LOCN B1 B2 B3

```
*STOCKMARKET FOR THE 6800
*
*
* COPYRIGHT 1976 BY
*   TECHNICAL SYSTEMS CONSULTANTS
* BOX 2574  W. LAFAYETTE  IN  47906
*
*      STOCKMARKET IS A GAME FOR THE 6800 BASED ON
* THE POPULAR BOARD GAME OF THE SAME NAME.  THE
* PROGRAM SIMULATES STOCKMARKET ACTIVITY FOR FIVE
* COMPANIES.  YOU ARE GIVEN $500 AND YOUR TASK
* IS TO BUY AND SELL STOCKS IN AN EFFORT TO ACCUM-
* ULATE $5000 AT WHICH POINT YOU ARE DECLARED A
* FINANCIAL GENIUS.
*      THE COMPUTER ACTS AS YOUR STOCKBROKER BUT
* CHARGES YOU NO FEE FOR TRANSACTIONS.  THE COMMANDS
* TO YOUR STOCKBROKER ARE GIVEN BELOW.
*
*    COMMAND                  FUNCTION
*    BUY NN X            BUY NN SHARES OF STOCK X AT THE
*                        CURRENT MARKET PRICE
*    SELL NN X           SELL NN SHARES OF STOCK X AT THE
*                        CURRENT MARKET PRICE
*    REPORT              DISPLAY A MARKET REPORT GIVING THE
*                        CURRENT PRICE AND CHANGE FOR EACH
*                        STOCK
*    PORTFOLIO           DISPLAY A PORTFOLIO OF THE STOCKS
*                        PRESENTLY HELD, THE NUMBER OF
*                        SHARES OF EACH, AND THE PRICE WHEN
*                        LAST PURCHASED
*    MONEY               DISPLAY AMOUNT OF MONEY HELD
*    NO ACTION           DO NOTHING (EXCEPT LET MARKET CHANGE)
*    END                 ABANDON CURRENT GAME
*
*
*      IT IS SUFFICIENT TO TYPE THE FIRST LETTER OF EACH
* COMMAND.  WHEN USING THE BUY AND SELL COMMANDS THE
* COMPUTER WILL PRINT A SPACE AND WAIT FOR THE NUMBER
* OF SHARES.  THIS WILL BE A NUMBER BETWEEN 1 AND 99.
* IF MORE THAN ONE DIGIT IS ENTERED ONLY THE LAST TWO
* ARE MEANINGFUL.  TO INPUT THE STOCK (ABBREVIATED
* BY A THROUGH E) YOU MUST FIRST TYPE A SPACE TO SIGNAL
* THE END OF THE AMOUNT, THEN TYPE THE STOCK CODE.  TO
* ABORT A BUY OR SELL COMMAND TYPE AN ASTERISK (*) AT
* ANY POINT IN THE COMMAND.
*      THE MARKET CHANGE IS ALWAYS COMPUTED BEFORE A REPORT
* IS DISPLAYED AND DURING A NO ACTION COMMAND.  AFTER
* ALL REMAINING COMMANDS (EXCEPT END) THERE IS A
* CHANCE THAT THE MARKET MAY CHANGE ALSO.
*      OCCASIONALLY THERE WILL OCCUR A STOCKMARKET
* CRASH OR A BANKRUPTCY.  ONCE A COMPANY HAS GONE
* BANKRUPT IT MAY BECOME SOLVENT AGAIN AFTER SOME TIME
* HAS PASSED.  YOU ARE NOT ALLOWED TO BUY A
* BANKRUPT STOCK.
*      THIS PROGRAM REQUIRES THAT THE TSC RANDOM NUMBER
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LOCN B1 B2 B3
                      * GENERATOR BE LOADED IN THE SYSTEM AT ADDRESS A04A.
                      *      THE STARTING ADDRESS OF THIS PROGRAM IS 01C0.
                      *
                      *
                      *     STORAGE SPACE
                              ORG      $0020
0020          MONEY   RMB      2
0022          AS      RMB      3          STOCK A
0025          BS      RMB      3
0028          CS      RMB      3
002B          DS      RMB      3
002E          ES      RMB      3          STOCK E
0031          XTEMP   RMB      2
0033          XTEMP2  RMB      2
0035          ABRT    RMB      1
0036          NUM     RMB      1          QUANTITY OF STOCK
0037          BILL    RMB      2          NET PRICE
0039          STOCK   RMB      2          STOCK INFO.
003B          PRICE   RMB      1
003C          AP      RMB      2          A STOCK HOLDINGS
003E          BP      RMB      2
0040          CP      RMB      2
0042          DP      RMB      2
0044          EP      RMB      2          E STOCK HOLDINGS
              *
              *
                      ORG      $A048
A048 01 00            FDB      BEGIN
              *
              *
                      ORG      $0100
0100 20 15    BEGIN   BRA      START
0102 7E E1 D1 OUTEEE  JMP      $E1D1     MIKBUG ROUTINES USED
0105 7E E1 AC INEEE   JMP      $E1AC     (MIKBUG IS A
0108 7E E0 7E PDATA1  JMP      $E07E     MOTOROLA TRADEMARK)
010B 7E E0 67 OUTHL   JMP      $E067
010E 7E E0 6B OUTHR   JMP      $E06B
0111 7E E0 E3 CONTRL  JMP      $E0E3
              *
0114 7E A0 4A RANDOM  JMP      $A04A     EXTERNAL ROUTINE
              *
0117 8E A0 42 START   LDS      #$A042    SET UP STACK
011A CE 04 C0         LDX      #STOC
011D BD 01 08         JSR      PDATA1    PRINT HEADER
0120 CE 00 22         LDX      #AS
0123 BD 04 B7 INITPR  JSR      GETBCD    GENERATE A PRICE
0126 81 02            CMP A    #$2
0128 23 F9            BLS      INITPR    SET PRICE >=30
012A 81 06            CMP A    #$6
012C 22 F5            BHI      INITPR    SET PRICE <=69
012E 48              ASL A
012F 48              ASL A
0130 48              ASL A
0131 48              ASL A               MAKE MS DIGIT
0132 16              TAB                 SAVE
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LOCN B1 B2 B3
0133 BD 04 B7            JSR     GETBCD    GENERATE LS DIGIT
0136 1B                  ABA               MERGE
0137 A7 00               STA A   0,X       STORE INITIAL PRICE
0139 08                  INX               POINT NEXT BYTE
013A 6F 00               CLR     0,X       CLR THE CHANGE DIR.
