February 1 - 2018

Hands-On Programming Set

JUDGES PACKET

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**Problem #1**

**60 Points**

**Pottery**

**No Data File**

**Test Output To Screen**

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\\_\_\_\_\_\_\_/**Problem #2**

**60 Points**

**Ruodamudi**

**Test Input File - ruodamudi.dat**

288230376151711732 2

**Test Output To Screen**

288230376151711743**Problem #3**

**60 Points**

**Reverse**

**Test Input File - reverse.dat**

3

COMPUTER 1 8

SCIENCE 0 7

RULESSSSSSSSSSSSSSSSSSSS 3 4

**Test Output To Screen**

C

RULSSSSSSSSSSSSSSSSSSSS**Problem #4**

**60 Points**

**Square**

**Test Input File - square.dat**

4

a

one

twenty

abcdefghijabcdefghijabcdefghijabcdefghijabcdefghijabcdefghijabcdefghijabcdefg

**Test Output To Screen**

a

one

n n

eno

twenty

w t

e n

n e

t w

ytnewt

abcdefghijabcdefghijabcdefghijabcdefghijabcdefghijabcdefghijabcdefghijabcdefg

b f

c e

d d

e c

f b

g a

h j

i i

j h

a g

b f

c e

d d

e c

f b

g a

h j

i i

j h

a g

b f

c e

d d

e c

f b

g a

h j

i i

j h

a g

b f

c e

d d

**\* Continued \***

e c

f b

g a

h j

i i

j h

a g

b f

c e

d d

e c

f b

g a

h j

i i

j h

a g

b f

c e

d d

e c

f b

g a

h j

i i

j h

a g

b f

c e

d d

e c

f b

g a

h j

i i

j h

a g

b f

c e

d d

e c

f b

gfedcbajihgfedcbajihgfedcbajihgfedcbajihgfedcbajihgfedcbajihgfedcbajihgfedcba

**Problem #5**

**60 Points**

**Quadratics**

**Test Input File – quadratics.dat**

4

1 5000000 9

50.3945 500.12349 10.6

1 2 1

1 600 1

**Test Output To Screen**

-0.000, -5000000.000

-0.021, -9.903

-1.000, -1.000

-0.002, -599.998

**Problem #6**

**60 Points**

**Holes**

**Test Input File - holes.dat**

5

10 30

##############################

#............................#

#............................#

#............................#

#............................#

#............................#

#............................#

#............................#

#............................#

##############################

1 1

#

3 3

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#.#

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3 3

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###

###

3 29

#############################

#.#.#.#.#.#.#.#.#.#.#.#.#.#.#

#############################

**Test Output To Screen**

1 section, 224 spaces

0 sections, 0 spaces

1 section, 1 space

0 sections, 0 spaces

14 sections, 14 spaces

**Problem #7**

**60 Points**

**Ornaments**

**Test Input File – ornaments.dat**

4

1000000

0

1

50000

**Test Output To Screen**

166667166667000000

0

1

20834583350000**Problem #8**

**60 Points**

**Family**

**Test Input File - family.dat**

10

John brother Susan

Kim mom John

Dave brother Sean

Dave son Jim

John son Jim

Jim son Dan

Dan son Steve

Steve son Jack

Jack son Jasmine

Danny son J

4

Jim John

Kim Susan

Jasmine Sean

Danny Sean

**Test Output To Screen**

Related

Related

Related

Not Related

**Problem #9**

**60 Points**

**Checkpoint**

**Test Input File – checkpoint.dat**

3

10 10 1

S.........

E########.

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1########.

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..........

1 5 0

SE...

1 11 9

S123456789E

**Test Output To Screen**

67

1

10**Problem #10**

**60 Points**

**Bags**

**Test Input File - bags.dat**

4

11

1 1 1 1 1 1 1 1 1 1 10

10

3

25 25 50

100

2

6 2

7

6

10 5 4 4 1 2

18

**Test Output To Screen**

1

3

Not possible

3**Problem #11**

**60 Points**

**Bomb**

**Test Input File - bomb.dat**

4

2 3 3

S##

##E

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2 10 10

S#########

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##########

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##########

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##########

#########E

1 1 20

S##################E

1 1 20

S..................E

**Test Output To Screen**

2

18

18

0**Problem #12**

**60 Points**

**Draw**

**Test Input File – draw.dat**

8

rectangle 3 5 n

rectangle 3 7 y

right triangle 4 n

right triangle 4 y

left triangle 5 n

left triangle 4 y

diamond 11 y

diamond 5 n

**Test Output To Screen**

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