University Interscholastic League

Computer Science Competition

2015 State 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.

II. Table of Contents

1. Bully

Program Name: Bully.java   **Input File: bully.dat**

Judges Input
```
13
3 2
2 2
5 4
100000000 2
99999999 3
100000000 1000000
500 2
45 46
12 13
10 1000
677889 670000
5000 5000
10 10
```

Judges Output
```
5
3
6
199999999
149999998
100000100
999
45
12
10
677890
5001
11
```

2. Compression

Program Name: Compression.java　　　**Input File: compression.dat**

Judges Input
```
11
aaaa56666bmFfff
12121212
CCCCCCCsssssss
qwertyiasdfhjklxvbnsdfalkjhfaslkjhvnvaksjhgosusuh5h7dhsvjkhtj35jh3jh247
3428744444444hhhhhfbbbfhheyyyzvfg5728277
asfkjhkfhffhfhfhffffffffffrrrrrrggggggrrggg1111111
111111144444466664444666f6464646fffffhhhfhhfhhf
1231231231113331133131313131333333331
01239vksjfkjvjASGSJVJMMZZZZZZZZZZZ00000000001111x
f1
z
op
```

Judges Output
```
4a15461b1m1F3f
1112111211121112
7C8s
1q1w1e1r1t1y1i1a1s1d1f1h1j1k1l1x1v1b1n1s1d1f1a1l1k1j1h1f1a1s1l1k1j1h1v1
n1v1a1k1s1j1h1g1o1s1u1s1u1h151h171d1h1s1v1j1k1h1t1j13151j1h131j1h121417
1314121817845h1f3b1f2h1e3y1z1v1f1g151712181227
1a1s1f1k1j1h1k1f1h2f1h1f1h1f1h8f6r6g2r3g71
71644644361f161416141614165f3h1f2h1f2h1f
111213111213111213313321231113111311131113218311
10111213191v1k1s1j1f1k1j1v1j1A1S1G1S1J1V1J2M11Z100411x
1f11
1z
1o1p
```

3. Decisions

Program Name: Decisions.java   **Input File: decisions.dat**

Judges Input

See decisions.dat in judges folder.

Judges Output
```
3 5
0 2
Send a helicopter
3 1
3 12
36 0
20 30
13 1
54 3
82 98
Send a helicopter
```

4. Land

Judges Input

See land.dat in judges folder.

Judges Output
1
9
0
936106668
913045171
903703206
900575114
914476380
938411206
953221716
946442249

5. Receipt

Program Name: Receipt.java   **Input File: receipt.dat**

Judges Input
```
9
apple orange
1 2 6.00
2 4 12.00
eraser pencil
1 2 2.50
3 1 2.50
bread butter
2 3 5.00
10 16 26.00
fish meat
15 0 3.14
15 0 2.78
mustard ketchup
5 9 13.51
5 3 7.51
salt sugar
500 1000 2586.16
1000 500 3359.86
milk juice
1010 101010 2512.12
101001 10101 1313.12
spoon fork
10000000 10000000 10000000
40000000 40000000 40000000
carrot celery
1 2 0.12
2 1 0.21
```

Judges Output
```
Grocery Store #1:
CANNOT COMPUTE PRICES
Grocery Store #2:
eraser: 0.50, pencil: 1.00
Grocery Store #3:
bread: 1.00, butter: 1.00
Grocery Store #4:
CANNOT COMPUTE PRICES
Grocery Store #5:
mustard: 0.90, ketchup: 1.00
Grocery Store #6:
salt: 2.76, sugar: 1.21
Grocery Store #7:
milk: 0.07, juice: 0.16
Grocery Store #8:
CANNOT COMPUTE PRICES
Grocery Store #9:
carrot: 0.10, celery: 0.01
```

6. Scheduler

Program Name: Scheduler.java   Input File: scheduler.dat

Judges Input
```
11
2
20 20 10
50 50 25
2
3 3 1
4 4 2
2
2 1 1
2 2 1
2
2 1 1
2 1 1
3
4 4 1
5 5 2
7 7 2
3
4 4 1
5 5 2
10 10 2
4
4 4 3
5 5 3
6 6 3
7 7 3
3
6 4 1
8 6 2
10 5 3
3
6 4 1
8 6 2
10 5 3
3
8 4 2
10 8 4
30 16 9
8
75 48 10
100 42 13
15 8 2
100 9 3
40 9 1
50 50 25
75 10 4
30 16 5
```

