



# UIL Computer Science Competition

## Invitational A 2018

### **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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### Problem #1

60 Points

## 1. Aaron

**Program Name:** Aaron.java

**Input File: None**

## Test Output To Screen

.....

**Problem #2**  
**60 Points**

## 2. Chaoxiang

**Program Name: Chaoxiang.java**

**Input File: chaoxiang.dat**

**Test Input File:**

```
212
32
-459.68
55
-20
500
-200
299.99
-456
```

**Test Output To Screen**

```
373.16
273.16
0.00
285.94
244.27
533.16
144.27
422.04
2.05
```

**Problem #3**  
**60 Points**

### 3. Déshì

**Program Name: Deshi.java**

**Input File: deshi.dat**

**Test Input File:**

```
eairphnanf
dekfqkexcxoeiiecooqmjvkqujitie
hqlouuycblgjsxo
utuqleznljagihbtbgiuaoeezdlbkwadalceseecyd
uqirqqrlfqekbmtii
bbooevaauliqzuaqzelbketgzepv
ducmixmbyebuccjsqrqabskcieixmiidpceacfezp
yieezaraieicrsdbigeuhbcottlncqebuewkmzel
auxuvnaoldqemuineiaubeuiaoudeoejaejaeilomknuciud
ibocmluyeajacgdbbnilbaujkhallqovniiaudjledqwkddje
xblcbwckaezekjnudgqnqzqdegcu
mweulehfzguemcizdtdcdjikfwozmtrimacuje
ltijmeunonyaldbombamm
jljedruthmjbwkrncicuzoncu
ofayfucxdaizimewqjpeedasmloiuudlu
ipduteuwjlqpietjcekaijbae
jmkmokutieduicpeacheibomaxbtkldgdjyieircuaa
ajdmjgmqqedlkuceabrjppjeneniemmduaiumokoiuyeoli
aqhoiiqqyidbiluuzfpebj
cbboniqijceumjoaxjjga
abnmcccjyniefyowxebkriyuimubemijqdaiooglemyobe
muwmbpkcopuliuicm
ufdocdmqkldbaupqcqgeourqjdkoiw
goueaazjayzenzauykumqddcdmbqutjtxaiqjyaogeede
uomasumgleoviopsmifcaisieauchjnuurmui
naoutkeuuan
eismoxiiouykieiearixjinynobzimuztuguytsi
kueiseemtavvmbbegicicwiafeenl
necnedcwqjd
orauilvpmqpaauhedcvnsujdjawezlooioqmbdkb
qdkemnanovuejomzatdoamxqveioieuoecooumgdocbe
veobjdzakevpikuukkcljderoirihhfkralei
guxexvsbdiuultuhofuphaldimuvzlduneiluaotclp
oknyozpiimecajlokbsrkxicfnjeathoocs
xeioangteullqoanbasfoxcoboieayiincducankrol
eoeagmdkduigldaf
yhjejbdbhullgeomdekedzaend
dzeikeauaescixyiqofjoeiqpeuedeej
eidlioallryeaaiiatavbdoualihoomb
izymsubbbqemga
bboudwoeafsgheohzashexvhkafediacu
beqqxeyuhekrewqpeaoteveugwluounkobtuuoedjupkudv
akmdnzsuqriccdiauejnkmekhjoyzodweicarkxoqti
buktshnrnodlufakldpqajiaelapdqou
uuuckdzyvyxoenjicplmope
sdrnlncikzjprdcqnfofoueocumu
bdjpwnaodlojqeaodguosalnxaioaujpfugeaunkgndimzo
hdapergcowuahimrjuufkuouqvnxyqenejckvir
ectugvugvyneueuasol
epcoibebejtjdiawnocxajchfwaxgulqimoebbjjcl
```

(Deshi, cont)

