Apple Software Bank





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CHECKBOOK I PRELIMINARY

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Introduction

This program provides the user with a convenient, error free method of keeping track of all aspects of his checking account. The user may enter data either from keyboard or magnetic tape, save data onto magnetic tape, make changes to the data, name the file, sort, search, calculate the balance at anytime, or reconcile to a bank statement. Instructions are provided to assist the user while the program is being run.

System Requirements

1. Apple II - 16K Bytes RAM 4. Misc. Cables minimum 2. TV Display (Color or B/W)

5. RF Modulator if TV display does not have a direct video input jack.

3. Cassette recorder

Program Limitations

- 1. Totals may not exceed + 32750.99 Dollars.
- 2. Check amounts may not exceed <u>+</u> 32750.99 Dollars.
- The SORT routines consider only the first two letters when sorting on the 'TO:' field or the 'CODE' field.

OPERATING INSTRUCTIONS

Getting Started

Turn on the Apple and make sure your recorder and TV display are properly connected. Hit the 'RESET' key. You should see a random display and an asterisk '*' with a flashing cursor in the lower left hand corner of the screen (See Figure 1). Hold down the 'CTRL' (control)



Figure 1 Power on

key and the 'B' key at the same time. Then hit the 'RETURN' key. You should now see a right hand arrow '>' and the flashing cursor in the lower left hand corner (See Figure 2). Type LOAD, place the 'CHECKBOOK' program cassette in the recorder, check the volume and tone control settings (volume: 4-5, tone: max treble) and press the play button. Now hit the 'RETURN' Key. Wait for a beep from Apple's speaker. While the program is loading, the cursor will disappear (CHECKBOOK takes approximately 1 min. to LOAD). After a second beep the basic prompt, '>', and cursor will re-appear in the lower left hand corner. Now type 'RUN' and hit the 'RETURN' key.



Figure 2 "Basic" Prompt and Load

If at any time you accidentally exit from the program, you will see either the '>' sign or the ásterisk along with the flashing cursor. If this occurs, you may return to the menu as follows:

- From the '>' sign type RUN and then hit the RETURN key.
- From the asterisk '*', hold down the 'CTRL' key and hit the 'C' key at the same time. Then hit the 'RETURN' key. The '>' sign and flashing cursor will appear. Then type 'RUN' and then hit the 'RETURN' key.

The computer will now display a menu of operations to select from. (See Figure 3)



Entering Data from the Keyboard

To enter data, type a '1' and hit the 'RETURN' key. Apple will then ask if you want to enter data from the keyboard (K) or from tape (T). (See Figure 4)



assigned check numbers. If you do, enter the starting number, if not enter a 'O' and then hit 'RETURN'. From this point forward, it will be understood that 'RETURN' is hit after each keyboard entry. During data entry, a '?' and the flashing cursor will appear under the column headers CHK#, MO, DA, YR, TO:, AMOUNT, or CODE. (See Figure 5) Hit return after each entry to advance



Figure 5 Column Headers

the cursor to the next column. Do not enter slashes (/). Use the space bar to move to the next column. The computer will automatically reject data which is obviously wrong, such as a month entry greater than 12 or a day entry of 32. You may exit the data entry routine simply by entering a '-1' in the CHK# or MO columns. The CODE column may be used to indicate taxable purchases, home expenses, food, entertainment expenses, charity, etc. etc. The user may define his own codes to suit his individual needs. The CODE field is four characters wide - each character may be a letter or a number. The TO: field should be used to indicate who the check was written to. Any alpha-numeric sequence up to 12 characters will be accepted. Entering Deposits, Credits, Service Charges & Misc. other records: To enter a deposit, or other type of credit to your account, simply enter a '#' sign as the first character of the TO: field. (See Figure 6) The other 11 characters may be used to describe the type of credit (i.e. # DEPOSIT, #BANK ERROR, etc).

сни в	10×0ម×	H ^{PP}	Ŧ		СНЕСКВ	ANGUNT	CODE
1234		77 77	HŘPL ≠DEP	E Ösi		1299 00	OES.

Figure 6 Entering Deposits

If you're using the automatic check number feature, a # sign in the first position of the TO: field will assign the same check number to the next check as it did for the deposit. Service charges and other debits should be entered with check #9999 assigned. For this purpose use the keyboard data entry routine and enter a 'O' when asked if you want automatically assigned check numbers.

Entering Data from Tape

Place the data cassette in the recorder. Starting from the Menu, type a '1'. The computer will then ask if you want to enter data from keyboard or tape. (See Fig. 7)



Figure 7 Entering Data From Tape

Type a 'T'. The computer will then ask if you want to Replace (erase) the data currently in the memory or Append (add) to it. Type 'R' or 'A'. Start the recorder and then hit the 'RETURN' key. The computer will print out the name of the file and the first and last check numbers.

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(See Fig. 8) When the data has completed loading into memory, the selection menu will return to the screen.

THE KEYBOARD TO ENTER DATH FROM REPLACE CURRENT DATA OR APPEND TO IT START PLAYING TAPE. THEN HIT 'RETURN RENDING IN FILE 'HOR 5, 77 CHECKS' FROM CHECK #3877 'HOR CHECK #3999

Figure 8 File Name Display

Listing Data

From the menu, type'4'. The computer will ask which check number you would like to begin listing from. Enter a 0 to start from the lowest check.number or enter the desired beginning number. The computer will continue listing to the end of the file, the end of the page, or until the space bar is pressed. To continue listing after the end of a page, hit the 'RETURN' key. To return to the menu hit the 'R' key and then the 'RETURN' key.