Judges Output
```
SCHEDULABLE
SCHEDULABLE
SCHEDULABLE
NOT SCHEDULABLE
SCHEDULABLE
SCHEDULABLE
SCHEDULABLE
SCHEDULABLE
SCHEDULABLE
NOT SCHEDULABLE
SCHEDULABLE
```

7. Scoreboard

Program Name: Scoreboard.java   **Input File: scoreboard.dat**

Judges Input
```
5

5
1 2 I
3 1 A
1 2 C
1 2 A
1 1 A

6
5 1 I
5 1 A
14 7 C
14 7 A
5 3 A
2 1 C

9
21 3 I
15 2 A
21 3 C
2 1 A
21 12 A
21 7 U
21 3 A
15 5 E
6 1 E

20
17 12 I
13 12 A
17 12 I
11 12 I
17 12 I
11 12 C
17 12 I
17 12 I
17 12 I
11 12 C
17 12 I
17 12 I
```

```
17 12 I
11 12 I
17 12 I
17 12 I
17 12 I
17 12 I
11 12 A
17 12 A

12
1 1 I
2 2 I
3 3 I
25 12 I
2 2 A
1 2 A
3 4 I
3 5 I
3 3 A
25 12 A
23 11 I
23 11 A

10
1 1 A
1 2 I
1 2 A
1 3 I
1 3 I
1 3 A
1 4 I
1 4 I
1 4 I
1 4 A

20
1 1 A
1 2 I
1 2 A
1 3 I
1 3 I
1 3 A
```

```
1 4 I
1 4 I
1 4 I
1 4 A
2 2 I
2 2 A
2 3 I
2 3 I
2 3 A
2 4 I
2 4 I
2 4 I
2 4 A
3 1 C
```

Judges Output
```
1 2 115
3 1 60

5 2 115
14 1 60

21 2 115
2 1 60
15 1 60
6 0 0

13 1 60
11 1 50
17 1 0

1 1 60
2 1 55
3 1 55
23 1 55
25 1 55

1 4 210

1 4 210
2 3 150
```

8. Siren

Program Name: Siren.java   **Input File: siren.dat**

Judges Input
```
8
2 8
-3 3 3
3 6 3
2 4
0 1 1
0 3 1
3 14
-22 3 5
-10 4 8
4 6 7
1 10
2 5 5
4 15
-15 5 5
-5 10 5
5 5 5
15 10 5
5 15
-15 5 5
10 8 1
-5 10 5
5 5 5
15 10 5
24 20
-2 2 2
18 2 2
-4 4 2
16 4 2
-6 6 2
14 6 2
-8 8 2
12 8 2
-10 10 2
10 10 2
-12 12 2
8 12 2
-14 14 2
6 14 2
-16 16 2
4 16 2
6 4 2
4 6 2
```

```
2 8 2
0 10 2
-2 12 2
-4 14 2
-6 16 2
-8 18 2
25 20
2 18 2
18 18 2
-4 16 2
16 16 2
-6 14 2
14 14 2
-8 12 2
12 12 2
-10 10 2
10 10 2
-12 8 2
8 8 2
-14 6 2
6 6 2
-16 4 2
4 4 2
6 16 2
4 14 2
2 12 2
0 10 2
-2 8 2
-4 6 2
-6 4 2
-8 2 2
8 18 2
```

