

# 04510D PROGRAM DESCRIPTION I

Page 1 of 8

Program Title GUESS THE CARD SUIT

Contributor's Name Otto X. Dobnick

Address 3171 - S. 83 Street

City Milwaukee, State Wis. Zip Code 53219

Program Description, Equations, Variables

A simple game wherein one tries to guess the SUIT of a card dealt.

There are no card repetitions. A \$5.00 bet is automatically made

for each guess, and winnings and losses status is displayed after  
each bet.

Value: A, 2, 3, 4, 5, 6, 7, 8, 9, 10, J, Q, K.

Code: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13.

Suit: spades, hearts, diamonds, clubs.

Code: n.1, n.2, n.3, n.4.

Necessary Accessories none

Operating Limits and Warnings

Make certain registers are always restored to their original positions.

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.

NEITHER HP NOR THE CONTRIBUTOR MAKES ANY EXPRESS OR IMPLIED WARRANTY OF ANY KIND WITH REGARD TO THIS PROGRAM MATERIAL, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. NEITHER HP NOR THE CONTRIBUTOR SHALL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING OUT OF THE FURNISHING, USE OR PERFORMANCE OF THIS PROGRAM MATERIAL.

**Sample Problem** (Sketch if Desired)

**PROBLEM 1:**

Four unknown cards are generated, one at a time. Try to guess the suit of each card.

PRELIMINARY INSTRUCTIONS: LOAD CARD, 2 SIDES IF NOT ALREADY LOADED.

**SOLUTION:**

04510D

PROGRAM DESCRIPTIION II  
(CONTINUATION PAGE)

Page 3 of 8

Let's have problem 2, but try to guess the suits of 5 cards.

We have 2 alternatives, i.e., continue with the preceding deck since 48 cards remain in the deck or start from scratch.

Let's start from scratch as we may have better luck.

Since the program is loaded our first step will be initialization and shuffle of the deck.

INPUT	FUNCTION	DISPLAY	COMMENTS
	[E]	18.0	initialization & shuffle
0.985	[STO][A]	1.0	seed, $0 < S < 1$
	[A]	0.0	1st unknown card
0.1	[B]	5.0	correct, \$5.00 total credit
	[A]	0.0	2nd unknown card
0.2	[B]	10.0	correct, \$10.00 total credit
	[A]	0.0	3rd unknown card
0.3	[B]	15.0	correct, \$15.00 total credit
	[A]	0.0	4th unknown card
0.4	[B]	20.0	correct, \$20 total credit
	[A]	0.0	5th unknown card
0.1	[B]	25.0	correct, \$25 total credit

Five correct guesses out of five. The odds are almost phenomenal.

Go ahead! See if you can outguess the RNG.

STEP	INSTRUCTIONS	INPUT	FUNCTION	DISPLAY	SIZE:
1	Load card, 2 sides				
2	Initialize & shuffle		[E]	18.0	
3	Seed	0<S<1	[STO][A]	0.n	
4	Generate card		[A]	0.0	
5	Bet	0.n	[B]	±n.0	
6	Continue step 5 until desired  number of cards have been generated OR until all 52 cards are used at which 52nd card DSP = 0.000000000				
	OR				
	Start new deal by doing steps 2 thru 5 or 6.				
	WINNINGS or LOSSES are displayed after each bet automatically, viz., ±n.0				
	To see number of cards dealt		[RCL][0]	n.0	
	TO CHEAT:				
	R <sub>C</sub> displays card code and R <sub>B</sub> displays suit code when divided by 10.				
	Alternatively the card and suit are available from R <sub>58</sub> , i.e., n.n.				
	Make certain the registers are restored to their original positions after CHEATING!				

