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PROGRAM LIBRARY

DECUS NO.	8-791
TITLE	DELAY
AUTHOR	J. Victor Nahigian
COMPANY	39 Beaver Road Weston, Massachusetts 02193
DATE	October 20, 1975
SOURCE LANGUAGE	4K PAL III

ATTENTION

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GENERAL INFORMATION

Object Computer(s) PDP-8 Source Computer (if different) _____
File Name DELAY Version No. 1
Title _____
Author J. Victor Nahigian
Submitter (if other than author) _____
Affiliation _____
Address 39 Beaver Road
Weston, Massachusetts 02193 Country USA
Monitor/Operating System None DEC No. _____
Core Storage Required 4K storage 0100-1100 Starting Address 0200
Peripherals Required 4K Storage, ASR33 teletype, PDP-8 computer
Other Software Required None DEC or DECUS No. _____
Source Language 4K PAL III Category Duplicating; Utility
Restrictions, Deficiencies, Problems Can't be used on high-speed reader/punch
Date of Planned or Possible Future Revisions No planned revisions

TAPES AVAILABLE

Paper Tapes Object Binary Object ASCII Source Other _____
DECtape LINCtape Format _____ Magtape: 7 Track 9 Track BPI _____
Object Files Source Files Documentation Files Other _____

ABSTRACT

See page 1 of write-up

DELAY

DECUS Program Library Write-up

DECUS NO. 8-791

Introduction:

When entering a tape via the low speed reader in 8K Basic or 8K Focal, characters are occasionally dropped. To avoid this null characters must be inserted after each line in order to allow the computer to catch up.

Storage:

The program takes up locations 0100-0344. There is temporary storage in locations 1000-1100.

Loading Procedures:

Use Binary Loader.

Starting Procedures:

LOAD/START 0200

After putting on the punch, hit return, then start reader after the leader has been typed out. The program will type out the program as entered except that 7 null characters will be inserted after each linefeed.

The program will insert a leader at the beginning only. To insert a leader at the end of your tape, hit the "Here Is" button two or three times and then hit the "Linefeed" button.

Hardware Needed:

A 4K PDP8 computer with ASR-33 Teletype.

Restrictions:

Cannot use High Speed Punch or Reader.

/WRITTEN BY J. VICTOR NAHIGIAN ON OCT. 20, 1975
 /THIS PROGRAM WAS WRITTEN BECAUSE WHEN
 /READING A TAPE FROM THE LOW SPEED READER
 /IN 8K BASIC, IT MAY DROP A CHARACTER.
 /THIS CAN BE AVOIDED BY INSERTING NULL CHARACTERS
 /AFTER A LINEFEED. TO USE, LOAD IN TAPE
 /PUT ON PUNCH, AND START READER.

*100 /LETTERS FOR INTRO

Ø100	Ø215	215	/RET
Ø101	Ø212	212	/LIN
Ø102	Ø314	314	/L
Ø103	Ø317	317	/O
Ø104	Ø301	301	/A
Ø105	Ø304	304	/D
Ø106	Ø240	240	/SPACE
Ø107	Ø324	324	/T
Ø110	Ø301	301	/A
Ø111	Ø320	320	/P
Ø112	Ø305	305	/E
Ø113	Ø256	256	/.
Ø114	Ø240	240	/SPACE
Ø115	Ø240	240	/SPACE
Ø116	Ø320	320	/P
Ø117	Ø325	325	/U
Ø120	Ø324	324	/T
Ø121	Ø240	240	/SPACE
Ø122	Ø317	317	/O
Ø123	Ø316	316	/N
Ø124	Ø240	240	/SPACE
Ø125	Ø320	320	/P
Ø126	Ø325	325	/U
Ø127	Ø316	316	/N
Ø130	Ø303	303	/C
Ø131	Ø310	310	/H
Ø132	Ø256	256	/.
Ø133	Ø215	215	/RET
Ø134	Ø212	212	/LIN
Ø135	Ø310	310	/H
Ø136	Ø311	311	/I
Ø137	Ø324	324	/T
Ø140	Ø240	240	/SPACE
Ø141	Ø322	322	/R
Ø142	Ø305	305	/E
Ø143	Ø324	324	/T
Ø144	Ø325	325	/U
Ø145	Ø322	322	/R
Ø146	Ø316	316	/N
Ø147	Ø240	240	/SPACE
Ø150	Ø327	327	/W
Ø151	Ø310	310	/H
Ø152	Ø305	305	/E
Ø153	Ø316	316	/N

