SPACWR

SPACEWAR BASED ON STAR TREK

Description

This program is an incredibly complete version of spacewar.
You are Captain Kirk of the Starship Enterprise and have as
your mission to destroy a certain number of enemy Klingon
spaceships (generally around 24) and thus keep the galaxy safe
for democracy. You must complete your mission in 30 stardates
(measure of time in space--think of it as a day).

The galaxy is divided into 64 quadrants arranged in an 8x8 grid.
Each quadrant is in turn divided into 64 sectors, also in an
8x8 grid arrangement. It, of course, costs time and fuel to get
from one quadrant to another.

Complete playing instructions are given if you answer YES to
the question, DO YOU WANT INSTRUCTIONS?

Note: This program appears to have one or two minor bugs. It's
eminently usable, but occasionally funny little things happen.

Program Author

Slightly modified by Mary Cole from the original written by:

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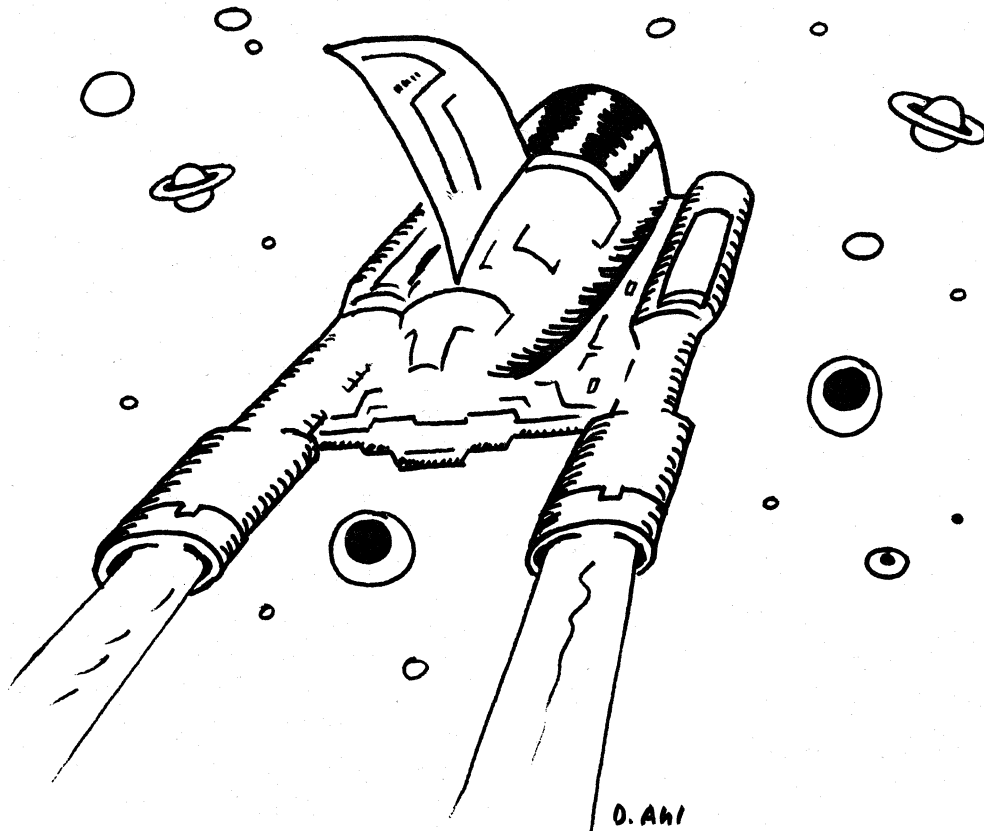
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100 REM *** PROGRAM SIMULATES TV PROGRAM STARTREK
110 REM *** WRITTEN BY MIKE MAYFIELD, CENTERLINE ENGINEERING,
120 REM *** DEBUGGING AND MINOR REVISIONS BY LEO LAVERDURE, IRA POTEL,
130 REM *** MARY COLE, AND DAVE AHL OF DIGITAL
170 RANDOMIZE
180 PRINT "            * * * STAR TREK * * * ":PRINT
200 INPUT "DO YOU WANT INSTRUCTIONS (THEY'RE LONG)";A$
210 IF A$<>"YES" THEN 230
220 GOTO 5820
230 REM *** PROGRAM BEGINS HERE
240 Z$,R$,Q$=""
260 DIM G(8,8),C(9,2),K(3,3),N(3),Z(8,8)
290 T0,T=INT(RND(1)*20+20)*100
300 T9=30:D0=D1E0,E=3000:P0,P=10:S9=20:S,H8=0
360 DEF FND(D)=SQR((K(I,1)-S1)**2+(K(I,2)-S2)**2)
370 Q1=INT(RND(1)*8+1)
380 Q2=INT(RND(1)*8+1)
390 S1=INT(RND(1)*8+1)
400 S2=INT(RND(1)*8+1)
410 T7=TIME(0)
420 C(2,1),C(3,1),C(4,1),C(4,2),C(5,2),C(6,2)=-1
430 C(1,1),C(3,2),C(5,2),C(7,2)=0
440 C(1,2),C(2,2),C(6,1),C(7,1),C(8,1),C(8,2),C(9,2)=1
450 MAT D=ZER
460 D$="WARP ENGINES,R. SENSORS,L. SENSORS,PHASER CNTRL"
470 D$=D$+"PHOTON TUBES,DAMAGE CNTRL"
480 E$="SHIELD CNTRL,COMPUTER"
490 B9,K9=0
491 REM *** SETS UP WHAT EXISTS IN GALAXY
500 FOR I=1TO8
510 FOR J=1TO8
520 R1=RND(1)
530 IF R1>.98 THEN 580
540 IF R1>.95 THEN 610
550 IF R1>.8 THEN 640
560 K3=0:GOTO 660
580 K3=3:K9=K9+3:GOTO 660
610 K3=2:K9=K9+2:GOTO 660
640 K3=1:K9=K9+1
660 R1=RND(1)
670 IF R1>.96 THEN 700
680 B3=0:GOTO 720
700 B3=1:B9=B9+1
720 S3=INT(RND(1)*8+1)
730 G(I,J)=K3*100+B3*10+S3
740 Z(I,J)=0
750 NEXT J
760 NEXT I
770 K7=K9
775 PRINT:PRINT
780 PRINT"YOU MUST DESTROY"K9" KLINGONS IN"T9" STARDATES WITH "B9
790 IF B9>0 THEN 810           " STARBASES"
800 G(6,3)=114
810 K3,B3,S3=0
