UIL Computer Science Competition

Region 2021

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

Problem #1
60 Points

1. Adéla

Program Name: Adela.java   Input File: none

Test Input File: None

Test Output To Screen:

```
*
* *
* * *
* * * *
* * * * *
* * * * * *
* * * * * * *
* * * * * * * *
* * * * * * * * *
* * * * * * * *
* * * * * * *
* * * * * *
* * * * *
* * * *
* * *
* *
*
```

Problem #2
60 Points

2. Bruce

Program Name: Bruce.java   **Input File: bruce.dat**

Test Input File:
```
10
100
50
85
20000
1
40000
99
15238
29012
36547
```

Test Output To Screen:
```
40.0000
28.2843
36.8782
565.6854
4.0000
800.0000
39.7995
493.7692
681.3164
764.6908
```

Problem #3
60 Points

3. Esteban

Program Name: Esteban.java   **Input File: esteban.dat**

Test Input File:

```
25
F 97 44
C 42 47
F 79 12
C 26 52
F 90 11
F 80 40
C 35 86
C 31 87
C 37 44
F 87 53
C 30 53
C 31 53
```

```
C 26 12
C 27 13
C 32 87
C 33 14
C 26 40
C 27 40
F 108 47
C 43 47
F 108 53
C 42 53
C 43 53
F 85 85
C 36 95
```

Test Output To Screen:

```
#1:105.6F
#2:59.1C
#3:77.5F INVALID
#4:26.6C INVALID
#5:85.5F
#6:79.9F INVALID
#7:60.6C INVALID
#8:43.5C
#9:42.9C
#10:90.4F
#11:31.5C
#12:33.2C
#13:25.2C INVALID
```

```
#14:25.9C
#15:47.5C
#16:30.7C
#17:26.2C INVALID
#18:26.9C INVALID
#19:139.7F
#20:62.6C INVALID
#21:149.4F INVALID
#22:64.4C INVALID
#23:68.3C INVALID
#24:99.1F
#25:72.5C INVALID
```

Problem #4
60 Points

4. Guozhi

Program Name: Guozhi.java   **Input File: guozhi.dat**

Test Input File:

Note: This judge data file contains over 1100 lines. This page shows the first portion of those lines. See the judge data file for the complete input data listing.

```
15
3 3
..G
N..
..H
3 3
..H
N#.
..G
4 5
.###H
S....
.G###
#..N#
3 3
G.#
.#.
#.H
3 3
G.N
.E.
```

```
W.H
1 11
E....H....G
3 3
G.W
...
..H
3 8
#.#.#.#.
S......H
...G##.#
5 5
..S..
#....
S.H.S
....#
G.S..
2 5
```
(data continues, see in data file)

Test Output To Screen:
```
Case #1: 3
Case #2: 2
Case #3: -1
Case #4: -1
Case #5: -1
Case #6: 5
Case #7: -1
Case #8: 10
Case #9: -1
Case #10: -1
Case #11: 9
Case #12: 8
Case #13: -1
Case #14: 999
Case #15: 999
```

5

Problem #5
60 Points

5. Kevin

Program Name: Kevin.java   **Input File: kevin.dat**

Test Input File:
Note: This judge data file contains around 500 lines. This page shows the first portion of those lines. See the judge data file for the complete input data listing.

```
10/29     4.39 0:12:31
10/30     19.64     0:55:58
10/31     18.08     0:56:35
11/1 24.11     1:06:33
11/2 4.49 0:11:43
11/4 3.45 0:09:46
11/5 12.04     0:41:47
11/6 27.91     1:44:57
11/7 25.74     1:11:18
11/8 28.34     1:29:50
11/9 15.05     0:46:12
11/11     25.35     1:36:50
11/12     8.95 0:23:16
11/13     18.86     1:00:32
11/14     12.01     0:40:57
11/15     12.35     0:34:42
11/16     22.77     1:25:37
11/17     24.55     1:08:15
11/19     19.93     1:02:23
11/20     28.87     1:49:08
11/21     22.42     1:21:37
11/22     3.07 0:08:38
11/23     8.59 0:22:36
11/24     15.95     0:45:18
11/25     25.70     1:42:33
11/26     22.81     1:16:39
11/28     3.45 0:08:56
11/29     24.08     1:15:37
11/30     24.21     1:07:04
12/1 3.68 0:10:14
12/2 10.72     0:36:08
12/3 23.74     1:24:45
12/4 8.01 0:20:30
12/5 25.58     1:41:18
12/6 3.88 0:09:58
```
(data continues, see in data file)

