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=====CONVERT
PROGRAM CONVERT
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VERSION 75-1 (APRIL 1975) CONVERT
VERSION 78-1 (JANUARY 1978) CONVERT
VERSION 80-1 (AUGUST 1980) IBM VERSION CONVERT
VERSION 80-2 (DECEMBER 1980) CONVERT
VERSION 82-1 (JANUARY 1982) CONVERT
VERSION 83-1 (JANUARY 1983) CONVERT
VERSION 86-1 (JANUARY 1986) *NEW PROGRAM CONVERT
                                *FORTRAN-77/H VERSION CONVERT
                                *MULTIPLE INPUT OPTIONS CONVERT
VERSION 88-1 (AUGUST 1988) *OPTION...INTERNALLY DEFINE ALL I/O CONVERT
                                FILE NAMES (SEE, SUBROUTINE FILEIO CONVERT
                                FOR DETAILS). CONVERT
                                *IMPROVED BASED ON USER COMMENTS. CONVERT
                                *ADDED NAMES OPTION TO TURN ON/OFF CONVERT
                                STANDARD FILE NAMES. CONVERT
                                *ADDED REWIND OPTION TO TURN ON/OFF CONVERT
                                REWIND AT START OF PROGRAMS. CONVERT
                                *DELETED HARWELL AND JAERI OPTIONS CONVERT
                                (PREVIOUSLY ONLY REQUIRED FOR GRAPHIC CONVERT
                                INTERFACE. NO LONGER REQUIRED). CONVERT
VERSION 89-1 (JANUARY 1989) *PSYCHOANALYZED BY PROGRAM FREUD TO CONVERT
                                INSURE PROGRAM WILL NOT DO ANYTHING CONVERT
                                CRAZY. CONVERT
                                *IMPROVED BASED ON USER COMMENTS. CONVERT
                                *ADDED LIVERMORE CIVIC COMPILER CONVERT
                                CONVENTIONS. CONVERT
                                *UPDATED TO USE NEW PROGRAM CONVERT CONVERT
                                KEYWORDS. CONVERT
                                *ADDED ENDFILE OPTION TO OPTIONALLY CONVERT
                                ALLOW END OF FILE TO BE WRITTEN CONVERT
VERSION 91-1 (JUNE 1991) *ADDED FORTRAN SAVE OPTION CONVERT
VERSION 92-1 (JANUARY 1992) *ADDED ACTION OPTION - TO CONTROL CONVERT
                                INTERACTIVE INPUT TO CODES CONVERT
                                *ADDED BLANK DELIMITED KEYWORD INPUT CONVERT
                                (REPLACES EARLIER FIXED FIELD INPUT) CONVERT
                                *WARNING...THE INPUT PARAMETER FORMAT CONVERT
                                HAS BEEN GENERALIZED - FOR DETAILS CONVERT
                                SEE BELOW. CONVERT
VERSION 94-1 (JANUARY 1994) *VARIABLE PROGRAM FILENAMES CONVERT
                                TO ALLOW ACCESS TO FILE STRUCTURES CONVERT
                                (WARNING - INPUT PARAMETER FORMAT CONVERT
                                HAS BEEN CHANGED) CONVERT
                                *CLOSE ALL FILES BEFORE TERMINATING CONVERT
                                (SEE, SUBROUTINE ENDIT) CONVERT
                                *ADDED KEYWORD CLOSE. CONVERT
VERSION 96-1 (JANUARY 1996) *COMPLETE RE-WRITE CONVERT
                                *IMPROVED COMPUTER INDEPENDENCE CONVERT
                                *ALL DOUBLE PRECISION CONVERT
                                *ON SCREEN OUTPUT CONVERT
VERSION 99-1 (MARCH 1999) *GENERAL IMPROVEMENTS BASED ON CONVERT
                                USER FEEDBACK CONVERT
VERS. 2000-1 (FEBRUARY 2000) *GENERAL IMPROVEMENTS BASED ON CONVERT
                                USER FEEDBACK CONVERT
VERS. 2002-1 (MAY 2002) *OPTIONAL INPUT PARAMETERS CONVERT
VERS. 2004-1 (MARCH 2004) *GENERAL UPDATE CONVERT
VERS. 2007-1 (JAN. 2007) *GENERAL UPDATE CONVERT
VERS. 2007-2 (DEC. 2007) *72 CHARACTER FILE NAMES. CONVERT
VERS. 2010-1 (Apr. 2010) *General update based on user feedback CONVERT
VERS. 2012-1 (Aug. 2012) *Added CODENAME CONVERT
                                *32 and 64 bit Compatible CONVERT
                                *Added ERROR stop CONVERT
VERS. 2015-1 (Jan. 2015) *Replaced ALL 3 way IF Statements CONVERT
VERS. 2017-1 (May 2017) *Updated based on user feedback. CONVERT
VERS. 2018-1 (Jan. 2018) *Added on-line output for ALL ENDERROR CONVERT
VERS. 2020-1 (Feb. 2020) *Identical to 2018-1. CONVERT
VERS. 2021-1 (Jan 2021) *Updated for FORTRAN 2018 CONVERT
VERS. 2023-1 (Feb. 2023) *Identical to 2021-1 CONVERT