820 IF Q1<1 OR Q1>8 OR Q2<1 OR Q2>8 THEN 920
830 X=G(Q1,Q2)*.01
840 K3=INT(X)
850 B3=INT((X-K3)*10)
860 S3=G(Q1,Q2)-INT(G(Q1,Q2)*.1)*10
870 IF K3=0 THEN 910
880 IF S>200 THEN 910
890 PRINT"COMBAT AREA      CONDITION RED"
900 PRINT"   SHIELDS DANGEROUSLY LOW"
910 MAT K=ZER
920 FOR I=1TO3
930 K(I,3)=0
940 NEXT I
950 Q$=Z$:R$=Z$
970 S$=MID(Z$,1,48)
971 REM *** PUT ENTERPRISE SOMEWHERE
980 A$="<*>"
990 Z1=S1
1000 Z2=S2
1010 GOSUB 5510
1020 FOR I=1TOK3
1030 GOSUB 5380
1031 REM *** PUT KLINGONS SOMEWHERE
1040 A$="+++"
1050 Z1=R1
1060 Z2=R2
1070 GOSUB 5510
1080 K(I,1)=R1: K(I,2)=R2: K(I,3)=S9
1110 NEXT I
1120 FOR I=1TOB3
1130 GOSUB 5380
1131 REM *** PUT STARBASE(S) SOMEWHERE
1140 A$=">!<": Z1=R1: Z2=R2
1170 GOSUB 5510
1180 NEXT I
1190 FOR I=1TOS3
1200 GOSUB 5380
1201 REM *** PUT STARS SOMEWHERE
1210 A$=" * ": Z1=R1: Z2=R2
1240 GOSUB 5510
1250 NEXT I
1260 GOSUB 4120
1270 INPUT "COMMAND";A
1290 IF A=0 GOTO 1410
1291 IF A=1 GOTO 1260
1292 IF A=2 GOTO 2330
1293 IF A=3 GOTO 2530
1294 IF A=4 GOTO 2800
1295 IF A=5 GOTO 3460
1296 IF A=6 GOTO 3560
1297 IF A=7 GOTO 4630
1298 IF A=8 GOTO 6510
1310 PRINT:PRINT"   0 = SET COURSE"
1320 PRINT"   1 = SHORT RANGE SENSOR SCAN"
1330 PRINT"   2 = LONG RANGE SENSOR SCAN"
1340 PRINT"   3 = FIRE PHASERS"
1350 PRINT"   4 = FIRE PHOTON TORPEDOES"
1360 PRINT"   5 = SHIELD CONTROL"
1370 PRINT"   6 = DAMAGE CONTROL REPORT"
1380 PRINT"   7 = CALL ON LIBRARY COMPUTER"
1390 PRINT"   8 = END THE CONTEST":PRINT
1400 GOTO 1270
1401 REM *** COURSE CONTROL CODE BEGINS HERE
1410 INPUT "COURSE (1-9)";C1
1430 IF C1=0 THEN 1270
1440 IF C1<1 OR C1>9 THEN 1410
1460 INPUT "WARP FACTOR (0-8)";W1
1470 IF W1<0 OR W1>8 THEN 1410
1480 IF D(1)>=0 OR W1<=.2 THEN 1610
1490 PRINT "WARP ENGINES ARE DAMAGED, MAXIMUM SPEED = WARP .2"
1500 GOTO 1410
1510 IF K3<=0 THEN 1560
1520 GOSUB 3790
1530 IF S<0 THEN 1560
1540 IF S<0 THEN 4000
1550 GOTO 1610
1560 IF E>0 THEN 1610
1570 IF S<1 THEN 3920
1580 PRINT "YOU HAVE"E" UNITS OF ENERGY"
1590 PRINT "SUGGEST YOU GET SOME FROM YOUR SHIELDS WHICH HAVE"S" UNITS LEFT"
1600 GOTO 1270
1610 FOR I=1TO8: IF D(I)>=0 THEN 1640
1611 REM *** FIX ANY DAMAGED DEVICE
1630 D(I)=D(I)+1
1640 NEXT I
1650 IF RND(1)>.2 THEN 1810
1660 R1=INT(RND(1)*8+1)
1670 IF RND(1)>=.5 THEN 1750
1680 D(R1)=D(R1)-(RND(1)*5+1)
1690 PRINT:PRINT "DAMAGE CONTROL REPORT:";
1710 GOSUB 5610
1720 PRINT" DAMAGED";:PRINT:GOTO 1810
1750 D(R1)=D(R1)+(RND(1)*5+1)
1760 PRINT:PRINT "DAMAGE CONTROL REPORT:";
1780 GOSUB 5610
1790 PRINT" STATE OF REPAIR IMPROVED":PRINT
1810 N=INT(W1*8):A$="   ":Z1=S1:Z2=S2
1850 GOSUB 5510
1860 X1=C(C1,1)+(C(C1+1,1)-C(C1,1))*(C1-INT(C1))
1870 X=S1:Y=S2
1890 X1=C(C1,1)+(C(C1+1,1)-C(C1,1))*(C1-INT(C1))
