



UIL Computer Science Competition

Invitational A 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.

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Problem #1
60 Points

1. Ana

Program Name: Ana.java

Input File: None

Test Output To Screen:

```
1*1=1
2*2=4
3*3=9
4*4=16
5*5=25
6*6=36
7*7=49
8*8=64
9*9=81
10*10=100
11*11=121
12*12=144
```

Problem #2
60 Points

2. Bryan

Program Name: Bryan.java

Input File: bryan.dat

Test Input File:

20	minus -30	16	ymne -6	ekq -22
4	minus -30	yrhpdmd -11	qzicgkdvdn -14	cv 11
babysitting 10	minus -30	evnwgt -8	20	hafvptcx -4
lemonade 4	minus -30	rheysvcoi 5	umkgcgqhtb 20	mt -24
game -7	minus -30	zmfilbjtso 3	ex -29	androtiei 28
date -7	minus -30	htjuckwfm -24	brelyzm -5	tm 23
3	minus -30	dx -22	gblht 4	lnmczdww 2
movies -10	minus -30	fylbqku -14	rxsuh -14	dnl 28
mowing 5	minus -30	kct 25	yktlj 17	ksdor -14
carwashing 8	minus -30	oy 10	phga 27	qzi 23
2	30	fousnwh -26	kuetwilzyc -16	xrkhuccob -23
tutoring 4	plus 30	fbnp 29	xvberohgn -15	uzdoqxpw -24
clothes -7	plus 30	uya -12	mnzibue 17	lahdxbt -18
1	plus 30	eicfhkwtb -15	yzi -23	mogvt -9
asdf 4	plus 30	lfuy -6	mke 30	pzvchtk -21
1	plus 30	prgwk 17	iwnkta 5	nouglbgrid -21
asdf -4	plus 30	tjpyzdcqm 16	waqksbjtg -25	uredklows 25
2	plus 30	17	hvpzpnx 15	telik -26
plus 2	plus 30	hlvozwns 15	rnovegws -17	btqaixp -28
minus -2	plus 30	fahzjec -27	ijgrkazml -11	toybke -29
30	plus 30	yhdina 12	syupm 18	24
plus 30	plus 30	wr 7	nmv -4	woh -17
plus 30	plus 30	diegxpwcov 11	tnh 20	bejlonm 20
plus 30	plus 30	rwaumgd -16	21	jgmfcckvl 28
plus 30	plus 30	za 21	svrmauypo 23	vxocjd -5
plus 30	plus 30	mgdosy 18	hbgylfz 27	gedypxzf -6
plus 30	minus -30	dkbgzwhji 17	gkvtc 27	zw 20
plus 30	minus -30	fsqelnu -11	zcmd -13	sanjxydro -1
plus 30	minus -30	ixq 26	hnbvcay -4	rizubxd 14
plus 30	minus -30	qajemofkit 22	hnf 30	zoa 7
plus 30	minus -30	qom -14	ogky -27	sulgto 11
plus 30	minus -30	gsydf 27	bsh -10	wrqv -25
plus 30	minus -30	del 15	xlhompiase 2	cwd 22
plus 30	minus -30	yqpu 20	wyaeziqm -22	ifdxynqgu -11
plus 30	minus -30	pvho 22	ufqzn 13	bktot -6
plus 30	minus -30	18	nxb 25	jrw -11
plus 30	minus -30	gdch -11	xrusyl -4	egi 23
plus 30	minus -30	dxapcuy -20	tcqsmi -11	kj 12
plus 30	minus -30	gdpmaulhrv 9	nudjyi 30	rovap -13
plus 30	minus -30	qalotwez -18	hdxfafjt 17	zrumgqcv -2
plus 30	minus -30	bicmapszjd 1	kodyl 29	nlfyp -19
plus 30	30	faptjvbnl -4	ebs -27	qram 4
plus 30	plus 20	wrxdatghc 12	xcehpzfnir -13	ovqgtgbnu -19
plus 30	plus 20	jqrnpuxa -19	dnrywx 14	emgndb 15
plus 30	plus 20	lnjvikg 3	ucnelq -23	cmpr 25
plus 30	plus 20	mdlk -13	22	25
plus 30	plus 20	wglpbuoc -16	lgtmox -11	ind -16
plus 30	plus 20	tlba -3	rvbzhuexp -30	wqtf -14
plus 30	plus 20	hlybitrjof -6	eksulvpy -30	shcn -29
plus 30	plus 20	vkyaz 27	vejrhi 8	xpfine -22
plus 30	plus 20	wfairthsub 29	qpjln 14	dmrtinjexk -17
30	plus 20	eikmhnx 27	pcmursnyw -17	yxztw -15
minus -30	minus -10	shyugia -16	zg 26	nduloav 21
minus -30	minus -10	tv1 2	ge -25	cuea -29
minus -30	minus -10	19	hea -18	xvbqzakwrm -14
minus -30	minus -10	lkghdjs 13	chwxb 10	qnu 24
minus -30	minus -10	sdaqvwp 22	hw 18	pvkfsi -1
minus -30	minus -10	giopbfm -13	rijpqwt 13	bfzyut -10
minus -30	minus -10	otgra 4	xgyilzuaom 9	estrumh 8
minus -30	minus -10	cgh -1	mxceljpg 21	lpog 7
minus -30	minus -10	pvyrt -14	miv 12	lbtgn 17
minus -30	minus -10	lwaweycn 1	asiy 1	rzbpnvflgt -21
minus -30	minus -10	vtzxhbilo 10	yduqv 17	pbbjfqkl -21
minus -30	minus -10	mpy 1	cwg 23	yhrdc -4
minus -30	minus -10	px -12	bs -9	jnvvgqfird 20
minus -30	minus -10	jmtkovnld -26	szc -27	ecgb 10
minus -30	minus -10	cvqrithkz -17	ggw 23	hanlkv 19
minus -30	minus -10	szern 8	yfq 5	zktvpmuob 7
minus -30	minus -10	azqbwnp -19	23	lbacuo 3
minus -30	minus -10	achvueptl 9	jhuqn 4	tswifnk 20
minus -30	minus -10	fqh 19	cijsfad 10	chpfwxqkbv -17
minus -30	minus -10	ghosj -27	qxflbagjdz 4	