013C 08                  INX
013D 6F 00               CLR     0,X       CLEAR THE CHANGE
013F 08                  INX               POINT TO NEXT STOCK
0140 8C 00 31            CPX     #ES+3     CHECK FOR DONE
0143 26 DE               BNE     INITPR    IF NOT,CONTINUE
0145 CE 00 3C  CLRSH     LDX     #AP       POINT TO PORTFOLIO
0148 6F 00     CLEAR     CLR     0,X       SET =0
014A 08                  INX
014B 8C 00 46            CPX     #EP+2     CHECK FOR DONE
014E 26 F8               BNE     CLEAR
0150 CE 00 20  INDONE    LDX     #MONEY    POINT TO MONEY
0153 6F 01               CLR     1,X
0155 86 05               LDA A   #05
0157 A7 00               STA A   0,X       SET FOR $500
0159 CE 04 D3            LDX     #YOU
015C BD 04 AF            JSR     PSTR      TELL HIM $500
               *
               * MAIN COMMAND LOOP
015F CE 05 13  COMLOP    LDX     #PROMPT
0162 BD 04 AF            JSR     PSTR      PRINT PROMPT
0165 BD 01 05            JSR     INEEE     GET COMMAND
0168 81 42               CMP A   #'B       CHECK FOR BUY
016A 27 46               BEQ     BUYCOM
016C 81 53               CMP A   #'S       CHECK FOR SELL
016E 27 1C               BEQ     SCOM
0170 81 50               CMP A   #'P       CHECK FOR PORTFOLIO
0172 27 1B               BEQ     PCOM
0174 81 4D               CMP A   #'M       CHECK FOR MONEY
0176 27 1A               BEQ     MCOM
0178 81 4E               CMP A   #'N       CHECK FOR NO ACTION
017A 27 19               BEQ     NCOM
017C 81 52               CMP A   #'R       CHECK FOR REPORT
017E 27 20               BEQ     RCOM
0180 81 45               CMP A   #'E       CHECK FOR END
0182 27 1F               BEQ     ECOM
0184 CE 05 15            LDX     #ERR
0187 BD 01 08            JSR     PDATA1    PRINT ERROR MESSAGE
018A 20 D3               BRA     COMLOP    TRY AGAIN
018C 7E 02 15  SCOM      JMP     SELCOM
018F 7E 02 68  PCOM      JMP     PORCOM
0192 7E 02 C0  MCOM      JMP     MONCOM
0195 CE 06 44  NCOM      LDX     #NSTR
0198 BD 01 08            JSR     PDATA1    FILL OUT COMMAND
019B BD 03 E0            JSR     CHANGE    COMPUTE FLUX
019E 20 BF               BRA     COMLOP    GET NEXT COMMAND
01A0 7E 02 EC  RCOM      JMP     REPCOM
01A3 CE 06 58  ECOM      LDX     #ND
01A6 BD 01 08            JSR     PDATA1    FILL OUT COMMAND
01A9 BD 04 A9            JSR     PCRLF
01AC CE 05 9A            LDX     #WANT
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LOCN B1 B2 B3
01AF 7E 02 4B                JMP      AGAIN    SEE IF PLAY AGAIN
                    *
01B2 CE 06 41       BUYCOM LDX        #BSTR
01B5 BD 01 08              JSR        PDATA1   FILL OUT COMMAND
01B8 BD 03 5B       NOC1   JSR        GETD     GET AMT AND STOCK
01BB 7D 00 35              TST        ABRT     CHECK FOR COMMAND ABORT
01BE 26 9F          COMREL BNE        COMLOP   IF SO, IGNORE
01C0 DE 39                 LDX        STOCK    POINT TO STOCK
01C2 96 3B                 LDA A      PRICE    GET COST
01C4 26 08                 BNE        OKTOBY   CHECK FOR BANKRUPT
01C6 CE 06 68              LDX        #NOBUY
01C9 BD 04 AF              JSR        PSTR     PRINT MESSAGE
01CC 20 45                 BRA        RELCOM   SKIP
01CE 96 36          OKTOBY LDA A      NUM      GETAMOUNT
01D0 AB 00                 ADD A      0,X      ADD IN
01D2 A6 00                 LDA A      0,X      GET AMOUNT PRESENTLY
01D4 9B 36                 ADD A      NUM      ADD IN AMOUNT BUYING
01D6 19                    DAA
01D7 24 08                 BCC        ROOM     CHECK FOR >99
01D9 CE 05 19              LDX        #NOSTOK
01DC BD 04 AF              JSR        PSTR     PRINT NO STOCK MESSAGE
01DF 20 32                 BRA        RELCOM   GO GET NEXT COMMAND
01E1 A7 00          ROOM   STA A      0,X      SAVE NEW AMOUNT
01E3 86 99                 LDA A      #$99
01E5 90 37                 SUB A      BILL
01E7 97 37                 STA A      BILL     SAVE 9'S COMP.
01E9 86 99                 LDA A      #$99
01EB 90 38                 SUB A      BILL+1
01ED 0D                    SEC                 TAKE 10'S COMP.