1900 X2=C(C1,2)+(C(C1+1,2)-C(C1,2))*(C1-INT(C1))
1910 FOR I=1TON:S1=S1+X1:S2=S2+X2
1940 IF S1<1 OR S1>9 OR S2<1 OR S2>9 THEN 2170
1950 S8=S1*24+S2*3-26: IF S8>72 THEN 1990
1970 IF MID(Q$,S8,3)="   " THEN 2070
1980 GOTO 2030
1990 IF S8>144 THEN 2020
2000 IF MID(R$,S8-72,3)="   " THEN 2070
2010 GOTO 2030
2020 IF MID(S$,S8-144,3)="   " THEN 2070
2030 PRINT"WARP ENGINES SHUTDOWN AT SECTOR "S1","S2" DUE TO BAD NAVAGATION"
2040 S1=S1-X1:S2=S2-X2:GOTO 2080
2070 NEXT I
2080 A$="<*>":Z1=S1:Z2=S2
2110 GOSUB 5510
2120 E=E-N-5:IF W1<1 THEN 2150
2140 T=T+1
2150 IF T>T0+T9 THEN 3970
2160 GOTO 1260
2170 X=Q1*8+X+X1:Y=Q2*8+Y+X2*N
2190 Q1=INT(X/8):Q2=INT(Y/8):S1=INT(X-Q1*8):S2=INT(Y-Q2*8)
2230 IF S1<>0 THEN 2260
2240 Q1=Q1-1:S1=8
2260 IF S2<>0 THEN 2290
2270 Q2=Q2-1:S2=8
2290 T=T+1:E=E-N-5
2310 IF T>T0 + T9 THEN 3970
2320 GOTO 810
2321 REM *** LONG RANGE SENSOR SCAN CODE BEGINS HERE
2330 IF D(3)>=0 THEN 2370
2340 PRINT "LONG RANGE SENSORS ARE INOPERABLE"
2360 GOTO 1270
2370 PRINT"LONG RANGE SENSOR SCAN FOR QUADRANT "Q1","Q2
2380 PRINT"-------------------"
2390 FOR I=Q1-1 TO Q1+1
2400 MAT N=ZER
2410 FOR J=Q2-1 TO Q2+1
2420 IF I<1 OR I>8 OR J<1 OR J>8 THEN 2460
2430 N(J-Q2+1)=G(I,J)
2440 IF D(7)<0 THEN 2460
2450 Z(I,J)=G(I,J)
2460 NEXT J
2470 P1$="! ### ! ### ! ### !"
2471 PRINT USING P1$,N(1),N(2),N(3)
2480 PRINT"-------------------"
2490 NEXT I
2500 GOTO 1270
2501 REM *** PHASER CONTROL CODE BEGINS HERE
2530 IF K3<=0 THEN 3670
2540 IF D(4)>=0 THEN 2570
2560 GOTO 1270
2570 IF D(7)>=0 THEN 2590
2580 PRINT " COMPUTER FAILURE HAMPERS ACCURACY"
2590 PRINT"PHASERS LOCKED ON TARGET,  ENERGY AVAILABLE="E
2600 INPUT "NUMBER OF UNITS TO FIRE";X
2620 IF X<=0 THEN 1270
2630 IF E-X<0 THEN 2570
2640 E=E-X
2650 GOSUB 3790
2660 IF D(7)>=0 THEN 2680
2670 X=X*RND(1)
2680 FOR I=1TO3
2690 IF K(I,3)<=0 THEN 2770
2700 H=INT((X/K3/RND(0))*(2+RND(1)))
2710 K(I,3)=K(I,3)-H
2720 PRINT" UNIT HIT ON KLINGON AT SECTOR "K(I,1)","K(I,2);
2721 PRINT"   ("K(I,3)" LEFT)";
2740 IF K(I,3)>0 THEN 2770
2750 GOSUB 3690
2760 IF K9<=0 THEN 4040
2770 NEXT I
2780 IF E<0 THEN 4000
2790 GOTO 1270
2791 REM *** PHOTON TORPEDO CODE BEGINS HERE
2800 IF D(5)>=0 THEN 2830
2810 PRINT "PHOTON TUBES ARE NOT OPERATIONAL"
2820 GOTO 1270
2830 IF P>0 THEN 2860
2840 PRINT "ALL PHOTON TORPEDOES EXPENDED"
2850 GOTO 1270
2860 INPUT "TORPEDO COURSE (1-9)";C1
2880 IF C1=0 THEN 1270
2890 IF C1<1 OR C1>9 THEN 2860
2900 X1=C(C1,1)+(C(C1+1,1)-C(C1,1))*(C1-INT(C1))
2910 X2=C(C1,2)+(C(C1+1,2)-C(C1,2))*(C1-INT(C1))
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2920  X=S1:Y=S2:P=P-1
2950  PRINT "TORPEDO TRACK:"
2960  X=X+X1:Y=Y+X2
2980  IF X<1 OR X>=9 OR Y<1 OR Y>=9 THEN 3420