Test Output To Screen

```

ACCEPTABLE eairphnanf
NOT ACCEPTABLE dekfqkexcxcxeoiiecooqmjvkqujitie
NOT ACCEPTABLE hqloiuyyblgjsxo
NOT ACCEPTABLE utuqleznljagihbqiuaooezdlbkwadalceseecyd
ACCEPTABLE uqirqqrllfqekbmtii
ACCEPTABLE bbooevaauliqzuaqzelbketgzevp
NOT ACCEPTABLE ducmixmbyebbcjsqrqabskcieixmiidpceacfezp
ACCEPTABLE yieezaraieicrsdbigeuhbcottlncqebuewkmzel
NOT ACCEPTABLE auxuvnaoldqemuineiabebuiaoudeoejaejaeilomknuciud
ACCEPTABLE ibocmluyeajacgdbbnlbaujkhallqovniiaudjledqwkddje
NOT ACCEPTABLE xblcbwckaezekjnudggnqznzqdegcu
ACCEPTABLE mweulehfhzguemcizdtcdjikfwozmtrimacuje
ACCEPTABLE ltijmeunonyaldombzamm
NOT ACCEPTABLE jlijedruthmjbwkrncicuzoncu
ACCEPTABLE ofayfucxdajizmewqjpeedasmlouiuudlu
ACCEPTABLE ipduteuwjlpqietjcekaijbae
NOT ACCEPTABLE jmkmokutieduicpeacbeibomaxbtkdlgdjyieircuaa
NOT ACCEPTABLE ajdmjgmqqedlkuceabrjppjeneniemmduaiaumokoiuyeoli
ACCEPTABLE aqhoiiqqyidbiluuzfpebj
ACCEPTABLE cbboniqijceuamjoaxjjga
NOT ACCEPTABLE abnmcccjynieifyowxebkriyuimubemijqdaiooglemyobe
ACCEPTABLE muwmbpkcopuliuicm
NOT ACCEPTABLE ufdocdmqkldbaupqcqgeourqjdkoiw
NOT ACCEPTABLE goueaazjayzenzauykumqddcdmbqutjttxaiqjyaogeede
ACCEPTABLE uomasumqleoviopsmifcalsieauchjnuurmui
ACCEPTABLE naoutkeuan
NOT ACCEPTABLE eismoxiiouykueiearixjinynobzimuuztuguytsi
ACCEPTABLE kueiseemtavvmbbegcicwiaefeenl
ACCEPTABLE necnedcwqjd
NOT ACCEPTABLE orauilvpmqpaaaauhedcvnsujdjawezlooioqmbdkb
NOT ACCEPTABLE qdkemnanovuejomzatdoamxqveioieuoecooumgdocbe
ACCEPTABLE veobjdzakevpikuukkcljderoirihhfkralei
ACCEPTABLE guxexvsbdiuultuhofuphaldimuvzlduneiluaotclp
ACCEPTABLE oknyozpiimecajlokbsrkxicfnjeathoocs
ACCEPTABLE xeioangteullqoanbasfoxcoboieayiincluducanvkrol
NOT ACCEPTABLE eoeagmdkduigldaf
ACCEPTABLE yhjejbdjhullgeomdedkedzaend
NOT ACCEPTABLE dzeikeauaescixyiqofjoeiqpeuedeej
NOT ACCEPTABLE eidlioallryeaaiiatavbdoualihoomb
ACCEPTABLE izymsubbbqemga
ACCEPTABLE bboudwoeafsgheohzashexvhkafediacu
ACCEPTABLE beqqxeyuhekrewqpeaoteveugwluounkobtuuoedjupkudv
ACCEPTABLE akmdnzsuqriccdiuaejnkmekhjyozdweicarkxoqti
ACCEPTABLE buksnihrnodlufakldpqajiaelapdqou
NOT ACCEPTABLE uuuckdzyvyxoenjicplmope
NOT ACCEPTABLE sdrnlncikzjprdcqnfofoueocumu
NOT ACCEPTABLE bdjpwnaodlojgeaodguosalnxaioaujpfugeaunkgndimzo
ACCEPTABLE hdapergcowuahimrjufkuouquvnsxyqenejckvir
NOT ACCEPTABLE ectugvugvyneueuasol
ACCEPTABLE epcoibebejtjdiawnocxajchfwaxgulqimoebbjjcl

```

**Problem #4**  
**60 Points**

**4. Isabel**

**Program Name: Isabel.java**

**Input File: isabel.dat**

**Test Input File:**

```
Isabel 2003 9 18
Rocio 2004 12 25
Wally 2003 10 31
Klara 2002 11 1
Chaoxiang 2001 2 16
Stelios 2002 6 6
Linus 2001 4 21
Deshi 2002 3 7
Logan 2003 8 17
Polina 2002 5 15
Vicente 2001 7 9
Aaron 2000 1 23
```

