



UIL Computer Science Competition

District 2 2016

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

Number	Name
Problem 1	Aiguo
Problem 2	Ba Tu
Problem 3	Chin
Problem 4	Daisuke
Problem 5	Ekaterina
Problem 6	Felipe
Problem 7	Gary
Problem 8	Heather
Problem 9	Isabel
Problem 10	Jakub
Problem 11	Kartik
Problem 12	Lauren

Problem #1

60 Points

1. Aiguo

Test Input File: aiguo.dat

10
klm1n2opqr3tu4vwxyz
albcd2e3fgh4ij
1234567890
0123456789
qwertyuiopasdfghjklzxcvbnm
qjtttyuiopasrfdghxcvbnmdd
the brown fox curiously jumped over the sad dog
the quick brown fox jumped over the lazy dog
Ceci n'est pas ma femme.
Ceci est ma femme.
I love chocolate!
He loves chocolates!
a
a
aaaaaaaaaabbbbbbbbbb
aaaacaaaaacbbbbbcbbbb
abababababababababab
bbbbbbbbbbbbb

(first line of last data set)

[illegible]

(second line of last data set)

abcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyz
tuglmnopqrstuvwxyabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyz
efghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyz
daddedsomejibberishefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyz
efghijnopqrstuvwxyabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyz
klmnopqrstuvwxyabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyz
defghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyz
wxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyzabcdefghijklmnopqrstuvwxyz(end of line)

Test Output To Screen

```
removed: klmnopqrtuvwx
added: abcdefghij
unchanged: 1234
removed: 0
added: 0
unchanged: 123456789
removed: werjklzn
added: jtrfpndd
unchanged: qtyuiopasdghxcvbm
removed: curiously sd
added: quick lzy
unchanged: the brown fox jumped over the a dog
removed: n'pas
added:
unchanged: Ceci est ma femme.
removed: I
added: Hess
unchanged:  love chocolate!
removed:
added:
unchanged: a
removed: ab
```

UIL – Computer Science Judge’s Packet – District 2 - 2016

added: ccc
unchanged: aaaaaaaaaabbbbbbbbbb
removed: aaaaaaaaaa
added:
unchanged: bbbbbbbbbbbb
removed: vwxyzabcdefhijklrstbcdghijklnpqrvwxyzbcklmwxyzabtuvw
added: Ihvrevedomesffnaddsomejibberishe
unchanged:
abcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqr
stuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnop
stuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnop
opqrstuvcdghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnop
rstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnop
klmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabcdefghijklmnopqrstuvwxyabc
defghijklmnopqrstuvwxy

Problem #2
60 Points

2. Ba Tu

Test Input File: batu.dat

```
050010040
107000602
000905000
208030501
040070020
901080406
000401000
304000709
020060010
1 1
4 2
2 5
3 5
8 8
8 5
4 4
1 3
1 9
6 7
```

Test Output To Screen

```
68
67
4
24
568
25
6
2369
378
34
```

Problem #3
60 Points

3. Chin

Test Input File: chin.dat

```

10
5 * x^2 + x / 7 + 9
1372.3
7 * x^3 + 7 * x + 15
100.1
1 / 7 + 17 + 9 * x + 15 * x^3
0.0
703 * x^51
4.3
x^12 + 6 * x^4 + 1225 * x - 5
5.5
6 * x^10000 + 7 * 7
1.001
6 * x^10000000000 + 9000000 * x
0.5
1 + 1 + 1 + 1 + 1 + 1
10000000000.343
x
3.3
5 * x^1
4.0
    
```

Test Output To Screen

```

13723.14
210427.21
9.00
16902396299027330000000000000000000000.00
1671753287.99
1313687193.15
9000000.00
0.00
1.00
5.00
    
```

Problem #4
60 Points

4. Daisuke

Test Input File: **NONE**

Test Output To Screen

```
\"""/  
%\'\'/%  
%.\/. %  
%./\.%  
%/\'\'\  
/"""\
```

Problem #5
60 Points

5. Ekaterina

Test Input File: ekaterina.dat

```
20E WED 01PM 0E
65W FRI 07AM 5E
4E SAT 06AM 23E
157W MON 07AM 110W
170E SAT 06PM 140W
140W SAT 06PM 170E
77W FRI 08PM 149W
5E TUE 09AM 153E
153E WED 09PM 5E
25E MON 08AM 28E
40E MON 09AM 50E
25W TUE 10AM 65W
155W WED 11PM 89W
89W WED 11PM 155W
140E THU 10PM 20E
20E THU 10PM 140E
```

Test Output To Screen

```
WED 12PM
FRI 12PM
SAT 07AM
MON 10AM
FRI 09PM
SUN 03PM
FRI 04PM
TUE 07PM
WED 11AM
MON 08AM
MON 10AM
TUE 07AM
THU 04AM
WED 06PM
THU 02PM
FRI 06AM
```