Judges Output
```
YES
NO
YES
NO
YES
NO
YES
NO
```

9. Speedy

Program Name: Speedy.java**Input File: speedy.dat**

Judges Input

```
10
4 10
0 4
1 2
3 10
2 3
4 100
0 50
1 25
2 12
3 6
8 10000
9564 355
634 8324
1512 133
3524 959
1289 735
846 4604
5115 8283
9753 9216
10 10000
4631 6275
9777 9928
9216 8214
3697 8750
5548 3001
1682 5876
7988 8701
7570 871
7538 5250
4045 5758
20 10000
8908 8749
14 3234
9901 4800
7338 4978
7727 3613
9389 4949
4602 6835
5653 5573
280 2883
8524 2986
3152 991

5977 7028
8861 9038
3426 2833
9309 2424
1071 507
85 36
9689 8353
1458 1516
4145 8689
20 10000
1170 3557
6681 3914
8644 5745
8368 6545
6060 3266
1486 2971
3546 6545
4739 2832
3186 9997
6573 2407
3770 7864
3562 8914
5583 2767
2894 6359
1012 884
7488 2635
1882 9033
4558 5837
9643 3242
8450 3741
20 10000
6634 9662
3036 2181
9386 2325
139 9628
1581 3890
2132 754
6154 211
2303 901
7584 1749
9598 8479
9822 7724
4251 2985

2414 3731
363 1386
747 4736
4879 2881
1620 1667
9081 7419
217 5323
3771 4593
20 10000
7159 1193
9757 9314
8079 4992
8565 5005
5911 418
4582 8632
4334 2486
7597 4506
2328 3229
555 3548
5962 9831
5486 5279
3618 8466
568 777
2708 2592
1088 3023
6879 6403
3959 4912
895 9336
2563 2955
20 10000
3512 475
7711 1438
7219 6208
9491 6833
2291 7873
3052 1340
3788 565
3653 3127
5577 2303
2015 5004
4446 1111
1120 8105
6983 3735

6549 1329
4988 4287
3699 8697
2198 8469
8715 102
4971 7901
4668 7521
20 10000
2876 607
7147 5648
9502 9874
502 1480
7405 6423
3381 3804
37 8616
1349 8622
6901 4775
7154 5844
5747 6512
5166 8065
1139 378
3924 2402
3635 185
3686 4295
9470 7155
6210 6955
6256 5404
8147 3986
```

Judges Output

```
4
0
6
6
60
42
45
54
50
75
```

10. Spreadsheet Columns

Program Name: SpreadsheetColumns.java   **Input File: spreadsheetcolumns.dat**

Judges Input
```
12
4 C C
5 AA AAA
3 5 AA
3 AA 5
100 562 GSR
3 DX ZHF
48 DJ SLH
243 FJ FZ
2 ZC SDG
1 AAA ZZZ
4 642 35
92 425 FD
```

Judges Output
```
36
94905
405
405
294712800
6831360
72033408
7341516
17592890
12849434
89880
6256000
```