2990  PRINT"         "X,"Y
3010  A$="   ":Z1=X:Z2=Y
3040  GOSUB 5680
3050  IF Z3=0 THEN 3070
3060  GOTO 2960
3070  A$="+++":Z1=X:Z2=Y
3100  GOSUB 5680
3110  IF Z3=0 THEN 3220
3120  PRINT "*** KLINGON DESTROYED ***"
3130  K3=K3-1:K9=K9-1
3150  IF K9<=0 THEN 4040
3160  FOR I=1TO3:IF INT(X)<>K(I,1) THEN 3190
3180  IF INT(Y)=K(I,2) THEN 3200
3190  NEXT I
3200  K(I,1)=0:GOTO 3360
3220  A$=" * ":Z1=X:Z2=Y
3250  GOSUB 5680
3260  IF Z3=0 THEN 3290
3270  PRINT "YOU CAN'T DESTROY STARS, SILLY"
3280  GOTO 3420
3290  A$=">1<":Z1=X:Z2=Y
3320  GOSUB 5680
3330  IF Z3=0 THEN 2960
3340  PRINT "*** STAR BASE DESTROYED *** .........CONGRATULATIONS"
3350  B3=B3-1
3360  A$="   ":Z1=X:Z2=Y
3390  GOSUB 5510
3400  G(Q1,Q2)=K3*100+B3*10+S3
3410  GOTO 3430
3420  PRINT "TORPEDO MISSED"
3430  GOSUB 3790
3440  IF E<0 THEN 4000
3450  GOTO 1270
3451  REM *** SHIELD CONTROL CODE BEGINS HERE
3460  IF D(7)>=0 THEN 3490
3470  PRINT "SHIELD CONTROL IS NON-OPERATIONAL"
3480  GOTO 1270
3490  PRINT "ENERGY AVAILABLE ="E+S
3500  INPUT "  NUMBER OF UNITS TO SHIELDS:"X
3510  IF X<=0 THEN 1270
3520  IF E+S-X<0 THEN 3490
3530  S=E+S-X:E=X
3540  GOTO 1270
3551  REM *** DAMAGE CONTROL REPORT CODE BEGINS HERE
3560  IF D(6)>=0 THEN 3590
3570  PRINT "DAMAGE CONTROL REPORT IS NOT AVAILABLE"
3580  GOTO 1270
3590  PRINT:PRINT "DEVICE           STATE OF REPAIR"
3610  FOR R1=1TO8
3620  GOSUB 5610
3630  PRINTD(R1)
3640  NEXT R1:PRINT
3660  GOTO 1270
3670  PRINT"SHORT RANGE SENSORS REPORT NO KLINGONS IN THIS QUADRANT"
3680  GOTO 1270
3690  PRINT "KLINGON AT SECTOR "K(I,1),"K(I,2)"DESTROYED ***"
3710  K3=K3-1:K9=K9-1:A$="   ":Z1=K(I,1):Z2=K(I,2)
3760  GOSUB 5510
3770  G(Q1,Q2)=K3*100+B3*10+S3
3780  RETURN
3790  IF C$<>"DOCKED" THEN 3820
3800  PRINT "STAR BASE SHIELDS PROTECT THE ENTERPRISE"
3810  RETURN
3820  IF K3<=0 THEN 3910
3830  FOR I=1TO3:IF K(I,3)<=0 THEN 3900
3850  H=INT((K(I,3)/FND(0))*(2+RND(1))):S=S-H
3870  PRINTH" UNIT HIT ON ENTERPRISE AT SECTOR "K(I,1)","K(I,2)
3871  PRINT"      ("S" LEFT)"
3890  IF S<0 THEN 4000
3900  NEXT I
3910  RETURN
3920  PRINT "THE ENTERPRISE IS DEAD IN SPACE. IF YOU SURVIVE ALL IMPENDING"
3930  PRINT "ATTACKS YOU WILL BE DEMOTED TO THE RANK OF PRIVATE"
3940  IF K3<=0 THEN 4020
3950  GOSUB 3790
3960  GOTO 3940
3970  PRINT:PRINT "IT IS STARDATE"T
3990  GOTO 4020
3991  REM *** NO ENERGY LEFT
4000  PRINT:PRINT"THE ENTERPRISE HAS BEEN DESTROYED. THE FEDERATION WILL BE
4020  PRINT "THERE ARE STILL "K9" KLINGON BATTLE CRUISERS"           CONQUERED"
4030  PRINT:PRINT:PRINT:PRINT "YOU GET ANOTHER CHANCE....":GOTO 230
4040  PRINT:PRINT"THE LAST KLINGON BATTLE CRUISER IN THE GALAXY HAS BEEN