Test Output To Screen:

Case #1: Phew, broke even!
Case #2: Wow, Bryan saved \$3
Case #3: Oh no! Bryan had to borrow \$3
Case #4: Wow, Bryan saved \$4
Case #5: Oh no! Bryan had to borrow \$4
Case #6: Phew, broke even!
Case #7: Wow, Bryan saved \$900
Case #8: Oh no! Bryan had to borrow \$900
Case #9: Phew, broke even!
Case #10: Phew, broke even!
Case #11: Oh no! Bryan had to borrow \$33
Case #12: Wow, Bryan saved \$165
Case #13: Oh no! Bryan had to borrow \$16
Case #14: Oh no! Bryan had to borrow \$62
Case #15: Wow, Bryan saved \$14
Case #16: Wow, Bryan saved \$83
Case #17: Wow, Bryan saved \$33
Case #18: Oh no! Bryan had to borrow \$105
Case #19: Wow, Bryan saved \$66
Case #20: Oh no! Bryan had to borrow \$74

Problem #3
60 Points

3. Ethan

Program Name: Ethan.java

Input File: ethan.dat

Test Input File:

```
8
3
7 8 1
6 9 2
5 4 3
2
2 4
3 1
2
2 3
1 4
3
1 9 5
7 2 4
6 8 3
3
1 8 9
6 2 7
3 4 5
3
9 2 1
8 4 3
7 6 5
3
9 7 2
5 1 6
3 4 8
2
3 1
2 4
```

Test Output To Screen:

```
Case 1 distance: 8.0000
Case 2 distance: 3.8284
Case 3 distance: 3.0000
Case 4 distance: 12.0711
Case 5 distance: 11.4787
Case 6 distance: 8.8284
Case 7 distance: 15.1356
Case 8 distance: 3.8284
```

Problem #4
60 Points

4. Fatimah

Program Name: Fatimah.java

Input File: fatimah.dat

Test Input File:

15	bbb ddd	lbitrjofmxk	cqsmijundtvgrbl
3 1	1 0	aiyrfzxwhsb	ajqxvgko
pikawho	alone	eikmhnxlvrq	ylxdebs
charzar	8 8	ahdtvlqkus	qxcehp
meeth	uadelfv	hdjsvlwya	fvntiyuw
pikawho	qkyidx	vqpkgioxbfmedh	nrzxyjc
meeth	taoulfx	grytaxcwzhodqki	elqdsiygmoju
4 2	nyschcfubzpdkmae	12 20	ajqxvgko qxcehp
kaysi	eicfhkwtvbyvuxs	inlvaecypokjqm	ylxdebs ajqxvgko
asa	fuymgprvknj	biloucmps	cqsmijundtvgrbl qxcehp
rengo	jtduqmwlospg	pxjoym	fvntiyuw nrzxyjc
seju	wykfahzjecbrmdp	zkowxnldcvryiue	elqdsiygmoju ylxdebs
rengo	taoulfx nyschcfubzpdkmae	hkcgsuierpnvqmf	nrzxyjc cqsmijundtvgrbl
kaysi	jtduqmwlospg	aqbxnp	cqsmijundtvgrbl ajqxvgko
asa	wykfahzjecbrmdp	oachvuep	ylxdebs fvntiyuw
seju	qkyidx taoulfx	vlctcfqhgsxoje	9 4
5 0	wykfahzjecbrmdp uadelfv	wfmnxe	cheagyz
kenny	fuymgprvknj	qzyicgkdutne	wxbuahnri
rayu	jtduqmwlospg	umkgcqhtbrela	pzvxsuwgr
chunnle	uadelfv qkyidx	brelyzmthgu	lgyaomtnuc
y	nyschcfubzpdkmae	zkowxnldcvryiue	lxjpgcmi
gail	eicfhkwtvbyvuxs	biloucmps	asiphdqu
baisen	eicfhkwtvbyvuxs	pxjoym vlctcfqhgsxoje	wgsabxk
2 1	fuymgprvknj	umkgcqhtbrela	scbzygg
aaa	11 11	vlctcfqhgsxoje	yfqrhvj
bbb	epwgcodsk	brelyzmthgu	wgsabxk lgyaomtnuc
bbb aaa	wauzmgdhbyjxtr	vlctcfqhgsxoje	wxbuahnri lxjpgcmi
4 6	sgodkbqwthjel	zkowxnldcvryiue	asiphdqu lxjpgcmi
aaa	lfsqezntjciupxm	hkcgsuierpnvqmf	scbzygg yfqrhvj
bbb	jemofu	umkgcqhtbrela	12 15
ccc	irfcqomzgyv	inlvaecypokjqm	khucdobvmsxpit
ddd	ydfzwelugpshkvm	pxjoym brelyzmthgu	odklahyubgsqp
ddd aaa	vofgdchjkzatz	wfmnxe inlvaecypokjqm	vtklpzchx
aaa ccc	fyrqdp	brelyzmthgu	uqnozglb
bbb aaa	aulthrzogwvx	umkgcqhtbrela	trideoyvklhbp
ddd ccc	oexqkgwbicmlazh	qzyicgkdutne	gtelick
bbb ddd	irfcqomzgyv	zkowxnldcvryiue	btqaixpzjou
bbb ccc	ydfzwelugpshkvm	biloucmps aqbxnp	keacoh
6 15	sgodkbqwthjel	inlvaecypokjqm	kbejlonmt
aaa	lfsqezntjciupxm	zkowxnldcvryiue	gmfcckwtljo
bbb	fyrqdp aulthrzogwvx	wfmnxe qzyicgkdutne	jdmngey
ccc	oexqkgwbicmlazh	wfmnxe oachvuep	pdgfmbsz
ddd	epwgcodsk	biloucmps pxjoym	gmfcckwtljo keacoh
eee	vofgdchjkzatz fyrqdp	umkgcqhtbrela pxjoym	vtklpzchx khucdobvmsxpit
fff	ydfzwelugpshkvm	hkcgsuierpnvqmf	vtklpzchx gtelick
aaa bbb	vofgdchjkzatz	inlvaecypokjqm	vtklpzchx kbejlonmt
eee ddd	lfsqezntjciupxm jemofu	umkgcqhtbrela aqbxnp	btqaixpzjou
fff bbb	wauzmgdhbyjxtr	hkcgsuierpnvqmf	khucdobvmsxpit
aaa fff	sgodkbqwthjel	biloucmps	gmfcckwtljo vtklpzchx
ccc ddd	jemofu irfcqomzgyv	aqbxnp inlvaecypokjqm	trideoyvklhbp uqnozglb
ccc bbb	epwgcodsk wauzmgdhbyjxtr	4 3	khucdobvmsxpit keacoh
aaa eee	aulthrzogwvx	cvanwd	jdmngey pdgfmbsz
ccc aaa	oexqkgwbicmlazh	nfveoqkbd	kbejlonmt jdmngey
ddd fff	12 0	shkoly	trideoyvklhbp gtelick
aaa ddd	bynixprdag	mpisveqzautyx	vtklpzchx btqaixpzjou
fff ccc	cnvjqrpxu	mpisveqzautyx nfveoqkbd	vtklpzchx keacoh
eee ccc	afklmjixqgervb	cvanwd shkoly	jdmngey vtklpzchx
eee bbb	kimwglpboqh	shkoly mpisveqzautyx	pdgfmbsz kbejlonmt
fff eee	tlbanzqh	7 8	

Test Output To Screen:

Case #1: 2
Case #2: 2
Case #3: 5
Case #4: 1
Case #5: 1
Case #6: 1
Case #7: 1
Case #8: 4
Case #9: 5
Case #10: 12
Case #11: 5
Case #12: 2
Case #13: 3
Case #14: 6
Case #15: 6

Problem #5
60 Points

5. Hai

Program Name: Hai.java

Input File: hai.dat

Test Input File:

Bill's phone number is 325-456-1234 and his email address is bill@gmail.com.
Let's give him a call ASAP.

```
8
[a-z]+
\D+
.+m+.+
.+l{2}+.
\d+
[^a-z]+
[A-Z]+.
.*'s
```