HK + 100000000000000000000000000000000000	H 10000 COLERA H 10000 H 100000 H 10000 H 100000 H 100000 H 100000 H 100000 H 100000 H 10000 H 10000
THERE HRE HORE CHECKS IN HEM	ORVA NOU
HAKE CHANGES, 'L'LIST F	RM NEU CHK#
R RTH TO HENU, OR 'RTN' CO	NT LISTING

5

Figure 9 Listing Data

Changing Data

First list data from a check number prior to the check number requiring the change. When the data you want to change is displayed on the screen and the listing has stopped (either by hitting the space bar or by coming to the end of the page), hit the 'M' key. The computer will ask if you want to 1.) change the data or 2.) delete records. (See Figure 10) Type a '1.' Use the

	77 CHECKS TO TFLO MOIO CUPT TENNIS 5 C ANDAS 5 CCANLEY NS CHOR ASIN HOLEST NS CHOR ASIN HOLEST HOB HILL CROCKER HOB HILL CONTER FOSTER STEIN 2 TRKNOOD	ная
Durman Nou	1 CHANGE HBO 2 DELETE BY	JE DHTH Check #
.+11+ 1 1		

Figure 10 Changing Data

control characters to position the cursor at the beginning of the data field you want to change. Press the 'CTRL' key & the desired letter key simultaneously. (See Figure 11)

- A^{C} = Advance cursor one field
- B^{C} = Back space cursor one field
- UC = Move cursor up one record
- D^{C} = Move cursor down one record
- E^C = Exit to menu.

When the cursor is positioned at the desired field, hit the space bar. A '?' will appear to accept the new data. Enter the new data and hit 'RETURN'. Move the cursor and make all desired changes to the currently displayed page. Type 'CTRL' and 'E' at the same time to exit to the menu when finished.

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Figure 11 Moving the Cursor

Deleting Records

Use the above procedure for changing data until you're asked: 1) Make changes or 2) Delete records. (See Figure 12) Type a '2'. The computer will ask for a



Figure 12 Deleting Records

starting check #. Enter the check number you want deleted. The computer will then ask for the ending check #. If you want to delete a range of checks, enter the last check #. If you want to delete only one check, enter that # for both starting and ending. When the record(s) have been deleted, the menu will return to the screen.

Balancing

From the menu, type a '2'. Enter the desired beginning balance when asked. (See Figure 13) Enter the desired



Figure 13 Balance Routine Entry

beginning check # when asked. The computer will then calculate the remaining balance for all checks ir the data base. (See Figure 14)



Figure 14 Balanced Checks

Reconciling to the Bank Statement

Type '3' from the menu. Enter a '0' for starting check #. (To insure all out checks are picked up from previous month - more on this later.) Enter the beginning balance from your bank statement. (See Figure 15)



9

Figure 15 Entering the Reconcile Routine

The computer will then list the first check in the data base up to the point of calculating the new balance. Check your stack of cancelled checks and the bank statement to see if each check has been correctly processed and returned. If so, hit the 'RETURN' key, if not, hit the 'ESC' key. The computer will then automatically record the check as reconciled or un-reconciled. (See Figure 16) When the last check

HK = 110 DH / HA HK = 110 DH / HA HK = 110 GH / T HK = 110 GH / T HK = 11 / T	P 5. 77 CHECK TO ELSTFLD CUPT TE S M KAD J CRAHL HS CANDO DE HNZA HOLST NS CATU REGLIN REGLIN CROCKER NOB HILL	S ANOUNT BHLANCE 7 3 30 580 30 567 30 437 239 100 200 437 239 62 00 225 239 100 200 225 337 100 200 225 337 100 200 225 337 100 258 440 41 372 58 440 41
DH STHTEMENTS	IF CHECK/DEP HIT ESC KE	OSIT IS LISTED

Figure 16 Reconciling

in the data base has been listed, the computer will print out the total of out checks plus deposits not accounted for on the bank statement, and the current balance in your account. The last balance in the list of reconciled records should match the ending balance shown in the bank statement. (See Figure 17 & 18) If it doesn't there are only three sources for error:

- 1. One of the checks or deposits has been missentered, or
- There are service charges or credits which haven't been entered into the data base.
- 3. The bank goofed.

10



Figure 17 Reconciled Listing



Figure 18 Reconciled Listing - Last Page

In case 1, use the list and change routine to make the appropriate corrections. For case 2, use the data entry from keyboard routine to add in whatever changes are missing. Then re-run the reconcile routine. If changes are made to any record, whether it was previously reconciled or not, the computer will automatically flag it as un-reconciled. The second time the reconcile routine is run, all previously reconciled records (except those that have been changed) will list through. (i.e. you won't have to bother hitting the 'RETURN' key). The data base should be corrected until the last balance during reconcile matches the bank statement.

For case 3, you know what to do.

Sorting

Occasionally it may be desirable to sort the records into a different order or to sort an added check into its proper sequence. A SORT routine has been included for this purpose. To sort, type a '5' from the menu. The computer will list the fields that can be sorted on. Enter the desired number. (See Figure 19) Note: when sorting on either the TO: or CODE fields, only the first two letters are considered.



Figure 19 Sorting

The sort routines require a short time to run. The word SORTING will be printed on the screen each time the computer makes a pass through the data base. One pass is required for each record (i.e. 20 records, 20 passes). <u>Do not interrupt the program during a SORT as your data base may be lost</u>. When SORT is completed, the menu will be returned to the screen.

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Search and Total

To use the search routine, type a '6' from the menu. The computer will ask which field you want to search through. Answer by number. Then it will ask what specific item you want to search for in the chosen field; type it in, and hit 'RETURN'. (See Figure 20)



Figure 20 Search

The computer will then search through the entire data base and list all records which have the specified item in the chosen field, and total up the amount. If there are none, the computer will print 'THATS ALL OF THEM' without listing any records. (See Figure 21)

CHF 4 106	10 DH 78 2/24 77 1 4/77	TÓ NÓB HILL GENCO	нио 21 17	INT SIGE
	11/77 14/77 14/77	NOB HILL PENINSULH NOB HILL RACE STRE	IOR 44 ET 56	
1 62	3/24/77 3/30/77 4/2/77	NOB HILL GEMCO ALPHA BEI	23 13 H 40	05 F000 28 F000 20 F000
Тннт	S HLL OF	THEM	HL ZZI	
HIT	RETURN	TO GET BHC	K TO THE	1ENU

Figure 21 Search Completed

Saving Data to Tape & Naming the File

Type '8' from the menu. The computer will first ask if you want to name your file. Answer Y or N (yes or no). If you answer Yes, the computer will ask you to type in the desired file name. Do so. The name can be up to 40 characters long. (See Figure 22) Hit 'RETURN' after typing the name & the computer will tell you to start the recorder & then hit RETURN. Make sure you have a blank cassette in the recorder, and start recording. Wait for 2 beeps from the speaker and the menu to return to the screen. The data is then saved on tape.

