FLORIDA HIGH SCHOOLS COMPUTING COMPETITION '94
JUDGING CRITERIA

1.1 RUN PROGRAM:

OUTPUT: (The following lines are displayed, each beginning at the left most column of the screen):

FHSCC '94 IS SPONSORED BY:

GTEDS GTEDS GTEDS GTEDS GTEDS
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1.2 INPUT: Entrance requirement: **PASSED**
Plans to accept or reject offer: **REJECT**

OUTPUT: **APPLICANT WILL NOT BE HIRED**

INPUT: Entrance requirement: **PASSED**
Plans to accept or reject offer: **ACCEPT**

OUTPUT: **APPLICANT WILL BE HIRED**

INPUT: Entrance requirement: **FAILED**
Plans to accept or reject offer: **ACCEPT**

OUTPUT: **APPLICANT WILL NOT BE HIRED**

1.3 INPUT: Enter current number: **130000**
Enter number hiring: **4321**
Enter number leaving: **5678**

OUTPUT: **128643 EMPLOYEES**

1.4 INPUT: Enter number of accounts: **2 MILLION**
Enter number of accounts: **2.1 MILLION**
Enter number of accounts: **2.4 MILLION**
Enter number of accounts: **1.5 MILLION**
Enter number of accounts: **1 MILLION**
Enter number of accounts: **-999**

OUTPUT: **9 MILLION ACCOUNTS CONVERTED TO CBSS**

INPUT: Enter number of accounts: **3.1 MILLION**
Enter number of accounts: **0.4 MILLION**
Enter number of accounts: **0.3 MILLION**
Enter number of accounts: **4 MILLION**
Enter number of accounts: **-999**

OUTPUT: **7.8 MILLION ACCOUNTS CONVERTED TO CBSS**

1.5 INPUT: Enter hours, rate: **40, 7.50**

OUTPUT: **GROSS WAGES ARE $300.00**

INPUT: Enter hours, rate: **50, 6.10**

OUTPUT: **GROSS WAGES ARE $335.50**

1.6 INPUT: Enter number of area codes: **4**
Enter area code: **912**
Enter area code: **706**
Enter area code: **208**
Enter area code: **404**

OUTPUT: **TOTAL NUMBER OF ACCOUNTS BEING SOLD = 339321**

INPUT: Enter number of area codes: **2**
Enter area code: **605**
Enter area code: **706**

OUTPUT: **TOTAL NUMBER OF ACCOUNTS BEING SOLD = 183776**

1.7 INPUT: Enter cost $: **76**
Enter phase: **DESIGN**

OUTPUT: **COST IS $380 TO FIX PROBLEM IN DESIGN PHASE**

INPUT: Enter cost $: **66**
Enter phase: **SYSTEM TEST**

OUTPUT: **COST IS $1320 TO FIX PROBLEM IN SYSTEM TEST PHASE**

INPUT: Enter cost $: **99**
Enter phase: **CODING**

OUTPUT: **COST IS $990 TO FIX PROBLEM IN CODING PHASE**

1.8 INPUT: Enter logical record length: **2348**

OUTPUT: **BLOCKSIZE = 21132 BYTES**

INPUT: Enter logical record length: **600**

OUTPUT: **BLOCKSIZE = 23400 BYTES**

1.9 INPUT: Enter kilowatt hours: **15**

OUTPUT: **THE CUSTOMER'S ELECTRIC BILL IS $92.38**

INPUT: Enter kilowatt hours: **7.5**

OUTPUT: **THE CUSTOMER'S ELECTRIC BILL IS $40.47**

INPUT: Enter kilowatt hours: **99.5**

OUTPUT: **THE CUSTOMER'S ELECTRIC BILL IS $637.77**

1.10 INPUT: Enter row: **1, 2, 3, 4, 5**
Enter row: **2, 3, 5, 6, 8**
Enter row: **3, 5, 0, 7, 0**
Enter row: **4, 6, 7, 4, 1**
Enter row: **5, 8, 0, 1, 5**