01EE 99 21                 ADC A      MONEY+1
01F0 19                    DAA
01F1 16                    TAB                 SAVE
01F2 96 37                 LDA A      BILL     GET MS BACK
01F4 99 20                 ADC A      MONEY
01F6 19                    DAA                 SUBTRACT BILL FROM MONEY
01F7 24 0A                 BCC        NOTENF   CHECK FOR ENUF MONEY
01F9 97 20                 STA A      MONEY
01FB D7 21                 STA B      MONEY+1  SET NEW MONEY
01FD 96 3B                 LDA A      PRICE    GET COST
01FF A7 01                 STA A      1,X      SAVE IT
0201 20 58                 BRA        CHKCHG   GO GET NEXT COMMAND
0203 86 99          NOTENF LDA A      #$99
0205 90 36                 SUB A      NUM
0207 0D                    SEC                 10'S COMP AMOUNT
0208 A9 00                 ADC A      0,X
020A 19                    DAA
020B A7 00                 STA A      0,X      FIX UP AMOUNT
020D CE 05 39              LDX        #NOMON
0210 BD 04 AF       PRTMES JSR        PSTR     PRINT MESSAGE
0213 20 46          RELCOM BRA        CHKCHG   GO GET COMMAND
                    *
0215 CE 06 4D       SELCOM LDX        #SSTR
0218 BD 01 08              JSR        PDATA1   FILL OUT COMMAND
021B BD 03 5B       NOC2   JSR        GETD     GET STOCK AND AMOUNT
021E 7D 00 35              TST        ABRT     CHECK FOR COMMAND ABORT
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LOCN B1 B2 B3
0221 26 9B                BNE     COMREL  IF SO, IGNORE
0223 86 99                LDA A   #$99
0225 90 36                SUB A   NUM
0227 DE 39                LDX     STOCK
0229 0D                   SEC
022A A9 00                ADC A   0,X
022C 19                   DAA             DEC HIS PORT.
022D 25 05                BCS     HAVENF  CHECK FOR ENUF
022F CE 05 51             LDX     #NOSTK
0232 20 DC                BRA     PRTMES  TELL NOT ENUF
0234 A7 00        HAVENF  STA A   0,X     UPDATE PORT.
0236 96 38        ADDMON  LDA A   BILL+1  GET LOW HALF BILL
0238 9B 21                ADD A   MONEY+1 ADD IN MONEY
023A 19                   DAA
023B 97 21                STA A   MONEY+1
023D 96 37                LDA A   BILL    GET HIGH HALF BIILL
023F 99 20                ADC A   MONEY   ADD IN
0241 19                   DAA
0242 97 20                STA A   MONEY   SAVE IT
0244 81 49                CMP A   #$49    CHECK FOR >$5000
0246 23 13                BLS     CHKCHG  IF NOT GET COMMAND
0248 CE 05 6B             LDX     #CONGRA
024B BD 04 AF    AGAIN    JSR     PSTR    PRINT CONGRATULATIONS, ETC.
024E BD 01 05             JSR     INEEE   SEE IF PLAY AGAIN
0251 81 4E                CMP A   #'N
0253 27 03                BEQ     NO      N MEANS NO
0255 7E 01 00             JMP     BEGIN   RECYCLE
0258 7E 01 11    NO       JMP     CONTRL  EXIT
                 *
025B BD 01 14    CHKCHG   JSR     RANDOM  GET RND NUMBER
025E 81 20                CMP A   #$20    CHECK FOR MKT. CHANGE
0260 22 03                BHI     NOTCHG
0262 BD 03 E0             JSR     CHANGE  COMPUTE CHANGE
0265 7E 01 5F    NOTCHG   JMP     COMLOP  GO GET NEXT COMMAND
                 *
0268 CE 05 AF    PORCOM   LDX     #PORTHD
026B BD 01 08             JSR     PDATA1  PRINT HEADING
026E 86 41       NOC3     LDA A   #'A     GET ASCII FOR 'A'
0270 97 36                STA A   NUM     SAVE
0272 CE 00 3C             LDX     #AP     POINT TO STOCK A
0275 DF 31       STORX    STX     XTEMP   SAVE PTR
0277 E6 00                LDA B   0,X     GET AMOUNT
0279 27 22                BEQ     PASS
027B BD 04 A9             JSR     PCRLF   PRINT CR AND LF
027E 08                   INX
027F BD 01 08             JSR     PDATA1  PRINT 2 SPACES
0282 96 36                LDA A   NUM     GET A STOCK
0284 BD 01 02             JSR     OUTEEE  PRINT CHAR
0287 CE 05 D8             LDX     #BLANKS
028A BD 01 08             JSR     PDATA1  PRINT SPACES
028D DE 31                LDX     XTEMP   GET POINTER
028F E6 00                LDA B   0,X     GET AMOUNT HELD
0291 8D 19                BSR     PRTBCD  PRINT IT
0293 E6 01                LDA B   1,X     GET PRICE
0295 CE 05 D8             LDX     #BLANKS
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LOCN B1 B2 B3
0298 BD 01 08              JSR     PDATA1   PRINT SPACES
029B 8D 0F                 BSR     PRTBCD   GO PRINT PRICE
029D DE 31       PASS      LDX     XTEMP    GET POINTER
029F 7C 00 36              INC     NUM      KICK STOCK COUNTER
02A2 08                    INX              POINT NEXT
02A3 08                    INX
02A4 8C 00 46              CPX     #EP+2    CHECK FOR DONE
02A7 26 CC                 BNE     STORX    DO AGAIN
02A9 7E 02 5B              JMP     CHKCHG
                     *
                     *
02AC 17          PRTBCD TBA               SAVE A COPY
02AD 85 F0                 BIT  A  #$F0     MASK
02AF 26 07                 BNE     PRTFIR   CHECK FOR FIRST PRINT
02B1 86 20                 LDA  A  #$20
02B3 BD 01 02              JSR     OUTEEE   PRINT A BLANK
02B6 20 03                 BRA     GETSEC
02B8 BD 01 0B    PRTFIR JSR        OUTHL    PRINT MS DIGIT
02BB 17          GETSEC TBA                GET BACK
02BC BD 01 0E              JSR     OUTHR    PRINT LS DIGIT
02BF 39                    RTS              DONE
                     *
02C0 CE 05 E2    MONCOM LDX        #YOUH
