

TITLE:

Modification to Data Input Number 3

AUTHOR:

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ABSTRACT:

This routine modifies Data Input Number 3, Program number 11.2 to recognize a code word which precedes the data to be input. The code word specifies the initial location of sequential storage, and the q of the data.

DISCLAIMER:

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FOR POOL MEMBERS ONLY

1. Title: Modifications to Data Input No. 3

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Classification: J-2

2. Purpose:

- a. To increase programming flexibility and/or reduce the need for program calling sequences.
- b. To reduce errors in data tape preparation when data are to be loaded sequentially.

The first objective is accomplished by two features of the modification. The q of the data (at 29) and the initial location from the last code word are stored in locations 1562 and 1563 respectively. The numbers of data words entered after each code word are stored at 29 sequentially beginning in location 1532.

The second objective is accomplished by permitting the use of the dummy location, 6363, in place of the actual location in all but the first code word, when sequential loading is desired.

3. Restrictions:

- a. No more than 30 code words may be used in a single entry to Data Input No. 3.
- b. The number of data words entered between an input code word and the -0000000' is printed immediately after the -0000000' by means of the Integer Printout Routine. Integer Printout is stored in track 10.
- c. The modification is stored in 1232 to 1263. It uses 1532 to 1563 for storage of results. Lo+0241 of Data Input No. 3, normally unused by the program, is used as the data counter. Drum location 1211 (Lo+0111 of Data Output No. 1) is used for temporary storage.

4. Method:

As the Data Input Routine is entered by means of its calling sequence, the modification initializes the location of the data count storage (xH1532), sets the data counter to zero and returns to D.I. to receive the code word. The address portion of the code word is interrogated for 6363. If it is not 6363, the C[] in Lo+0123 is initialized. If it is 6363, the initialization is omitted. The q of the code word is stored in 1562 and the address of the C[] in Lo+0123 is stored in 1563. After each data word is stored the data counter is incremented by 1. When the -0000000' is entered, the modification stores and prints the data count in [1532], increments the data count storage location, clears the data counter and returns to D.I. for the next input code word.

5. Coding Information:

- a.Storage. 32 sectors for the program, plus two temporary storages in Lo + 0241 of Data Input No. 3 and location 1211.
- b.Linkage. Five changes in Data Input No. 3, shown in the program input column of the coding sheet, are required for linkage.
- c.Input: The usual input requirements of Data Input No. 3 are used unless sequential loading is required with different code words. In this case, the initial location is replaced by 6363 in all but the first code word.
- d.Output. The number of data words entered is printed after each -0000000'

6. Example:

The numbers, 1, 2, 3, 4, and 5 are to be entered in location 3000 et seq. at a q of 10. The numbers, 12, 15, 17 and 18 are to be loaded immediately following at a q of 12. The data tape includes:

0+103000'1'2'3'4'5'-0000000'
0+126363'12'15'17'18'-0000000''

Upon exit from Data Input No. 3, the memory would contain:

<u>Location</u>	<u>Contents</u>	<u>Remark</u>
1532	5 at 29	5 words in first group
1533	4 at 29	4 words in second group
1562	12 at 29	q Of last group
1563	Z 3005	First location of last group
1240	H 1534	One beyond last n storage used

NOTE: Companion routines are Data Input No. 3, Program 11.2 and Integer Print Out, Program No. J4-172.

LGP-30 CODING SHEET

PREPARED FOR: LGP-30, RPC-4000 Users' Organization - POOL				PAGE	OF
JOB NO.	PROGRAM NO. J2-170	PROGRAM PREPARED BY: R. A. Lamm	PROGRAM CHECKED BY: POOL Review	DATE	1-20-60
PROBLEM: Modifications to Data Input 3				TRACK	12

PROGRAM INPUT CODES	STOP	LOCATION	INSTRUCTION		STOP	CONTENTS OF ADDRESS	NOTES
			OPERATION	ADDRESS			
; 0 0 0 1 2 3 2	/						
/ 0 0 0 Lp	/	⊗					
		1 2 3 2	X B	1 2 3 8	/	XH 1532	Initialize Data Number Storage
		3 3	X C	1 2 4 0	/		
		3 4	C	0 2 4 1	/	Counter	
		3 5	B	0 1 4 3	/	⊗	
		3 6	U	0 0 0 1	/		
Changes in 11,2		3 7	X Z	6 3 6 3	/	Extract Mask	Store and Print Number of Data Words Increment Storage Loc.
		3 8	X H	1 5 3 2	/		
		3 9	B	0 2 4 1	/	⊗	
		4 0	H	[1 5 3 2]	/	CTR	Integer Printout
		4 1	X R	1 0 5 6	/		
		4 2	X U	1 0 0 0	/		
		4 3	X B	1 2 4 0	/	⊗	
		4 4	A	0 2 4 2	/	1 @ 29	
		4 5	X U	1 2 3 3	/		
		4 6	X B	1 2 1 1	/	Temp. Storage	Test for Sequential Loading
		4 7	Y	0 1 2 3	/	⊗	
		4 8	U	0 0 2 6	/		
		4 9	X H	1 2 1 1	/	Temp. Storage	Counter Incremented for Data Word
		5 0	X E	1 2 3 7	/		
		5 1	X S	1 2 3 7	/	⊗	
		5 2	X T	1 2 4 6	/		
		5 3	X B	1 2 1 1	/	Temp. Storage	
		5 4	U	0 0 2 6	/		
		5 5	B	0 2 4 1	/	⊗	
		5 6	A	0 2 4 2	/	1 @ 29	
		5 7	C	0 2 4 1	/	CTR	
		5 8	U	0 2 5 6	/		
		5 9	B	0 1 2 3	/	⊗	
		6 0	X Y	1 5 6 3	/	Store Lo and q	Data @ 29
		6 1	B	0 1 3 0	/	of	
		6 2	X C	1 5 6 2	/		
		6 3	U	0 0 3 7	/	⊗	

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