OUTPUT: **MATRIX IS SYMMETRIC**

INPUT: Enter row: **1, 2, 3, 4, 5**
Enter row: **2, 3, 4, 5, 6**
Enter row: **3, 4, 5, 6, 7**
Enter row: **4, 5, 8, 9, 1**
Enter row: **5, 6, 7, 1, 2**

OUTPUT: **MATRIX IS NOT SYMMETRIC**

2.1 INPUT: Enter jobs/CK: **OA OC OJ CK OE CK OO ON CK SG SK CK**

OUTPUT: **OA**
OC
OJ
EVERYTHING OK?
INPUT: **N**
OUTPUT: **OA**
OC
OJ
EVERYTHING OK?
INPUT: **Y**
OUTPUT: **OE**
EVERYTHING OK?
INPUT: **N**
OUTPUT: **OE**
EVERYTHING OK?
INPUT: **N**
OUTPUT: **OE**
EVERYTHING OK?
INPUT: **Y**
OUTPUT: **OO**
ON
EVERYTHING OK?
INPUT: **Y**
OUTPUT: **SG**
SK
EVERYTHING OK?
INPUT: **Y**
OUTPUT: (program ends)

2.2 RUN PROGRAM:
OUTPUT: (The screen is cleared and a randomly chosen letter is displayed in random locations until a key is pressed, displaying the letters slowly (about 10 per second))
INPUT: Enter letter: **R**
OUTPUT: (The program clears the screen and continuously displays the letter **R** in random locations until a key is pressed)
INPUT: Enter letter: (press space bar)
OUTPUT: (The program clears the screen and displays a randomly chosen letter in random locations until a key is pressed)
INPUT: Enter letter: **Y**
OUTPUT: (The program clears the screen and continuously displays the letter **Y** in random locations until a key is pressed)
INPUT: Enter letter: (press space bar)
OUTPUT: (The program clears the screen and displays a randomly chosen letter in random locations until a key is pressed)
INPUT: Enter letter: **3**
OUTPUT: (program terminates)

2.3 INPUT: Enter letters: **TSADHE RESH ALEPH HE**

OUTPUT: **H)RTS**

INPUT: Enter letters: **DALETH BETH AYIN TAW**

OUTPUT: **T(BD**

INPUT: Enter letters: **NUN HETH TETH**

OUTPUT: **TCHN**

2.4 INPUT: Enter account number: **123456789**

OUTPUT: **1234567890**

INPUT: Enter account number: **2309849123**

OUTPUT: **ERROR - INCORRECT LENGTH**

INPUT: Enter account number: **9876543**

OUTPUT: **98765431**

INPUT: Enter account number: **98765432A**

OUTPUT: **ERROR - NON-NUMERIC**

INPUT: Enter account number: **123ABC**

OUTPUT: **ERROR - INCORRECT LENGTH**
ERROR - NON-NUMERIC

2.5 INPUT: Enter last page number: **2109**
Enter M: **13**

OUTPUT: **0 APPEARS 572 TIMES**
1 APPEARS 1504 TIMES
2 APPEARS 674 TIMES
3 APPEARS 573 TIMES
4 APPEARS 574 TIMES
5 APPEARS 572 TIMES
6 APPEARS 573 TIMES
7 APPEARS 574 TIMES
8 APPEARS 573 TIMES
9 APPEARS 574 TIMES

DIGIT(S) APPEARING THE MOST: 1
DIGIT(S) APPEARING THE LEAST: 0 5

2.6 INPUT: Enter coefficients A, B, C: **2, 10, -12**

OUTPUT: **THE ROOTS ARE REAL**
THE ROOTS ARE 1 AND -6

INPUT: Enter coefficients A, B, C: **1, 6, 9**

OUTPUT: **THE ROOTS ARE REAL**
THE ONLY ROOT IS -3

INPUT: Enter coefficients A, B, C: **3, 12, 24**

OUTPUT: **THE ROOTS ARE COMPLEX**
THE ROOTS ARE -2 + 2I AND -2 - 2I

2.7 INPUT: Enter seed used last: **420001233**

OUTPUT: **4243000123**
4253000126
4263000129
4273000121
4283000124
4293000127
4204000126
4214000129
4224000121
4234000124
4244000127
4264000122
4274000125
4284000128
4294000120