4050  PRINT"THE FEDERATION HAS BEEN SAVED!!!!!":PRINT           DESTROYED"
4075  F5=((K7/(T-T0))*10000)
4080  PRINT "YOUR EFFICIENCY RATING ="F5
4100  PRINT"YOUR ACTUAL TIME OF MISSION ="INT((TIME(0)-T7)/60)" MINUTES"
4105  PRINT:PRINT:PRINT
4106  INPUT"DO YOU WANT TO TRY AGAIN"R$
4197  IF R$ = "YES" THEN 230
4110  GOTO 6510
4111  REM *** SHORT SENSOR SCAN AND STARTING POINT CODE
4120  FOR I=S1-1TO S1+1
4130  FOR J=S2-1TO S2+1
4140  IF I<1 OR I>8 OR J<1 OR J>8 THEN 4200
4150  A$=">1<":Z1=I:Z2=J
4160  GOSUB 5680
4190  IF Z3=1 THEN 4240
4200  NEXT J
4210  NEXT I
4220  D0=0:GOTO 4310
4240  D0=1:C$="DOCKED":E=3000:P=10
4280  PRINT "SHIELDS DROPPED FOR DOCKING PURPOSES"
4290  S=0:GOTO 4380
4310  IF K3>0 THEN 4350
4320  IF E<E0 +.1 THEN 4370
4330  C$="GREEN"
4340  GOTO 4380
4350  C$="RED":GOTO 4380
4370  C$="YELLOW"
4380  IF D(2)>=0 THEN 4430
4390  PRINT:PRINT"*** SHORT RANGE SENSORS ARE OUT ***":PRINT
4420  GOTO 4530
4430  O1$="------------------------------"
4435  PRINT USING O1$
4440  O2$=": : : : : : : : : : "
4445  PRINT USING O2$,MID(QS,1,3),MID(QS,4,3),MID(QS,7,3),
          MID(QS,10,3),MID(QS,13,3),MID(QS,16,3),MID(QS,19,3),
          MID(QS,22,3)
4450  O3$=O2$+"    STARDATE    #####"
4455  PRINT USING O3$,MID(QS,25,3),MID(QS,28,3),MID(QS,31,3),
          MID(QS,34,3),MID(QS,37,3),MID(QS,40,3),T
4460  O4$=O2$+"    CONDITION     \    \"
4465  PRINT USING O4$,MID(QS,49,3),MID(QS,52,3),MID(QS,55,3),
          MID(QS,58,3),MID(QS,61,3),MID(QS,64,3),MID(QS,67,3),
          MID(QS,70,3),C$
4470  O5$=O2$+"#"
4475  PRINT USING O5$,MID(RS,1,3),MID(RS,4,3),MID(RS,7,3),
          MID(RS,13,3),MID(RS,16,3),MID(RS,19,3),
          MID(RS,22,3),Q1
4476  PRINT " ",#Q2
4480  O6$=O2$+"    SECTOR      #"
4485  PRINT USING O6$,MID(RS,25,3),MID(RS,28,3),
          MID(RS,31,3),MID(RS,34,3),MID(RS,37,3),MID(RS,40,3),
          MID(RS,43,3),MID(RS,46,3),S1
4486  PRINT " ",#S2
4490  O7$=O2$+"    TOTAL ENERGY  ######"
4495  PRINT USING O7$,MID(RS,49,3),MID(RS,52,3),MID(RS,55,3),
          MID(RS,58,3),MID(RS,61,3),MID(RS,64,3),MID(RS,67,3),
          MID(RS,70,3),E
4500  O8$=O2$+"    PHOTON TORPEDOES   ###"
4505  PRINT USING O8$,MID(SS,1,3),MID(SS,4,3),MID(SS,7,3),MID(SS,10,3),
          MID(SS,13,3),MID(SS,16,3),MID(SS,19,3),MID(SS,22,3),P
4510  O9$=O2$+"    SHIELDS      ######"
4515  PRINT USING O9$,MID(SS,25,3),MID(SS,28,3),MID(SS,31,3),
          MID(SS,34,3),MID(SS,37,3),MID(SS,40,3),MID(SS,43,3),
          MID(SS,46,3),S
4520  PRINT USING O1$
4530  RETURN
4620  REM *** LIBRARY COMPUTER CODE BEGINS HERE
4630  IF D(8)>=0 THEN 4660
4640  PRINT "COMPUTER DISABLED":GOTO 1270
4660  INPUT "COMPUTER ACTIVE AND AWAITING COMMAND:"A
4680  IF A=0 GOTO 4740