HPPLE COMPUTER INCCHECKBOOK PROGRAM
ENTER DATA BALANCE TECONCILE TO BANK STATEMENT LIST AND/OR CHANGE DATA SORT SORT SORT DELETE RECONCILED RECORDS SAUE DATA TO TAPE SAUE DATA TO TAPE SAUE DATA TO TAPE SAUE DATA TO TAPE
UHICH 28 D0 YOU WANT TO NAME THIS FILE (YYND 27
DF TYPE IT INAPR 5, 1977 CHECKS BTHRT RECORDING, THEN HIT RETURN∎ /

Figure 22 Saving Data to tape & Naming the File

Checking File Length

Occasionally you may want to know how much room you have left for more data records. Type '9' from the menu to find out.

Delete Reconciled Records

Before reconciling the current month but after loading in the previous month's records from tape, you will want to delete the reconciled records from memory (i.e. keep the 'out' checks an un-accounted for deposits) this will be accomplished simply by typing a '7' from the menu.

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Some users may want to make a cassette of "out checks only" to be used in the following months reconciliation to the bank statement.

This feature eliminates the need for double entering checks which were written one month and don't get included in the bank statement until several months later.

Typical Usage

End o	of 1st Month
-	Reconcile
	Save Data to tape
Durin	ng 2nd Month
I	End of 1st week
Í	Enter new checks from keyboard
E	Balance & record in check register
9	Save new checks - 'WEEK 1'
E	End of 2nd week
E	Enter 2nd week's checks
E	Balance and record in register
5	Save new checks - 'WEEK 2'
E	End of 3rd Week
E	Enter 3rd week's checks
E	Balance and record
9	Save New Checks - 'WEEK 3'
End d	of 2nd Month
E	Enter previous month's checks from tape
[Delete reconciled records
E	Enter (Append) 1st, 2nd, 3rd weeks'
	Checks from tape
E	Enter 4th week's checks from keyboard
E	Balance from beginning of 4th week's checks and record
	in check register
F	Reconcile
While	e paying monthly bills -
2	Search to see if certain bills have already been paid.
9	Search & Total on various codes to see expenses by
	category.
While	e preparing Income Taxes

<u>Search & Total</u> all taxable expenses. Calculate tax and deduct.

<u>Search & Total</u> all charitable expenses & deduct.

What To Do If

- All of a sudden the asterisk and flashing cursor appear.
 - Hit C^C, RETURN, then type RUN
- You get a SYNTAX ERR message, a beep, and the cursor moves down the screen along with a question mark. Re-enter the data you were trying to enter and hit 'PLIUPR'.

NOTE: Remember, hit 'RETURN' after each data entry. No slashes (/) or spaces are required.

- 3. All of a sudden you get the right hand arrow & the flashing cursor
 - (>). type RUN, then hit 'RETURN'.

Handy Hints

- 1. Don't use lower case L in place of a 1.
- 2. Don't use the letter 0 in place of a zero (\emptyset)
- 3. Do hit 'RETURN' after each entry.
- Y or N may be used instead on YES and NO to answer questions.
- 5. To use control characters push the 'CTRL' key and the desired key at the same time. You may hold down the 'CTRL' key while typing A,B,U,D to move the cursor around during the change data routine.

CHECKBOOK I Data Base Management System

One of the most useful applications of the computer is for the management of large bases of data, whether this data is a list of customers and addresses, a cross reference of cars versus owners, or a list of checks you write in a month. Apple II can manage data bases up to 65,535 bytes in length. (One byte can hold one character, two bytes can hold an integer, 4 bytes can hold a floating point number). The following section describes some useful subroutines, all of which were used in CHECKBOOK, Apple Computer's checkbook handling program.

First, it is essential to understand the method by which BASIC allocates memory. When BASIC is entered with a control-B (B^C) low memory bounds are set at \$0800, or 2048 decimal. High memory bounds are set to the end of continuous memory.

When a program is loaded into BASIC, whether it be via cassette tape or keyboard entry, it is stored starting at high memory working down. When a program is RUN by BASIC, all variables are stored from low memory, working up.

In order to use the following subroutines, low memory must be set at the normal value of 2048 decimal. The first statement of any program using these routines must be the following:

O A=O: DIM C\$ (ddd), R(dd), D(dd): Ø A=Ø: DIM C\$ (ddd), R(dd), D(dd): GOTO 1000

Where 'd' represents a digit from Ø thru 9

The reason for the above statement as the very first statement of your program is that the subroutines assume that A and C\$ are the first variables in the variable table. By assuming this, values for A and C\$ can be POKE'd directly into memory since the memory location for both of these variables is known. Arrays R,C, and any other variables that need to be dimensioned may now be dimensioned.

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The following subroutines may be used via a BASIC "GOSUB" statement. Following is a list of the subroutines included in the Data Base Management Subroutine Package (Lines 1-105 from CHECKBOOK) and how to use them. A thorough explanation of how the subroutines work is not included.

The following variables are dedicated pointers and should be used only as such:

LM Low memory pointer. Note that this is the low memory pointer for data storage, and cannot be the same value as the low memory pointer for BASIC

HM High memory pointer. Note that this is the last available memory location to save data into, and must be set to something below the beginning of the user program, which is stored from the end of continuous memory down. (See "Setting HM")

CM Current memory pointer. CM always points at the last used memory location.

Subroutines for Data Management

The following list of subroutines is preceded by the line number at which the subroutine begins. To reference that subroutine, you should set all entry variables as described for each subroutine, then use a GOSUB statement to execute that subroutine.

Line # PURPOSE

2

To write the array D of size S from CM+1 to CM+S+S. If an attempt is made to write data past HM, the subroutine will transfer control to line 20000, where the user error handling routine should be located. CM is updated to point at the end of used memory.