Test Output To Screen:

```
[a-z]+    phone number is and his email address is give him a call
\D+       Bill's phone number is and his email address is bill@gmail.com. Let's
give him a call ASAP.
.+m+.+    number email bill@gmail.com.
.+l{2}+.   Bill's bill@gmail.com.
\d+        No matches.
[^a-z]+    325-456-1234 ASAP.
[A-Z]+.    ASAP.
.*'s       Bill's Let's
```


Problem #6
60 Points

6. Isaac

Program Name: Isaac.java

Input File: isaac.dat

Test Input File:

```

10
21
Mr. French Jody Buffy Sissy Keith Danny Lori Chris Shirley Marsha Jan Cindy Carol Mike Greg Peter
Bobby Alice Ruben Oliver Sam
20
a b c d e f g h i j k l m n o p q r s t
2
a abcdefghijklmnopqrstuvwxyz0123abcdefghijklmnopqrstuvwxyz0123
233
15.dat ewhitell.C lab01.C lab04.C lab05-1.dat lab05.C lab07-1.out lab07.data lab08-2.dat lab08-4.dat
lab09 lab09-02.out lab09-04.out lab09-06.out lab09-08.out lab09-10.out lab09-12.out lab09-14.out
lab09-gen.C lab10-1.dat lab10.C lab11-1.out lab11-3.out lab11-5.out lab11-7.out lab11.o lab12-2.dat
lab12-4.dat lab12-6.dat lab12.C lab13-2.dat lab13.C lab14-1000.dat lab14-33.dat lab15-1.dat lab15-
13.dat lab15-6.dat lab16-01.dat lab16-03.dat lab16-05.dat lab16-07.dat lab16-09.dat lab16-11.dat
lab16-13.dat lab16-15.dat lab16-17.dat lab16-20.dat lab17-1.dat lab18-1.dat lab18.C lab19-1.out
lab20 lab21 lab21-02.out lab21-04.out lab21-06.out lab21-08.dat sets.o testBits.out dad.cpp
invBits.C lab03.C lab04.out lab05-3.dat lab07 lab07-2.out lab08-1.dat lab08-3.dat lab08.C lab09-
01.out lab09-03.out lab09-05.out lab09-07.out lab09-09.out lab09-11.out lab09-13.out lab09-15.out
lab09.o lab10-main.C lab11 lab11-2.out lab11-4.out lab11-6.out lab11-main.o lab12-1.dat lab12-3.dat
lab12-5.dat lab12-7.dat lab13-1.dat lab13-3.dat lab14-100.dat lab14-10000.dat lab14.C lab15-100.dat
lab15-32.dat lab15.C lab16-02.dat lab16-04.dat lab16-06.dat lab16-08.dat lab16-10.dat lab16-12.dat
lab16-14.dat lab16-16.dat lab16-19.dat lab16.C lab17.C lab18-main.C lab19 lab1942.data lab20-1.out
lab21-01.out lab21-03.out lab21-05.out lab21-07.dat~ lab21.C testBits.C core ewhitell.o lab02.C
lab04.dat lab05-2.dat lab05.out lab07-2.dat lab08 lab08-2.out lab08-4.out lab09-01.dat lab09-03.dat
lab09-05.dat lab09-07.dat lab09-09.dat lab09-11.dat lab09-13.dat lab09-15.dat lab09.C lab10-1.out
lab10.o lab11-2.dat lab11-4.dat lab11-6.dat lab11-main.C lab12 lab12-2.out lab12-4.out lab12-6.out
lab13 lab13-2.out lab14 lab14-1000.out lab14-33.out lab15-1.out lab15-13.out lab15-6.out lab16-
01.out lab16-03.out lab16-05.out lab16-07.out lab16-09.out lab16-11.out lab16-13.out lab16-15.out
lab16-17.out lab16-20.out lab17-1.out lab18-1.out lab18.o lab19.C lab20-1.dat lab21-01.dat lab21-
03.dat lab21-05.dat lab21-07.dat lab21-08.out testBits ewhitell invBits.o lab03.out lab05 lab05-
4.dat lab07-1.dat lab07.C lab08-1.out lab08-3.out lab08.o lab09-02.dat lab09-04.dat lab09-06.dat
lab09-08.dat lab09-10.dat lab09-12.dat lab09-14.dat lab09-gen lab10 lab10-main.o lab11-1.dat lab11-
3.dat lab11-5.dat lab11-7.dat lab11.C lab12-1.out lab12-3.out lab12-5.out lab12-7.out lab13-1.out
lab13-3.out lab14-100.out lab14-10000.out lab15 lab15-100.out lab15-32.out lab16 lab16-02.out lab16-
04.out lab16-06.out lab16-08.out lab16-10.out lab16-12.out lab16-14.out lab16-16.out lab16-19.out
lab17 lab18 lab18-main.o lab19-1.dat lab1942.output lab20.C lab21-02.dat lab21-04.dat lab21-06.dat
lab21-07.out pal.txt testBits.o
1
12345678901234567890123456789
2
12345678901234567890123456789 01234567890123456789012345678 20123456789012345678901234567
3
12345678901234567890123456789 01234567890123456789012345678 20123456789012345678901234567
18
Mr._French Jody Sissy Keith Danny Lori Chris Shirley Marsha Jan Cindy Carol Mike Greg Peter Bobby
Alice Ruben
21
a b c d e f g h i j k l m n o p q r s t u
22
a b c d e f g h i j k l m n o p q r s t u v