**Test Output To Screen**

```
Aaron      : Sunday, January 23, 2000
Logan      : Sunday, August 17, 2003
Vicente    : Monday, July 9, 2001
Polina     : Wednesday, May 15, 2002
Deshi      : Thursday, March 7, 2002
Isabel     : Thursday, September 18, 2003
Stelios    : Thursday, June 6, 2002
Chaoxiang  : Friday, February 16, 2001
Klara      : Friday, November 1, 2002
Wally      : Friday, October 31, 2003
Linus      : Saturday, April 21, 2001
Rocio      : Saturday, December 25, 2004
```







**Problem #6**  
**60 Points**

**6. Linus**

**Program Name: Linus.java**

**Input File: linus.dat**

**Test Input File:**

```
16
2 4
12 14
6 8
9 27
25 4
7 7
5 7
2 10
26 13
26 14
0 5
1 5
381 549
9 18
18 9
18 10
```

**Test Output To Screen**

```
1/2
6/7
3/4
1/3
6 1/4
1
5/7
1/5
2
1 6/7
0
1/5
127/183
1/2
2
1 4/5
```

**Problem #7**  
**60 Points**

## 7. Logan

**Program Name: Logan.java**

**Input File: logan.dat**

**Test Input File:**

5	15 53 O	41 2 AD	77 47 BO
5	20 88 P	6 72 AE	26 68 BP
3	25 73 Q	58 26 AF	24 39 BQ
5 3 BLUE	30 83 R	52 2 AG	45 18 BR
3 2 RED	35 93 S	82 76 AH	86 91 BS
4 1 GREEN	40 103 T	12 2 AI	90 23 BT
6	1000	2 40 AJ	71 39 BU
5	100	3 29 AK	2 56 BV
1 5 BLUE	84 62 A	19 66 AL	99 36 BW
6 4 RED	49 14 B	87 39 AM	76 77 BX
4 3 GREEN	98 24 C	1 45 AN	32 31 BY
7 2 YELLOW	79 64 D	85 41 AO	62 29 BZ
3 1 ORANGE	17 22 E	64 90 AP	78 11 CA
10	8 8 F	59 97 AQ	4 17 CB
6	13 56 G	58 81 AR	97 9 CC
9 2 VIOLET	98 62 H	34 68 AS	47 49 CD
4 5 INDIGO	73 32 I	98 16 AT	31 92 CE
7 3 RED	12 1 J	65 43 AU	86 17 CF
6 7 PINK	59 72 K	4 33 AV	19 85 CG
2 1 BLACK	74 13 L	86 94 AW	9 92 CH
5 4 BROWN	59 41 M	96 7 AX	67 88 CI
100	18 11 N	37 49 AY	9 29 CJ
20	66 98 O	91 87 AZ	58 46 CK
1 1000 A	34 23 P	72 92 BA	100 99 CL
49 25 B	68 37 Q	98 45 BB	1 16 CM
14 19 C	24 1 R	32 95 BC	18 37 CN
73 61 D	82 85 S	68 66 BD	60 18 CO
9 23 E	58 2 T	76 76 BE	70 97 CP
52 11 F	54 60 U	98 60 BF	27 13 CQ
7 54 G	37 51 V	18 31 BG	75 53 CR
14 14 H	2 23 W	20 72 BH	48 96 CS
7 2 I	78 47 X	22 53 BI	80 70 CT
16 4 J	18 50 Y	95 95 BJ	57 5 CU
88 42 K	62 47 Z	6 8 BK	56 17 CV
82 23 L	33 6 AA	36 21 BL	
5 33 M	54 45 AB	21 72 BM	
10 43 N	21 71 AC	1 96 BN	

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(Logan, cont)

Test Output To Screen

5	M
4	N
\$9	P
BLUE	Q
GREEN	R
6	T
6	X
\$14	Z
GREEN	AA
YELLOW	AD
ORANGE	AF
10	AG
10	AI
\$23	AM
VIOLET	AO
RED	AT
BLACK	AU
BROWN	AX
100	BB
96	BF
\$259	BL
F	BO
H	BR
I	BT
J	BU
K	BW
L	BZ
1000	CA
1000	CC
\$2644	CF
B	CO
C	CQ
H	CR
I	CU
J	CV
L	

**Problem #8**  
**60 Points**

**8. Polina**

**Program Name: Polina.java**

**Input File: polina.dat**

**Test Input File:**

```
INVITATIONAL 914
DISTRICT 425 562
UILCONTEST 691 472 456
ELEPHANT 756 451
GIRAFFE 451 284 962 942
CHEETAH 962 756
RHINOCEROS 693 454 314 285
CHIMPANZEE 325 451 314 586 618 442
COMPUTERS 325
PROGRAMMING 962 451 618
ZEBRA 451 314 586 618 442
PACKETSWEEP 756 451 284 693 942 876 693 454 314 285
```