2.8 INPUT: Enter speed, distance: **632.1, 0**
Enter time: **03:05C**

OUTPUT: **DISTANCE = 1949.0 MILES**

INPUT: Enter speed, distance: **120.9, 59.9**
Enter time: **0**

OUTPUT: **TIME = 0.50 HOURS**

INPUT: Enter speed, distance: **0, 999.9**
Enter time: **70M**

OUTPUT: **SPEED = 857.1 MPH**

INPUT: Enter speed, distance: **0, 432.0**
Enter time: **7.2H**

OUTPUT: **SPEED = 60.0 MPH**

2.9 INPUT: Enter reported date: **11/07/95**
Enter reported time: **09:05**
Enter cleared date: **11/09/95**
Enter cleared time: **19:15**

OUTPUT: **RESPONSE TIME WAS 1555 MINUTES**

INPUT: Enter reported date: **08/03/94**
Enter reported time: **05:35**
Enter cleared date: **08/04/94**
Enter cleared time: **14:25**

OUTPUT: **RESPONSE TIME WAS 925 MINUTES**

INPUT: Enter reported date: **02/05/94**
Enter reported time: **23:59**
Enter cleared date: **02/16/94**
Enter cleared time: **00:12**

OUTPUT: **RESPONSE TIME WAS 5400 MINUTES**

2.10 INPUT: Enter originating number: **8135558530**
Enter number called: **4075551234**
Handicapped person?: **NO**
Enter length of call: **8**
Enter cost of call $: **11.44**

OUTPUT: **THE PLAN A CHARGE WOULD BE $9.72**
THE PLAN C CHARGE WOULD BE $10.04
THIS PERSON WOULD RECEIVE PLAN A

INPUT: Enter originating number: **4075558530**
Enter number called: **4075551212**
Handicapped person?: **NO**
Enter length of call: **10**
Enter cost of call $: **1.23**

OUTPUT: **THIS PERSON DOES NOT QUALIFY FOR ANY PLANS**

INPUT: Enter originating number: **8135558530**
Enter number called: **4075551212**
Handicapped person?: **YES**
Enter length of call: **4**
Enter cost of call $: **2.34**

OUTPUT: **THE PLAN B CHARGE WOULD BE $2.11**
THE PLAN C CHARGE WOULD BE $2.05
THIS PERSON WOULD RECEIVE PLAN C

3.1 INPUT: Enter transliteration: **PHILADELPHIA**

OUTPUT: **PHI IOTA LAMBDA ALPHA DELTA EPSILON LAMBDA PHI IOTA ALPHA**
NUMERICAL SUM = 1091

INPUT: Enter transliteration: **EKPSUCHO**

OUTPUT: **EPSILON KAPPA PSI UPSILON CHI OMEGA**
NUMERICAL SUM = 2525

INPUT: Enter transliteration: **CHTHES**

OUTPUT: **CHI THETA EPSILON SIGMA**
NUMERICAL SUM = 814

INPUT: Enter transliteration: **PHOTIZO**

OUTPUT: **PHI OMEGA TAU IOTA ZETA OMEGA**
NUMERICAL SUM = 2417

3.2 INPUT: Enter starting position: **X,7**
Enter direction: **S**
OUTPUT: **TAXI LOCATION IS X,8**
INPUT: Enter direction: **S**
OUTPUT: **LOCATION IS OUTSIDE CITY LIMITS**
INPUT: Enter direction: **W**
OUTPUT: **TAXI LOCATION IS W,8**
INPUT: Enter direction: **W**
OUTPUT: **TAXI LOCATION IS V,8**
INPUT: Enter direction: **W**
OUTPUT: **LOCATION IS TOO FAR WEST**
INPUT: Enter direction: **N**
OUTPUT: **TAXI LOCATION IS V,7**
INPUT: Enter direction: **N**
OUTPUT: **TAXI LOCATION IS V,6**
INPUT: Enter direction: **N**
OUTPUT: **TAXI LOCATION IS V,5**
INPUT: Enter direction: **N**
OUTPUT: **LOCATION IS TOO FAR NORTH**
INPUT: Enter direction: **Q**
OUTPUT: (program terminates)