Kevin Test Output To Screen:
```
Total distance = 8396.98
Total time = 450:56:40
Average distance = 16.83
Average time = 0:54:13
Longest distance = 30.00
Longest time = 1:55:37
Fastest pace = 2:30
Short run average distance = 7.50
Short run average pace = 2:52
Medium run average distance = 16.30
Medium run average pace = 3:07
Long run average distance = 25.42
Long run average pace = 3:22
Best 7-day streak 7/26 - 8/1
Total distance = 162.58
Total time = 9:07:46
Average distance = 23.23
Average time = 1:18:15
Average pace = 3:22
```

Problem #6
60 Points

6. Mahesh

Program Name: Mahesh.java   **Input File: mahesh.dat**

Test Input File:
```
11
-4688
-27797
11359
23247
-1174
30153
7765
-30891
841
2902
-23569
```

Test Output To Screen:
```
Programming
```

Problem #7
60 Points

7. Maximo

Program Name: Maximo.java   **Input File: maximo.dat**

Test Input File:
```
7
A={1,2,3,4,5,6,7,8,9,10,11,12,13,14}
B={3,2,1}
A={1,2,3,6,7,9,11,12}
B={3,2,1,11}
A={7,8}
B={8,7}
A={1}
B={1}
A={1,2,3,4,5,6,7,8,9,10}
B={11,12,13,14,15,16,17}
A={2,4,6,8,10}
B={10,4,2,6,8}
A={11,2,4,7,9}
B={7,2,11,6,9}
```

Test Output To Screen:
```
Set B is a subset of Set A
Set B is a subset of Set A
Set A is equal to Set B
Set A is equal to Set B
Neither set is a subset of the other. Their intersection is: {}
Set A is equal to Set B
Neither set is a subset of the other. Their intersection is:
{2,7,9,11}
```

Problem #8
60 Points

8. Olivia

Program Name: Olivia.java   **Input File: olivia.dat**

Test Input File:
```
15
4 3 2
4 3 6
10 10 25
3141592 6535897 9323846
1000000000 1000000000 1000000000
1000000000 1000000000 999950884
1000000000 1000000000 31662
1000000000 1000000000 1
1 1 1
5 6 35
123456789 987654321 998244353
2 100000 32010
100000 2 32010
1000000000 1000000000 367567200
1000000000 1000000000 551350800
```

Test Output To Screen:
```
Case #1: 3
Case #2: 8
Case #3: 25
Case #4: 71686489
Case #5: 18951987500
Case #6: 11879427812
Case #7: 200202
Case #8: 1
Case #9: 1
Case #10: 0
Case #11: 0
Case #12: 48015
Case #13: 48015
Case #14: 7266489510
Case #15: 11118567948
```

Problem #9
60 Points

9. Randy

Program Name: Randy.java   **Input File: randy.dat**

Test Input File:
```
10
9/9/9/9/9/9/9/9/9/9
XXXXX5/5/X5/X5/
9/0/0/X6/1/9/XX0/3
6/X8/43X17X5/8/XXX
0000000000000000000
XXXXXXXXXXX
X0/0/0/0/0/0/0/XXXX
X9/817/XX5/62717/9
X4/30XX42X9/7/XXX
9/XXXXXXXXXX
```