To read the array R of size S out of memory from P to P+S+S-1. P is unchanged.

18

Line # PURPOSE

3

6

7 8

- To write the array D of size S into memory from P to P+S+S-1. P is changed to P+S+S-1. CM is undisturbed.
- 4 To convert string C\$, of its current length into array D from D(B) to D (B+LEN(C\$)/2-1.
- 5 To convert back from array D to C\$. Elements D(B) to D(B+SL/2-1) are converted to C\$. SL is the expected string length.
 - Print the header.
 - Print C right justified at column E.

To set cassette pointers for reading or writing a small portion of the symbol table. For CHECKBOOK, this includes A, C\$, Array D (), and N\$. These variables should hold all header information desired.

- 9 To set cassette pointers to read or write data from LM to CM.
- 10 Print I and F as a floating point number, with E as the column for decimal point to be in. If I is negative, the number is printed in inverse mode.
- 11 12 Subroutine to print CHK #, Month, Day, Year, and 'TO:' field for checkbook.
- 13 Prints a modified header.
- 14 Input a floating point number and put the integer portion into I and the fractional portion into F. This routine is written mainly for inputing a dollar and cents amount, and allows F to be no greater than 99. If a minus sign (-) preceeds the number, both I and F will be negative.

The user should note that the variables A,B,C,E,J,Q, and SL are used as scratch variables in the above routines and should not be used in user programs, except also as scratch variables where no interference with the above routines may occur.

Setting HM

A useful trick for setting the variable HM is based upon the following principle: By taking the start of the program itself, and setting HM according to that, the largest possible amount of space is allocated. To set HM, the user should have the following statement in his program.

Line# POKE 2052, PEEK (202): POKE 2053, PEEK (203): HM=A: IF A <Ø THEN HM=32767

Note that HM will never be set higher than 32767, since that is the largest positive value BASIC can hold.

CHECKBOOK PROGRAM LISTING

LINE #	ROUTINE
Ø-1Ø99	SUBROUTINES
11ØØ	SELECTION MENU
12ØØ	KEYBOARD INPUT ROUTINE
1300	TAPE INPUT ROUTINE
14ØØ	BALANCE
16ØØ	RECONCILE
1800	LIST
2000	SORT
22ØØ	SEARCH
24ØØ	CHANGE DATA
26ØØ	TAPE OUTPUT
28ØØ	FILE LENGTH
3000	QUIT
34ØØ	DELETE BY CHK #'s
36ØØ	DELETE RECONCILED CHKS

20

LIST

- 0 A=0: DIM C\$(12),D(13),N\$(40),RA(13),R(13),L≸(40): GOTO 1000
- 0 POKE 204,252: POKE 205,8: GOTO 1100
- 1 IF CM+S+S>HM THEN 20000: FOR J=0 TO S:A=D(J): POKE CM+J+ J-0, PEEK (2052): POKE CM+J+ J, PEEK (2053): NEXT J:CM=CM+ S+S: RETURN
- 2 FOR J=0 TO S: POKE 2052, PEEK (P+J+J-2): POKE 2053, PEEK (P+J+J-0):R(J)=A: NEXT J: RETURN
- 3 BCM=CM:CM=P-O: GÓSUB 0:CM=BCM: RETURN
- 4 FOR Q=B TO B+ LEN(C\$)/2-0: POKE 2052, ASC(C\$(Q-B+Q-B+O)): POKE 2053, ASC(C≸(Q-B+Q-B+2));D(@)=A: NEXT Q: RETURN
 5 FOR Q=B TO B+SL/2-0:A=R(Q):
- POKE 2059+Q-B+Q-B, PEEK (2052): POKE 2060+Q-B+Q-B, PEEK (2053): NEXT Q: POKE 2059+Q-B+Q-B,O: RETURN 6 CALL -936: TAB (20- LEN(N\$)
- /2): PRINT N\$: PRINT "CHK# M0/DA /YR TO:";: TAB 30: PRINT "AMOUNT
- CODE";:L=3: RETURN 7 TAB E: IF C<0 THEN CALL -1008 : FOR A=0 TO 4: IF ABS (C>>= 10 ^ A THEN CALL -1008: NEXT A: PRINT C;: RETURN
- 8 POKE 60,Z: POKE 61,8: POKE 62,102: POKE 63,8: RETURN 9 POKE 60,LM MOD 256: POKE 61
- ,LM/256: POKE 62,CM MOD 256
- : POKE 63,CM/256: RETURN
 10 IF I<Z THEN POKE 50,127:C= ABS
 (I): GOSUB 7: PRINT ".";: IF
 ABS (F)<10 THEN PRINT Z;: PRINT ABS (F);: POKE 50,255:SG=0: RETURN
- 11 P=P+S+S:E=4:C=R(0): TAB 0: CALL -868: G0SUB 7:E=7:C=R(2)/256 : GOSUB E: PRINT "/";:A=R(2 > MOD 256: IF A<10 THEN PRINT " ";: PRINT A;"/";