INPUT: Enter starting position: **Y,1**
Enter direction: **N**
OUTPUT: **LOCATION IS OUTSIDE CITY LIMITS**
INPUT: Enter direction: **E**
OUTPUT: **TAXI LOCATION IS Z,1**
INPUT: Enter direction: **Q**
OUTPUT: (program terminates)

3.3 INPUT: Enter number of words: **5**
Enter word: **REACT**
Enter word: **MASTER**
Enter word: **CRATE**
Enter word: **STREAM**
Enter word: **PEACH**

OUTPUT: **ANAGRAMS: CRATE, REACT**
MASTER, STREAM

INPUT: Enter number of words: **9**
Enter word: **PEACH**
Enter word: **RESTING**
Enter word: **SHORE**
Enter word: **HORSE**
Enter word: **MANGER**
Enter word: **STINGER**
Enter word: **CHEAP**
Enter word: **GERMAN**
Enter word: **MANAGER**

OUTPUT: **ANAGRAMS: CHEAP, PEACH**
GERMAN, MANGER
HORSE, SHORE
RESTING, STINGER

INPUT: Enter number of words: **2**
Enter word: **BEARD**
Enter word: **BEAR**

OUTPUT: **NO ANAGRAMS IN LIST**

3.4 INPUT: Enter amount of money: **15**

OUTPUT: **TAKE 1 2 3 9 AND DISPERSE 8 DOLLARS TO MAKE 2 3 9 1**
TAKE 1 2 4 8 AND DISPERSE 7 DOLLARS TO MAKE 2 4 8 1
TAKE 1 2 5 7 AND DISPERSE 6 DOLLARS TO MAKE 2 5 7 1
TAKE 1 3 4 7 AND DISPERSE 6 DOLLARS TO MAKE 3 4 7 1
TAKE 1 3 5 6 AND DISPERSE 5 DOLLARS TO MAKE 3 5 6 1
TAKE 2 3 4 6 AND DISPERSE 4 DOLLARS TO MAKE 3 4 6 2
TOTAL NUMBER OF SOLUTIONS = 6

INPUT: Enter amount of money: **19**

OUTPUT: **TAKE 1 2 3 13 AND DISPERSE 12 DOLLARS TO MAKE 2 3 13 1**
TAKE 1 2 4 12 AND DISPERSE 11 DOLLARS TO MAKE 2 4 12 1
TAKE 1 2 5 11 AND DISPERSE 10 DOLLARS TO MAKE 2 5 11 1
TAKE 1 2 6 10 AND DISPERSE 9 DOLLARS TO MAKE 2 6 10 1
TAKE 1 2 7 9 AND DISPERSE 8 DOLLARS TO MAKE 2 7 9 1
TAKE 1 3 4 11 AND DISPERSE 10 DOLLARS TO MAKE 3 4 11 1
TAKE 1 3 5 10 AND DISPERSE 9 DOLLARS TO MAKE 3 5 10 1
TAKE 1 3 6 9 AND DISPERSE 8 DOLLARS TO MAKE 3 6 9 1
TAKE 1 3 7 8 AND DISPERSE 7 DOLLARS TO MAKE 3 7 8 1
TAKE 1 4 5 9 AND DISPERSE 8 DOLLARS TO MAKE 4 5 9 1
TAKE 1 4 6 8 AND DISPERSE 7 DOLLARS TO MAKE 4 6 8 1
TAKE 1 5 6 7 AND DISPERSE 6 DOLLARS TO MAKE 5 6 7 1
TAKE 2 3 4 10 AND DISPERSE 8 DOLLARS TO MAKE 3 4 10 2
TAKE 2 3 5 9 AND DISPERSE 7 DOLLARS TO MAKE 3 5 9 2
TAKE 2 3 6 8 AND DISPERSE 6 DOLLARS TO MAKE 3 6 8 2
TAKE 2 4 5 8 AND DISPERSE 6 DOLLARS TO MAKE 4 5 8 2
TAKE 2 4 6 7 AND DISPERSE 5 DOLLARS TO MAKE 4 6 7 2
TAKE 3 4 5 7 AND DISPERSE 4 DOLLARS TO MAKE 4 5 7 3
TOTAL NUMBER OF SOLUTIONS = 18