Test Output To Screen:
```
190
230
163
175
0
300
160
163
169
290
```

Problem #10
60 Points

10. Sergey

Program Name: Sergey.java   **Input File: sergey.dat**

Test Input File:

```
5
5 90
<...>
.O.O.
..|..
.(_).
.....
22 180
* * * * * * * * * * * * * * * * * * * *
* * * * * * * * * * * * * * * * * * * *
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*) .) * *__ --  __ * * * * * * * * *
(. (* * /......\ * *A_ - _A * *
*\.\/.........\/.,.,.\ *
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* * *\.... ____ ...\_--/ * *
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* * * */.//* * * *|.|| * * * * * *
* * */_,))* * * *|_,)) * * * * *
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* * * * * * * * * * * * * * * * * * * *
9 450
.........
..STATE..
```

```
.........
&.&.|.#..
&.&.|.#..
&&&.|.###
.........
...CS....
.........
21 270
* * * * * * * * * * * * * * * * * * * *
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* * * * * * * * * * * * * * * * * * * *
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/...^.| * * * * * * * * * * * * * *
*---..| * * * * *___ * * * * * *
* * * *) .| * * * */...\ * * * * *
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* * *\..../...\.....|\ *
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* * * *|||* * * * * * *|||* * *
* * *//_(* * * * * * //_(* * *
* * * * * * * * * * * * * * * * * * * *
* * * * * * * * * * * * * * * * * * * *
* * * * * * * * * * * * * * * * * * * *
2 540
@#
$%
```

Sergey Test Output To Screen:

```
....<                                          .C.....T.
.(.O.                                          .S.|||.A.
._|..                                          .......T.
.).O.                                          ...###.E.
....>                                          ...#.....
DONE                                           ...#.....
* * * * * * * * * * * * * * * * * * * *        DONE
* * * * * * * * * * * * * * * * * * * *        * * * * * * * * * * * * | * * * * * * *
* * * * * * * * * * * * * * * * * * * *        * * * * * * * * * * * \ \ * * * * * * *
* * * * * * * * * * * * * * * * * * * *        * * * * * * * * * * \ | / * * * * * * *
* * * * * * * * * * * * * * * * * * * *        * * * * * * * * * * ' . . . | | | ( * * *
* * * * * * * * * * * * * * * * * * * *        * * * * * * * * * ' . . . . . ( | _ * * *
* * * * * * * * * * * * * * * * * * * *        * * * * * * * * \ . . . . ' \ ( | / * * *
* * * * * ) ) , _ | * * * * ) ) , _ / * * *    * * * * * * * _ . . . . . \ \ * * / * * *
* * * * * * | | . | * * * * / / . / * * * *    * * * * * * * _ . . / . . \ * * * * * * *
* * * * * * ; . . \ * * * * | . . \ * * * *    * * * * * * * _ . . . | \ - * * * * * * *
* * / - - _ \ . . . ____ . . . . \ * * *      * * * * * * * * / . . . . - * * * * * * *
= / . . t . . ; = . . . . . . . . . . \ * *    * * * * * * * * * ` . . . - * * * * * * *
* \ . , . , . / \ . . . . . . . . / \ . \ *    * * * * * * * * * / . . . - * * * * * * *
* * A _ - _ A * * \ . . . . . . / * * ( . (    * * * * * * * * * * ' . / ' * * * * * * *
* * * * * * * * * * __ - - __ * * ) . ) *      * * * * * * * * * * _ . . / * * * * * * *
* * * * * * * * * * * * * * * * * * * \ . (    * * * * | | | | | | | ' . . . | | | ( * * *
* * * * * * * * * * * * * * * * * * * _ *      * * * _ . . . . . . . . . . | ( | _ * * *
* * * * * * * * * * * * * * * * * * * * * *    * * * * _ | . ^ . ) . . . . \ | ( | / * * *
* * * * * * * * * * * * * * * * * * * * * *    * * * * * _ . - * / . . \ * * * * / * * *
* * * * * * * * * * * * * * * * * * * * * *    * * * * * _ . - * * | \ * * * * * * * * *
* * * * * * * * * * * * * * * * * * * * * *    * * * * * _ . _ * * * * * * * * * * * * *
* * * * * * * * * * * * * * * * * * * * * *    * * * * * * / * * * * * * * * * * * * * *
DONE                                           DONE
...&&&...                                       %$
...&.....                                       #@
...&&&.S.                                       DONE
```