- 12 I= ABS (R(3) MOD 256): IF I< 10 THEN PRINT " ";: PRINT I; " ";:B=4:SL=T: GOSUB 5: PRINT C\$;:E=T1:I=R(10):F=R(11): GOTO 10
- 13 GOSUB 6: VTAB 2: TAB (27): PRINT
- "AMOUNT BALAN&E";: RETURN 14 I=2:F=Z: INPUT "?",L\$: IF NOT LEN(L\$) THEN 14: IF L\$(0,0) #"-" THEN 15: IF LEN(L\$)=0 THEN 14:L\$=L\$(2, LEN(L\$)):SG=-0
- 15 FOR J=O TO LEN(L\$):A= ASC(L\$ (J))-176: IF A<Z OR A>9 OR I>3275 THEN 16:I=I*10+A*SG: NEXT J: RETURN
- 16 IF A#-2 THEN 14: IF LEN(L\$) =J THEN RETURN : FOR K=J+0 TO LEN(L\$):A= ASC(L\$(K))-176: IF A<Z OR 6>9 THEN 14:F=F*10+A* SG: NEXT K
- 17 IF J+0= LEN(L\$) THEN F=F*10 : IF F>99 THEN 14: RETURN
- 18 INPUT "?",L\$:A= LEN(L\$): IF A>=S THEN A=12: IF NOT A THEN 18:C\$=L\$(0.8)
- 19 IF LEN(C\$)<12 THEN C\$(LEN(C\$)+1)=" ": IF LEN(C\$)<12 THEN 19:B=4⊌ GOSUB B:SG=O: IF C≸
- (0,0)="#" THEN SG=-O: RETURN 20 INPUT "?",C\$: IF LEN(C\$)>4 THEN C\$=C\$(0,4)
- 21 IF LEN(C\$)<4 THEN C\$(LEN(C\$)+0)=" ": IF LEN(C\$)<4 THEN
- 21:B=12: GOTO 4 22 PRINT "";: CALL -958: RETURN 23 IF PEEK (-16384)<128 THEN RETURN
- : POKE -16368,0: POP :L=L+0: GOTO 1842
- 24 IF PEEK (-16384)<128 THEN RETURN : POKE -16368,0: POP :L=L+0: GATO 0
- 30 VTAB 22: TAB 0: PRINT "HIT SPACE BAR TO STOP LISTING": VTAB L: RETURN
- 40 RETURN

RETURN

- 100 FOR C=0 TO S:RA(C)=R(C): NEXT C:I=P: RETURN
- 101 C=R(O)<RA(O): RETURN 102 C= ABS (R(3))< ABS (RA(3)): IF ABS (R(3))# ABS (RA(3)) THEN RETURN :C=R(2)(RA(2):

22

103 A=R(4):J= PEEK (2052):A=RA(4):C=J< PEEK (2052): IF PEEK (2052)#J THEN RETURN :J= PEEK (2053):A=R(4):C= PEEK (2053 ≻J: RETURN

- 104 C=R(10)<RA(10): IF R(10)=RA(10) THEN C=R(11)(RA(11): RETURN
- 105 A=R(12):J= PEEK (2052):A=RA(12):C=J< PEEK (2052): IF PEEK (2052)#J THEN RETURN :J= PEEK (2053):A=R(12):C= PEEK (2053)<J: RETHRN
- 1000 0=1:Z=A:S=13:LM=3000:CM=LM-0: POKE 2052, PEEK (202): POKE 2053, PEEK (203):HM=A: IF A< Z THEN HM=32767
- 1010 POKE Z,134: POKE 0,255: POKE 2,32: POKE 4,254: POKE 5,166 : POKE 6,255: POKE 7,96 1040 DEL 0
- 1050 POKE 8,32: POKE 9,12: POKE 10,253: POKE 11,133: POKE 12 ,255: POKE 13,96
- 1100 TEXT : CALL -936: PRINT : PRINT "APPLE COMPUTER INC----CHECKBOO K PROGRAM": PRINT : PRINT " 1. ENTER DATA": PRINT " 2. BALANCE
- 1105 PRINT " 3. RECONCILE TO BANK ST ATEMENT": PRINT " 4. LIST AND/O R CHANGE DATA"
- 1107 PRINT " 5. SORT" 1108 PRINT " 6. SEARCH": PRINT
- " 7. DELETE RECONCILED RECORDS"
- 1110 PRINT " 8. SAVE DATA TO TAPE" : PRINT " 9. CHECK FILE LENGTH" : PRINT "10. QUIT"
- 1111 PRINT
- 1160 INPUT "
- WHICH ",Q 1170 IF Q<O OR Q>10 THEN 1100 1180 GOSUB Q*200+1000: GOTO 1100
- 1200 CALL -936: PRINT "ARE YOU GOING TO ENTER DATA FROM": INPUT "THE KEYBOARD 'K' OR TAPE 'T' ?" ,C≸
- 1210 IF C\$="T" THEN 1300: IF C\$# "K" THEN RETURN