Problem #6
60 Points

6. Felipe

Test Input File: felipe.dat

```
EKATERINA I
EKATERINA E
EKATERINA O
EKATERINA R
AIGUO O
DAISUKE I
HEATHER R
ROSANNAROSANNADANNA E
JAKUB R
MADAM I
TED O
MARCO R
```

Test Output To Screen

```
AAEEIKNRT
EAAEKITRN
AEAINRTKE
TRNKIEEAA
GOUIA
ADEIKSU
TRHHEEA
ROAAAAAANNNDNNORSS
UKJBA
AADMM
DET
ROMCA
```


Problem #7
60 Points

7. Gary

Test Input File: gary.dat

```
true true or
true false and
true false true and or
true false or not
false not false not or
true false xor
false false and not false true or xor
true false xor true or
false true false xor or
true true or true false or xor
false true or false true or not and
false false and false not or
true true or true true or and true not true or xor
```

Test Output To Screen

```
true
false
true
false
true
true
false
true
true
false
false
true
false
true
false
```

Problem #8
60 Points

8. Heather

Test Input File: heather.dat

```
25 10 X 8
25 X 31 8
25 10 31 X
X 23 FACE 16
A5 X BC 13
145 10 X 13
J3 30 X 10
X 10 51 36
X 11 29 19
X 10 31 8
X 10 568D 23
568D X 232BC 13
25 24 X 9
115 6 X 17
MN 25 X 30
573 10 X 25
64206 10 X 13
2A 16 42 X
```

Test Output To Screen

```
31
10
8
568D
15
B2
573
181
43
25
64206
23
58
2D
J3
MN
232BC
10
```

Problem #9
60 Points

9. Isabel

Test Input File: isabel.dat

```
7 2 B C
15 1 A
10 2 B A
130 4 F D E G
20 4 D C B A
40 3 E D A
12 3 D B A
25 2 E A
211 3 G H A
250 3 D H A
```

Test Output To Screen

```
6 4
1 8
3 5
120 64
15 8
25 16
11 5
17 10
193 84
137 123
```

Problem #10
60 Points

10. Jakub

Test Input File: jakub.dat

4
5
24
16
10
20
25
100
55
36
1

Test Output To Screen

14.000
21.875
558.000
248.000
93.750
387.500
605.469
9921.875
2977.734
1275.750
0.500

Problem #11
60 Points

11. Kartik

Test Input File: kartik.dat

```
LS-1 KARTIK
RC-2 AIGUO
MC-243R EKATERINA
REV-42 DAISUKE
RS-2 REV-24 HEATHER
LS-2 CHIN
RS-1 LC-2 JAKUB
RC-3 MC-342L LAUREN
RC-2 LS-5 FELIPE
LS-1 LC-3 MC-453L SAMURAILAUNDRY
MC-352L MC-452R CHEVYCHASE
MC-342L LC-2 LS-6 REV-35 RS-1 ROSANNAROSANNADANNA
```

Test Output To Screen

```
KARTIK ==> ARTIK-
AIGUO ==> UOAIG
EKATERINA ==> EATEKRINA
DAISUKE ==> DAIUSKE
HEATHER ==> --HHTAE
CHIN ==> IN--
JAKUB ==> -KUBJ
LAUREN ==> NURLAE
FELIPE ==> --E---
SAMURAILAUNDRY ==> LURAAUNDRYSAM-
CHEVYCHASE ==> CHAVYEHCS
ROSANNAROSANNADANNA ==> RONNSAADANN-----OA
```

Problem #12
60 Points

12. Lauren

Test Input File: lauren.dat

11	b d 6
3	c d 7
SanFrancisco	d e 8
NewYork	2
LosAngeles	a
3	b
SanFrancisco LosAngeles 383	1
SanFrancisco NewYork 2905	a b 10
LosAngeles NewYork 2789	4
5	a
Austin	b
Istanbul	c
Calcutta	d
NewYork	6
London	a b 2
10	a c 7
Austin Istanbul 6500	a d 12
Austin Calcutta 8773	b c 5
Austin NewYork 1513	b d 3
Austin London 4921	c d 4
Istanbul Calcutta 3652	4
Istanbul NewYork 5020	a
Istanbul London 1556	b
Calcutta NewYork 7929	c
Calcutta London 4853	d
NewYork London 3465	3
4	a b 2
Reykjavik	b c 2
Aarhus	c d 2
Geneva	10
Budapest	a
5	b
Reykjavik Aarhus 1515	c
Reykjavik Geneva 2379	d
Reykjavik Budapest 2443	e
Aarhus Budapest 933	f
Geneva Budapest 787	g
5	h
a	i
b	j
c	10
d	a b 6
e	b c 8
7	c d 9
a b 2	d e 10
a c 3	e f 33
a d 4	f g 1000
b c 5	g h 393848493