```

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Test Output To Screen:

Case 1
111111111122222222223333333333444444444455555555556
123456789012345678901234567890123456789012345678901234567890

Alice Cindy Keith Oliver Sissy
Bobby Danny Lori Peter
Buffy Greg Marsha Ruben
Carol Jan Mike Sam
Chris Jody Mr._French Shirley

Case 2
111111111122222222223333333333444444444455555555556
123456789012345678901234567890123456789012345678901234567890

a b c d e f g h i j k l m n o p q r s t

Case 3
111111111122222222223333333333444444444455555555556
123456789012345678901234567890123456789012345678901234567890

a
abcdefghijklmnopqrstuvwxyz0123abcdefghijklmnopqrstuvwxyz0123

Case 4
111111111122222222223333333333444444444455555555556
123456789012345678901234567890123456789012345678901234567890

15.dat lab10-main.C lab16-05.dat
core lab10-main.o lab16-05.out
dad.cpp lab10.C lab16-06.dat
ewhite11 lab10.o lab16-06.out
ewhite11.C lab11 lab16-07.dat
ewhite11.o lab11-1.dat lab16-07.out
invBits.C lab11-1.out lab16-08.dat
invBits.o lab11-2.dat lab16-08.out
lab01.C lab11-2.out lab16-09.dat
lab02.C lab11-3.dat lab16-09.out
lab03.C lab11-3.out lab16-10.dat
lab03.out lab11-4.dat lab16-10.out
lab04.C lab11-4.out lab16-11.dat
lab04.dat lab11-5.dat lab16-11.out
lab04.out lab11-5.out lab16-12.dat
lab05 lab11-6.dat lab16-12.out
lab05-1.dat lab11-6.out lab16-13.dat
lab05-2.dat lab11-7.dat lab16-13.out
lab05-3.dat lab11-7.out lab16-14.dat
lab05-4.dat lab11-main.C lab16-14.out
lab05.C lab11-main.o lab16-15.dat
lab05.out lab11.C lab16-15.out
lab07 lab11.o lab16-16.dat
lab07-1.dat lab12 lab16-16.out
lab07-1.out lab12-1.dat lab16-17.dat
lab07-2.dat lab12-1.out lab16-17.out
lab07-2.out lab12-2.dat lab16-19.dat
lab07.C lab12-2.out lab16-19.out
lab07.data lab12-3.dat lab16-20.dat
lab08 lab12-3.out lab16-20.out
lab08-1.dat lab12-4.dat lab16.C
lab08-1.out lab12-4.out lab17
lab08-2.dat lab12-5.dat lab17-1.dat
lab08-2.out lab12-5.out lab17-1.out
lab08-3.dat lab12-6.dat lab17.C
lab08-3.out lab12-6.out lab18
lab08-4.dat lab12-7.dat lab18-1.dat
lab08-4.out lab12-7.out lab18-1.out
lab08.C lab12.C lab18-main.C
lab08.o lab13 lab18-main.o
lab09 lab13-1.dat lab18.C
lab09-01.dat lab13-1.out lab18.o
lab09-01.out lab13-2.dat lab19
lab09-02.dat lab13-2.out lab19-1.dat
lab09-02.out lab13-3.dat lab19-1.out
lab09-03.dat lab13-3.out lab19.C
lab09-03.out lab13.C lab1942.data