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C***** NAMES ***** ACTIVATE STANDARD FILENAMES CONVERT
 C***** REWIND ***** ACTIVATE REWIND FILES AT START OF PROGRAM CONVERT
 C***** ENDFILE ***** ACTIVATE ENDFILE AT END OF PROGRAM CONVERT
 C***** CIVIC ***** ACTIVATE LIVERMORE CIVIC COMPILER CONVENTIONS CONVERT
 C***** NOID ***** REMOVE LINE ID IN COLUMNS 73-80 (73-80=BLANK) CONVERT
 C***** SAVE ***** SAVE VARIABLES BETWEEN SUBROUTINE CALLS CONVERT
 C***** ACTION ***** ACTIVATE INTERACTIVE INPUT TO CODES CONVERT
 C***** CLOSE ***** ACTIVATE CLOSE ALL FILES BEFORE TERMINATING CONVERT

IF THE USER DOES NOT SELECT,
 (1) DOUBLE OR SINGLE - THE PROGRAM WILL ACTIVATE DOUBLE CONVERT
 (2) CHARACTER OR INTEGER - THE PROGRAM WILL ACTIVATE CHARACTER CONVERT
 (3) STOP OR EXIT - THE PROGRAM WILL ACTIVATE STOP CONVERT

IF THE USER SELECTS,
 (1) DOUBLE AND SINGLE - THE PROGRAM WILL ACTIVATE DOUBLE CONVERT
 (2) CHARACTER AND INTEGER - THE PROGRAM WILL ACTIVATE CHARACTER CONVERT
 (3) STOP AND EXIT - THE PROGRAM WILL ACTIVATE STOP CONVERT

IF THE USER DOES NOT SELECT PROGRAM, NAMES, REWIND, ENDFILE, CIVIC, NOID, SAVE OR ACTION THESE OPTIONS WILL BE TURNED OFF. CONVERT
 CONVERT

WHERE CODING IS COMPUTER OR COMPILER DEPENDENT CODING WILL BE PRESENT FOR ALL POSSIBLE OPTIONS. THIS PROGRAM WILL ALLOW THE USER TO CONVERT PROGRAMS FOR USE WITH ANY COMBINATION OF OPTIONS. FOR EXAMPLES OF HOW THIS CONVENTION IS USED SEE THE LISTING OF THIS PROGRAM AND THE COMMENTS BELOW ON COMPUTER DEPENDENT CODING. CONVERT
 CONVERT
 CONVERT
 CONVERT
 CONVERT
 CONVERT

INPUT LINES

 LINE COLS. DESCRIPTION CONVERT

 1 1-72 BLANK DELIMITED KEYWORDS CONVERT
 2 1-60 ENDF/B INPUT DATA FILENAME CONVERT
 (STANDARD OPTION = ENDFB.IN) CONVERT
 3 1-60 ENDF/B OUTPUT DATA FILENAME CONVERT
 (STANDARD OPTION = ENDFB.OUT) CONVERT

*THE FIRST INPUT LINE IS 72 CHARACTERS. CONVERT
 *KEYWORDS MAY BE LOCATED ANYWHERE WITHIN THESE 72 CHARACTERS CONVERT
 *THERE MAY BE ANY NUMBER OF KEYWORDS INPUT CONVERT
 *EACH KEYWORD MUST BE BLANK DELIMITED, E.G., DOUBLE CHARACTER IS LEGAL INPUT - DOUBLE CHARACTER IS NOT LEGAL INPUT. CONVERT
 *THERE MUST BE ONE OR MORE BLANKS BETWEEN KEYWORDS CONVERT

