November 2010

Computer Science Competition

Judges Packet

Problem #1
60 Points

Clothes

Test Input File
```
5
6
mario logo (shirt)
red   (pants)
hawaiian (shirt)
baggy (pants)
white (socks)
fancy (socks)
10
khaki (pants)
blueish green (shirt)
apple (shirt)
bright (socks)
blue (pants)
red (pants)
purple (socks)
ugly (shirt)
stupid (socks)
big red (pants)
10
khaki (socks)
blueish green (shirt)
apple (shirt)
bright (pants)
blue (pants)
red (pants)
purple (socks)
ugly (pants)
stupid (socks)
big red (pants)
12
one (shirt)
two (shirt)
three (pants)
four (pants)
five (shirt)
six (socks)
seven (pants)
eight (shirt)
nine (socks)
ten (socks)
eleven (shirt)
twelve (pants)
7
seven (pants)
one (shirt)
two (shirt)
six (socks)
three (shirt)
four (shirt)
```

```
five (shirt)
```

Test Output To Screen
```
hawaiian, baggy, fancy
mario logo, red , white

ugly, big red, stupid
apple, red, purple
blueish green, blue, bright

apple, big red, stupid
blueish green, ugly, purple

eleven, twelve, ten
eight, seven, nine
five, four, six

five, seven, six
```

Problem #2
60 Points

Friends

Test Input File
```
5
2
bill 2
greg 5
4
jim 5
phil 8
paul 7
rob 2
8
one 1
two 2
three 3
four 4
five 5
six 6
seven 7
eight 8
7
apple 43
bear 5
cable 3
dice 7
egg 34
frog 1
grass 12
1
bill 5
```

Test Output To Screen
```
greg, bill
phil, paul, jim, rob
eight, seven, six, five, four, three, two, one
apple, egg, grass, dice, bear, cable, frog
bill
```

Problem #3
60 Points

Periods

Test Input File
```
6
You kicked my dog
No I did not.
It was the kid that did
a
a.
not much to test.
```

Test Output To Screen
```
You kicked my dog.
No I did not.
It was the kid that did.
a.
a.
not much to test.
```

Problem #4
60 Points

Population

Test Input File
```
6
12 14
530 200
4786 3543
234 234
567 2434
96 2
```

Test Output To Screen
```
13
552
5165
259
828
96
```

Problem #5
60 Points

Presidents

Test Input File
```
7
Franklin Grant Jackson
Hamilton Lincoln Washington
Washington Washington Washington Franklin Jackson
Hamilton Lincoln Washington Lincoln Franklin
Hamilton Jackson
Franklin Jackson Franklin Jackson Franklin Jackson
Washington Jackson Jackson
```

Test Output To Screen
```
$170
$16
$123
$121
$30
$360
$41
```

Problem #6
60 Points

ReWord-Wrap

Test Input File
```
5
40
4
Chinua Achebe was born on November 16, 1930 into the Igbo
African ethnic group in southern Nigeria.  He was raised in a
Christian family, but he was always fascinated by the
traditional African religion and culture.
35
4
Achebe uses the short story of a hard working man
in a war torn area with a bright outlook on life to act
as a model for other Africans affected by
the Nigerian Civil War.
18
4
Achebe uses the short story of a hard working man
in a war torn area with a bright outlook on life to act
as a model for other Africans affected by
the Nigerian Civil War.
1
1
a b c d e f g h i j k l m n o p q r s t u v w x y z
14
3
African ethnic group in southern Nigeria.  He was raised in a
Christian family, but he was always fascinated by the
traditional African religion and culture.
```

Test Output To Screen
```
Chinua Achebe was born on November 16,
1930 into the Igbo African ethnic group
in southern Nigeria.  He was raised in a
Christian family, but he was always
fascinated by the traditional African
religion and culture.

Achebe uses the short story of a
hard working man in a war torn area
with a bright outlook on life to
act as a model for other Africans
affected by the Nigerian Civil War.

Achebe uses the
short story of a
hard working man
in a war torn area
with a bright
outlook on life to
act as a model for
other Africans
```

```
affected by the
Nigerian Civil
War.

a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
p
q
r
s
t
u
v
w
x
y
z

African ethnic
group in
southern
Nigeria.  He
was raised in
a Christian
family, but he
was always
fascinated by
the
traditional
African
religion and
culture.
```