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lab09-04.dat	lab14	lab1942.output
lab09-04.out	lab14-100.dat	lab20
lab09-05.dat	lab14-100.out	lab20-1.dat
lab09-05.out	lab14-1000.dat	lab20-1.out
lab09-06.dat	lab14-1000.out	lab20.C
lab09-06.out	lab14-10000.dat	lab21
lab09-07.dat	lab14-10000.out	lab21-01.dat
lab09-07.out	lab14-33.dat	lab21-01.out
lab09-08.dat	lab14-33.out	lab21-02.dat
lab09-08.out	lab14.C	lab21-02.out
lab09-09.dat	lab15	lab21-03.dat
lab09-09.out	lab15-1.dat	lab21-03.out
lab09-10.dat	lab15-1.out	lab21-04.dat
lab09-10.out	lab15-100.dat	lab21-04.out
lab09-11.dat	lab15-100.out	lab21-05.dat
lab09-11.out	lab15-13.dat	lab21-05.out
lab09-12.dat	lab15-13.out	lab21-06.dat
lab09-12.out	lab15-32.dat	lab21-06.out
lab09-13.dat	lab15-32.out	lab21-07.dat
lab09-13.out	lab15-6.dat	lab21-07.dat~
lab09-14.dat	lab15-6.out	lab21-07.out
lab09-14.out	lab15.C	lab21-08.dat
lab09-15.dat	lab16	lab21-08.out
lab09-15.out	lab16-01.dat	lab21.C
lab09-gen	lab16-01.out	pal.txt
lab09-gen.C	lab16-02.dat	sets.o
lab09.C	lab16-02.out	testBits
lab09.o	lab16-03.dat	testBits.C
lab10	lab16-03.out	testBits.o
lab10-1.dat	lab16-04.dat	testBits.out
lab10-1.out	lab16-04.out	

Case 5

```

111111111122222222223333333333444444444455555555556
123456789012345678901234567890123456789012345678901234567890
-----
12345678901234567890123456789

```

Case 6

```

111111111122222222223333333333444444444455555555556
123456789012345678901234567890123456789012345678901234567890
-----
01234567890123456789012345678  12345678901234567890123456789

```

Case 7

```

111111111122222222223333333333444444444455555555556
123456789012345678901234567890123456789012345678901234567890
-----
01234567890123456789012345678  20123456789012345678901234567
12345678901234567890123456789

```

Case 8

```

111111111122222222223333333333444444444455555555556
123456789012345678901234567890123456789012345678901234567890
-----

```

Alice	Cindy	Jody	Mike	Shirley
Bobby	Danny	Keith	Mr._French	Sissy
Carol	Greg	Lori	Peter	
Chris	Jan	Marsha	Ruben	

Case 9

```

111111111122222222223333333333444444444455555555556
123456789012345678901234567890123456789012345678901234567890
-----
a c e g i k m o q s u
b d f h j l n p r t

```

Case 10

```

111111111122222222223333333333444444444455555555556
123456789012345678901234567890123456789012345678901234567890
-----
a c e g i k m o q s u
b d f h j l n p r t v

```

Problem #7
60 Points

7. Jamari

Program Name: Jamari.java

Input File: jamari.dat

Test Input File:

```
Melany Jordyn Kaylynn Kyra Kasen Hassan Jaylah 2
Alexandria 1 Leonard Julianna Myles 3 Belinda
Jamari 1 Troy Chase Yasmin Zoey 5 Jaime Jade 4
Brooklyn >>> Tommy Aaliyah Ingrid April 3 Dwayne
Andres River Asa Jaslene 3 >>> Isla 1 Danna Aleena
Kailee Micah 4 Hadley Ty 2 Lailah Cara Jayce Colby
4 >>> Jillian
Amelie
Amiya
Nicole
Casey
Alec
Crystal
Braelyn
Edgar
Soren
>>>
Jaylen
Julissa
2
Ingrid
Rubi
Taryn
2
Isabel
Alberto
Marquis
Kenneth
3
Davin
>>>
```

Test Output To Screen:

```
The last person to get a donut was Yasmin.
4 customers did not get a donut today.
The last person to get a donut was Andres.
3 customers did not get a donut today.
Everyone got a donut today.
No one got a donut today.
The last person to get a donut was Alberto.
3 customers did not get a donut today.
```

Problem #8
60 Points

8. Kirill

Program Name: Kirill.java

Input File: kirill.dat

Test Input File:

50
22
9
2
60
1234567
1
5000000
2860110
4716727
2030933
1086541
3959573
1010129
3154387
2595853
4939837
2125170
1073773
3430685
1658136
2967083
4143028
4507568
2054685
1096341
1911896
4789814
4802830
608310
3733791
2338363
4674039
4411620
3354733
1418016
2336977
2954949
460315
2381157
2377287
2442414
3763732
4368708
3993491
2001560
2516140
743433
2882517
2857852
1367628

Test Output To Screen:

Case #1: 20
Case #2: 9
Case #3: 1
Case #4: 53
Case #5: 1234557
Case #6: 1
Case #7: 4999993
Case #8: 2860102
Case #9: 4716721
Case #10: 2030923
Case #11: 1086540
Case #12: 3959573
Case #13: 1010123
Case #14: 3154380
Case #15: 2595849
Case #16: 4939829
Case #17: 2125164
Case #18: 1073771
Case #19: 3430680
Case #20: 1658130
Case #21: 2967077
Case #22: 4143017
Case #23: 4507563
Case #24: 2054681
Case #25: 1096339
Case #26: 1911895
Case #27: 4789810
Case #28: 4802829
Case #29: 608302
Case #30: 3733787
Case #31: 2338361
Case #32: 4674026
Case #33: 4411612
Case #34: 3354731
Case #35: 1418008
Case #36: 2336976
Case #37: 2954949
Case #38: 460309
Case #39: 2381157
Case #40: 2377285
Case #41: 2442412
Case #42: 3763722
Case #43: 4368702
Case #44: 3993481
Case #45: 2001550
Case #46: 2516135
Case #47: 743427
Case #48: 2882510
Case #49: 2857850
Case #50: 1367619