02C3 BD 01 08              JSR     PDATA1   PRINT STRING
02C6 5F          NOC4      CLR  B
02C7 96 20                 LDA  A  MONEY    GET MS MONEY
02C9 27 0D                 BEQ     OUT2     CHECK FOR 2 ZEROS
02CB 85 F0                 BIT  A  #$F0     MASK MS DIGIT
02CD 27 03                 BEQ     OUT1     CHECK FOR LEADING 0
02CF BD 01 0B              JSR  ·  OUTHL    PRINT MS DIGIT
02D2 96 20       OUT1      LDA  A  MONEY    GET MONEY BACK
02D4 BD 01 0E              JSR     OUTHR    PRINT LS DIGIT
02D7 5C                    INC  B           SET FLAG
02D8 96 21       OUT2      LDA  A  MONEY+1  GET LS MONEY
02DA 5D                    TST  B           CHECK FLAG
02DB 26 04                 BNE     NOZ
02DD 84 F0                 AND  A  #$F0     MASK MS DIGIT
02DF 27 03                 BEQ     OUT3     CHECK FOR 0
02E1 BD 01 0B    NOZ       JSR     OUTHL    PRINT MS DIGIT
02E4 96 21       OUT3      LDA  A  MONEY+1  GET MONEY BACK
02E6 BD 01 0E              JSR     OUTHR    PRINT LS DIGIT
02E9 7E 02 5B              JMP     CHKCHG   LOOP BACK
                     *
                     **
02EC CE 05 F7    REPCOM LDX        #RSTR
02EF BD 01 08              JSR     PDATA1   FILL OUT COMMAND
02F2 BD 03 E0              JSR     CHANGE   COMPUTE CHANGE
02F5 CE 05 FD              LDX     #REPHDG
02F8 BD 04 AF              JSR     PSTR     PRINT REPORT HEADING
02FB 86 41                 LDA  A  #'A      GET ASCII FOR 'A'
02FD 97 36                 STA  A  NUM      SAVE IT
02FF CE 00 22              LDX     #AS      POINT TO STOCK A
0302 DF 31                 STX     XTEMP    SAVE
0304 BD 04 A9    LOOP      JSR     PCRLF
0307 08                    INX
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LOCN B1 B2 B3
0308 BD 01 08              JSR      PDATA1   PRINT 2 SPACES
030B 96 36                 LDA A    NUM      GET STOCK NAME
030D BD 01 02              JSR      OUTEEE   PRINT IT
0310 7C 00 36              INC      NUM      ADVANCE TO NEXT
0313 CE 05 D8              LDX      #BLANKS
0316 BD 01 08              JSR      PDATA1   PRINT BLANKS
0319 DE 31                 LDX      XTEMP    GET POINTER BACK
031B E6 00                 LDA B    0,X      GET STOCK PRICE
031D 8D 8D                 BSR      PRTBCD   GO PRINT PRICE
031F CE 05 D8              LDX      #BLANKS
0322 BD 01 08              JSR      PDATA1   PRINT BLANKS
0325 DE 31                 LDX      XTEMP    RESTORE PTR
0327 A6 01                 LDA A    1,X      GET DIRECTION
0329 E6 02                 LDA B    2,X      GET AMOUNT
032B 08                    INX
032C 08                    INX
032D 08                    INX               ADVANCE PTR
032E DF 31                 STX      XTEMP    SAVE PTR
0330 5D                    TST B             CHECK FOR NO CHANGE
0331 27 20                 BEQ      NOCHG
0333 4D                    TST A             CHECK FOR UP
0334 27 05                 BEQ      INC
0336 CE 06 1B              LDX      #DOWN
0339 20 03                 BRA      PTM      GO PRINT DOWN
033B CE 06 1E  INC         LDX      #UP
033E BD 01 08  PTM         JSR      PDATA1   PRINT MESSAGE
0341 CE 05 DF              LDX      #TSP
0344 BD 01 08              JSR      PDATA1   PRINT BLANKS
0347 BD 02 AC              JSR      PRTBCD   GO PRINT CHANGE
034A 96 36     CONT4       LDA A    NUM      GET STOCK NAME
034C 81 46                 CMP A    #'F      CHECK FOR DONE
034E 26 B4                 BNE      LOOP
0350 7E 01 5F              JMP      COMLOP   RECYCLE
0353 CE 06 51  NOCHG       LDX      #NOCHAN
0356 BD 01 08              JSR      PDATA1   PRINT NO CHANGE
0359 20 EF                 BRA      CONT4    JUMP BACK
               *
               *
               *
035B 7F 00 35  GETD        CLR      ABRT
035E 86 20                 LDA A    #$20
0360 BD 01 02              JSR      OUTEEE   PRINT BLANK
0363 5F        IND         CLR B
0364 BD 01 05  IND1        JSR      INEEE    GET A CHAR
0367 81 2A                 CMP A    #'*      CHECK FOR ABORT
0369 27 71                 BEQ      ABORT
036B 80 30                 SUB A    #'0      CHECK FOR <0
036D 2B 04                 BMI      INER
036F 81 09                 CMP A    #9       CHECK FOR >9
0371 23 0C                 BLS      INOK
0373 81 F0     INER        CMP A    #' -'0   CHECK FOR SPACE
0375 27 10                 BEQ      TERM     GOT TERMINATOR
0377 CE 05 15              LDX      #ERR
037A BD 01 08              JSR      PDATA1   PRINT ERR MESG.
037D 20 E4                 BRA      IND      GET AGAIN
037F 58        INOK        ASL B
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LOCN B1 B2 B3
0380 58                 ASL  B
0381 58                 ASL  B
0382 58                 ASL  B
0383 1B                 ABA              MERGE DIGITS
0384 16                 TAB              SAVE
0385 20 DD              BRA     IND1     GET NEXT
0387 D7 36      TERM    STA  B  NUM      SAVE NUMBER
0389 BD 01 05   INST    JSR     INEEE    GET STOCK
038C 81 2A              CMP  A  #'*      CHECK FOR ABORT
038E 27 4C              BEQ     ABORT
0390 80 40              SUB  A  #'A-1    STRIP ASCII
0392 23 04              BLS     STERR    CHECK FOR ERROR
0394 81 05              CMP  A  #5
0396 23 08              BLS     STOK     CHECK FOR OK
0398 CE 05 15   STERR   LDX     #ERR
039B BD 01 08           JSR     PDATA1   PRINT ERROR MSG.