*NOTE, THIS NEW INPUT PARAMETER FORMAT (VERSION 92-1) IS COMPLETELY COMPATIBLE WITH THE OLDER FIXED FIELD FORMAT. SO THAT IF YOU HAVE INPUT THAT YOU HAVE USED IN THE PAST YOU CAN CONTINUE TO USE IT. CONVERT
 CONVERT

LEGAL KEYWORDS INCLUDE,

DOUBLE ACTIVATE DOUBLE PRECISION (DEFAULT) CONVERT
 SINGLE ACTIVATE SINGLE PRECISION CONVERT
 CHARACTER TREAT CHARACTER ARRAYS AS CHARACTERS (DEFAULT) CONVERT
 INTEGER TREAT CHARACTER ARRAYS AS INTEGERS CONVERT
 PROGRAM ACTIVATE PROGRAM LINE AND CONTINUATIONS CONVERT
 NAMES ACTIVATE STANDARD FILENAMES CONVERT
 REWIND ACTIVATE REWIND FILES AT START OF PROGRAM CONVERT
 ENDFILE ACTIVATE ENDFILE AT END OF PROGRAM CONVERT
 CIVIC ACTIVATE LIVERMORE CIVIC COMPILER CONVENTIONS CONVERT
 NOID REMOVE LINE ID IN COLUMNS 73-80 (73-80=BLANK) CONVERT
 SAVE SAVE VARIABLES BETWEEN SUBROUTINE CALLS CONVERT
 ACTION ACTIVATE INTERACTIVE INPUT FOR CODES CONVERT
 CLOSE ACTIVATE CLOSE ALL FILES BEFORE TERMINATING CONVERT

EXAMPLE INPUT NO. 1

 TO USE A PROGRAM IN SINGLE PRECISION, USE THE STANDARD FILE NAMES, REWIND ALL UNITS AT THE START OF THE PROGRAM AND TREAT CHARACTER ARRAYS AS CHARACTER (FORTRAN-77 CONVENTION). CONVERT
 CONVERT