11. Square

Program Name: Square.java   **Input File: square.dat**

Judges Input

```
4
2 2
xx
.x
2 2
xx
xx
3 3
xx.
xxx
.xx
66 57
.x.x...x.xxxxxxx..x.x..x.x.xx..x..x.x.xxxx..xxxxxx...xxxx
xx..xx.x.xxxx.xx.x..x..xx....xx...xxx.xxx.xxxxxx.xxx.xx.x
xxxx.xx.xx..xxxxx..xxxxxxx.x.xxxx.x...xx..xxxxxxx..xxxxx
..x.xxxxxxxxxxx.xx..x.xxx.x.xxxxxxxxxxx...xx.xxxxxxx.xxx
.xx.....xxx.x.xxxx.xx......x..xx.xxx.x..x...xx..x.xx.xxx.
xx.xx.x.xxx.xx.xxxx..xx..xxxxx....x.xxxxxxxxx.xxxxxxx.x.
..xxxxxx.xx..x..xx.xx.xxx.x..xxxxxxxxx.....xx.xxxxx.xxx
xxxxxxx.xxx.xxx..xxxxx...xxxxxxx.xxxxxxx...xxxx..xx...
.xxxxxxxx.xx.xx.xxxxxxxxxx..xxxx.x.x.xx...x.....x.x.xx.x
xx..xxx.xxx....xxxxxxx.xx.xxx...xxx.xxxxxxx..xxx.xx...x..
xx..x..xx.xxxxxxxxxx.xxxx.xxx.xxxx.xxx.x...xxx.xx.xxxxxx
xx.xx.xx.xxx.xxx.xx..x..xxx.x.x.xxxxxx.x.xxxx.x.xxxxx..xx
xxxxxxxxxx.xxx.xx.......xx.x.xxx.x.xxx.x.x.x.x.xxx.x...x
.xxxxx.x.xx..x.xxxxxxxx.x.xxxx.xx.xxx.xxxx..xx..x..x.xxx
.x..xxxx.x..xxxxxxxxxxxx...x.x.x...xxxxxx.xxxxx.xxx.xxx.
...xx.xxxxxxx...xxxxxx.xxx....x.xxxxx.xx.xx.x.x.x.xxxxxxx
xx.x.xxx...xxxx.xxxx..xxxx.xxxxx.xxxx.xxx.xxxx..xxx.xxxx
.xxx..xxxxx.xxxxx.xx..xxxxxxx.xx.xxxxx....x..x..xxxxxxx..
x..xx..x..xxxx.xxx.xxxx.x....x.x.x.xxx.xx.x.x...xx.x
x..xxxxxx...xx.x...x.x.xxxxxx...xx.xxxx.xx.xxxxxxx.xx.xx.
xxx.x.x...xxxxxxx.x.x.x..xxx.xxx.x.xx.xxx.xxxxxxxxxxxxxx
.x..xx.xxxxxxxxxxxx..xxxxx..x.xxx..xx.x.....x.x..xxxxxxx
x.x..xxxxxxx.xx.xxx.xxx.x.xxxx.xxxxxxxx..x.xxxxxxxxxxxx
xx...xxx......xxxxx.xx.xxxxx.xx.xx..x..xxx.xx.xxxxxx..x..
.xx.xxxx.xxxx.x.x.x.xxxxxxxxx..xxxxxx.xxxx.xxx.x..x...xx
x.xxxx.x.xxxx...xx.xxxxx.x.x.x....x.x...xxxxxxxxxxx..xxxx
xxxxxx.x..x...xx.xxx...xxx.x.xxxx.xxx.xxx.xx.xx..xx.xxxx.
x.x.xx..xx.x.xxx.xx.xx....xxxxxxx.x....xxxxx.xxxx...xxxx
x.x.xxx.xxx.x.xxxxxx.x..xxxxx.xx.xxxxxxxxx.xx..x...xxx.
.xxxxx.xx.xxx.xxxxxxxx.xxxxx..xx.xxxx..xxxx..xxx.x.x.xx.
x.xxxxxxxxxx.xxxxx.x.xxxxxxx....xx.xx.xxx.xxx.x.x..x..
xx.xxx.x.x.x.xx.xx.xx..xx.xx.xxx.x.xx.xxxxxx...xx.x..x.xxx
xxxx.xx.xxx.xxxx.xx.xxxxxx..x.xx.x.x.x.xxxx..xx..xxxx..x
x..xxxx....x.xxxxxxx.x.xxxxx......x.xx..xx.xx..x..xx..xxx
...xxxx.xxxxxxx.xx..xx....xxxxxxxxxxxx.xxx.x..x..xxxxxxx
```

```
x.xx.xxx..xxx..xxxxxxxxxxxxxx.xxx...x.x.x.x..xxx.xxxxx..
...xx..xxxx.x.xxxx.xxxx.x..xxxx.x.xx.xx.x.xxxx..xxxx.xx..
xxxxx.x..x.x.xxxx.xxxxx.xx.xxx.x.x.xxx...x...x.xx.x..x.xx
..xxx...xx..x.xxxxx.x.xxxxxxx..xxxx.xxxx.x.x.x.......xx.
x.xxxxxxxxx.x.xx.x.x.x.xxxxx.x.xx.xxx...xx.xxx.xxxxx.xx.x
.x...x.xx..xx..xxxxxxxx..x.xx.xx.xxxxxxx..xxxx.x.xxxxx.xx