039E 20 E9              BRA     INST
03A0 97 37      STOK    STA  A  BILL     SAVE
03A2 CE 00 3C           LDX     #AP      POINT TO STOCK
03A5 4A         DCRA    DEC  A
03A6 27 04              BEQ     GOTSTK   CHECK FOR PTR
03A8 08                 INX
03A9 08                 INX              ADVANCE PTR
03AA 20 F9              BRA     DCRA     DO AGAIN
03AC DF 39      GOTSTK  STX     STOCK    STORE STOCK PTR
03AE 96 37              LDA  A  BILL     GET STOCK AGAIN
03B0 CE 00 22           LDX     #AS      POINT TO STOCK
03B3 4A         DCRA2   DEC  A           COUNT OFF STOCK
03B4 27 05              BEQ     GOTPR
03B6 08                 INX
03B7 08                 INX
03B8 08                 INX              ADVANCE PTR TO NEXT
03B9 20 F8              BRA     DCRA2
03BB 4F         GOTPR   CLR  A           CLEAR STORE
03BC 97 37              STA  A  BILL
03BE 97 38              STA  A  BILL+1   CLR BILL
03C0 D6 36              LDA  B  NUM      GET NUMBER
03C2 27 18              BEQ     ABORT    IF =0 SIMULATE ABORT
03C4 A6 00      ALOOP   LDA  A  0,X      GET CURRENT PRICE
03C6 97 3B              STA  A  PRICE    SAVE COST
03C8 9B 38              ADD  A  BILL+1   ADD IN
03CA 19                 DAA
03CB 97 38              STA  A  BILL+1   SAVE
03CD 96 37              LDA  A  BILL     GET MS BILL
03CF 89 00              ADC  A  #00      CARRY ADJUST
03D1 19                 DAA
03D2 97 37              STA  A  BILL     SAVE
03D4 17                 TBA              GET NUMBER
03D5 8B 99              ADD  A  #$99
03D7 19                 DAA
03D8 16                 TAB              DECREMENT COUNTER
03D9 26 E9              BNE     ALOOP    DO AGAIN
03DB 39                 RTS              DONE
03DC 73 00 35   ABORT   COM     ABRT     SET ABORT FLAG
03DF 39                 RTS
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LOCN B1 B2 B3
                        *
                        *
03E0 BD 01 14  CHANGE JSR     RANDOM   GET NUMBER
03E3 81 FC            CMP A   #$FC
03E5 22 63            BHI     CRASH    CHECK FOR CRASH
03E7 CE 00 22  CONT1  LDX     #AS      POINT TO STOCK A
03EA 6D 00     BLOOP  TST     0,X      CHECK FOR BANKRUPT
03EC 26 13            BNE     CONT3
03EE 6D 02            TST     2,X      CHECK FOR NO CHANGE
03F0 26 0B            BNE     SETZER
03F2 BD 01 14         JSR     RANDOM   GET RANDOM
03F5 81 FB            CMP A   #$FB     SEE IF SOLVENT AGAIN
03F7 23 48            BLS     PTNXT    IF NOT,SKIP
03F9 6C 00            INC     0,X      SET PRICE = 1
03FB 20 44            BRA     PTNXT
03FD 6F 02     SETZER CLR     2,X      CLEAR THE CHANGE
03FF 20 40            BRA     PTNXT
0401 A6 01     CONT3  LDA A   1,X      GET LAST DIRECTION
0403 26 09            BNE     HIDN     ODDS ARE DOWN
0405 BD 01 14         JSR     RANDOM   GET CHANGE
0408 81 A0            CMP A   #$A0     COMPUTE CHANGE
040A 22 26            BHI     ITSDN    DECREASED?
040C 20 20            BRA     ITSUP    INCREASED
040E BD 01 14  HIDN   JSR     RANDOM
0411 81 FD            CMP A   #$FD     CHECK FOR BANKRUPT
0413 23 12            BLS     CONT2    IF NOT, CONTINUE
0415 DF 31            STX     XTEMP    SAVE X
0417 CE 06 5B         LDX     #BKRPT
041A BD 04 AF         JSR     PSTR     TELL BANKRUPT
041D DE 31            LDX     XTEMP    RESTORE X
041F A6 00            LDA A   0,X      GET OLD PRICE
0421 6F 00            CLR     0,X      SET NEW PRICE =0
0423 A7 02            STA A   2,X      SET CHANGE = OLD PRICE
0425 20 1A            BRA     PTNXT
0427 BD 01 14  CONT2  JSR     RANDOM
042A 81 A0            CMP A   #$A0     CHECK DIRECTION
042C 23 04            BLS     ITSDN    DECREASED?
042E 6F 01     ITSUP  CLR     1,X      SHOW INCREASE
0430 20 04            BRA     GETCHG   GO GET GHANGE
0432 6F 01     ITSDN  CLR     1,X
0434 63 01            COM     1,X      SHOW DECREASE
0436 BD 01 14  GETCHG JSR     RANDOM   GET CHANGE AMT.
0439 8B 00            ADD A   #0       SET CC BITS
043B 19              DAA              MAKE BCD
043C 84 0F            AND A   #$0F     MASK
043E BD 04 73         JSR     FIX      GO FIX REPORT
0441 08        PTNXT  INX
0442 08               INX
0443 08               INX
0444 8C 00 31         CPX     #ES+3    CHECK FOR ALL DONE
0447 26 A1            BNE     BLOOP
0449 39              RTS
044A CE 06 2A  CRASH  LDX     #CRSH
044D BD 04 AF         JSR     PSTR     PRINT CRASH MESSAGE
0450 CE 00 22         LDX     #AS      POINT TO STOCK A
```

```
          LOCN B1 B2 B3
          0453 BD 01 14          JSR      RANDOM   GET CHANGE
          0456 84 OF             AND A    #$0F
          0458 8B 10             ADD A    #$10
          045A 19                DAA               SET FOR 10 TO 25
          045B 97 36             STA A    NUM      SAVE AMT.