	24		25
12/3	, dopop +		Z
1275	-938: FRIMI (00₽) 5 60508 4	1600	P=LM:T=8:T1=29:H=0:BALI=Z:BALF=
1274	GOSUB 20: VIAB L: THE 36: CHLL		RETURN : GOTO 1410
	10 		RALANCING" IS IF IS="P" THEN
	-958:D(10)=I:D(11)=F:E=32: 60508	1448	N TO THE MENNI 'PTN' TOCONTINUE
1268	GOSUB 14: VTAB L: THE 27: CHLL	1449	PRINT , INDUT "TYPE 'P' TO DETHD
1261	IF 52 THEN 51=51-1	1430	
	1,1)#"#" THEN 1262	1429	IF H THEN KETURN
	-958: PRINT " ";C\$;: IF C\$(1400	U:BHLF=(BHLF-100) MUD 100
1260	GOSUB 18: VTAB L: TAB 14: CALL		U: IF BHLF>2 (HEN BHL1=BHL1+
1,255	GOSUB 22: GOTO 1250	1428	IF BHLFK-99 (HEN BHEI=BHLI-
	1260	1400	1007 MUD 100: 5010 1429
	:E=13: GOSUB 7:D(3)=C: GOTO		YY THEN BHLI=BHLI+0:BALF=(BALF+
	-958: IF C <z c="" or="">99 THEN 1255</z>		Z THEN BALT-BALT-O: IF BALF>
1250	INPUT C: VTAB L: TAB 12: CALL	1427	IF BALIKZ THEN 1428: IF BALFK
1245	GOSUB 22: GOTO 1240		11)
	D(2)=D(2)+C: GOTO 1250	1425	BHL1=BHLI-R(10):BALF=BALF-R(
	:E=10: GOSUB 7: PRINT "/";:	1422	GUSUB 11
	-958: IF C <o c="" or="">31 THEN 1245</o>		1690: GOSUB 2
1240	INPUT C: VTAB L: TAB 9: CALL	1420	FOR L=3 TO 19: IF P>=CM THEN
1235	GOSUB 22: GOTO 1230	1415	GOSUB 30: VTRB L+O
	1240		10
	E: PRINT "/";:D(2)=C*256: GOTO		";:E=37:I=BALI:F=BALF: GOSUB
	C=Z OR C>12 THEN 1235:E=7: GOSUB	1411	PRINT "STARTING BALANCE
	-958: IF C <z 1100:="" if<="" td="" then=""><td>1410</td><td>GOSUB 13</td></z>	1410	GOSUB 13
1230	INPUT C: VTAB L: TAB 5: CALL		:P=P-S-S
	1220		:P=P+S+S: IF R(0) <c 1402<="" td="" then=""></c>
1225	PRINT "CHECK # TOO HIGH": GOTO	1402	GOSUB 2: IF P>=CM THEN 1690
	1230		F
	1225:D(0)=C:E=4: GOSUB 7: GOTO		E";:SG=0: GOSUB 14:BALI=I:BALF=
	C <z 1100:="" c="" if="" then="">9999 THEN</z>		,C: PRINT "ENTER STARTING BALANC
1221	C=S1: VTAB L: CALL -958: IF	1401	INPUT "ENTER STARTING CHECK #"
1220	IF NOT S2 THEN INPUT S1	1400	P=LM:T=8:T1=29:HqZ
1218	GOSUB 6		3):RBF=D(4): RETURN
	DY",L≸		Z:BALI=D(0):BALF=D(2):RBI=D(
1216	INPUT "HIT 'RETURN' KEY WHEN REA		HECK #";D(6): GOSUB 9: CALL
	AGE ?"	1360	PRINT "FROM CHECK #";D(5);" TO C
1215	PRINT "READY TO GO TO THE NEXT P		; ^{****}
	: PRINT : GOTO 1216	1351	PRINT "READING IN FILE '";N\$
	R MO TO RETURN TO THE MENU."		:CM=B
1014	ING DATA, ENTERA '-1' FOR CHK# 0		B>HM OR A <z 20000<="" gosub="" td="" then=""></z>
1214	PRINT "WHEN YOU'RE THROUGH ENTER		ETURN'",L≸: CALL Z:B=LM+A: IF
	: PRINT		"START PLAYING TAPE, THEN HIT 'R
	CHARACTER OF THE 'TO:' FIELD"	1350	GOSUB 8: POKE 3,253: INPUT
1613	T. TYPE A '#' SIGN FOR THE FIRST		LM=BCM: RETURN
1212	PRINT : PRINT "TO ENTER A DEPOSI	1310	BCM=LM:LM=CM+0: GOSUB 1350:
	1212: IF 51>Z THEN 52=0		"A" THEN RETURN
1515	INFOL TO ENTER THEN TOORSEET, E	1305	IF L\$="R" THEN 1350: IF \$#
	RIING #, IF YOU WHNI":SC=4 YUDUT WTO FWTED TUEM YOUDSFUE F	1366	PPEND TO IT (P/A) 2" !*
	ASSIGNED CHECK#'S ENTER THE STH	1000	IZEN-D*(L/ZE/
1211	PRINT "IF YOU WANT AUTOMATICALLY	1277	L=L+U:S1=S1+U: GOSUB 0: GOTO

v

1601	INPUT "ENTER STHRTING CHECK #"	
	, C: FRINT "ENTER BEGINNING BHEHN OF EDAM DANK STATE_MENT"SG-	
	OF FROM DONN STRIETHER: J:SU-	
1609	6. 60500 14.KBI-1.KBF-1 60518 2. TE C\=CM THEN 1690	
1002	•P=P+S+S+ IF R(0)(C THEN 1602	
	•P=P-S-S	
1610	605UB 13	
1611	PRINT "STARTING BALANCE	
1011	"::F=37:I=RBI:F=RBF: GOSU8	
	10	
1615	VTAB 20: TAB O: PRINT "HIT 'RTN'	
	KEY IF CHECK/DEPOSIT IS LISTEDO	
	N STATEMENT, HIT 'ESC' KEY IF NO	
	T.": VTAB L+0	
1620	FOR L=3 TO 16: IF P>=CM THEN	
	1631: GOSUB 2	
1625	GOSUB 11:Q=R(3) <z: if="" q="" th="" then<=""><th></th></z:>	
	1627	
1626	H= PEEK (-16384): IF H<128 THEN	
	1626: PUKE -16368,2: iF H=155	
1207	HEN 1640	
1627	KD1=KD1-K(10):KBF=KBF-K(11)	
1628	IF RBI <z 1629:="" if="" rbf<<="" th="" then=""><th></th></z>	
	Z THEN RBI=RBI-O: IF RBF>99	
	THEN RBI=RBI+0:RBF=(RBF+100	
) MOD 100: GOTO 1630	
1629	IF RBF<-99 THEN RBI=RBI-0; IF	
	RBF>Z THEN RBI=RBI-0:RBF=(RBF-	
	100) MOD 100	
1630	A=- ABS (R(3)): POKE P-21, PEEK	
	(2053): PUKE P-22, PEEK (2052	
):1=RB1:F=RBF:E=37: GUBUB 10	
1701	10=1631: 00506 24: MEAL L	
1631	PRINT "SHM OF DEPOSITS NOT OREDI	
1036	TED ON STATE- MENT (+) & CHECKS	
	STILL OUT (-)";:I=BALI:F=BALF:	
	E=37: GOSUB 10	
1634	R(10)=-RBI:R(11)=-RBF: GOSUB	
	1425:I=BALI:F=BALF:R(10)=RBI:	
	R(11)=RBF: GOSUB 1425	
1636	PRINT "BOOK BALANCE AT CHK #"	
	;R(1);" IS";:E=37: GOSUB	
	10: CALL -958: IF P>=CM THEN	
	1690	
1638	PRINT : PRINT "TYPE 'R' TO RETUR	
	N TO THE MENU, 'RTN' TOCONTINUE	
	RECONCILING";: CALL -958: INPUT	
1.000	L\$ 15 1 +- "D" TUEN DETUDN - COTO	
1639	IF L¥="K" IHEN REIURN : GUIU	
	26	
	20	

