University Interscholastic League

Computer Science Competition

2015 District Week 1 Programming

<u>JUDGES PACKET - CONFIDENTIAL</u>

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. Base Fibonacci

Program Name: Base.java   Input File: base.dat

Judges Input File
```
16
29
53
55
1
21
500
999
```

Judges Output to Screen
```
16 = 13 + 3
29 = 21 + 8
53 = 34 + 13 + 5 + 1
55 = 55
1 = 1
21 = 21
500 = 377 + 89 + 34
999 = 987 + 8 + 3 + 1
```

Program Name: Books.java   **Input File: books.dat**

Judges Input File
```
6
26.5 5
3.72
6.83
12.684
6.712
9.152
105.293 5
12.34
53.91
6.29
19.6
13.153
85.73 12
22.35
12.43
7.64
10.75
26.587
13.276
18.2
19.325
8.64
17.272
11.933
22.89
999.70 20
58.48
45.83
33.13
38.29
67.33
63.17
68.42
59.49
38.77
49.14
32.23
38.96
30.22
44.71
51.95
45.75
42.69
68.05
32.01
60.3
583.01 20
36.33
```

```
46.56
56.52
50.26
49.44
60.5
62.58
54.02
36.18
39.07
57.76
64.28
54.9
65.02
68.47
43.88
44.3
62.58
41.13
39.67
708.26 20
57.22
34.12
52.23
57.74
45.1
58.57
64.91
39.36
52.07
58.9
56.63
40.98
56.05
35.31
62.92
52.67
56.82
45.76
64.58
47.13
```

Judges Output to Screen
```
4
5
7
20
12
14
```

3. Collation

Program Name: Collation.java   **Input File: collation.dat**

Judges Input File
```
6
ojhdfnexkizuyvgltraqpwbsmc
5
dance safe sidewalk orange safety
zyxwvutsrqponmlkjihgfedcba
7
cage hammer tree cow yearning treatment morning
fhgdsakjlpioytuerqwczxbnvm
3
apple justice favorite
whejymilfvuabscprdznxtkoqg
10
tall strap neighborly strapping tumble strapper ethereal whimsical join hungry
vwpqyhrmidnuebgxljkstzafoc
10
bad trick calendar decay clammy umbrella roomy contain voice optimal
udbylqvhgiwrtnzsecmxakjpof
10
table prickly stomach linen childlike cent heartbreaking art sidewalk selection
ofqxncrkgajslmvudzityebhwp
10
nauseating space trick hook nod coil book calculating ground true
```

Judges Output to Screen
```
orange dance sidewalk safe safety
yearning tree treatment morning hammer cow cage
favorite apple justice
whimsical hungry ethereal join strap strapper strapping neighborly tumble tall
voice roomy decay umbrella bad trick optimal clammy calendar contain
linen heartbreaking table sidewalk stomach selection childlike cent art prickly
nod nauseating coil calculating ground space true trick book hook
```

4. Face

Program Name: Face.java   Input File: none

Judges Input File
```
NONE
```

Judges Output to Screen

```
        8888888888
     88          88
    88            88
  88                88
  88  ----+  +----  88
888    +-+ || +-+    888
888  + 0 |||| 0 +  888
 88  +   +||+   +  88
 88       (..)      88
 88        ||       88
  88     (----)    88
    88      --    88
     88          88
       88888888
```

5. Festivals

Program Name: Festivals.java   Input File: festivals.dat

Judges Input File
```
8
1017
1400
1200
1080
750
1389
844
792
```

Judges Output to Screen

```
1017 is an ordinary year.

1400 is a Narishkeit festival year.

1200 is a leap year.

1080 is a leap year.
1080 is a Brimborion festival year.

750 is a Narishkeit festival year.

1389 is an ordinary year.

844 is a leap year.

792 is a leap year.
792 is a Brimborion festival year.
```