          045D 86 FF     CRLOOP  LDA A    #$FF
          045F A7 01             STA A    1,X
          0461 A6 00             LDA A    0,X      GET PRICE
          0463 27 05             BEQ      PTNXT1   IF ZERO, SKIP
          0465 96 36             LDA A    NUM      GET NUMBER
          0467 BD 04 73          JSR      FIX      GO FIX REPORT
          046A 08        PTNXT1  INX
          046B 08                INX
          046C 08                INX               POINT TO NEXT STOCK
          046D 8C 00 31          CPX      #ES+3
          0470 26 EB             BNE      CRLOOP   CHECK FOR DONE
          0472 39                RTS
                            *
                            *
          0473 16        FIX     TAB               SAVE AMOUNT
          0474 6D 01             TST      1,X      CHECK DIRECTION
          0476 26 15             BNE      GODOWN
          0478 AB 00             ADD A    0,X      ADD ON CHANGE
          047A 19                DAA               ADJUST
          047B 25 05             BCS      NOTOK    CHECK FOR OVFL
          047D A7 00             STA A    0,X
          047F E7 02             STA B    2,X      SAVE CHG. AND DIR.
          0481 39        NOFIX   RTS               DONE
          0482 86 99     NOTOK   LDA A    #$99
          0484 A0 00             SUB A    0,X      GET MAX CHG.
          0486 A7 02             STA A    2,X      SAVE
          0488 86 99             LDA A    #$99
          048A A7 00             STA A    0,X      SET PRICE MAX.
          048C 39                RTS               DONE
          048D 86 99     GODOWN  LDA A    #$99
          048F 10                SBA
          0490 0D                SEC               10'S COMP
          0491 A9 00             ADC A    0,X      COMPUTE NEW PRICE
          0493 19                DAA               ADJUST
          0494 27 07             BEQ      NOGO     CHECK FOR EQUAL
          0496 24 05             BCC      NOGO     CHECK FOR UNDERFLOW
          0498 E7 02             STA B    2,X
          049A A7 00             STA A    0,X      STORE PRICE AND CHG.
          049C 39                RTS               DONE
          049D A6 00     NOGO    LDA A    0,X      GET OLD PRICE
          049F 6F 00             CLR      0,X
          04A1 6C 00             INC      0,X      SET NEW PRICE=1
          04A3 8B 99             ADD A    #$99
          04A5 19                DAA               GET CHANGE
          04A6 A7 02             STA A    2,X      SET CHANGE
          04A8 39                RTS               DONE
                            *
                            *
          04A9 CE 06 21  PCRLF   LDX      #CRLF
          04AC 7E 01 08  PRT     JMP      PDATA1
```

```
       LOCN B1 B2 B3
                          *
                          *
       04AF DF 33     PSTR   STX      XTEMP2   SAVE POINTER
       04B1 8D F6            BSR      PCRLF    GO PRINT CR AND LF
       04B3 DE 33            LDX      XTEMP2   GET POINTER BACK
       04B5 20 F5            BRA      PRT      GO PRINT
                          *
                          *
       04B7 BD 01 14  GETBCD JSR      RANDOM   GET NUMBER
       04BA 8B 00            ADD A    #0
       04BC 19              DAA               FORCE BCD
       04BD 84 0F           AND A    #$0F     MASK
       04BF 39             RTS
                          *
                          *
                          ** STRINGS
       04C0 0D        STOC   FCB      $D,$A,$A,0,0,0,0
       04C7 53               FCC      ;STOCKMARKET;
       04D2 04               FCB      4
       04D3 59        YOU    FCC      ;YOU HAVE $500 AND I'M YOUR;
       04ED 0D               FCB      $D,$A,0,0,0,0
       04F3 53               FCC      ;STOCKBROKER. ENTER YOUR COMMAND;
       0512 04               FCB      4
       0513 3E        PROMPT FCB      '>,4
       0515 07        ERR    FCB      7,$3F,$20,4
       0519 53        NOSTOK FCC      ;SORRY, THAT STOCK NOT AVAILABLE;
       0538 04               FCB      4
       0539 59        NOMON  FCC      ;YOU'VE NOT ENOUGH MONEY;
       0550 04               FCB      4
       0551 59        NOSTK  FCC      ;YOU DON'T HAVE THAT MUCH!;
       056A 04               FCB      4
       056B 43        CONGRA FCC      ;CONGRATULATIONS! YOU'VE MADE A ;
       058A 0D               FCB      $D,$A,0,0,0,0
       0590 46               FCC      ;FORTUNE.  ;
       059A 57        WANT   FCC      ;WANT TO PLAY AGAIN ?;
       05AE 04               FCB      4
       05AF 4F        PORTHD FCC      ;ORTFOLIO;
       05B7 0D               FCB      $D,$A,0,0,0,0
       05BD 53               FCC      ;STOCK      SHARES      COST;
       05D7 04               FCB      4