1640 PRINT " ----";: GOSUB 1425 : NEXT L: GOTO 1632 1690 PRINT : CALL -958: INPUT "THAT'S ALL THE CHECKS IN MEMORY....HIT 'RETURN' KEY TO GET BACK TO TH E MENU..",L\$:H=Z: RETURN 1800 INPUT "ENTER THE CHECK NUMBER YO U WOULD LIKE THE LIST TO START WITH",C 1801 P=LM 1802 GOSUB 2: IF P>=CM THEN 1890 :P=P+S+S: IF R(0)<C THEN 1802 :P=P-5-5 1810 GOSUB 6:T=12:T1=32: FOR L=3 TO 17: IF P>=CM THEN 1840 1815 GOSUB 30 1820 GOSUB 2: GOSUB 11:SL=B:B=T: IS20 GUSUE 2: GUSUE II:SL-STB-I: GOSUE 5: PRINT " ";C\$;:Q=1842 : GOSUE 24: NEXT L 1840 PRINT : IF P<CM THEN 1841: PRINT "THAT'S ALL THE CHECKS IN MEMORY , NOW...": GOTO 1842 1841 PRINT "THERE ARE MORE CHECKS IN MEMORY, NOW..." 1842 PRINT "'M' MAKE CHANGES, 'L' LIS T FRM NEW CHK#,";: CALL -958 1843 INPUT "'R' RTN TO MENU, OR 'RTN' CONT. LISTING",L\$ 1860 IF L\$="" THEN 1810: IF L\$="R" THEN 1100: IF L\$="M" THEN 2440: IF L\$="L" THEN 1870: VTAB L: TAB 0: GOSUB 22: GOTO 1842 1870 CALL -936: GOTO 1800 1889 RETURN 1890 PRINT : PRINT "NO CHECKS IN MEMO RY": FOR N=1 TO 300: NEXT N: GOTO 1100 2000 CALL -936: VTAB 5: PRINT "YOU MA Y SORT ON ONE OF THE FOLLOWING:" 2001 PRINT 2010 PRINT "1. CHECK #": PRINT "2. DA TE": PRINT "3. 'TO:' FIELD" : PRINT "4. AMOUNT": PRINT "5. CODE": PRINT 2020 INPUT "WHICH ",Q: IF Q<O OR 0>5 THEN 2020 2030 FOR P1=LM TO CM-S-S STEP S+ S:I=P1:P=I: GOSUB 2: GOSUB ផែផ

2040	FOR P2=P1+S+S TO CM STEP S+	
	S:P=P2: GOSUB 2: GOSUB 100+	
	Q: IF C THEN GOSUB 100: NEXT	
	P2	
2050	P=P1: GOSUB 2: FOR C=O TO S:	
	D(C)=R(C): NEXT C:P=I: GOSUB	
	3: EOR C=0 TO 5:D(C)=RB(C):	And and
	NEXT C:P=P1: GOSUB 3	
2868	PRINT "SORTING ":: NEXT P1:	
	PRINT "DONE!". FOR C=0 TO	
	200: NEXT C: RETURN	1
2266	P=1M+H=A+ CALL -936+ VIAR 5	
2200	· PRINT "YAU MAY SEARCH BY ANE O	
	E THE FOLLOWING. ". PRINT . PRINT	
	"1 CHECK NUMBER", PRINT "2 MON	
	TU", DDINT "O DOV"	
2210	PRINT "A VEGR", PRINT "5 'TO.'	
	FIFID": PRINT "& AMOUNT":	
	PRINT "7. CODE"	
0000	PDTNT : DOI 1-7: DOI 5-7	
2220	INDUT "NUTCH FIELD DV NUMBED "	
6600	E1. IE E1/A AR E1/7 THEN RETURN	
	, COCHE DOGGIE!	
0005	CACHD 4	
2246	TE RN-CM THEN 9960, GOODD 9	
2240	. COCHE 22104E1. TE H TUEN	
	COSUD 2250.P=P+C+C, COTO 2240	
	30500 E200.1 -1 -5-5, 3010 E240	
2250	T=12.T1=32: VT8B . T8B 0. 605UB	
2200	2: 605UB 11:51=B:B=T: 605UB	1000
	5: PRINT " ":C\$::1=1+0:P=P-	and the second
	S-S: BALT=BALT+R(10): BALE=BALE+	10000
	P(11), GOSHB 1427; PETHRN	
2260	TAB 21. PRINT "TOTAL"::F=32	Constant of
6200	·I=BALT·F=BALE· GOSUB 10	interests.
2290	PRINT · PRINT "THAT'S ALL OF THE	and the
2270	M 18	and had
2294	PDINT	1
2205	INPUT "HIT 'RETURN' TO GET RECK	interest of
	TO THE NENNI".1 \$	and the second
2296	60TO 1100	and the second
2301	PRINT "CHECK NUMBER":: GOTO	and and
2001	2358	instant.
2302	PRINT "MONTH" GOTO 2350	No.
2303	INPUT "INPUT MONTH DAY YEAR "	and the second
2000	.8.9.D(3): IF 8(0 0R 8)=5 0R	
	9/0 OP 9/31 THEN 2393.D/2)=	
	ato on efor then coporpter-	and and
	日本さつちましき おとくりだい	- 15
2394	H#236+W: RETORN PRINT "YFAR":: GOTO 2250	1
2304 2305	HAZOSHU: KEIOKN PRINT "YEAR";: GOTO 2350 PRINT "TO FIFID LOOKING FOP"	
2304 2305	H*C35+W: KEIOKN PRINT "YEAR";: GOTO 2350 PRINT "TO FIELD LOOKING FOR" GOTO 18	