Problem #7
60 Points

Seasons

Test Input File
```
7
1000
January 1, 1999
365
August 12, 2034
712
December 31, 1991
234
October 13, 2000
1
June 13, 2009
9456
April 30, 1952
45
May 8, 1990
```

Test Output To Screen
```
September 26, 1999
February 17, 2035
July 09, 1992
February 21, 2001
June 13, 2009
October 27, 1960
May 17, 1990
```

Problem #8
60 Points

Semiperfect

Test Input File
```
9
3
6
32
228
234
186
235
672
674
```

Test Output To Screen
```
NOT Semiperfect
Semiperfect
NOT Semiperfect
Semiperfect
Semiperfect
Semiperfect
NOT Semiperfect
Semiperfect
NOT Semiperfect
```

Problem #9
60 Points

Spaces

Test Input File
```
27
sad
data
apon
sentence
him
was
because
darby
of
time
lived
everybody
alone
is
once
judges
whatever
a
problem
he
i
and
afraid
apple
an
there
la
onceaponatimetherewasadarbyandhelivedalonebecauseeverybodywasafraidofhimhewas
sadandisentenceisproblemjudgesdatalalaandwhateveranapple
```

Test Output To Screen
```
4 9 11 16 22 26 28 34 38 41 47 53 61 71 75 82 85 89 92 96 100 104 106 115 118
126 133 138 141 144 148 157 160
```

Problem #10
60 Points

Stacker

Test Input File
```
5
5 5
.....
#####
...#.
...#.
#..#.
1 3 2 1 4
7 7
.......
....###
.#...##
.#...#.
###..#.
..#..#.
..#..#.
1 2 2 2 2 3 3 4 5
5 5
.####
.#...
####.
...#.
#####
6 4 3 3 1 2 3 4 4 4 1
8 8
....##..
....#...
....#...
####...
.#..#...
.#..####
.#..#.#.
.#..#.#.
7 4 3 1 3 2 2 3
1 1
#
1 1 1
```

Test Output To Screen
```
Not Possible.
6
6
7
1
```

Problem #11
60 Points

Star

Test Output To Screen
```
. . . . . . . . . .*. . . . . . . . .
. . . . . . . . . .**. . . . . . . .
. . . . . . . . . .*.*. . . . . . .
. . .******. . .*. . . . . .
. . . .*. . . . . . . .******
. . . . .*. . . . . . . . . . .*.
. . . . .*. . . . . . . . . .*. .
. . . .*. . . . . . . . . . .*. . .
. . .*. . . .*. . . . .*. . . .
. .*. . .*. .*. . .*. . . . .
.*. .*. . . . . . .*. .*. . . .
.**. . . . . . . . . .*.*. . .
. . . . . . . . . . . . . .**. .
```

Problem #12
60 Points

Trail

Test Input File
```
6
7 7
..W....
..W....
..W....
..W..FF
..W.R..
..W..R.
.....RS
35
5 10
....RF....
....RF....
...R.FF..S
..R..FF...
...R.FF...
50
10 10
.R........
.R........
.RWWWWWWW
.R........
.RFR......
.R.R......
...R....RR
...R....RS
.WWWWWWFFF
.WWWWR...W
72
1 3
.WS
8
7 7
.WWWWWW
.WWFFFF
...FFFF
.WWFFFF
.RRRRRF
.RWWWWF
.RS.WFF
61
5 5
.F...
.RFFF
.RFWW
.RFWS
.RFWW
30
```

Test Output To Screen

```
The Package arrived with 4 day(s) to spare.
The Package was not delivered in time.
The Package arrived with 15 day(s) to spare.
The Package arrived with 0 day(s) to spare.
The Package was not delivered in time.
The Package arrived with 3 day(s) to spare.
```