       05D8 20        BLANKS FCC      ;          ;
       05DF 20        TSP    FCC      ;  ;
       05E1 04               FCB      4
       05E2 4F        YOUH   FCC      ;ONEY;
       05E6 0D               FCB      $D,$A,0,0,0,0
       05EC 59               FCC      ;YOU HAVE $;
       05F6 04               FCB      4
       05F7 45        RSTR   FCC      ;EPORT;
       05FC 04               FCB      4
       05FD 53        REPHDG FCC      ;STOCK      PRICE       CHANGE;
       061A 04               FCB      4
       061B 44        DOWN   FCC      ;DN;
       061D 04               FCB      4
       061E 55        UP     FCC      ;UP;
       0620 04               FCB      4
```

```
LOCN B1 B2 B3
0621 0D          CRLF    FCB     $D,$A,0,0,0,4
0627 20                  FCB     $20,$20,4
062A 07          CRSH    FCB     7
062B 53                  FCC     ;STOCKMARKET CRASH!!!!;
0640 04                  FCB     4
0641 55          BSTR    FCC     ;UY;
0643 04                  FCB     4
0644 4F          NSTR    FCC     ;O ACTION;
064C 04                  FCB     4
064D 45          SSTR    FCC     ;ELL;
0650 04                  FCB     4
0651 4E          NOCHAN  FCC     ;NO CHG;
0657 04                  FCB     4
0658 4E          ND      FCC     ;ND;
065A 04                  FCB     4
065B 07          BKRPT   FCB     7
065C 42                  FCC     ;BANKRUPTCY!;
0667 04                  FCB     4
0668 43          NOBUY   FCC     ;CAN'T BUY BANKRUPT STOCK;
0680 04                  FCB     4
                         END
```

SYMBOL TABLE:

ABORT	03DC	ABRT	0035	ADDMON	0236	AGAIN	024B	ALOOP	03C4
AP	003C	AS	0022	BEGIN	0100	BILL	0037	BKRPT	065B
BLANKS	05D8	BLOOP	03EA	BP	003E	BS	0025	BSTR	0641
BUYCOM	01B2	CHANGE	03E0	CHKCHG	025B	CLEAR	0148	CLRSH	0145
COMLOP	015F	COMREL	01BE	CONGRA	056B	CONTRL	0111	CONT1	03E7
CONT2	0427	CONT3	0401	CONT4	034A	CP	0040	CRASH	044A
CRLF	0621	CRLOOP	045D	CRSH	062A	CS	0028	DCRA	03A5
DCRA2	03B3	DOWN	061B	DP	0042	DS	002B	ECOM	01A3
EP	0044	ERR	0515	ES	002E	FIX	0473	GETBCD	04B7
GETCHG	0436	GETD	035B	GETSEC	02BB	GODOWN	048D	GOTPR	03BB
GOTSTK	03AC	HAVENF	0234	HIDN	040E	INC	033B	IND	0363
INDONE	0150	IND1	0364	INEEE	0105	INER	0373	INITPR	0123
INOK	037F	INST	0389	ITSDN	0432	ITSUP	042E	LOOP	0304
MCOM	0192	MONCOM	02C0	MONEY	0020	NCOM	0195	ND	0658
NO	0258	NOBUY	0668	NOCHAN	0651	NOCHG	0353	NOC1	01B8
NOC2	021B	NOC3	026E	NOC4	02C6	NOFIX	0481	NOGO	049D
NOMON	0539	NOSTK	0551	NOSTOK	0519	NOTCHG	0265	NOTENF	0203
NOTOK	0482	NOZ	02E1	NSTR	0644	NUM	0036	OKTOBY	01CE
OUTEEE	0102	OUTHL	010B	OUTHR	010E	OUT1	02D2	OUT2	02D8
OUT3	02E4	PASS	029D	PCOM	018F	PCRLF	04A9	PDATA1	0108
PORCOM	0268	PORTHD	05AF	PRICE	003B	PROMPT	0513	PRT	04AC
PRTBCD	02AC	PRTFIR	02B8	PRTMES	0210	PSTR	04AF	PTM	033E
PTNXT	0441	PTNXT1	046A	RANDOM	0114	RCOM	01A0	RELCOM	0213
REPCOM	02EC	REPHDG	05FD	ROOM	01E1	RSTR	05F7	SCOM	018C
SELCOM	0215	SETZER	03FD	SSTR	064D	START	0117	STERR	0398
STOC	04C0	STOCK	0039	STOK	03A0	STORX	0275	TERM	0387
TSP	05DF	UP	061E	WANT	059A	XTEMP	0031	XTEMP2	0033
YOU	04D3	YOUH	05E2						

```
S105A048010011
S1130100201S7EE1D17EE1AC7EE07E7EE0677EE07C
S11301106B7EE0E37EA04A8EA042CE04C0BD0108FF
S1130120CE0022BD04B7810223F9810622F5484896
S1130130484816BD04B71BA700086F00086F0008E5
S11301408C003126DECE003C6F00088C004626F879
S1130150CE00206F018605A700CE04D3BD04AFCE28
S11301600513BD04AFBD0105814227468153271CF9
S113017081502718814D271A814E2719815227203D
S11301808145271FCE0515BD010820D37E02157EAB
S113019002687E02C0CE0644BD0108BD03E020BF54
S11301A07E02ECCE0658BD0108BD04A9CE059A7E98
S11301B0024BCE0641BD0108BD035B7D00035269F81
S11301C0DE39963B2608CE0668BD04AF2045963638
S11301D0AB00A6009B36192408CE0519BD04AF2038
S11301E032A700869990379737869990380D9921D0
S11301F019169637992019240A9720D721963BA7D8
S113020001205886999036DA90019A700CE05390A
S1130210BD04AF2046CE064DBD0108BD035B7D0085
S113022035269B86999036DE390DA900192505CE11
S11302300055120DCA70096389B2199721963799D0
S1130240201997208149231 3CE056BBD04AFBD014E
S113025005814E27037E01007E0111BD0114812013A
S11302602203BD03E07E015FCE05AFBD01088641D8
S11302709736CE003CDF31E6002722BD04A9908BD35
S113028001089636BD0102CE05D8BD0108DE31E66F
S113029000 8D19E601CE05D8BD01088D0FDE317C35
S11302A0003608088C004626CC7E025B1785F026B3
S11302B0078620BD01022003BD010B17BD010E39C5
S11302C0CE05E2BD01085F9620270D85F02703BD0A
S11302D0010B9620BD010E5C96215D260484F02757
S11302E003BD010B9621BD010E7E025BCE05F7BD59
S11302F00108BD03E0CE05FDBD04AF86419736CEAF
S1130300C022DF31BD04A9908BD01089636BD0102F3
S11303107C0036CE05D8BD0108DE31E6008D8DCED9
S113032005D8BD0108DE31A601E602080808DF3160
S11303305D27204D2705CE061B2003CE061EBD01DA
S113034008CE05DFBD0108BD02AC9636814626B451
S11303507E015FCE0651BD010820EF7F0035862067
S1130360BD01025FBD0105812A277180302B048104