Problem #9
60 Points

9. Megan

Program Name: Megan.java

Input File: megan.dat

Test Input File:

```

13
gqbhvmokxfiplzrcwunjtyeads
g,q,b,h,v,m,o,k,x,f,i,p,l,z,r,c,w,u,n,j,t,y,e,a,d,s

gqbhvmokxfiplzrcwunjtyeads
q,qq,qqq,qqqq

gqbhvmokxfiplzrcwunjtyeads
a,aa,aaa,g

gqbhvmokxfiplzrcwunjtyeads
a

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

mfxsqukwgzrnipahvbeocytdjl
m,mm,f,ff,x,xx,xxx,qu,qz,qr,a,hh,beo,o

mfxsqukwgzrnipahvbeocytdjl
m,mm,f,ff,x,xx,xxx,qu,qz,qr,a,hh,beo,o,e

mfxsqukwgzrnipahvbeocytdjl
m,mm,f,ff,x,xx,xxs,xxx,qu,qz,qr,a,hh,beo,o

tispdnwluvchqofrmygzekxjba
tispdnwluvchqofrmygzekxjba

tispdnwluvchqofrmygzekxjba
tis,pdn,wlu,vch,qof,rmy,gze,kx,jba

tispdnwluvchqofrmygzekxjba
a,b

abcdefghijklmnopqrstuvwxyz
paint,hat,miscreant,accept,bruise,hollow,current,invent,good,ladybug,fly,annoyed

abcdefghijklmnopqrstuvwxyz
accept,annoyed,bruise,current,fly,good,hat,hollow,invent,ladybug,miscreant,paint
    
```

Test Output To Screen:

```

Word List 1 is sorted.
Word List 2 is sorted.
Word List 3 is not sorted.
Word List 4 is sorted.
Word List 5 is sorted.
Word List 6 is sorted.
Word List 7 is not sorted.
Word List 8 is not sorted.
Word List 9 is sorted.
Word List 10 is sorted.
Word List 11 is not sorted.
Word List 12 is not sorted.
Word List 13 is sorted.
    
```

Problem #10
60 Points

10. Oscar

Program Name: Oscar.java

Input File: oscar.dat

Test Input File:

```
5
Zagut 5 Okork 3 Nogark 6 Zazir 1 Tazir 2 Domuzig 7 Dougurk 3
Treerut 8 Elezor 3 Wazagark 5
Takig 3 Bugrok 2 Krozir 1 Kigruk 4 Wazag 5 Ezigurk 6 Kabekurg 8 Koagurk 1 Uozig
7 Blirag 3
Blarag 5
Orob 1 Glikuhr 2 Ug 3 Agurk 1 Tresurub 5 Yaguruk 3 Brotikork 5 Graezug 1 Uxukuhr
6
```

Test Output To Screen:

```
Zagut Nogark Domuzig
Treerut
Takig Kigruk Wazag Ezigurk Kabekurg
Blarag
Orob Glikuhr Ug Tresurub Brotikork Uxukuhr
```