UIL – Computer Science Judge’s Packet – District 2 - 2016

h i 3848	Vladivostok
i j 392	Pyongyang
j a 38499	Fukuoka
10	Singapore
a	Darwin
b	QueensTown
c	Honolulu
d	82
e	Anchorage Toronto 4093
f	Anchorage KansasCity 3423
g	Anchorage Honolulu 2782
h	Toronto KansasCity 1001
i	Toronto Guadalajara 2400
j	Toronto GuatemalaCity 3165
13	Toronto Geneva 3970
a b 6	Toronto Aarhus 3785
b d 43	Toronto Reykjavik 2608
b c 8	KansasCity Guadalajara 1600
c d 9	KansasCity GuatemalaCity 2354
d e 10	Guadalajara GuatemalaCity 1185
e f 33	Guadalajara Recife 5048
f g 10	GuatemalaCity Recife 4118
f i 3	Recife AddisAbaba 5200
f j 3	Recife Kinshasa 3497
g h 39	Recife Bariloche 3847
h i 38	Bariloche Reykjavik 7750
i j 39	Bariloche CapeTown 4715
j a 38	Reykjavik Aarhus 1515
2	Reykjavik Geneva 2379
b	Reykjavik Budapest 2443
a	Aarhus Budapest 933
1	Aarhus Geneva 869
b a 3	Geneva Budapest 787
30	Geneva Krakow 930
Anchorage	Geneva Catania 1029
Toronto	Geneva SharmElSheikh 2830
KansasCity	Budapest Krakow 403
Guadalajara	Budapest Catania 1232
GuatemalaCity	Budapest SharmElSheikh 2959
Recife	Krakow Catania 1454
Bariloche	Krakow Kabul 3246
Reykjavik	Krakow SharmElSheikh 3206
Aarhus	Catania SharmElSheikh 2405
Geneva	Catania Kabul 3842
Budapest	SharmElSheikh AddisAbaba 2143
Krakow	SharmElSheikh Lagos 3845
Catania	SharmElSheikh Kinshasa 2543
SharmElSheikh	SharmElSheikh Calcutta 3368
AddisAbaba	SharmElSheikh Colombo 3305
Lagos	AddisAbaba Lagos 3515
Kinshasa	AddisAbaba Kinshasa 1820
CapeTown	AddisAbaba CapeTown 4192
Kabul	AddisAbaba Kabul 4789
Calcutta	Lagos Kinshasa 1149
Colombo	Lagos Kabul 5200
SiemRiep	Lagos CapeTown 4401
Ulaanbaatar	Kinshasa CapeTown 2046

UIL – Computer Science Judge’s Packet – District 2 - 2016

Kinshasa Kabul 4376	SiemRiep Singapore 1377
CapeTown Kabul 8000	Ulaanbaatar Vladivostok 2000
CapeTown Colombo 4899	Ulaanbaatar Fukuoka 1566
Kabul Calcutta 1422	Vladivostok Pyongyang 1121
Kabul Colombo 2025	Vladivostok Fukuoka 1566
Kabul SiemRiep 2609	Pyongyang Fukuoka 456
Calcutta Colombo 1772	Pyongyang Singapore 2967
Calcutta SiemRiep 2315	Fukuoka Honolulu 4393
Calcutta Ulaanbaatar 2025	Singapore Darwin 2083
Calcutta Singapore 3112	Singapore QueensTown 5077
Calcutta Pyongyang 2469	Singapore Honolulu 6715
Colombo Pyongyang 3606	Darwin QueensTown 3159
Colombo SiemRiep 2500	Darwin Honolulu 5364
Colombo Darwin 3746	QueensTown Honolulu 5042
SiemRiep Ulaanbaatar 2390	QueensTown SharmElSheikh 9677
SiemRiep Vladivostok 2651	QueensTown CapeTown 6667
SiemRiep Pyongyang 2220	

Test Output To Screen

SanFrancisco => LosAngeles => NewYork
Austin => NewYork => London => Istanbul => Calcutta
Reykjavik => Aarhus => Budapest => Geneva
a => b => c => d => e
a => b
a => b => d => c
a => b => c => d
a => b => c => d => e => f => g => h => i => j
a => b => c => d => e => f => i => h => g => j
b => a
Anchorage => Honolulu => Fukuoka => Pyongyang => Vladivostok => Ulaanbaatar
=> Calcutta => Kabul => Colombo => SiemRiep => Singapore => Darwin =>
QueensTown =>CapeTown => Kinshasa => Lagos => AddisAbaba => SharmElSheikh =>
Catania => Geneva => Budapest => Krakow => Aarhus => Reykjavik => Toronto =>
KansasCity => Guadalajara => GuatemalaCity => Recife => Bariloche