

READY

06/23/77 1811
SOFTWARE CHECKED OCT. 14,1976, RAH
NEW COMM DEBUG PATCH I

ABORT

GET-#P933,LIFE

LIST

LIFE

0010 DIM X[33,33],Y[33,33]

0020 DIM I#[111],C#[111],Z#[111]

0030 F=0

0040 ON ERROR THEN 400

0050 L3=L4=H5=H6=33

0060 H3=H4=1

0070 L1=L2=1

0080 H1=L3

0090 H2=L4

0100 MAT X=ZER

0110 G=P=0

0120 G9=100

0130 PRINT "ENTER PATTERN:"

0140 X1=X3=1

0150 I#[1:X3]=" "

0160 INPUT "?",I#[X3]

0170 IF I#[X3:X3]=":" THEN 240

0180 IF I#[X3]="GO" THEN 470

0190 FOR X2=X3 TO LEN(I#)

0200 IF I#[X2:X2]# " " THEN GOSUB 880

0210 NEXT X2

0220 X1=X1+1

0230 GOTO 150

0240 FOR X2=X3 TO LEN(I#)

0250 IF I#[X2:X2]="," THEN 290

0260 NEXT X2

0270 PRINT "CAN'T FIND COMMA!"

0280 GOTO 150

0290 C#=I#[X3+1:X2-1]

0300 X4=VAL(C#)

0310 C#=I#[X2+1]

0320 X5=VAL(C#)

0330 IF X4<1 OR X4>H5 OR X4#INT(X4) THEN 380

0340 IF X5<1 OR X5>H6 OR X5#INT(X5) THEN 380

0350 X1=X4

0360 X3=X5

0370 GOTO 150

0380 PRINT "INVALID NUMBERS"

0390 GOTO 150

0400 REM ON ERROR ROUTINE

0410 IF REF(6)=81 THEN 450

0420 F=REF(6)

0430 IF F#1 THEN ON ERROR THEN 0

0440 RESUME

0450 C#="0"

0460 RESUME

0470 PRINT

0480 IF LEN(Z#) THEN 510

0490 Z#=" "

0500 L9=1

0510 PRINT

0520 GOSUB 960

0530 G=1

0540 FOR G=G TO G9

0550 L1=L3-1

0560 H1=H3+1

0570 L2=L4-1

0580 H2=H4+1

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0540 FOR G=0 TO 97
0550 L1=L3-1
0560 H1=H3+1
0570 L2=L4-1
0580 H2=H4+1
0590 H3=H4=1
0600 L3=H5
0610 L4=H6
0620 P=0
0630 MAT Y=X
0640 MAT X=ZER
0650 IF L1<1 OR L2<1 OR H1>H5 OR H2>H6 THEN 1130
0660 FOR X1=L1 TO H1
0670 X3=X1-1 MAX L1+1
0680 X4=X1+1 MIN H1-1
0690 FOR X2=L2 TO H2
0700 X5=X2-1 MAX L2+1
0710 X6=X2+1 MIN H2-1
0720 T=0
0730 FOR Y1=X3 TO X4
0740 FOR Y2=X5 TO X6
0750 T=T+Y[Y1,Y2]
0760 NEXT Y2
0770 NEXT Y1
0780 IF T=3 THEN GOSUB 880
0790 IF T=4 THEN IF Y[X1,X2] THEN GOSUB 880
0800 NEXT X2
0810 NEXT X1
0820 GOSUB 960
0830 IF F THEN 1330
0840 IF NOT P THEN 1580
0850 NEXT G
0860 G=G9
0870 GOTO 1580
0880 REM CELL ALIVE
0890 X[X1,X2]=1
0900 L3=L3 MIN X1
0910 L4=L4 MIN X2
0920 H3=H3 MAX X1
0930 H4=H4 MAX X2
0940 P=P+1
0950 RETURN
0960 REM PRINT
0970 L8=0
0980 FOR X1=1 TO LEN(Z$)
0990 IF ASC(Z$[X1])=8 THEN L8=L8+1
1000 NEXT X1
1010 FOR X1=L3 TO H3
1020 L0=0
1030 FOR X2=L4 TO H4
1040 IF X[X1,X2]#1 THEN 1070
1050 PRINT TAB((X2-L4)*L9+L0);Z$;
1060 L0=L0+L8
1070 NEXT X2
1080 PRINT
1090 NEXT X1
1100 PRINT "GENERATION"G"POPULATION"P
1110 PRINT CHR$(10); .
1120 RETURN
1130 REM ADJUST
1140 A1=INT((L1+H1)/2)
1150 A2=INT((L2+H2)/2)
1160 A3=INT((1+H5)/2)
1170 A4=INT((1+H6)/2)
1180 A1=A3-A1
1190 A2=A4-A2
1200 IF NOT A1 THEN IF L1<2 THEN 1620
1210 IF NOT A2 THEN IF L2<2 THEN 1620
1220 PRINT "ADJUSTING BY"A1","A2
1230 H1=H1-1
1240 H2=H2-1

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1200 IF NOT A1 THEN IF L1<2 THEN 1020
1210 IF NOT A2 THEN IF L2<2 THEN 1620
1220 PRINT "ADJUSTING BY"A1","A2
1230 H1=H1-1
1240 H2=H2-1
1250 FOR Y1=L1+1 TO H1
1260 X1=Y1+A1
1270 FOR Y2=L2+1 TO H2
1280 X2=Y2+A2
1290 IF Y[Y1,Y2]=1 THEN GOSUB 880
1300 NEXT Y2
1310 NEXT Y1
1320 GOTO 550
1330 REM INTERRUPT
1340 INPUT "WHAT?",I$
1350 F=0
1360 IF I$#"GO" THEN 1400
1370 IF G<G9 THEN 850
1380 G9=G9+100
1390 GOTO 540
1400 IF I$="STOP" THEN STOP
1410 IF I$="END" THEN END
1420 IF I$[1:3]="DIS" THEN 1530
1430 IF I$="SEE" THEN 1460
1440 IF I$[1:3]="RES" THEN 10
1450 GOTO 1580
1460 FOR X1=1 TO H5
1470 FOR X2=1 TO H6
1480 PRINT USING "#DD";X1,X2]
1490 NEXT X2
1500 PRINT
1510 NEXT X1
1520 GOTO 1580 /
1530 INPUT "ENTER DISPLAY CHARACTER(S)... ",I$
1540 IF LEN(I$) THEN Z$=I$
1550 INPUT "ENTER SPACING: 1 OR 2... ",I$
1560 IF I$#"1" THEN IF I$#"2" THEN 1580
1570 L9=VAL(I$)
1580 REM
1590 PRINT
1600 PRINT "NOW ";
1610 GOTO 1340
1620 PRINT "LIFE NOW TOO WIDESPREAD TO CALCULATE"
1630 GOTO 1580
1640 END

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