

02400C

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PROGRAM DESCRIPTION I

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Program Title CHECKBOOK-EXTENDED MEMORYContributor's Name John E. SchiermeierAddress 303 Glasgow RoadCity Cary State/Country NC Zip Code 27511

Program Description, Equations, Variables This program uses an ASCII file in extended memory instead of a card reader to store checks and deposits. If a file does not exist, the program will create it and prompt for initial balance. Each check or deposit is entered with a number, date, ALPHA description, and amount. Two balances are kept: bank balance and checkbook balance. Upon clearing the bank, only the number is needed to change the bank balance and delete the transaction from memory. Facilities also include voiding checks, displaying balances, and displaying specified transactions.

Necessary Accessories extended functions/memory module, 1 memory module or the equivalent

Operating Limits and Warnings If the second specification for displaying transactions is a date, only the first transaction with that date will be displayed. [X] I should be the last function executed, in order to store the balances in the file.

Reference(s)

This program has been verified only with respect to the numerical example given in *Program Description II*. User accepts and uses this program material AT HIS OWN RISK, in reliance solely upon his own inspection of the program material and without reliance upon any representation or description concerning the program material.

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PROGRAM DESCRIPTION II

Sample Problem (Sketch if Desired)

- Create a file CHK with initial balances of 0 and the following transactions:

```

1/01/83 deposit #1          $100
1/02/83 check #101 phone bill 60
1/03/83 check #102 cash      40
1/04/83 check #103 electric bill 20
    
```

and display the balances.

- Upon receiving the statement, deposit #1 and checks #101 and #103 have cleared. Display all remaining transactions and display balances.

SOLUTION:

1.

Display	Input	Function	Comments
		[XEQ] SIZE 002	set size
		[XEQ] CHKBK	start execution
FILE ?	CHK	[R/S]	input filename
LENG ?	20	[R/S]	input length of file
INI BAL ?	0	[R/S]	input initial balance
		[XEQ] B	enter deposit routine
DEP ?	1	[R/S]	
DATE ?	1.0183	[R/S]	
DES ?	DEPOSIT	[R/S]	
AMT ?	100	[R/S]	
DEP ?		[R/S]	just hit R/S to escape
		[XEQ] A	input check routine
CHK ?	101	[R/S]	input first check
DATE ?	1.0283	[R/S]	
DES ?	PHONE BILL	[R/S]	
AMT ?	60	[R/S]	
CHK ?	102	[R/S]	input second check
DATE ?	1.0383	[R/S]	
DES ?	CASH	[R/S]	
AMT ?	40	[R/S]	
CHK ?	103	[R/S]	input third check
DATE ?	1.0483	[R/S]	
DES ?	ELECTRIC BILL	[R/S]	
AMT ?	20	[R/S]	
CHK ?		[R/S]	just R/S to escape
		[XEQ] I	display balances
CB BAL -20.00			checkbook balance (bad news)
BK BAL 0.00			bank balance

(CONTINUATION PAGE)

2.

Display	Input	Function	Comments
DEP ?	1	[XEQ] E R/S	deposit clear routine
DEP ?		R/S	just hit R/S to escape
CHK ?	101	[XEQ] D R/S	check clear routine
CHK ?	103	R/S	first check
CHK ?		R/S	second check
		R/S	just hit R/S to escape
FROM NUM ?		[XEQ] J R/S	display transaction routine
FROM DATE ?		R/S	just hit R/S for next prompt
TO NUM ?		R/S	just hit R/S for first transaction
TO DATE ?		R/S	just hit R/S for next prompt
TRANS 102		R/S	just hit R/S for last transaction
DATE 1.0383			transaction is displayed
CASH			
AMT -40.00			
CB BAL -20.00		[XEQ] I	display balances
BK BAL 20.00			checkbook balance (unchanged)
			bank balance