4681  IF A=1 GOTO 4830
4682  IF A=2 GOTO 4880
4690  PRINT "FUNCTIONS AVAILABLE FROM COMPUTER"
4700  PRINT "   0 = CUMULATIVE GALACTIC RECORD"
4710  PRINT "   1 = STATUS REPORT"
4720  PRINT "   2 = PHOTON TORPEDO DATA"
4730  GOTO 4660
4731  REM *** CUMULATIVE GALACTIC RECORD CODE BEGINS HERE
4740  PRINT"COMPUTER RECORD OF GALAXY FOR QUADRANT "Q1","Q2
4760  PRINT"     1    2    3    4    5    6    7    8"
4770  PRINT"   ----- ----- ----- ----- ----- ----- ----- -----"
4780  FOR I=1TO8
4790  N1$="#   ###  ###  ###  ###  ###  ###  ###"
4795  PRINT USING N1$,I,Z(I,1),Z(I,2),Z(I,3),Z(I,4),Z(I,5),Z(I,6),
          Z(I,7),Z(I,8)
4800  PRINT"   ----- ----- ----- ----- ----- ----- ----- -----"
4810  NEXT I
4820  GOTO 1270
4821  REM *** STATUS REPORT CODE BEGINS HERE
4830  PRINT "   STATUS REPORT"
4840  PRINT "NUMBER OF KLINGONS LEFT ="K9
4850  V5=(T0+T9)-T
4851  PRINT "NUMBER OF STARDATES LEFT ="V5
4860  PRINT "NUMBER OF STARBASES LEFT ="B9
4870  GOTO 3560
4880  PRINT:H8=0
4881  REM *** PHOTON TORPEDO DATA CODE BEGINS HERE
4900  FOR I=1TO3
4910  IF K(I,3)<=0 THEN 5260
4920  C1=S1:A=S2:W1=K(I,1):X=K(I,2)
4960  GOTO 5010
4970  PRINT"YOU ARE AT QUADRANT ("Q1","Q2")   SECTOR ("S1","S2")"
4990  INPUT "SHIP AND TARGET COORDINATES ARE:"C1,A,W1,X
5010  X=X-A:A=C1-W1
5030  IF X<0 THEN 5130
5031  IF A<0 THEN 5190
5050  IF X>0 THEN 5070
5051  IF A=0 THEN 5150
5070  C1=1
5080  IF ABS(A) <= ABS(X) THEN 5110
5085  V5=C1+(((ABS(A)-ABS(X))/ABS(A)))
5090  PRINT "DIRECTION ="V5
5100  GOTO 5240
5110  PRINT "DIRECTION ="C1+(ABS(A)/ABS(X))
5120  GOTO 5240
5130  IF A>0 THEN 5170
5140  IF X>0 THEN 5190
5150  C1=5:GOTO 5080
5170  C1=3:GOTO5200
5190  C1=7
5200  IF ABS(A)>=ABS(X) THEN 5230
5210  PRINT "DIRECTION ="C1+(((ABS(X)-ABS(A))+ABS(X))/ABS(X))
5220  GOTO 5240
5230  PRINT "DIRECTION ="C1+(ABS(X)/ABS(A))
5240  PRINT "DISTANCE ="SQR(X**2+A**2)
5250  IF H8=1 THEN 5320
5260  NEXT I
5270  H8=0
5280  INPUT "DO YOU WANT TO USE THE CALCULATOR"A$
5300  IF A$="YES" THEN 4970
5310  IF A$<>"NO" THEN 5280
5320  GOTO 1270
5321  REM *** END OF LIBRARY COMPUTER CODE
5380  R1=INT(RND(1)*8+1):R2=INT(RND(1)*8+1):A$="   ":Z1=R1:Z2=R2
5430  GOSUB 5680
5440  IF Z3=0 THEN 5380
5450  RETURN
5510  REM *** INSERTION IN STRING ARRAY FOR QUADRANT ***
5520  S8=Z1*24+Z2*3-26:IF S8>72 THEN 5560
5540  QS=LEFT(QS,S8-1)+A$+RIGHT(QS,S8+3)
5550  GOTO 5600
5560  IF S8>144 THEN 5590
5570  RS=LEFT(RS,S8-73)+A$+RIGHT(RS,S8-69)
5580  GOTO 5600
5590  SS=LEFT(SS,S8-145)+A$+RIGHT(SS,S8-141)
5600  RETURN
5610  REM *** PRINTS DEVICE NAME FROM ARRAY***
5620  S8=R1*12-11:IF S8>72 THEN 5660
5640  PRINT MID(DS,S8,11):GOTO 5670
5660  PRINT MID(FS,S8-72,11)
5670  RETURN
```