6. Image Comparison

Program Name: Image.java   **Input File: image.dat**

Judges Input File
```
4
2 1 1
icon.png
FF89A3
background.png
666666
X3F.jpg
626163
AB.jpg
F190B2
3 2 2
circle.png
dd00ff c56a88
ee00ff 32684a
square.png
a3bcff ce3a82
21aafd 621aa1
triangle.png
3e00ff 4e29a8
3ea0ef 2684a3
5YaS.jpg
aabc3f c9318a
2aaf4 621aa5
H7rT.jpg
3a02f1 4e2aaa
39a1e1 2681a6
P77d.jpg
da00f9 c56b87
eb00fa 32604a
3 4 4
smile.png
000000 fff200 fff200 000000
fff200 fff200 fff200 fff200
000000 fff200 fff200 000000
000000 000000 000000 000000
stripe.png
3f48cc 3f48cc 3f48cc 3f48cc
ed1c24 ed1c24 ed1c24 ed1c24
3f48cc 3f48cc 3f48cc 3f48cc
ed1c24 ed1c24 ed1c24 ed1c24
plad.png
22b14c ff7f27 22b14c ff7f27
ff7f27 22b14c ff7f27 22b14c
22b14c ff7f27 22b14c ff7f27
ff7f27 22b14c ff7f27 22b14c
7TP.jpg
948754 cb7b4b 948754 cb7b4b
cb7b4b 948754 cb7b4b 948754
948754 cb7b4b 948754 cb7b4b
cb7b4b 948754 cb7b4b 948754
s1GK.jpg
bfb500 fff200 fff200 bfb500
fff200 fff200 fff200 fff200
```

```
bfb500 fff200 fff200 bfb500
bfb500 bfb500 bfb500 bfb500
6QPw.jpg
c2274e c2274e c2274e c2274e
ed1c24 ed1c24 ed1c24 ed1c24
c2274e c2274e c2274e c2274e
ed1c24 ed1c24 ed1c24 ed1c24
4 3 3
icon.png
37d365 dd00ff c56a88
00ff4c ee00ff 32684a
df4a77 34dac4 d5ea3c
background.png
a7d32a a3bcff ce3a82
0aee42 21aafd 621aa1
d28a6d 24d3c4 29e15c
pic1.png
afd9e2 3e00ff 4e29a8
00ff42 3ea0ef 2684a3
cf51e3 642dc5 3551af
pic2.png
6bd559 2affa0 c53aff
3d7711 7b00d2 28464c
2e52aa f59da1 f3a3ee
As5Ya.jpg
a5da21 aabc3f c9318a
11ea4c 2aaf4 621aa5
d5816a 2ad2c6 2ae059
xT5r.jpg
aedae6 3a02f1 4e2aaa
0afa4b 39a1e1 2681a6
ce5aea 612ac2 3554aa
88hTG.jpg
6cd056 2afda0 c33afe
3a7110 7902d1 28464b
2a54a9 f099a2 f2a2ea
1CFs.jpg
37d365 da00f9 c56b87
00ff4c eb00fa 32604a
de4976 33dac3 d5e03c
```

Judges Output to Screen
```
icon.png: AB.jpg
background.png: X3F.jpg

circle.png: P77d.jpg
square.png: 5YaS.jpg
triangle.png: H7rT.jpg

smile.png: s1GK.jpg
stripe.png: 6QPw.jpg
plad.png: 7TP.jpg

icon.png: 1CFs.jpg
background.png: As5Ya.jpg
pic1.png: xT5r.jpg
pic2.png: 88hTG.jpg
```

7. Lorem Ipsum

Program Name: Lorem.java   Input File: lorem.dat

Judges Input File
```
5
3
a beautiful sunset that was mistaken for a dawn
that was a beautiful sunset
a beautiful man
4
if ever i would leave you
i would never leave you today
if i leave will you leave too
if i will leave you leave too
2
she loves me she loves me not she loves me she loves me not
she loves him more than she loves me or she loves you
10
come way than did may could part oil
call made oil now been day water people
made oil down could down did than my
its long could than who than people than
people first its people get water come call
first than first people now did made been
its who come part find way than water
first first first way my way now my
people long day call day now its first
did its part oil come come part find
5
cows jump over the moon
cows eat on the moon
many cows jump over the moon sometimes
many times cows jump over the moon
cows do not jump ever
```

Judges Output to Screen
```
a: 0.75,beautiful 0.25,dawn
beautiful: 0.67,sunset 0.33,man
for: 1.00,a
mistaken: 1.00,for
sunset: 1.00,that
that: 1.00,was
was: 0.50,a 0.50,mistaken

ever: 1.00,i
i: 0.50,would 0.25,leave 0.25,will
if: 0.67,i 0.33,ever
leave: 0.50,you 0.33,too 0.17,will
never: 1.00,leave
will: 0.50,leave 0.50,you
would: 0.50,leave 0.50,never
you: 0.67,leave 0.33,today
```

```
him: 1.00,more
loves: 0.71,me 0.14,him 0.14,you
me: 0.40,not 0.40,she 0.20,or
more: 1.00,than
not: 1.00,she
or: 1.00,she
she: 1.00,loves
than: 1.00,she

been: 1.00,day
call: 0.50,day 0.50,made
come: 0.40,part 0.20,call 0.20,come 0.20,way
could: 0.33,down 0.33,part 0.33,than
day: 0.33,call 0.33,now 0.33,water
did: 0.25,its 0.25,made 0.25,may 0.25,than
down: 0.50,could 0.50,did
find: 1.00,way
first: 0.33,first 0.17,its 0.17,people 0.17,than 0.17,way
get: 1.00,water
its: 0.20,first 0.20,long 0.20,part 0.20,people 0.20,who
long: 0.50,could 0.50,day
made: 0.67,oil 0.33,been
may: 1.00,could
my: 1.00,way
now: 0.25,been 0.25,did 0.25,its 0.25,my
oil: 0.33,come 0.33,down 0.33,now
part: 0.50,find 0.50,oil
people: 0.20,first 0.20,get 0.20,long 0.20,now 0.20,than
than: 0.17,did 0.17,first 0.17,my 0.17,people 0.17,water 0.17,who
water: 0.50,come 0.50,people
way: 0.50,than 0.25,my 0.25,now
who: 0.50,come 0.50,than

cows: 0.60,jump 0.20,do 0.20,eat
do: 1.00,not
eat: 1.00,on
jump: 0.75,over 0.25,ever
many: 0.50,cows 0.50,times
moon: 1.00,sometimes
not: 1.00,jump
on: 1.00,the
over: 1.00,the
the: 1.00,moon
times: 1.00,cows
```