S113037009230C81F02710CE0515BD010820E4588F
S11303805858581B1620DDD736BD0105812A274C45
S1130390804023048105230 8CE0515BD010820E90A
S11303A09737CE003C4A2704080820F9DF399637EE
S11303B0CE00224A270508080820F84F97379738B7
S11303C0D6362718A600973B9B38199738963789S5
S11303D000199737178B99191626E9397300353 9F
S11303E0BD011481FC2263CE00226D0026136D0230
S11303F0260BBD011481FB23486C0020446F0220AE
S113040040A6012609BD011481A022262C20BD0199
S11304101481FD2312DF31CE065BBD04AFDE31A6AD
S113042000 06F00A702201ABD011481A023046F01EC
S113043020046F01630 1BD01148B0019840FBD04F6
S1130440730808088C003126A139CE062ABD04AFF2
S1130450CE0022BD0114840F8B1019973686FFA796
S113046001A600270596 36BD04730808088C0031E0
S113047026EB39166D012615AB00192505A700E7F3
S113048002398699A000A7028699A70039869910 97
S11304900DA90019270724 05E702A70039A6006F54
S11304A0006C008B9919A70239CE06217E0108DF62
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S11304B0338DF6DE3320F5BD01148B0019840F  1A
S11304C00D0A0A000000053544F434B4D41524B58
S11304D0455404594F5520484156452024353030 61
S11304E020414E4420492744204D20594F55520D0A00B2
S11304F000000005 3544F434B42524F4B45522E2061
S1130500454E44452059 4F5552204F4F4D4D416D
S113051004E44043E04073F2004534F5252592C20AA
S113052054484154205354 4F434B204E4F542041 80
S11305305641494C41424C4504594F55275645209 4
S11305404E4F5420454E4F5547482 04D4F4E455928
S113055004594F5520444F4E2754204841564520B6
S11305605448415420 4D554348210443 4F4E47526B
S1130570415455 4C41544 94F4E53212059 4F55270E
S113058056452 04D414444204120 0D0A00000000FD
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S11305A04F20504C41592041474 1494E20 3F044F70
S11305B052544 64F4C494F0D0A 0000000053544F0B
S11305C0434B20202020202053484152455320202 0D3
S11305D0202020 434F535404202020202020 2 0207A
S11305E020044F4E455590D0A00000000594F552074
S11305F0484 1564520240 4550504F5254 0453544F07
S1130600434B20202020202 0505249434520202 0C5
S11306102020202043484 14E474504444E04 55071
S1130620040D0A0000000042 0200407 53544F434BD8
S11306304D41524B4554204352 415348212121 21DD
S1130640045559044F204 1435449 4F4E04454C4CE2
S1130650044E4F2043484704 4E4404074 2414E4B46
S11306605255505443592104434 1 4E2754204255 76
S1130670592042414E4B525550 5420535 44F434BF2
S10406800471
S9030000FC
```

LOCN B1 B2 B3

```
                            *        RANDOM NUMBER ROUTINE
                            *
                            *        TSC   BOX 2574   W.LAFAYETTE   IND.  47906
                            *
                            * THIS ROUTINE WHEN CALLED WILL PRODUCE A RANDOM
                            * NUMBER IN LOCATION 'RNDM' THROUGH 'RNDM+3'.
                            * A SEQUENCE OF 2 TO THE 31ST MINUS 1 RANDOM
                            * NUMBERS RESULT BEFORE THE SEQUENCE REPEATS.
                            * 8 BIT BYTES ARE RETURNED IN THE A ACCUMULATOR.
                            * INITIALIZATION CAN BE DONE BY EITHER NONZERO
                            * SEEDING OR RELYING ON POWER-UP GARBAGE IN
                            * MEMORY. THE ILLEGAL STATE IS ALL ZEROES.


                              ORG     $A04A
A04A F7 A0 70   RANDOM        STA B   BSAVE     SAVE THE B ACCUMULATOR
A04D C6 08                    LDA B   #8        SET COUNTER
A04F B6 A0 74   RPT           LDA A   RNDM+3    GET M.S.BYTE OF RANDOM NO.
A052 48                       ASL A             SHIFT IT LEFT THREE
A053 48                       ASL A             TIMES TO GET BIT 28
A054 48                       ASL A             IN LINE WITH BIT 31
A055 B8 A0 74                 EOR A   RNDM+3    XOR A WITH RANDOM NO.
A058 48                       ASL A             PUT BIT 28.XOR.31 IN
A059 48                       ASL A             CARRY BY SHIFTING LEFT
A05A 79 A0 71                 ROL     RNDM      ROTATE ALL FOUR BYTES OF
A05D 79 A0 72                 ROL     RNDM+1    THE RANDOM NO., ROTATING
A060 79 A0 73                 ROL     RNDM+2    THE CARRY INTO THE LSB
A063 79 A0 74                 ROL     RNDM+3    THE MSB IS LOST
A066 5A                       DEC B             DECREMENT THE COUNTER
A067 26 E6                    BNE     RPT       IF ITS NOT 0, GO REPEAT
A069 F6 A0 70                 LDA B   BSAVE     RESTORE THE B ACCUMULATOR
A06C B6 A0 71                 LDA A   RNDM      PUT RANDOM # IN A
A06F 39                       RTS               RETURN TO CALLING PROGRAM


                  * TEMP STORAGE AREA


A070            BSAVE   RMB     1
A071            RNDM    RMB     4
                        END
```

SYMBOL TABLE:

BSAVE   A070   RANDOM A04A   RNDM   A071   RPT   A04F

S113A04AF7A070C608B6A074484848B8A07448482F
S113A05A79A07179A07279A07379A0745A26E6F668
S109A06AA070B6A07139DC
S9030000FC