**Test Output To Screen**

```
INVITATIONAL 3AINVITATILN0AA2
DISTRICT 21ADRSTIAC0AI92
UILCONTEST 1120SLICANTEUTAA388
ELEPHANT 1PAEL2EHANTAA43
GIRAFFE 3311AFFRAG3EACIA2E
CHEETAH 23ACAEETHHAA24
RHINOCEROS 1112ANOHROCERIS6A5AAD
CHIMPANZEE 12111IACH2MPENEAZ3A5AAAAA
COMPUTERS 1ACOMPRT0USAA5
PROGRAMMING 2ROAPR3G1NMMIAGAA23A
ZEBRA 1211EAARB23AAZAAAA
PACKETSWEEP 1112311A3PEA22KCSTWEEPAAC3456C5EAD
```



**Problem #10**  
**60 Points**

# 10. Stelios

**Program Name: Stelios.java**

**Input File: stelios.dat**

**Test Input File:**

```
3 AB BC CA
4 AB BC CD BD
6 AB AC CF BF BD BE ED
5 AB BD DA DC DE
7 AB BC CD DE EF FG BD CF GA
8 HG GF FE ED DC CB BA
9 AB BC CD EF GH EI FE
12 AB BC CD EF GH EI FE AK KJ JI BJ KB BD GK LA
25 AB BC CD EF GH EI FE AK KJ JI BJ KB BD GK LA AM AN BO CP DQ ER FS GT HU IV JW KX LY
```

**Test Output To Screen**

```
0 1 1
1 0 1
1 1 0
-----
0 1 2 2
1 0 1 1
2 1 0 1
2 1 1 0
-----
0 1 1 2 2 2
1 0 2 1 1 1
1 2 0 3 3 1
2 1 3 0 1 2
2 1 3 1 0 2
2 1 1 2 2 0
-----
0 1 2 1 2
1 0 2 1 2
2 2 0 1 2
1 1 1 0 1
2 2 2 1 0
-----
0 1 2 2 3 2 1
1 0 1 1 2 2 2
2 1 0 1 2 1 2
2 1 1 0 1 2 3
3 2 2 1 0 1 2
2 2 1 2 1 0 1
1 2 2 3 2 1 0
-----
0 1 2 3 4 5 6 7
1 0 1 2 3 4 5 6
2 1 0 1 2 3 4 5
3 2 1 0 1 2 3 4
4 3 2 1 0 1 2 3
5 4 3 2 1 0 1 2
6 5 4 3 2 1 0 1
7 6 5 4 3 2 1 0
-----
0 1 2 3 0 0 0 0 0
1 0 1 2 0 0 0 0 0
2 1 0 1 0 0 0 0 0
3 2 1 0 0 0 0 0 0
0 0 0 0 0 1 0 0 1

0 0 0 0 1 0 0 0 2
0 0 0 0 0 0 0 1 0
0 0 0 0 0 0 1 0 0
0 0 0 0 1 2 0 0 0
-----
0 1 2 2 4 5 2 3 3 2 1 1
1 0 1 1 3 4 2 3 2 1 1 2
2 1 0 1 4 5 3 4 3 2 2 3
2 1 1 0 4 5 3 4 3 2 2 3
4 3 4 4 0 1 4 5 1 2 3 5
5 4 5 5 1 0 5 6 2 3 4 6
2 2 3 3 4 5 0 1 3 2 1 3
3 3 4 4 5 6 1 0 4 3 2 4
3 2 3 3 1 2 3 4 0 1 2 4
2 1 2 2 2 3 2 3 1 0 1 3
1 1 2 2 3 4 1 2 2 1 0 2
1 2 3 3 5 6 3 4 4 3 2 0
-----
0 1 2 2 4 5 2 3 3 2 1 1 1 1 2 2 3 3 5 6 3 4 4 3 2 2
1 0 1 1 3 4 2 3 2 1 1 2 2 2 1 2 2 4 5 3 4 3 2 2 3
2 1 0 1 4 5 3 4 3 2 2 3 3 3 2 1 2 5 6 4 5 4 3 3 4
2 1 1 0 4 5 3 4 3 2 2 3 3 3 2 2 1 5 6 4 5 4 3 3 4
4 3 4 4 0 1 4 5 1 2 3 5 5 4 5 5 1 2 5 6 2 3 4 6
5 4 5 5 1 0 5 6 2 3 4 6 6 6 5 6 6 2 1 6 7 3 4 5 7
2 2 3 3 4 5 0 1 3 2 1 3 3 3 3 4 4 5 6 1 2 4 3 2 4
3 3 4 4 5 6 1 0 4 3 2 4 4 4 4 5 5 6 7 2 1 5 4 3 5
3 2 3 3 1 2 3 4 0 1 2 4 4 4 3 4 4 2 3 4 5 1 2 3 5
2 1 2 2 2 3 2 3 1 0 1 3 3 3 2 3 3 3 4 3 4 2 1 2 4
1 1 2 2 3 4 1 2 2 1 0 2 2 2 2 3 3 4 5 2 3 3 2 1 3
1 2 3 3 5 6 3 4 4 3 2 0 2 2 3 4 4 6 7 4 5 5 4 3 1
1 2 3 3 5 6 3 4 4 3 2 2 0 2 3 4 4 6 7 4 5 5 4 3 3
1 2 3 3 5 6 3 4 4 3 2 2 0 3 4 4 6 7 4 5 5 4 3 3
2 1 2 2 4 5 3 4 3 2 2 3 3 3 0 3 3 5 6 4 5 4 3 3 4
3 2 1 2 5 6 4 5 4 3 3 4 4 4 3 0 3 6 7 5 6 5 4 4 5
3 2 2 1 5 6 4 5 4 3 3 4 4 3 3 0 6 7 5 6 5 4 4 5
5 4 5 5 1 2 5 6 2 3 4 6 6 6 5 6 6 0 3 6 7 3 4 5 7
6 5 6 6 2 1 6 7 3 4 5 7 7 7 6 7 7 3 0 7 8 4 5 6 8
3 3 4 4 5 6 1 2 4 3 2 4 4 4 4 5 5 6 7 0 3 5 4 3 5
4 4 5 5 6 7 2 1 5 4 3 5 5 5 5 6 6 7 8 3 0 6 5 4 6
4 3 4 4 2 3 4 5 1 2 3 5 5 5 4 5 5 3 4 5 6 0 3 4 6
3 2 3 3 3 4 3 4 2 1 2 4 4 4 3 4 4 4 5 4 5 3 0 3 5
2 2 3 3 4 5 2 3 3 2 1 3 3 3 3 4 4 5 6 3 4 4 3 0 4
2 3 4 4 6 7 4 5 5 4 3 1 3 3 4 5 5 7 8 5 6 6 5 4 0
```