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```
5680  REM ***STRING COMPARISON IN QUADRANT ARRAY***
5690  S8=Z1+24+Z2+3+26173=01IF S4>72 THEN 5750
5720  IF MID(O$,S8,3)<>A$ THEN 5810
5730  Z3=1:GOTO 5810
5750  IF S8>144 THEN 5790
5760  IF MID(R$,S8-72,3)<>A$ THEN 5810
5770  Z3=1:GOTO 5810
5790  IF MID(S$,S8-144,3)<>A$ THEN 5810
5800  Z3=1
5810  RETURN
5820  R"      INSTRUCTIONS"
5821  R:R"THE GALAXY IS DIVIDED INTO AN 8,8 QUADRANT GRID"
5822  R"WHICH IS IN TURN DIVIDED INTO AN 8.8 SECTOR GRID."
5823  R:R"THE CAST OF CHARACTERS IS AS FOLLOWS:"
5830  R"<*> = ENTERPRISE"
5840  R"+++ = KLINGON"
5850  R">!< = STARBASE":R " * = STAR"
5870  R"COMMAND 0 = WARP ENGINE CONTROL!"
5880  R"  COURSE IS IN A CIRCULAR NUMERICAL        4  3  2"
5890  R"  VECTOR ARRANGEMENT AS SHOWN.             \ ^ /"
5900  R"  INTEGER AND REAL VALUES MAY BE           \^/"
5910  R"  USED.  THEREFORE COURSE 1.5 IS      5  ----- 1"
5920  R"  HALF WAY BETWEEN 1 AND 2.               /^\"
5930  R"                                         / ^ \"
5940  R"  A VECTOR OF 9 IS UNDEFINED, BUT        6  7  8"
5950  R"  VALUES MAY APPROACH 9."
5960  R"                                          COURSE"
5970  R"  ONE WARP FACTOR IS THE SIZE OF"
5980  R"  ONE QUADRANT.  THEREFORE TO GET"
5990  R"  FROM QUADRANT 6,5 TO 5.5 YOU WOULD"
6000  R"  USE COURSE 3, WARP FACTOR 1"
6005  R.
6010  R"COMMAND 1 = SHORT RANGE SENSOR SCAN"
6020  R"  PRINT THE QUADRANT YOU ARE CURRENTLY IN.  INCLUDING"
6030  R"  STARS, KLINGONS, STARBASES, AND THE ENTERPRISE, ALONG"
6040  R"  WITH OTHER PERTINATE INFORMATION."
6045  R:R"COMMAND 2 = LONG RANGE SENSOR SCAN"
6060  R"  SHOWS CONDITIONS IN SPACE FOR ONE QUADRANT ON EACH SIDE"
6070  R"  OF THE ENTERPRISE IN THE MIDDLE OF THE SCAN. THE SCAN"
6080  R"  IS CODED IN THE FORM XXX, WHERE THE UNITS DIGIT IS THE "
6090  R"  NUMBER OF STARS. THE TENS DIGIT IS THE NUMBER OF STAR-"
6100  R"  BASES.  THE HUNDREDS DIGIT IS THE NUMBER OF KLINGONS."
6110  R:R"COMMAND 3 = PHASER CONTROL"
6120  R"  ALLOWS YOU TO DESTROY THE KLINGONS BY HITTING HIM WITH"
6130  R"  SUITABLY LARGE NUMBERS OF ENERGY UNITS TO DEPLETE HIS "
6140  R"  SHIELD POWER.  KEEP IN MIND THAT WHEN YOU SHOOT AT HIM,"
6150  R"  HE GONNA SHOOT AT YOU, TOO!"
6160  R:R"COMMAND 4 = PHOTON TORPEDO CONTROL"
6170  R"  COURSE IS THE SAME AS USED IN WARP ENGINE CONTROL"
6180  R"  IF YOU HIT THE KLINGON, HE IS DESTROYED AND CANNOT FIRE"
6190  R"  BACK AT YOU.  IF YOU MISS, YOU ARE SUBJECT TO HIS "
6200  R"  PHASER FIRE."
6210  R:R  NOTE:  THE LIBRARY COMPUTER (COMMAND 7) HAS AN OPTION"
6220  R"  TO COMPUTE TORPEDO TRAJECTORY FOR YOU (OPTION 2)."
6230  R:R"COMMAND 5 = SHIELD CONTROL"
6240  R"  DEFINES NUMBER OF ENERGY UNITS TO BE ASSIGNED TO SHIELDS"
6250  R"  ENERGY IS TAKEN FROM TOTAL SHIP'S ENERGY."
6251  R"  NOTE THAT TOTAL ENERGY INCLUDES SHIELD ENERGY."
6260  R:R"COMMAND 6 = DAMAGE CONTROL REPORT"
6270  R"  GIVES STATE OF REPAIRS OF ALL DEVICES.  A STATE OF REPAIR"
6280  R"  LESS THAN ZERO SHOWS THAT THE DEVICE IS TEMPORARALY"
6290  R"  DAMAGED."
6300  R:R"COMMAND 7 = LIBRARY COMPUTER"
6310  R"  THE LIBRARY COMPUTER CONTAINS THREE OPTIONS:"
6320  R"    OPTION 0 = CUMILATIVE GALACTIC RECORD"
6330  R"      WHICH SHOWS COMPUTER MEMORY OF THE RESULTS"
6340  R"      OF ALL PREVIOUS LONG RANGE SENSOR SCANS"
6350  R"    OPTION 1 = STATUS REPORT"
6360  R"      WHICH SHOWS NUMBER OF KLINGONS, STARDATES,"
6370  R"      AND STARBASES LEFT."
6380  R"    OPTION 2 = PHOTON TORPEDO DATA"
6390  R"      GIVES TRAJECTORY AND DISTANCE BETWEEN THE"
6400  R"      ENTERPRISE AND ALL KLINGONS IN YOUR QUADRANT"
6500  GOTO 230
6510  END
```

SAMPLE RUN

```
YOU MUST DESTROY 12  KLINGONS IN 30  STARDATES WITH  3  STARBASES
------------------------------------
                  <*>          STARDATE          2300
                  *            CONDITION          GREEN
                               QUADRANT           2,  3
                               SECTOR             2,  6
                               TOTAL ENERGY       3000
                               PHOTON TORPEDOES    10
------------------------------------  SHIELDS               0
COMMAND:? 2
LONG RANGE SENSOR SCAN FOR QUADRANT  2 , 3
-------------------
:  5 :  1 :  7 :
-------------------
:  8 :  1 :  2 :
-------------------
:  4 :  2 : 104 :
-------------------
COMMAND:? 0
COURSE (1-9):? 8
WARP FACTOR (0-8):? 1
COMBAT AREA      CONDITION RED
    SHIELDS DANGEROUSLY LOW
------------------------------------
            +++
                  <*>          STARDATE          2301