0154	0240	240	/SPACE
0155	0322	322	/R
0156	0305	305	/E
0157	0301	301	/A
0160	0304	304	/D
0161	0331	331	/Y
0162	0215	215	/RET
0163	0212	212	/LIN
0164	0212	212	/LIN
0165	0000	000	/STOP PRINTOUT

*200 /PRINTS OUT MESSAGE

0200	7300	INTRO,	CLA CLL
0201	6046		TL5
0202	1731		TAD I COUNT
0203	4324		JMS PRN
0204	7450		SNA
0205	5213		JMP READY
0206	7300		CLA CLL
0207	1331		TAD COUNT
0210	1343		TAD DIGIT
0211	3331		DCA COUNT
0212	5200		JMP INTRO

0213	7300	READY,	CLA CLL
0214	1332		TAD RECOU
0215	3331		DCA COUNT
0216	6031		KSF
0217	5216		JMP .-1
0220	5221		JMP LEADER

/PRINTS OUT 32 BLANKS

0221	7300	LEADER,	CLA CLL
0222	6046		TL5
0223	4324		JMS PRN
0224	7300		CLA CLL
0225	1333		TAD TWEN
0226	7450		SNA
0227	5233		JMP CLE
0230	1344		TAD ONER
0231	3333		DCA TWEN
0232	5221		JMP LEADER

0233	7300	CLE,	CLA CLL
0234	1334		TAD RETWEN
0235	3333		DCA TWEN
0236	5237		JMP START

0237	7300	START,	CLA CLL	/ACCEPTS A LINE
0240	6031		KSF	
0241	5240		JMP .-1	
0242	6036		KRB	
0243	3336		DCA STORE	
0244	1336		TAD STORE	
0245	3737		DCA I POIN	
0246	1337		TAD POIN	
0247	1343		TAD DIGIT	
0250	3337		DCA POIN	
0251	7300		CLA CLL	

0252	1336		TAD STORE	
0253	1335		TAD LIN	
0254	7440		SZA	
0255	5237		JMP START	
0256	4315		JMS CLEAR	
0257	5260		JMP TYPER	
0260	7300	TYPER,	CLA CLL	/PRINTS 7 BLANKS
0261	6046		TLS	
0262	4324		JMS PRN	
0263	7300		CLA CLL	
0264	1341		TAD SEVEN	
0265	1344		TAD ONER	
0266	7450		SNA	
0267	5275		JMP TYE	
0270	7300		CLA CLL	
0271	1341		TAD SEVEN	
0272	1344		TAD ONER	
0273	3341		DCA SEVEN	
0274	5260		JMP TYPER	
0275	7300	TYE,	CLA CLL	/PRINTS OUT LINE READ IN.
0276	6046		TLS	
0277	1737		TAD I POIN	
0300	4324		JMS PRN	
0301	7300		CLA CLL	
0302	1737		TAD I POIN	
0303	1335		TAD LIN	
0304	7450		SNA	
0305	5313		JMP CLAR	
0306	7300		CLA CLL	
0307	1337		TAD POIN	
0310	1343		TAD DIGIT	
0311	3337		DCA POIN	
0312	5275		JMP TYE	
0313	4315	CLAR,	JMS CLEAR	/RESET ALL VARIABLES
0314	5237		JMP START	/GET NEXT LINE FROM TAPE
0315	0000	CLEAR,	Ø	
0316	7300		CLA CLL	
0317	1340		TAD PO	
0320	3337		DCA POIN	
0321	1342		TAD SE	
0322	3341		DCA SEVEN	
0323	5715		JMP I CLEAR	
0324	0000	PRN,	Ø	
0325	6041		TSF	
0326	5325		JMP .71	
0327	6046		TLS	
0330	5724		JMP I PRN	

0331	0100	COUNT,	100
0332	0100	RECOU,	100
0333	0040	TWEN,	40
0334	0040	RETWEN,	40
0335	7566	LIN,	-212
0336	0000	STORE,	0
0337	1000	POIN,	1000
0340	1000	PO,	1000
0341	0007	SEVEN,	7
0342	0007	SE,	7
0343	0001	DIGIT,	1
0344	7777	ONER,	-1

CLAR	0313
CLE	0233
CLEAR	0315
COUNT	0331
DIGIT	0343
INTRO	0200
LEADER	0221
LIN	0335
ONER	0344
PO	0340
POIN	0337
PRN	0324
READY	0213
RECOU	0332
RETWEN	0334
SE	0342
SEVEN	0341
START	0237
STORE	0336
TWEN	0333
TYE	0275
TYPER	0260