67    97    41C

STEP/ NE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS	STEP/ LINE	KEY ENTRY	KEY CODE (67/97 only)	COMMENTS
*	F LBL A	31 25 11	select card	51	RCL [i]	34 24	deal card
	5	05	one less than		RCL D	34 14	if not
1	01		ALL cards dealt		÷	81	dealt, else
	RCL 0	34 00			g FRAC	32 83	generate
	g x>y	32 81			F x=0	31 51	another
	GTO 0	22 00			GTO 3	22 03	card
	4	04			RCL D	34 14	
	STO E	33 15	generate suit,		STO X[i]	33 71 24	
*	F LBL 1	31 25 01	0.1-0.4		RCL C	34 13	
10	F GSB 2	31 22 02		60	RCL B	34 12	
	STO B	33 12			1	01	
	h ST I	35 33			0	00	
	1	01	one less than #		÷	81	
	2	02	of cards/suit		+	61	display
	RCL [i]	34 24			F P↔S	31 42	card.suit
	g x>y	32 81			STO B	33 08	
	GTO 1	22 01			F P↔S	31 42	
	g ISZ[i]	32 34			CLx	44	
	1	01			h RTN	35 22	
20	STO + 0	33 61 00		*	70	F LBL 2	31 25 02
	RCL 0	34 00			RCL A	34 11	
	5	05	limits total #		9	09	
	2	02	of cards		9	09	
	g x=y	32 51	last card?		7	07	
	DSP 9	23 09	YES, DSP 9		X	71	
	1	01			g FRAC	32 83	RNG
	3	03	limit # of		STO A	33 11	
	STO E	33 15	cards/suit		RCL E	34 15	
*	F LBL 3	31 25 03			X	71	
30	F GSB 2	31 22 02		80	1	01	
	STO C	33 13			+	61	
	4	04	prepare to		F INT	31 83	
	+	61	access card		h RTN	35 22	
	h ST I	35 33	registers	*	F LBL E	31 25 15	
	RCL B	34 12			F CL REG	31 43	
	2	02			F P↔S	31 42	
	g x=y	32 51			F CL REG	31 43	
	GTO 7	22 07			STO A	33 11	
	g x≤y	32 71			5	05	
40	GTO 4	22 04		90	h ST I	35 33	
	7	07		*	F LBL 8	31 25 08	initialize.
	GTO 7	22 07			g ISZ[i]	32 34	shuffle, &
*	F LBL 4	31 25 04			F ISZ	31 34	retain seed
	RCL B	34 12			1	01	
	3	03			7	07	
	g x=y	32 51			h RC I	35 34	
	GTO 7	22 07			g x≤y	32 71	
	5	05			GTO 8	22 08	
*	F LBL 7	31 25 07			23	DSP 1	
50	STO 0	33 14			01	23 01	
				100	h RTN	35 22	