024000 USER INSTRUCTIONS

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				SIZE: 002 (HP-41C)
STEP	INSTRUCTIONS	INPUT	FUNCTION	DISPLAY
1.	Enter program and set size.		[XEQ] SIZE 002	
2.	Start execution.		[XEQ] CHKBK	FILE ?
	Input filename.	filename	[R/S]	
	If the file does not exist:			LENG ?
		length	[R/S]	INI BAL ?
		b	[R/S]	
3.	Execute desired function:			
	check input		[XEQ] A	CHK ?
	input check number	n	[R/S]	DATE ?
	input date (as MM.DDYY)	d	[R/S]	DES ?
	input description	D	[R/S]	AMT ?
	input amount	a	[R/S]	CHK ?
	to escape, just hit R/S after CHK ?			
	deposit input		[XEQ] B	DEP ?
	input deposit number	n	[R/S]	DATE ?
	input date (as MM.DDYY)	d	[R/S]	DES ?
	input description	D	[R/S]	AMT ?
	input amount	a	[R/S]	DEP ?
	to escape, just hit R/S after DEP ?			
	check voiding		[XEQ] C	CHK ?
	input check number	n	[R/S]	CHK ?
	to escape, just hit R/S			
	check clearing		[XEQ] D	CHK ?
	input check number	n	[R/S]	CHK ?
	to escape, just hit R/S			
	deposit clearing		[XEQ] E	DEP ?
	input deposit number	n	[R/S]	DEP ?
	to escape, just hit R/S			
	display balances		[XEQ] I	CB BAL b BK BAL b
	display transactions		[XEQ] J	FROM NUM ? FROM DATE ? TO NUM ? TO DATE ? TRANS n DATE d des AMT a
	input n or R/S for:		[R/S]	
	input d or R/S for first transaction		[R/S]	
	input n or R/S for:		[R/S]	
	input d or R/S for last transaction		[R/S]	
	for each transaction:			
	positive for deposits, negative for checks			

4. For another function, go to Step 3.

Last function should be [XEQ] I to store new balances in file.

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STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
01	LBL	"CHK		51	LBL	B	enter deposit routine
BK"				52	CF	22	
02	FIX	0	initialize	53	FS?	00	check?
03	XEQ	07		54	"CHK ?"		
04	SF	27		55	FC?	00	no check?
05	FC?	55		56	"DEP ?"		
06	CF	21		57	PROMPT		input number
07	"FILE ?"			58	FC?	22	no input?
08	AON			59	GTO	03	escape
09	PROMPT		input filename	60	FIX	0	
10	AOFF			61	CLA		
11	SF	25		62	ARCL	X	
12	0			63	SF	25	
13	SEEKPTA			64	APPREC		append number
14	FS?	25	file exists?	65	RCLPT		
15	GTO	02		66	ENTER↑		
16	ASTO	00	— — — — —	67	FC?	25	no room?
17	LBL	00	create file	68	GTO	06	
18	"LENG ?"			69	"DATE ?"		
19	PROMPT		input length	70	PROMPT		input date
20	CLA			71	FIX	4	
21	ARCL	00		72	CLA		
22	SF	25		73	ARCL	X	
23	CRFLAS		create file	74	APPREC		append date
24	FS?	25	room enough?	75	FC?	25	no room?
25	GTO	01		76	GTO	04	
26	"NO ROOM			77	RDN		
"				78	"DES ?"		
27	AVIEW		display error message	79	CF	23	
28	TONE	0		80	AON		
29	GTO	00		81	PROMPT		input description
30	LBL	01	initialize new	82	AOFF		
31	"INI BAL		file	83	FC?	23	no input?
?"				84	" "		default input
32	PROMPT		input initial balance	85	APPREC		append description
33	FIX	2		86	FC?	25	no room?
34	CLA			87	GTO	04	
35	ARCL	X		88	"AMT ?"		
36	APPREC		append to file and	89	PROMPT		input amount
37	APPREC		store balance	90	FS?	00	check?
38	STO	00		91	CHS		
39	STO	01		92	FIX	2	
40	RTN			93	CLA		
41	LBL	02	initialize registers	94	ARCL	X	
42	GETREC			95	APPREC		append amount
43	ANUM			96	FC?	25	no room?
44	STO	00	store CB balance	97	GTO	04	
45	GETREC			98	ST+	00	
46	ANUM			99	GTO	B	
47	STO	01	store BK balance	100	LBL	03	clear flag
48	RTN						
49	LBL	A	enter check routine				
50	SF	00	set check flag				

