

\* \* \* SETLB NEWSLETTER 89 - NOVEMBER 8, 1972 \* \* \*  
\* \* \* USER INFORMATION FOR THE LEXICAL SCANNER SETUP \* \* \*  
REVISION 1, JANUARY 16, 1973

THE LEXICAL SCANNER SETUP PROGRAM IS CURRENTLY AVAILABLE ON THE PERMANENT FILE #LEXSCANSETUP# THIS PROGRAM WILL SET UP A LEXICAL SCANNER AND THE REQUIRED TABLES GIVEN THE FOLLOWING INFORMATION ON INPUT.

1. A STRING OF VALID CHARACTERS ENCLOSED IN QUOTES (#), EACH CHARACTER SHOULD APPEAR ONLY ONCE.

#ABCDEFGHIJKLMNPOQRSTUVWXYZ0123456789=,\$.-/\* #

2. THE SET OF ALL TYPE NAMES ENCLOSED IN < AND >. IN ADDITION EACH NAME MUST BE ENCLOSED IN QUOTES. MOREOVER, A TYPE NAME MUST BE SPECIFIED FOR THE INTERNALLY GENERATED CHARACTER #ER#.

<#ALPHA# #NUMERIC# #BLANK# #SPECIAL# #EOR#>

3. A ONE TO ONE CORRESPONDENCE OF THE CHARACTERS (1) AND THEIR TYPES (2) ENCLOSED IN ≤ AND ≥ WITH EACH CORRESPONDENCE ENCLOSED IN < AND >.

≤<#ALPHA# <#ABCDEFGHIJKLMNPOQRSTUVWXYZ#>> <#EOR# <#ER#>>)>

4. THE SCANNER STATES AND CORRESPONDING ACTIONS ALL ENCLOSED IN ≤ AND ≥. IN ADDITION, EACH STATE IS ENCLOSED IN < AND > AND EACH MULTIPLE WORD ACTION IS ENCLOSED IN AN ADDITIONAL SET OF < AND >, THE STATE #NXT# MUST BE DEFINED.

≤<#NXT# <<#GC# #NAME#> #SKIP# <#DO# #HOLD# #4#CONT#>> , . , ≥

5. THE ACTIONS CALLED FOR IN 4 ABOVE IN EACH #DO# #ACTION#

STATEMENT ALL MUST BE ENCLOSED IN ≤ AND ≥. IN ADDITION,  
EACH ACTION MUST BE ENCLOSED IN < AND > AND EACH INSTRUCTION  
MUST BE FOLLOWED BY A SEMICOLON (;). NOTE THAT ~ REPRESENTS  
A QUOTE.

≤<~BACKONE~ ~SCANT=SCANT + 1; STATE = ~~IR~~~> . . . ≥

6. THE FOLLOWING TWO CARDS MUST PRECEDE EACH INPUT SET:

INPUT = INFILE;

PRINT (SETUP(0));

\* \* \* A SAMPLE JOB INPUT FOLLOWS \* \* \*

A123456,T30,CM240000. NAME

ATTACH(BALM4,BALMTRANS)

ATTACH(BLM4SVD,LEXSCANSETUP)

BALM4.

\* \* \* E-O-R \* \* \*

INFILE=INPUT;

PRINT (SETUP(0));

~ABCDEFGHijklmnopqrstuvwxyz 0123456789~

<~A~ ~0~ ~BL~>

≤<~A~ <~ABCDEFGHijklmnopqrstvwxyz~>>

<~0~ <~0123456789~>> <~BL~ <~ ~>>≥

≤<~NXT~ <<~GC~ ~NAME~> <~GO~ ~NUM~> ~SKIP~>>

<~NAME~ <~CONT~ <~DO~ ~ZEROC~ ~CONT~> ~ENDC~>>

<~NUM~ <~END~ ~CONT~ ~END~>>≥

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S<#ZERO# #NN=NN+1;ACTION=IF CSTRING(NN) NE. 0 THEN  
~~CONT~~ ELSE ~~END~~;>>  
* * * E-O-F * * *
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