Program No. - J2-170
January 20, 1960

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 preceeds the data to be input. The code word specifies the initial location of sequential storage, and the q of the data.

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1. Title: Modifications to Data Input No. 3
Author: Richard A. Lamm
Date: Revised January 20, 1960
Installation: Lederle Laboratories, Pearl River, New York
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:

Location	Contents	Remark
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.	PROGRAM PREPARED BY	PROGRAM CHECKED BY	DATE
	J2-170	R. A. Lamm	POOL Review	1-20-60

PROBLEM: Modifications to Data Input 3

TRACK: 12

PROGRAM INPUT CODES	STOP	LOCATION	INSTRUCTION OPERATION	INSTRUCTION ADDRESS	STOP	CONTENTS OF ADDRESS	NOTES
;0001232	/						
/000 Lo	/	☒					
		12 32	XB	1238	/	XH 1532	Initialize Data Number Storage
		33	XC	1240	/		
		34	C	0241	/		Counter
		35	B	0143	/	☒	
		36	U	0001	/		
Changes in 11,2		37	XZ	6363	/		Extract Mask
		38	XH	1532	/		
;000 [Lo]		39	B	0241	/	☒	CTR
XU 1232		40	H	[1532]	/		Store and Print Number of Data Words Increment Storage Loc.
;000 [Lo + 25]		41	XR	1056	/		Integer
XU1249		42	XU	1000	/		Printout
;000 [Lo + 35]		43	XB	1240	/	☒	
XU1259		44	A	0242	/	1 @ 29	
;000 [Lo + 112]		45	XU	1233	/		
XT1239		46	XB	1211	/		Temp. Storage
;000 [Lo + 124]		47	Y	0123	/	☒	Test Sequential Loading
XU1255		48	U	0026	/		
		49	XH	1211	/		Temp. Storage
		50	XE	1237	/		
		51	XS	1237	/	☒	
		52	XT	1246	/		
		53	XB	1211	/		Temp. Storage
		54	U	0026	/		
		55	B	0241	/	☒	CTR
		56	A	0242	/	1 @ 29	Counter Incremented for Data Word
		57	C	0241	/		CTR
		58	U	0256	/		
		59	B	0123	/	☒	Store Lo
		60	XY	1563	/		and q
		61	B	0130	/		of
		62	XC	1562	/		Data @ 29
		63	U	0037	/	☒	

☒ CARRIAGE RETURN

/ = CONDITIONAL STOP CODE

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