045109

## PROGRAM LISTING

Page 6 of 8

67     97     41C

# REGISTERS, STATUS, FLAGS, ASSIGNMENTS

## 04510D

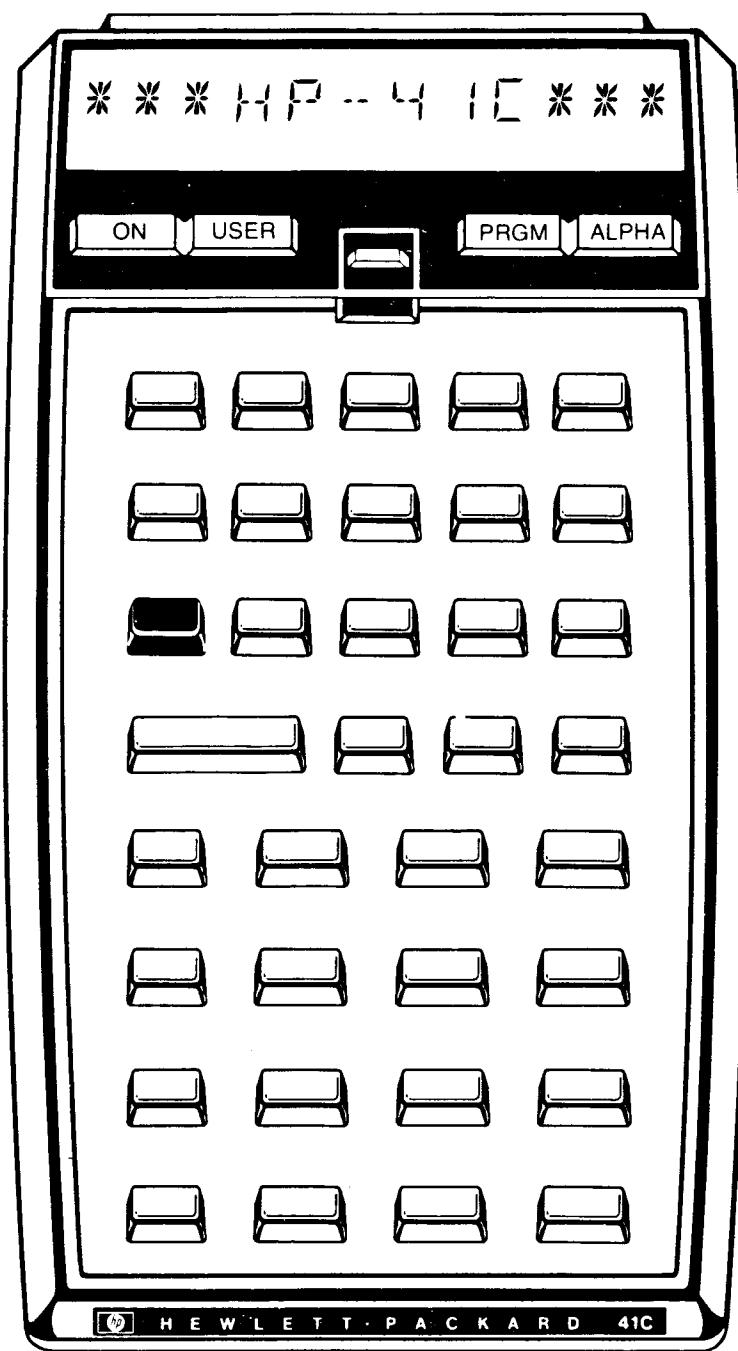
DATA REGISTERS			STATUS					
			SIZE	TOT. REG.	USER MODE			
			ENG	FIX 1 SCI	ON OFF			
			DEG X	RAD GRAD				
						FLAGS		
00	card count	50						
	spades		#	INIT S/C	SET INDICATES	CLEAR INDICATES		
	hearts		0	C	not used	not used		
	diamonds							
	clubs		1	C	not used	not used		
05	Ace	55						
	2		2	C	not used	not used		
	3							
	4		3	C	not used	not used		
	5							
10	6	60						
	7		4	C	not used	not used		
	8							
	9		5	C	not used	not used		
	10							
15	11 jack	65	6	C	not used	not used		
	12 queen							
	13 king		7	C	not used	not used		
20		70	8	C	not used	not used		
			9	C	not used	not used		
			10	C	not used	not used		
			11	C	not used	not used		
			12	C	not used	not used		
			13	C	not used	not used		
			14	C	not used	not used		
			15	C	not used	not used		
			16	C	not used	not used		
			17	C	not used	not used		
			18	C	not used	not used		
			19	C	not used	not used		
			20	C	not used	not used		
			21	C	not used	not used		
			22	C	not used	not used		
			23	C	not used	not used		
			24	C	not used	not used		
			25	C	not used	not used		
			26	C	not used	not used		
			27	C	not used	not used		
			28	C	not used	not used		
			29	C	not used	not used		
			30	C	not used	not used		
			31	C	not used	not used		
			32	C	not used	not used		
			33	C	not used	not used		
			34	C	not used	not used		
			35	C	not used	not used		
			36	C	not used	not used		
			37	C	not used	not used		
			38	C	not used	not used		
			39	C	not used	not used		
			40	C	not used	not used		
			41	C	not used	not used		
			42	C	not used	not used		
			43	C	not used	not used		
			44	C	not used	not used		
			45	C	not used	not used		
			46	C	not used	not used		
			47	C	not used	not used		
			48	C	not used	not used		
			49	C	not used	not used		
			50	C	not used	not used		
			51	C	not used	not used		
			52	C	not used	not used		
			53	C	not used	not used		
			54	C	not used	not used		
			55	C	not used	not used		
			56	C	not used	not used		
			57	C	not used	not used		
			58	C	not used	not used		
			59	C	not used	not used		
			60	C	not used	not used		
			61	C	not used	not used		
			62	C	not used	not used		
			63	C	not used	not used		
			64	C	not used	not used		
			65	C	not used	not used		
			66	C	not used	not used		
			67	C	not used	not used		
			68	C	not used	not used		
			69	C	not used	not used		
			70	C	not used	not used		
			71	C	not used	not used		
			72	C	not used	not used		
			73	C	not used	not used		
			74	C	not used	not used		
			75	C	not used	not used		
			76	C	not used	not used		
			77	C	not used	not used		
			78	C	not used	not used		
			79	C	not used	not used		
			80	C	not used	not used		
			81	C	not used	not used		
			82	C	not used	not used		
			83	C	not used	not used		
			84	C	not used	not used		
			85	C	not used	not used		
			86	C	not used	not used		
			87	C	not used	not used		
			88	C	not used	not used		
			89	C	not used	not used		
			90	C	not used	not used		
			91	C	not used	not used		
			92	C	not used	not used		
			93	C	not used	not used		
			94	C	not used	not used		
			95	C	not used	not used		
			96	C	not used	not used		
			97	C	not used	not used		
			98	C	not used	not used		
			99	C	not used	not used		
			100	C	not used	not used		
			101	C	not used	not used		
			102	C	not used	not used		
			103	C	not used	not used		
			104	C	not used	not used		
			105	C	not used	not used		
			106	C	not used	not used		
			107	C	not used	not used		
			108	C	not used	not used		
			109	C	not used	not used		
			110	C	not used	not used		
			111	C	not used	not used		
			112	C	not used	not used		
			113	C	not used	not used		
			114	C	not used	not used		
			115	C	not used	not used		
			116	C	not used	not used		
			117	C	not used	not used		
			118	C	not used	not used		
			119	C	not used	not used		
			120	C	not used	not used		
			121	C	not used	not used		
			122	C	not used	not used		
			123	C	not used	not used		
			124	C	not used	not used		
			125	C	not used	not used		
			126	C	not used	not used		
</td								

04510D

# KEYBOARD CARD LABELING

Page 8 of 8

KEYBOARD



SYSTEM  
CONFIGURATION



CARD