Problem #11
60 Points

11. Terry

Program Name: Terry.java   **Input File: terry.dat**

Test Input File: *Note: This judge data file contains over 800 lines. This page shows the first portion of those lines. See the judge data file for the complete input data listing.*

```
20                                      100 10000
3  2                                    100 99
5  50                                   100 99
3  10                                   100 99
8  25                                   100 99
2  10                                   100 99
6  50                                   100 99
7  50                                   100 99
3  141                                  100 99
59 65                                   100 99
89 79                                   100 99
32 38                                   100 99
1  100                                  100 99
99 50                                   100 99
1  99                                   100 99
99 50                                   100 99
1  99                                   100 99
99 0                                    (data continues, see in data file)
1  99
99 100
```

Terry Test Output To Screen:
```
Case #1:  10.000000          Case #10: 22.249600
Case #2:  75.000000          Case #11: 97.206121
Case #3:  92.650000          Case #12: 18.706942
Case #4:  100.000000         Case #13: 12.393271
Case #5:  50.000000          Case #14: 13.407200
Case #6:  0.000000           Case #15: 37.604917
Case #7:  100.000000         Case #16: 4.940000
Case #8:  100.000000         Case #17: 32.000000
Case #9:  63.396766          Case #18: 1.000000
                             Case #19: 4.000000
                             Case #20: 43.545856
```

Problem #12
60 Points

12. Yana

Program Name: Yana.java   **Input File: yana.dat**

Test Input File:
```
10
1,11,21,7,18,4,14,8,2
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22,15,42,8,13,36,17,27,3
4763Z NORTH SQ.
Bleep squad
Junk CODE
1,43,24,23,10,52,37,62,3
Eclipse NetBeans BlueJ Codeenvy DrJ Greenfoot and more...
Java Powers Our Digital World from Java.com  - What is Java
Mobile.Web apps.The Internet of Things.Big data.Machine learning.Cloudplatformcloud
infrastructure.
22,15,42,8,13,36,17,27,3
GeeKz WorrY.
jaVa boXxy
-F-M-c-w-
54,31,18,57,36,13,0,43,1
Augusta Ada King-countess of Lovelace-Daughter of poet Lord Byron.
31,38,45,52,59,2,9,16,9
Java emerged from Sun Microsystems Green Project
The.mascot.of.Java.is.Duke
.Java is Object Oriented.
SUN Microcomputer Systems gobbled up by Oracle
abcdeEfghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
--Java--Ada--FORTRAN--C--PL1--
01001010.01000001.01010110.01000001
.-..-.-. .-.....- .-.-.-.- .-.....-
18,57,6,37,24,47,51,12,4
AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRrSsTtUuVvWwXxYyZz
902837465-16273849506-0594837261
.9.8.7.6.5.4.3.2.1.0.
Now is the time for all good men and women to program.
40,12,33,2,22,59,31,53,5
Z
v
-
 Zv-
--
Aa1Bb2Cc3Dd4Ee5Ff6Gg7Hh8Ii9Jj10Kk11Ll12Mm13Nn14Oo15Pp16Qq17Rr18Ss19Tt20Uu21Vv22Ww23Xx24Yy25Zz26--
-
37,48,15,27,41,22,60,2,1
Ask not - what your teacher can teach you - but what you can learn from your teachers great
wisdom..
12,5,59,46,55,24,18,33,6
Adela - Bruce - Esteban - Guozhi - Josefina - Kevin - Maximo - Olivia - Randy - Sergey - Terry
Yana
ALAKAZARCACOCTDEFLGAHIIDILINIAKSKYLAMEMDMAMIMNMSMOMTNENVNHNJNMNYNCNDOHOKORPARISCSDTNTXUTVTVAWAWVW
IWY
this   line   intentionally   NOT   left   blank   but   has   lots   of   xxxx-extra-xxxxx
spaces
WYWVWIWAVTVAUTTXTNSDSCRIPAOROKOHNYNVNMNJNHNENDNCMTMSMOMNMIMEMDMALAKYKSINILIDIAHIGAFLDECTCOCAAZARA
LAK
The Great State of Texas produces SUPER programmers.
0
59,18,52,8,5,33,46,31,1
Finally-the LAST of the LAST line of data for Yana April 2020
```