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STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
101	CF 00			151	RTN		
102	RTN			152	*LBL I		display balances
103	*LBL 04		error recovery	153	FIX 2		
104	SF 25			154	"CB BAL		
105	RDN			"			
106	INT			155	ARCL 00		
107	SEEKPT		— — — — —	156	AVIEW		display CB balance
108	*LBL 05		delete records	157	PSE		
109	DELREC			158	0		
110	FS? 25		no error?	159	SEEKPT		
111	GTO 05		— — — — —	160	DELREC		delete old balance
112	*LBL 06		NO ROOM routine	161	CLA		
113	"NO ROOM			162	ARCL 00		
"				163	INSREC		insert new balance
114	AVIEW		display message	164	"BK BAL		
115	TONE 0			"			
116	CF 00			165	ARCL 01		
117	CF 01			166	AVIEW		display Bk balance
118	STOP			167	1		
119	*LBL C		void check routine	168	SEEKPT		
120	SF 02		set void flag	169	DELREC		delete old balance
121	*LBL D		check clear routine	170	CLA		
122	SF 00		set check flag	171	ARCL 01		
123	*LBL E		deposit clear routine	172	INSREC		insert new balance
124	CF 22			173	CLD		
125	FS? 00		check?	174	RTN		
126	"CHK ?"			175	*LBL J		display transaction
127	FC? 00		no check?	176	CF 22		routine
128	"DEP ?"			177	"FROM NU		
129	PROMPT		input number	M ?"			
130	FC? 22		no input?	178	PROMPT		input origin number
131	GTO 07		escape	179	FS? 22		input?
132	XEQ 15		find number in file	180	GTO 08		
133	DELREC		delete transaction	181	SF 01		
134	DELREC			182	3		
135	DELREC			183	CF 22		
136	GETREC			184	"FROM DA		
137	RCLPT			TE ?"			
138	INT			185	PROMPT		input origin date
139	SEEKPT			186	*LBL 08		
140	DELREC			187	FS? 22		input?
141	ANUM		amount of transaction	188	XEQ 15		find origin in file
142	FS? 02		void check?	189	FS? 22		input?
143	ST- 00			190	RCLPT		
144	FC? 02		not void check?	191	FS? 01		date found?
145	ST+ 01			192	1		
146	GTO E			193	FC?C 01		no date found?
147	*LBL 07		clear flags	194	0		
148	CF 00			195	-		
149	CF 01			196	ENTER↑		
150	CF 02			197	RDN		
				198	CF 22		
				199	"TO NUM		
				"			
				200	PROMPT		input last number

Note: Refer to "HP-41C OWNER'S HANDBOOK AND PROGRAMMING GUIDE" for specific information
67 or 97 "OWNER'S HANDBOOK AND PROGRAMMING GUIDE" for exact keystrokes.

and of the Handbook. Refer to Appendix E in

□ 67 □ 97 ☒ 41C

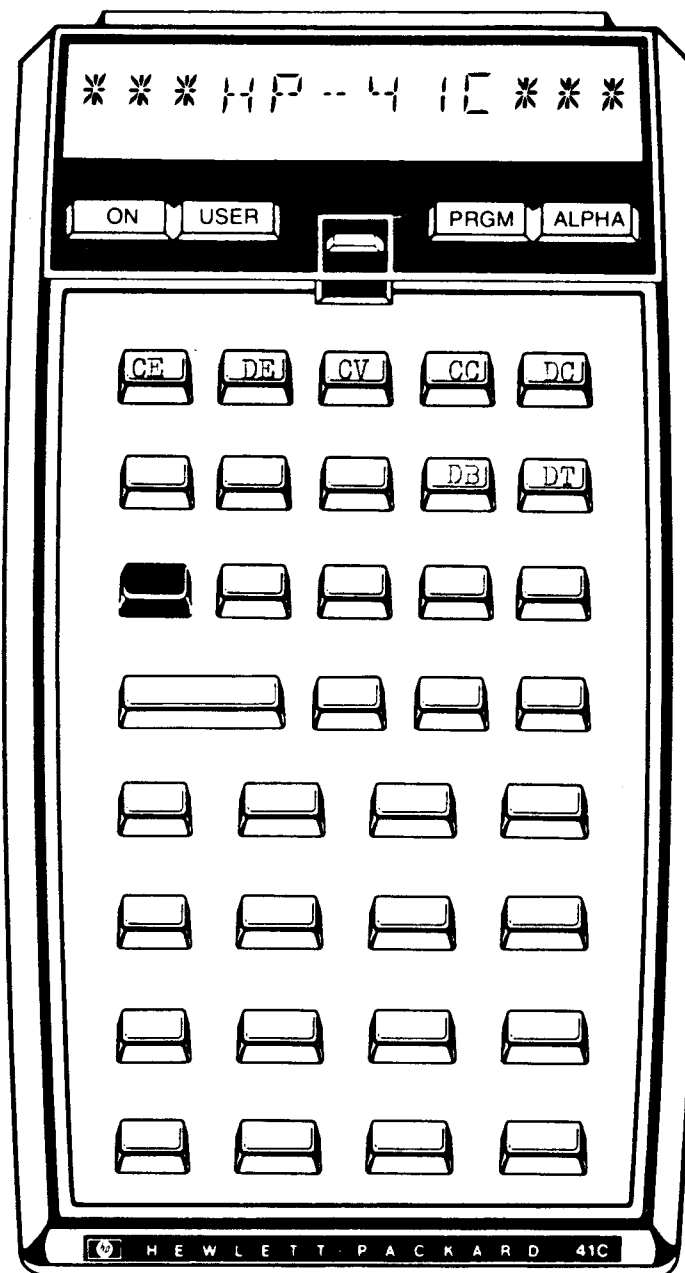
STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
201	FS? 22		input?	251	FIX 0		
202	GTO 09			252	FS? 01		
203	SF 01			253	FIX 4		
204	CF 22			254	CLA		
205	"TO DATE ?"			255	ARCL X		
206	PROMPT		input last date	256	2		
207	FC? 22		no input?	257	SEEKPT		set pointer
208	SF 00		set EOF indicator	258	*LBL 11		find occurrence
209	*LBL 09			259	RDN		
210	FS? 22		input?	260	POSFL		
211	XEQ 15		find last one in file	261	X<0?		no occurrence?
212	CF 01			262	GTO 12		
213	FS? 22		input?	263	FC? 01		no date?
214	ROLPT			264	2		
215	R↑			265	FS? 01		date?
216	SF 25			266	3		
217	SEEKPT			267	-		
218	FC? 25		no such record?	268	4		
219	GTO 13			269	MOD		
220	X<>Y			270	X=0?		right place in file?
221	SF 25			271	RTN		
222	*LBL 10		display transaction	272	GETREC		move pointer
223	"TRANS "			273	CLA		
224	ARCLREC			274	ARCL Y		
225	FC? 25		EOF?	275	GTO 11		
226	GTO 13			276	*LBL 12		NOT FOUND routine
227	AVIEW		display transaction number	277	"NOT FOU ND"		
228	PSE			278	AVIEW		display message
229	"DATE "			279	TONE 0		
230	ARCLREC			280	CF 00		
231	AVIEW		display	281	CF 01		
232	PSE			282	CF 02		
233	GETREC			283	STOP		
234	AVIEW		display description	284	END		
235	PSE						
236	"AMT "						
237	ARCLREC						
238	AVIEW		display amount				
239	PSE						
240	ROLPT						
241	X<>Y						
242	X>Y?		more to display?				
243	GTO 10						
244	FS? 00		displaying to EOF?				
245	GTO 10						
246	*LBL 13		clear flag				
247	CLD						
248	CF 00						
249	RTN						
250	*LBL 15		find transaction				