**Problem #11**  
**60 Points**

**11. Vicente**

**Program Name: Vicente.java**

**Input File: vicente.dat**

**Test Input File:**

```
10110101 EVEN
10110101 ODD
1000000001110001 ODD
10110100 EVEN
10110100 ODD
1101001011000111 EVEN
1111111111111110 ODD
10101010011000101010101001100010 ODD
11111111111111111111111111111110 EVEN
```

**Test Output To Screen**

```
B5 16B
B5 16A
8071 100E2
B4 168
B4 169
D2C7 1A58F
FFFE 1FFFC
AA62AA62 154C554C5
FFFFFFFFE 1FFFFFFFFFD
```

**Problem #12**  
**60 Points**

## 12. Wally

**Program Name: Wally.java**

**Input File: wally.dat**

**Test Input File:**

abstract  
assert  
boolean  
break  
byte  
case  
catch  
char  
class  
continue  
default  
do  
double  
else  
enum  
extends  
false  
final  
finally  
float  
for  
if  
implements  
import  
instanceof  
int  
interface

long  
native  
new  
null  
package  
private  
protected  
public  
return  
short  
static  
strictfp  
super  
switch  
synchronized  
this  
throw  
throws  
transient  
true  
try  
void  
volatile  
while  
999  
x  
num  
while

final  
count  
3com  
\_time  
\$amount  
this  
break  
7seven  
8  
Control  
alb2c3  
C3PO  
TEMP  
a123456  
elapsed time  
true  
false  
null  
Q13  
abc%def  
123456789  
valid  
valid\_identifier  
value\$  
double  
Int  
#hashtag

**Test Output To Screen**

\$amount  
C3PO  
Control  
Int  
Q13  
TEMP  
\_time  
a123456  
alb2c3  
count  
num  
valid  
valid\_identifier  
value\$  
x