Yana Test Output To Screen:

```
[1:1]--"VLGYSikeqpY1717"
[1:2]--"UdiYFltYqjYQlqklZooepkYOqn.Y0Y0E5D"
==========
[2:1]--"6105bcLORTNcSQx"
[2:2]--"CsiiocrpzWh"
[2:3]--"HzmgcDOEF"
==========
[3:1]--"BaoesniYNiv8iZqnY8owiJY9rhiiqx.YAmJYGmiiqjrrvYZqhYprmiuuu"
[3:2]--"JZxZYQryimnYPwmYAekevZoYbrmohYjmrpYJZxZuarpYY6YbdZvYenYJZxZ"
[3:3]--"Mr eoiubi
YZssnuUdiYIqvimqivYrjYUdeqknu8ekYhZvZuMZadeqiYoiZmqeqku9orwhsoZvjrmpaorwhYeqjmZnvmwavwmiu"
==========
[4:1]--"MiiIwcZnqqax"
[4:2]--"fWVWcXn uv"
[4:3]--"181K1Y1t1"
==========
[5:1]--"BzjzsyXWBgXWIdnj1ZoznyhssWoiWJo.hlXZh1EXzjkyhrWoiWpohyWJorgWCvronx"
==========
[6:1]--"MYvYXklkqekjXdqnlXOumXHg qnryrtklrXJqkkmXTqnhk t"
[6:2]--"Pfk.lYr nt.nd.MYvY.gr.Fuik"
[6:3]--".MYvYXgrXSZhk tXSqgkmtkj."
[6:4]--"OQIXHg qn nloutkqXOyrtklrXenZZskjXuoXZyXSqY sk"
[6:5]--"YZ jk8defghislmnopqrtuvwxyz"
[6:6]--"CDEF89JKLMNGHISTUVOPQRabcW"
[6:7]--"00MYvY00CjY009SVPVCI00E00TG200"
[6:8]--"12112121.12111112.12121221.12111112"
[6:9]--".0..0.0.X.0.....0X.0.0.0.0X.0.....0"
==========
[7:1]--"9aAbBcCeDfEgIhJiKjLkMdNqGrHsRlSmTnUoVpOxPyQzW.XtYuZv"
[7:2]--"860F15243574051F2836456382F15047"
[7:3]--"w8wFw5w4w3w2w1w0w7w6w"
[7:4]--"Hl. jp xif xjrf glo aqq hlle rfs ase .lrfs xl molhoarw"
==========
[8:1]--"a"
[8:2]--"y"
[8:3]--"7"
[8:4]--"bay7"
[8:5]--"77Ec1FW28X39i4Aj5Bk6Nd7GeCHfDIg10Jh11Km12Ln13Mo14Up15Vq16Or17Ps1CQl1DRw20Sx21Ty22Yz23Z.24
t25au26777"
==========
[9:1]--"AoeZrszZ2Zuj zZws.nZzg bjgnZb rZzg bjZws.Z2Za.zZuj zZws.Zb rZpg nrZhnsqZws.nZzg bjgnoZing
zZukofsqyy"
==========
[10:1]--
"Dderba3aEptWea3a9q.ecbla3aLtmyhia3aGmqefilba3aHeuila3aJbwisma3aQriuiba3aTbldxa3aUepgexa3aVeppxaa
Zblb"
[10:2]--"DIDHD
DTFDFQFV89AILDMNN8NINKNDHUHZIDJ9J8JDJNJKJUJQJVK9KPKMKGKJKZKFK8QMQHQTRDTNUFU8VKVYOVPVPDXDXPXNXZ"
[10:3]--
".hiqaaarileaaail.el.imlbrrxaaaKQVaaaref.aaacrblkaaact.aaahbqaaarm.qaaamfaaawwww3ew.pb3wwwwwaaaqn
bWeq"
[10:4]--
"XZXPXNXDPVPDOVVYVKU8UFTNRDQTQHQMKZKPKJKGKMK9K8KFJVJUJQJKJNJ9J8JDIDHZHUNKNIN8NDMNLDAI89FVFQFDD
DTDIDH"
[10:5]--"VheaLpeb.aU.b.eamfaVewbqanpmdtWeqaUOR9Tanpmgpbssepqz"
[10:6]--"4"
==========
```

16