                               CONDITION          RED
                               QUADRANT           3,  4
         *     *       *       SECTOR             2,  6
                               TOTAL ENERGY       2997
                               PHOTON TORPEDOES    10
         *                     SHIELDS               0
------------------------------------
COMMAND:? 5
ENERGY AVAILABLE = 2997   NUMBER OF UNITS TO SHIELDS:? 300
COMMAND:? 7
COMPUTER ACTIVE AND AWAITING COMMAND:? 2
```

```
DIRECTION = 4
DISTANCE = 1.41421
DO YOU WANT TO USE THE CALCULATOR? NO
COMMAND:? 4
TORPEDO COURSE (1-9):? 4
TORPEDO TRACK:
            1 , 5
*** KLINGON DESTROYED ***

COMMAND:? 0
COURSE (1-9):? 7
WARP FACTOR (0-8):? 3
------------------------------------
      *
                <*>            STARDATE          2302
        *                      CONDITION          GREEN
                               QUADRANT           6,  4
                    *   *       SECTOR             2,  6
                               TOTAL ENERGY       2678
                               PHOTON TORPEDOES     9
        *                      SHIELDS             300
------------------------------------
COMMAND:? 0
COURSE (1-9):? 3
WARP FACTOR (0-8):? 1
------------------------------------
                <*>      *     STARDATE          2303
      *                        CONDITION          RED
            +++        *       QUADRANT           5,  4
                               SECTOR             2,  6
                  *            TOTAL ENERGY       2675
                  *            PHOTON TORPEDOES     9
------------------------------------  SHIELDS             300
COMMAND:? 7
COMPUTER ACTIVE AND AWAITING COMMAND:? 2

DIRECTION = 6
DISTANCE = 4.24264
DO YOU WANT TO USE THE CALCULATOR? NO
COMMAND:? 4
TORPEDO COURSE (1-9):? 6
TORPEDO TRACK:
            3 , 5
            4 , 4
            5 , 3
*** KLINGON DESTROYED ***

COMMAND:? 0
COURSE (1-9):? 7
WARP FACTOR (0-8):? 1
WARP ENGINES SHUTDOWN AT SECTOR  8 , 1.5  DUE TO BAD NAVAGATION
------------------------------------
                               STARDATE          2307
                               CONDITION          GREEN
                               QUADRANT           7,  6
                               SECTOR             7, 1.5
         <* >                  TOTAL ENERGY       2573
                               PHOTON TORPEDOES     4
         >!<        *   *       SHIELDS             200
------------------------------------
COMMAND:? 7
COMPUTER ACTIVE AND AWAITING COMMAND:? 0
COMPUTER RECORD OF GALAXY FOR QUADRANT  7 , 7
      1     2     3     4     5     6     7     8
   ----- ----- ----- ----- ----- ----- ----- -----
1    0     5     1     7     0     0     0     0
   ----- ----- ----- ----- ----- ----- ----- -----
2    0     8     1     2     0     0     0     0
   ----- ----- ----- ----- ----- ----- ----- -----
3    0     4     2   104     0     0     0     0
   ----- ----- ----- ----- ----- ----- ----- -----
4    0     1     5     5     0     0     0     0
   ----- ----- ----- ----- ----- ----- ----- -----
5    0     7     2     5     2     0     0     0
   ----- ----- ----- ----- ----- ----- ----- -----
6    0     7     8     5     2     8     2     0
   ----- ----- ----- ----- ----- ----- ----- -----
7    0     0     1    14     6    12     6     0
   ----- ----- ----- ----- ----- ----- ----- -----
8    0     0     0     2     5   102     8     0
   ----- ----- ----- ----- ----- ----- ----- -----
COMMAND:? 0
COURSE (1-9):? 3
WARP FACTOR (0-8):? 5
------------------------------------
                               STARDATE          2308
                               CONDITION          GREEN
                 >!<           QUADRANT           2,  6
                               SECTOR             7,  1
                        *      TOTAL ENERGY       2538
        <*>                    PHOTON TORPEDOES     4
          *                    SHIELDS             200
------------------------------------
COMMAND:? 2
LONG RANGE SENSOR SCAN FOR QUADRANT  2 , 6
-------------------
:  6 :  2 :  3 :
-------------------
:  7 : 12 :  3 :
-------------------
:  4 :  8 :  8 :
-------------------
COMMAND:? 7
COMPUTER ACTIVE AND AWAITING COMMAND:? 1
    STATUS REPORT
NUMBER OF KLINGONS LEFT = 6
NUMBER OF STARDATES LEFT = 22
NUMBER OF STARBASES LEFT = 3

DEVICE        STATE OF REPAIR
WARP ENGINE     0
S. R. SENSOR    0
L. R. SENSOR    2.73447
PHASER CNTR     0
PHOTON TUBE     0
DAMAGE CNTR     0
SHIELD CNTR     0
```

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