YES	qhrup: YES
	imiaggd: YES
obsdiitg: NO	apkcp: NO
llty: NO	ukfbyi: YES
smecp: NO	cqtu: YES
xkhv: NO	wufltpy: NO
yzctems: YES	tnyhpyppd: NO
usjgb: NO	
vewmimwe: YES	
acds: NO	
gpzkkpwl: YES	
iietd: YES	
rwsxa: YES	
pzyynwbo: NO	
rtoutk: NO	
jcihnygh: YES	
cdpnlgy: YES	
fdieafq: NO	
lljxciff: NO	
ysafk: NO	
acpurl: YES	
kgkpj: YES	
xectb: NO	
svkdghp: NO	
skvnrl: NO	
vsxg: NO	
mudla: YES	
mywifdm: NO	
inrcpc: NO	
tinlw: NO	
smylfl: NO	
lnxuv: YES	
bxqzk: NO	
qiaujj: NO	
cwxqtoa: YES	
jhsbddy: YES	
twqihev: NO	

9. Mutual Friends

Program Name: Mutual.java

Input File: mutual.dat

Judges Input

6	Ollie	Jessica
3	Angela	Josh
Tyler	Keivaun	15
Alex	Parth	Pato
Maria	Taylor	Brian
3	Michael	Ollie
Zach	Benjamin	Angela
Maria	Anita	Keivaun
Tyler	Ben	Parth
2	Natalie	Taylor
Marge	Ruven	Michael
Danny	Jessica	Benny
1	Josh	Anitalia
Michael	15	Benny
1	John	Natalia
Bill	Jaime	Ruby
1	Jim	Jess
Bill	Robert	Joshua
9	Andy	
Dillon	Elynn	
Adam	Taylor	
Katie	Tres	
Michael	Paige	
David	Jon	
Reid	Matt	
Jaime	Emily	
John	Michael	
Dan	Clay	
10	Alex	
Elynn	15	
Alex	Pato	
Paolo	Brian	
Josh	Ollie	
Jim	Angela	
Dan	Keivaun	
David	Parth	
Michael	Taylor	
Pato	Michael	
Andy	Benjamin	
15	Anita	
Pato	Ben	
Brian	Natalie	
	Ruven	

Judges Output

Case 1:

Maria

Tyler

Case 2:

Case 3:

Bill

Case 4:

Dan

David

Michael

Case 5:

Michael

Taylor

Case 6:

Angela

Brian

Keivaun

Michael

Ollie

Parth

Pato

Taylor

10. Paint

Program Name: Paint.java

Input File: paint.dat

Judges Input

```
13      6 6      6 7
2 4      ...x..      .....
x...      .....x      x..xx..
..x..      ..xxx.      xxx.x..
H         ..x...      ....xx.
3 3      x.x...      x.....
x.x       x.....      .....x.
.x.       HVHH      VHV
...       12 6      12 14
V         .xx...      ..x....xx.....
4 4      .x.xx.      x....x..x.....
x...      .....      x.....x.....
.x...      x....x      x..x..x.....
....      .....x      x.....
....      xx.x..      .....
VH        .x...x      ..x..x..x.....
5 11      .x..x.      .x.....x.....
x...x.x.x..      .x..x.      ..x..x.....
...x.....x.      .....      .x..x..x..x..
..x.x.x....      .....      .xx.....
.x.....      H       VHVHVH
.xx....x...      13 8      .....
H         xx...xx.      .....
7 12      x.x....x      .....x..
...x.....x.      .....x..
...x..x.x..      ...xx..x
...x.....x.      ...x....
x.x...x....x      .x.....
...x.....      .....
.x....xx....x      .x..x...
VHV        xxx....      .....
7 14      .....x.      .....
x...x....x.x.      x.....
.x.....xx      .x.x....
..xx..x....xx.      VH
x.x.xx.....      11 7
..xx..x..xx...      ...x...
..xx....x..x.      .....
x..xx.....      x.....
HVH        x.xxxx.      .....
8 9        x....x.      .....
x...xx..x      x....x..
.x...x...      .....x.
...x.....      x.x....
...x.....      .....x.
x...x..x      .....
xx....x..      HV
V         .....
```