xx.xxx.x.xx...xxxxxxxxxx.x..xxx...xxxxxx...xxxx.xxxx...xx
x.xxx.xxx.xxx..xxx.x..x..xx.xxx.xxxxxxx.x.x.x.xxx.x...x..
.xxx....xxxxx..x..xxxxxxxxx..xxxxxxxxxxxxxx...xxxxxxxxxxx
.x.xxx..xx..x.x.x.x..x.xx.xxxx..x.xxx.x.xxxxxxxxx.xx.xxxx
x..xx.xxxxx.xx...x..x..xxx.xxxx.xxx.xxxxxxx.xx.xxxxxxxx..
.xx.xx.xxxx.xxxxx..x..xxxxxxxxxxxxx.xxxxx.....xxx.xxxx.x
x....xx.xxxxxxxxx.xx.xx..x..x.xxxxxx...xx.x..x.xxxxxxxxx.
x.xxxxxx...x.x..x.xxx.x.xx.xxxxxxx.xx.x.x.xxxx.x.xxxx.xx
xx.xxx.x.xxx...xxx.x..xxx.xxxxxx..xx.xxxx..xxxxxx.x.xxx.x
x...xx..xx..xx.x.xxxxxx.xx.xxx.xxx..xxxxxx.x.xx.xxxxx.xxx
xx.xxx..xx.xxxx..x..x..xxxxxx...x.xxxxx.xxxxxxxx.xxxxx.xx
xxx...xxx..xx..xx..xxxxxxx.xxx.x.xx.x..xx.xx.x.xxxx.....
xx.xxxx.x.xx.x..xxxx.xxx.x.x..x.....xx.xxxxxx....xxxx..x
.xxx.xxx.xx.xx..xxxxxxx..xx.xxxxxxx..x.x.x.xxxxxx.xx.x
xxx..x......xxxxxxxxxx.xxx.xxxxx.xxx..x..xx.xx..xx.xxxxx
xxx..xxxxxx.x...xx.x.xxxx.x.xxxx...x.xxxx.xxxxx.xxx.x.xxx
.x.xx.xxxx.xx.xxxxxxxxxxxxx.xx.xxxxx.xxxx.x.x.x...x.x.x.
.xxxx..xxx.xx.xx.xxx.xxx.xxxx.xxx.xx.xxxx...xx.xxxx.xx..x
xx.xx..xxxxx.xxxxxx.x.x...xx.xxx..x.xx..x..xxxx..x..xxxxx
xxxxxxxx..xx..xxx.xx..x..x.xxxx.xx.xx....x.x.x.x.xxx.xxx.
...xxx..xx...xxx.x.xx...x.xx.xxxxx.x..xx.x.x..xx.x.xxx..x
xxx...xx.xxxxx..xxxx...xx.x.x..xx..x.xxx.x.x..x.xxxxx.xx.
.xxxx.xxx..x.x.xxxxxx.x.x.x.xxxxx.x.xx.x..xx..xxxx.xxxx.x
xxxxxx.xxx.xxxxx..xx.xx.xxxxx..xx..xx.x.xxx.xxxxxx.xx.x..
.x.xx...xx.x.xxxxxxx..x...x.xxxx.xxxxxxxxx....xx..xx.xxxxx
xx.xx.xxx..xxxxxx.x..xxx.x.xx.xx.xxx.x.x.xxxxx..xxx....xx
```

Judges Output
```
3
5
9
3261
```

12. WordSearch

Program Name: WordSearch.java   Input File: wordsearch.dat

Judges Input

See wordsearch.dat in Judges folder.

Judges Output

```
110
1011
1110101
100110001110001010101111111001011011101010100111000110101000101101101000011010110011100111011010101101
110101010110100101000100101100011011000000100100011000010011111001111011011010100101001100100010000001
011010101111010101111001110000011111111101111000011000001011100100100010001111001000011011100111011
111111101000111001010010111111101001001010110001001011110010011110001011010101110001110110110000010000
101011011000101111000110011111111100001110110010010010010011110111100010000001101000000110001101000
001111010010010111100101000001001110111000000010001011011111000010011011001010001011111001110101011111
001100100000010111101100011110010100011001010110000100111101110011111110111100011111111101110101000110
001101000001010011111101001111111100000101111101000000011111101100101100110110110001000101000101100110
```