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REGISTERS, STATUS, FLAGS, ASSIGNMENTS

DATA REGISTERS		STATUS	
00 checkbook balance		SIZE 002	TOT. REG. 90
01 bank balance		ENG	FIX vary SCI
		DEG	RAD GRAD
		USER MODE	
			ON x OFF
		FLAGS	
		#	INIT S/C
		SET INDICATES	
		CLEAR INDICATES	
		00	C check
		01	C number search
		02	C void check
		21	printer enabled
		25	S no error
		27	S USER mode
		55	printer exists
		22	
		23	
			data entry
			alpha entry
		ASSIGNMENTS	
		FUNCTION	KEY
		FUNCTION	KEY

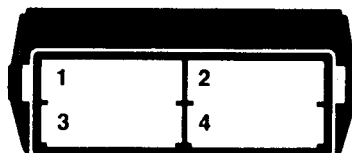
KEYBOARD CARD LABELING



CE check enter
 DE deposit enter
 CV check void
 CC check clear
 DC deposit clear
 DB display balances
 DT display transaction

KEYBOARD

**SYSTEM
CONFIGURATION**



CARD



PROGRAM REGISTERS NEEDED: 88

ROW 1 (1:3)



ROW 2 (3:7)



ROW 3 (7:15)



ROW 4 (16:21)



ROW 5 (21:26)



ROW 6 (26:31)



ROW 7 (31:35)



ROW 8 (36:44)



ROW 9 (45:52)



ROW 10 (52:56)



ROW 11 (56:62)



ROW 12 (62:69)



ROW 13 (69:74)



ROW 14 (74:79)



ROW 15 (79:87)



ROW 16 (87:92)



ROW 17 (93:99)



ROW 18 (99:108)



ROW 19 (109:113)



ROW 20 (113:120)



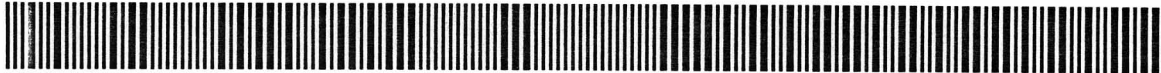
ROW 21 (120:126)



ROW 22 (126:129)



ROW 23 (130:135)



ROW 24 (136:142)



ROW 25 (143:149)



ROW 26 (149:154)



ROW 27 (154:161)



ROW 28 (162:165)



ROW 29 (165:173)



ROW 30 (174:177)



ROW 31 (177:183)



ROW 32 (184:185)



ROW 33 (186:192)



ROW 34 (193:199)



ROW 35 (199:204)



ROW 36 (205:207)



ROW 37 (208 : 214)



ROW 38 (214 : 221)



ROW 39 (222 : 226)



ROW 40 (226 : 232)



ROW 41 (233 : 239)



ROW 42 (240 : 248)



ROW 43 (248 : 255)



ROW 44 (256 : 264)



ROW 45 (265 : 274)



ROW 46 (275 : 277)



ROW 47 (278 : 284)