Judges Output

```
XXXXXXXXXX
X..X      X.X..X.X
.XX.      .XX..XX.
X.X       XXX..XXX
.X.       XX.XX.XX
X.X       ...XX...
X..X      .X....X.
.XX.      ...XX...
.XX.      XX.XX.XX
X..X      XXX..XXX
X.X.X.X.X.X.X   .XX..XX.
.X..X.X.X.X.    X.X..X.X
..X.X.X.X.X..   XXXXXXXX
.X.....X.       ...X...
.XXX...XXX.     .X...X.
XX..XXXX..XX    X.X.X.X
XXX.....XXX     XXXXXXXX
X.X.XXXX.X.X    XXX.XXX
.X...XX...X.    X....X
X.X.XXXX.X.X    XXX.XXX
XXX.....XXX     XXXXXXXX
XX..XXXX..XX    X.X.X.X
XX.XXX..XXXX.XX .X...X.
XXX..X...X...XXX...X...
.XXXXXXXXXXXXXX. .X...X.
X.X.XX..XX.X.X  X.XXX.X
.XXXXXXXXXXXXXX. XXX.XXX
XXX..X...X...XXX XXX.XXX
XX.XXX..XXXX.XX X.XXX.X
X...XX...X      .X...X.
XX...XX..       ..X..XXXXX..X..
X.....X.X       XXXX..X..X..XXX
...X.....X      XXXX.XXXX.XXXX
...X.....X      X...XXXXXXXX..X
X.....X.X       XX...X..X...XX
XX...XX..       ..X..XXXXX..X..
X...XX...X      ..X..XXXXX..X..
X.XX.X          XX...X..X...XX
X.XX.X          X...XXXXXXXX..X
.XXXX.          XXXX.XXXX.XXXX
.XXXX.          XXXX..X..X..XXX
X.XX.X          ..X..XXXXX..X..
X.XX.X          ..X..XXXXX..X..
.XXXX.          XX...X..X...XX
.XXXX.          X...XXXXXXXX..X
.....          XXXX.XXXX.XXXX
X....X          XXXX..X..X..XXX
X....X          ..X..XXXXX..X..
XXXXXX          ..X..XXXXX..X..
XX..XX          .....
.X...X          X....X
..XX..          X....X
.X...X          XXXXXX
.....          XX..XX
.....          .X...X.
.....          ..XX..
.....          .X...X.
.....          .....
.....          .....
```

11. Palindromic Square

Program Name: Square.java

Input File: square.dat

Judges Input

66
101
434
500
595
5
77
313
636
818
999

Judges Output

NO
NO
YES
NO
YES
YES
YES
YES
YES
YES
YES
NO

12. Wordoku

Program Name: Wordoku.java

Input File: wordoku.dat

Judges Input

```
7
3
a w l
w l a
l a w

4
g e v a
v g a e
a v e g
e a g v

5
p t a d e
a p e t d
t e d p a
d a t e p
e d o a t

7
s c i e n c e
c i e n c e s
i e n c e s c
e n c e s c i
n c e s c i e
c e s c i e n
e s c i e n c

9
a b s u r d i t y
s u r d i t y a b
r d i t y a b s u
i t y a b s u r d
y a b s u r d i t
b s u r d i t y a
u r d i t y a b s
d i t y a b s u r
t y a b s u r d i

3
c a t
t c a
a t c

6
d o u b l e
o u b l e d
u b l e d o
b l e d r u
l e d o u b
o u b l e d
```

Judges Output

```
VALID
VALID
INVALID
INVALID
VALID
VALID
INVALID
```