Problem #11
60 Points

11. Rebecca

Program Name: Rebecca.java

Input File: rebecca.dat

Test Input File:

```

20
3 4
1 1 2 2
1 1 2 2
3 3 3 3
4 3
8 7 8
5 3 1
2 4 6
6 2 1
5 5
3 3 3 3 3
3 3 3 1 1
3 3 2 3 1
3 3 3 3 3
3 3 2 2 2
5 5
3 3 3 3 3
3 3 3 3 3
3 3 2 3 2
3 1 3 3 2
3 1 1 3 2
5 5
3 3 3 3 3
3 3 3 1 1
3 3 2 3 1
3 3 3 3 3
3 3 2 2 2
5 5
3 3 3 3 3
3 3 3 3 3
3 3 2 3 2
3 1 3 3 2
3 1 1 3 2
1 1
1
25 15
58919963 941654917 117764856 181505789 299132676 682939465 733527723 429405445 632298862 779970083
829220131 304292386 262999381 95159093 910730216
891084919 910730216 840146597 332268867 576968382 262999381 129296220 891084919 623146168 272021436
259959126 701197815 892846202 669157215 299310206
632298862 914913788 477924967 181505789 530307301 576968382 299310206 403761243 840146597 262999381
304787788 312628684 914913788 481757399 747047309
623146168 764420396 244722305 378233115 891084919 564687041 424005589 564687041 439127335 117764856
481757399 481757399 840146597 312628684 368961850
477924967 365804732 322065597 192941402 378233115 914913788 779970083 477924967 914913788 726844853
669157215 996249708 403761243 299310206 840146597
272021436 299310206 672248238 139076960 403761243 145955413 910730216 803803707 272021436 854716208
758767115 244722305 379786267 424005589 140331292
735434112 365804732 915027626 137442607 181505789 145955413 139076960 559194274 613095843 272021436
77863393 728921884 139076960 701197815 481757399
140331292 137442607 829220131 390191365 140331292 829220131 439127335 429405445 941654917 689714779
439127335 22268537 840146597 564687041 299310206
304292386 914913788 910730216 892846202 379786267 58919963 659885119 322065597 564687041 996249708
682939465 689714779 743473415 22268537 259959126
726844853 669157215 559194274 95159093 914913788 378233115 299310206 743473415 530307301 735434112
892846202 368961850 256199325 299310206 140331292
140331292 613095843 910730216 439127335 914913788 439127335 272021436 669157215 58919963 379786267
892846202 175056045 379786267 175056045 477924967
77863393 175056045 95159093 576968382 244722305 439127335 632298862 77863393 564687041 378233115 137442607
259959126 175056045 332268867 506825086
576968382 764420396 244722305 272021436 623146168 256199325 779970083 58919963 614761957 145955413
139076960 829220131 22268537 506825086 304292386
368961850 365804732 669157215 117764856 181505789 244722305 22268537 129296220 854716208 332268867
559194274 259959126 623146168 910730216 941654917
564687041 733527723 424005589 829220131 914913788 779970083 115302260 848380018 701197815 403761243
891084919 854716208 659885119 424005589 764420396
439127335 779970083 747047309 477924967 735434112 322065597 726844853 117764856 764420396 891084919
424005589 803803707 803803707 779970083 262999381
299132676 312628684 659885119 564687041 299310206 378233115 140331292 892846202 212241120 256199325
272021436 304787788 429405445 598276699 511166564

```


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244722305 58919963 424005589 129296220 829220131 22268537 614761957 914913788 304787788 728921884
506825086 891084919 117764856 614761957 304292386
58919963 129296220 598276699 145955413 701197815 365804732 576968382 559194274 299310206 181505789
378233115 779970083 598276699 299310206 764420396
576968382 779970083 598276699 764420396 477924967 915027626 840146597 129296220 299132676 669157215
299310206 429405445 511166564 840146597 322065597
429405445 58919963 390191365 77863393 77863393 140331292 854716208 259959126 614761957 439127335 58919963
22268537 378233115 58919963 181505789
244722305 77863393 439127335 701197815 192941402 304292386 915027626 137442607 779970083 22268537
689714779 623146168 429405445 244722305 854716208
95159093 115302260 129296220 530307301 511166564 598276699 614761957 365804732 613095843 743473415
145955413 506825086 803803707 332268867 332268867
613095843 840146597 368961850 614761957 623146168 145955413 682939465 659885119 304787788 259959126
379786267 379786267 632298862 322065597 424005589
368961850 840146597 941654917 854716208 304292386 95159093 735434112 256199325 115302260 424005589
728921884 115302260 726844853 365804732 701197815

Note: The rebecca.dat input file includes several additional test cases that are not represented in this document. Refer to the data file if needed to view additional cases.

Test Output To Screen:

Case #1: 28
Case #2: 12
Case #3: 89
Case #4: 89
Case #5: 89
Case #6: 89
Case #7: 1
Case #8: 386
Case #9: 423
Case #10: 410
Case #11: 127
Case #12: 80
Case #13: 146
Case #14: 106
Case #15: 182
Case #16: 487730705685
Case #17: 487730705685
Case #18: 248005743003
Case #19: 921468
Case #20: 1465734

Problem #12
60 Points

12. William

Program Name: William.java

Input File: william.dat

Test Input File:

Carolyn Blair
Jared Hopkins
Maude Almond
Shamas Woodley
Wilfred Blaese
Miya Ridley
Salahuddin Alexander
Lea Richardson
Safwan Campos
Manal Mathews
Brandy Mackay
Leela Rhodes
Emanuel Powers
Hajrah Dickerson
Sadie Saunders
Shauna Rivers
Inaaya Thorne
Alaw Spencer
Aliyah Marin
Lucca Livingston

Test Output To Screen:

Salahuddin Alexander
Maude Almond
Wilfred Blaese
Carolyn Blair
Safwan Campos
Hajrah Dickerson
Jared Hopkins
Lucca Livingston
Brandy Mackay
Aliyah Marin
Manal Mathews
Emanuel Powers
Leela Rhodes
Lea Richardson
Miya Ridley
Shauna Rivers
Sadie Saunders
Alaw Spencer
Inaaya Thorne
Shamas Woodley