: GOSUB 14:D(10)=I:D(11)=F: RETURN 2307 PRINT "CODE LOOKING FOR";: GOTO 20 2311 U=D(0)=R(0): RETURN 2312 U=D(2)=R(2)/256: RETURN 2313 U=(D(2)=R(2) AND D(3)= AB5 (R(3) MOD 256)): RETURN 2314 U=(D(3)= ABS (R(3) MOD 256) : RETURN 2315 U=0: FOR J=4 TO 9:U=(U AND D(J)=R(J)): IF U THEN NEXT J: RETURN 2316 U=(D(10)=R(10) AND D(11)=R(11>>: RETURN 2317 U=(D(12)=R(12) AND D(S)=R(S)): RETURN 2350 INPUT " LOOKING FOR",D(F1-(F1>2)): RETURN 2400 GÖTO 3600 2440 VTAB L: TAB 0: CALL -958: PRINT : PRINT "YOU MAY NOW : 1. CHANG E ABOVE DATA" 2441 PRINT " 2. DELETE BY CHECK #" 2443 PRINT 2444 INPUT "WHICH ",Q 2445 IF Q=2 THEN 3400: IF Q=1 THEN 2446: GOSUB 22: GOTO 2440 2446 VTAB L+O: TAB O: CALL -958: PRINT "TYPE 'CTRL' & DESIRED KE Y SIMULTANEOUSLY"; 2447 PRINT "A=ADVANCE B=BACK UP" 2448 PRINT "U=UP D=DOWN"; 2449 TAB 27: PRINT "E=EXIT TO MENU" : PRINT "*HIT SPACE BAR BEFORE E NTERING NEW DATA*"; 2450 P=P-S-S:L=L-O: VTAB L:S1=0 2460 CALL 8:A= PEEK (255): IF A> 154 THEN 2500: IF A>128 AND A<134 AND A#131 THEN GOTO 2351 +A: IF A=149 THEN 2493: IF A=144 THEN 1810: GOTO 2460 2480 IF 51=7 THEN 51=Z:51=S1+0: GOTO 2482 2481 IF 51=0 THEN 2460:51=51-0 2482 TAB 51+3*(51=2)+5*(51=3)+7* (S1=4)+9*(S1=5)+21*(S1=6)+29

2306 PRINT "AMOUNT LOOKING FOR";

28

29

*(S1=7): GOTO 2460

2483	IF L=19 THEN 2460:L=L+0: VTAB
	L:P=P+S+S:SG=0: GOTO 2460
2484	RETURN
2493	IF L≕3 THEN 2460:L=L−O: VTAB
	L:P=P-S-S:SG=0: GOTO 2460
2500	GOSUB 2: FOR J=O TO S:D(J)=
	R(J): NEXT J:D(3)= ABS (R(3
)): POKE 35,L: PUKE 34,L-U:
	GUSUB 2500+SI*I0: PUKE 35,
	24: PUKE 34,2
2001	VINE L: GUDUE 3: FUR J-U IU
	5:R(J)=D(J): NEAT J: GOSOB 11.CL=D.D=T. COCHD 5. DDINT
	" ".C*.
2502	уси, VTAR I P=P-S-S, 60T0 2480
2510	INPUT D(0): PETHEN
2528	INPUT 8:D(2)=D(2) MOD 256+8*
	256: RÉTURN
2530	INPUT A:D(2)=D(2)/256*256+A:
	RETURN
2540	INPUT D(3): RETURN
2550	GOTO 18
2560	GOSUB 14:D(10)=I:D(11)=F: RETURN
2570	GOTO 20
2600	INPUT "DO YOU WANT TO NAME THIS
	FILE (Y/N) ?",L\$
2605	IF L\$="Y" THEN 2610: IF L\$=
	"N" THEN 2620: PRINT "": GOTO
	2600
2610	INPUT "OK, TYPE IT IN",N≸
9690	D(0)-0011.D(0)-0015.D(0)=001.
2020	D(4)=PRE:P=IMSUB 2: INPUT
	"START RECORDING. THEN HIT RETUR
2425	N ,L⊅ D(5)-D(0).D-CM_C_C+0. COCNO
LOLO	2.D(6)=R(0), POKE 2 205
2630	A=CM-IM: IF A/7 THEN RETURN
	: 605HB-8: CALL 7: 605HB 9:
	CALL Z: RETURN
2800	A=(CM-LM+0)/S/2:B=(HM-LM-0)
	/5/2
2810	PRINT A;" RECORDS USED OUT OF "
	;B;" TOTAL": PRINT "LEAVING "
	;B-A;" UNUSED.": POP : GOTO
	1160
3000	REM
3200	INPUT "DO YOU WANT. TO SAVE YOUR
	UNIN (17N) ?",U\$: IF U\$="Y"
	UR UP-"ILS" IREN UUSUB 2500

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3210 POP : PRINT " OK": END 3400 VTAB 18: TAB 0: CALL -958: PRINT 3405 INPUT "START CHECK NUMBER", I: VTAB 20: INPUT "END CHECK NUM BER",F:P=LM 3410 GOSUB 2: IF P>=CM THEN 3450 :P=P+S+S: IF I#R(0) THEN 3410 :P=P-S-S:B=P 3420 GOSUB 2: IF P>=CM THEN 3450 :P=P+S+S: IF F#R(0) THEN 3420 :8=P 3430 POKE 60, PEEK (2052): POKE 61, PEEK (2053):A=CM: POKE 62, PEEK (2052): POKE 63, PEEK (2053):A=B: POKE 66, PEEK (2052): POKE 67, PEEK (2053) 3440 CALL -468:CM=CM-P+B: IF Q=2 THEN 1100: IF Q=7 THEN RETURN 3443 VTAB 21: TAB 0: INPUT "MORE (Y/N) ?",L\$ 3445 IF L\$="Y" THEN 3400: IF L\$= "N" THEN RETURN : GOSUB 22: GOTO 3440 3450 PRINT "BAD RANGE!!!": FOR A= 0 TO 600: NEXT A 3460 GOTO 2440 3600 P=LM 3610 GOSUB 2: IF P>=CM THEN 3640 :P=P+S+S: IF R(3)>Z THEN 3610 :B=P-S-S 3620 GOSUB 2:P=P+S+S: IF P>=CM THEN 3630: IF R(3)<Z THEN 3620 3630 P=P-S-S:A=P: GOSUB 3430:P=B: GOTO 3610 3640 PRINT : PRINT "DONE!": GOSUB 22: FOR N=1 TO 300: NEXT N: RETURN 20000 POP : POP : PRINT " *** MENORY FULL ***": FOR A=1 TO 200: NEXT A: GOTO 1100 65535 REM *** COPYRIGHT 1977 BY APPLE COMPUTER: WRITTEN BY R.WIGGINTON

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