8. Mining

Program Name: Mining.java **Input File: mining.dat**

Judges Input File

```
7
1 2
SC
1 3
SXC
1 3
SOC
3 3
SOC
XOO
C.C
15 15
OOOOOOOXXO.COOO
O.C.OOOXOOC.OOO
OOXOO...OO.COOO
OOXXX..OOXOOOOO
OOOO...XXCOOOOO
OOOOOOOXOOOOOOO
OOOOOO...OX...O
OOOO..CS.XXOOOO
O..CCO..COX.COO
O.O.OOOOOOOOOOO
O.X.XXXXXXXOOO
OO.OOOOXCXCXOCO
C.OOOOOXXXXXOOO
XOOOOOOOOOCOOCO
COOOOOCOOOOOOOO
15 15
SXCOCOCOCXCXCOC
XCOCOCXC.COCXCO
COCXCXC.C.COCXC
.C.COCXCOCOCXCO
CXCOCOCXCXCOCOC
.COCXCOC.COCOCX
C.C.C.C.C.COC.C
XCOCOCOCOCXCOCO
CXCOCOCOCOCOCOC
OCOCXCOCXCOCXCO
CXCOCOCXCOCOCXC
OC.C.COCXCOCXCO
COC.CXCXCXCOC.C
XCOCOCXCOCXCOCX
CXCOC.CXCOCOCXC
7 7
CXXXXXC
XXCCCXX
XXXOXXX
XXOCOXX
XXXOC..
XXXX...
XSX...C
```

Judges Output to Screen

```
1
1
0
2
10
85
7
```

9. Odd Numbers

Program Name: Odd.java   Input File: odd.dat

Judges Input File

```
3
5
7
17
23
25
```

Judges Output to Screen
```
15
45
87
477
855
1005
```

10. Permutations

Program Name: Permutations.java   Input File: permutations.dat

Judges Input File
```
11
tall
splat
bug
stove
spiritual
remind
glue
program
rambunctious
unsuitable
mississippi
```

Judges Output to Screen
```
12
120
6
120
181440
720
24
2520
239500800
1814400
34650
```

11. Thanksgiving

Program Name: Thanks.java   Input File: thanks.dat

Judges Input File

```
6                          C 54 15 49
2                          D 21 36 34
0 0 1                      4
0 0 2                      89 1 56
2                          63 80 49
A 0 0 2                    37 35 74
B 0 0 1                    15 20 61
3                          6
2 4 3                      A 7 62 13
1 3 7                      B 50 19 15
0 2 3                      C 0 11 9
4                          D 19 28 59
A 1 2 1                    E 39 49 66
B 0 2 1                    F 60 46 373
C 1 4 3                    A 56 2 26
D 0 1 1                    B 45 11 57
2                          C 63 19 10
5 5 5                      4
6 3 8                      78 2 67
3                          98 11 4
A 1 2 1                    10 21 96
B 1 3 3                    98 66 65
C 1 4 2                    4
5                          A 40 41 48
57 82 54                   B 1 4 41
57 83 73                   C 54 15 49
43 40 47                   D 21 36 34
61 40 90                   4
3 13 24                    89 1 56
3                          63 80 49
A 56 2 26                  37 35 74
B 45 11 57                 15 20 61
C 63 19 10                 6
4                          A 7 62 13
78 2 67                    B 50 19 15
98 11 4                    C 0 11 9
10 21 96
98 66 65                   D 19 28 59
4                          E 39 49 66
A 40 41 48                 F 60 46 37
B 1 4 41
```

Judges Output to Screen

```
A
C
B
B
C
E
```

12. Tic Tac Toe

Program Name: Tic.java   **Input File: tic.dat**

Judges Input File
```
7
OOO
X.X
XXO
...
.O.
...
OXO
OXX
XOO
...
...
...
.XO
.O.
OX.
X..
XXO
O.X
OXO
.X.
OX.
```

Judges Output to Screen
```
O WINS
ONGOING
DRAW
ONGOING
O WINS
X WINS
X WINS
```