3.5 INPUT: Enter Gregorian or Julian: **GREGORIAN**
Enter date: **12/31/95**
OUTPUT: **JULIAN DATE = 95365**

INPUT: Enter Gregorian or Julian: **GREGORIAN**
Enter date: **03/31/92**
OUTPUT: **JULIAN DATE = 92091**

INPUT: Enter Gregorian or Julian: **JULIAN**
Enter date: **94334**
OUTPUT: **GREGORIAN DATE = 11/30/94**

INPUT: Enter Gregorian or Julian: **JULIAN**
Enter date: **96023**
OUTPUT: **GREGORIAN DATE = 01/23/96**

3.6 INPUT: Enter base of first number: **4**
Enter number: **32103210**
Enter base of output: **16**

OUTPUT: **4E4E**

INPUT: Enter base of first number: **16**
Enter number: **5BCDEF**
Enter base of output: **10**

OUTPUT: **5946106**

INPUT: Enter base of first number: **12**
Enter number: **5B43**
Enter base of output: **14**

OUTPUT: **D5A3**

3.7 INPUT: Enter seed X(0): **8765**

OUTPUT: **1000TH NUMBER = 130877**
2000TH NUMBER = 270865
3000TH NUMBER = 403565
4000TH NUMBER = 536721
5000TH NUMBER = 657665
6000TH NUMBER = 780405
7000TH NUMBER = 914329
8000TH NUMBER = 1048317

3.8 INPUT: Enter N: **99**
Enter radius: **10**

OUTPUT: **4188.790204786390984616857844372670512262892532500141**
094633259456410421875048278664837379767122822757309

INPUT: Enter N: **89**
Enter radius: **100**

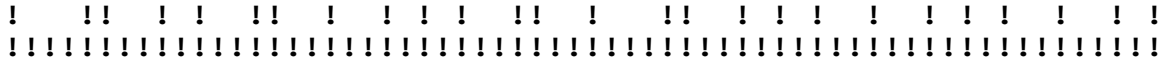
OUTPUT: **4188790.204786390984616857844372670512262892532500141**
094633259456410421875048278664837379767122822

INPUT: Enter N: **85**
Enter radius: **55**

OUTPUT: **696909.970321335800065629723857503056477738745094710974619608542060283939461157362862319058 7**

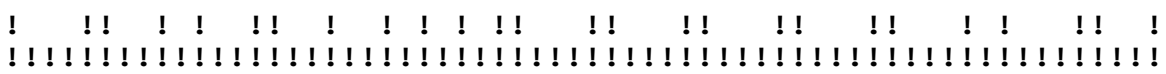
3.9 INPUT: Enter address 1: **P.O. BOX 6789**
Enter address 2: **SOMEWHERE FL 12345**

OUTPUT: **DELIVERY POINT BAR CODE = 123456789898**



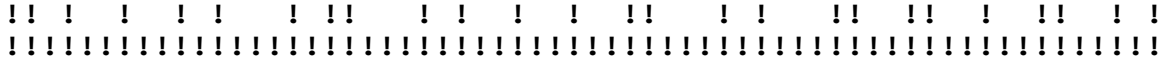
INPUT: Enter address 1: **9 GTE ST**
Enter address 2: **THISTOWN FL 12345**

OUTPUT: **DELIVERY POINT BAR CODE = 123450000096**



INPUT: Enter address 1: **5234 GTE ST**
Enter address 2: **COMPUTERVILLE FL 98765-4321**

OUTPUT: **DELIVERY POINT BAR CODE = 987654321348**



3.10 INPUT: Enter first number: **5**
Enter increment: **4**

Enter number: **9**
Enter row, col: **1, 1**

Enter number: **13**
Enter row, col: **2, 3**

OUTPUT: **9 37 17**
29 21 13
25 5 33

MAGIC NUMBER = 63

INPUT: Enter first number: **77**
Enter increment: **2**

Enter number: **89**
Enter row, col: **2, 3**

Enter number: **91**
Enter row, col: **3, 1**

OUTPUT: **83 93 79**
81 85 89
91 77 87

MAGIC NUMBER = 255