READ \PREPRO93\RECENT\RECENT.OLD AND	CONVERT
WRITE \PREPRO93\RECENT\RECENT.NEW	CONVERT
THE FOLLOWING 3 INPUT LINES ARE REQUIRED,	CONVERT
SINGLE NAMES REWIND CHARACTER	CONVERT
\PREPRO93\RECENT\RECENT.OLD	CONVERT
\PREPRO93\RECENT\RECENT.NEW	CONVERT
NOTE, SINCE CHARACTER IS THE STANDARD OPTION THE KEYWORD CHARACTER	CONVERT
NEED NOT APPEAR ON THE ABOVE INPUT LINE.	CONVERT
EXAMPLE INPUT NO. 2	CONVERT
-----	CONVERT
TO USE A PROGRAM IN DOUBLE PRECISION AND TREAT ALL CHARACTER	CONVERT
ARRAYS AS INTEGER (FORTRAN-H CONVENTION).	CONVERT
USE THE STANDARD FILENAMES TO READ = CONVERT.IN AND WRITE =	CONVERT
CONVERT.OUT (THIS CAN BE DONE BY LEAVING THE SECOND AND THIRD	CONVERT
INPUT LINES BLANK).	CONVERT
THE FOLLOWING 3 INPUT LINES ARE REQUIRED,	CONVERT
DOUBLE INTEGER	CONVERT
(NOTE, THIS IS A BLANK LINE)	CONVERT
(NOTE, THIS IS A BLANK LINE)	CONVERT
NOTE, SINCE DOUBLE IS THE STANDARD OPTION THE KEYWORD DOUBLE	CONVERT
NEED NOT APPEAR ON THE ABOVE INPUT LINE.	CONVERT
EXAMPLE INPUT NO. 3	CONVERT
-----	CONVERT
TO ACTIVATE THE PROGRAM LINE, USE DOUBLE PRECISION AND TREAT ALL	CONVERT
CHARACTER ARRAYS AS CHARACTER.	CONVERT
READ \PREPRO93\RECENT\RECENT.OLD AND	CONVERT
WRITE THE STANDARD FILENAME = CONVERT.OUT (LEAVE THE THIRD INPUT	CONVERT
LINE BLANK).	CONVERT
THE FOLLOWING 3 INPUT LINES ARE REQUIRED,	CONVERT
PROGRAM	CONVERT
\PREPRO93\RECENT\RECENT.OLD	CONVERT
(NOTE, THIS IS A BLANK LINE)	CONVERT
NOTE, SINCE DOUBLE, CHARACTER AND EXIT ARE THE STANDARD OPTIONS	CONVERT
THEY NEED NOT APPEAR ON THE ABOVE INPUT LINE AND IN THIS EXAMPLE	CONVERT
HAVE BEEN OMITTED.	CONVERT
WARNING	CONVERT
-----	CONVERT
(1) THE PROGRAM WILL ALWAYS ACTIVATE DOUBLE OR SINGLE, CHARACTER	CONVERT
OR INTEGER (AS DESCRIBED ABOVE).	CONVERT
(2) CODING IN THE PROGRAM FOR ANY KEYWORDS THAT ARE NOT ACTIVATED	CONVERT
WILL BE CONVERTED TO COMMENT LINES AND AS SUCH WILL EFFECTIVELY	CONVERT
DISAPPEAR FROM THE PROGRAM. THEREFORE IF THE KEYWORDS PROGRAM,	CONVERT
NAMES, REWIND, ENDFILE, CIVIC OR NOID ARE NOT INPUT BY THE USER	CONVERT
THESE OPTIONS WILL BE TURNED OFF AND ANY CODING USING THESE	CONVERT
KEYWORDS WILL EFFECTIVELY DISAPPEAR FROM THE PROGRAM.	CONVERT
(3) THE SERIES OF CODES THAT ARE DESIGNED TO BE AUTOMATICALLY	CONVERT
TRANSLATED BY THIS PROGRAM REQUIRE THAT ALL CALCULATIONS BE	CONVERT
PERFORMED IN DOUBLE PRECISION ON SHORT WORD LENGTH COMPUTERS	CONVERT
(E.G., IBM COMPUTERS). THIS PROGRAM WILL ALLOW YOU TO SPECIFY	CONVERT
EITHER DOUBLE OR SINGLE PRECISION. HOWEVER, IF YOU SPECIFY	CONVERT
SINGLE PRECISION THIS PROGRAM WILL PRINT A WARNING MESSAGE THAT	CONVERT
THE CONVERTED PROGRAM SHOULD ONLY BE USED ON LONG WORD LENGTH	CONVERT
COMPUTERS (E.G., CDC COMPUTERS).	CONVERT

PROGRAM OPERATION	CONVERT
-----	CONVERT
THE PROGRAM WILL SEARCH FOR COMMENT LINES THAT START WITH C**	CONVERT
IN COLUMNS 1-3 FOLLOWED BY ANY ONE OF THE ALLOWED KEYWORDS	CONVERT
IF THE KEYWORD IS THE SAME AS ONE OF THE KEYWORDS INPUT BY	CONVERT
THE USER ALL LINES UP TO THE NEXT LINE WITH C** IN COLUMNS 1-3	CONVERT
FOLLOWED BY THE SAME KEYWORD WILL BE SET ACTIVE BY SETTING COLUMN	CONVERT
1 TO BLANK. IF THE KEYWORDS DIFFERS FROM THAT INPUT BY THE USER	CONVERT
ALL LINES UP TO THE NEXT LINE WITH C** IN COLUMNS 1-3 FOLLOWED BY	CONVERT
THE SAME KEYWORD WILL BE SET INACTIVE BY SETTING COLUMN 1 TO C.	CONVERT
KEYWORDS MAY NOT BE NESTED (I.E., THIS PROGRAM WILL ONLY OPERATE	CONVERT
PROPERLY IF KEYWORDS APPEAR IN PAIRS. ONCE A LINE IS FOUND THAT	CONVERT
CONTAINS A KEYWORD, THE NEXT LINE THAT CONTAINS A KEYWORD MUST	CONVERT
CONTAIN THE SAME KEYWORD).	CONVERT
PROGRAM LINE	CONVERT
-----	CONVERT
THE FORTRAN FILE MAY START WITH A PROGRAM LINE AND CONTINUATIONS.	CONVERT
FOR USE ON CDC-7600 OR CRAY-1 COMPUTERS THIS PROGRAM CAN ACTIVATE	CONVERT
THE PROGRAM LINE AND CONTINUATION LINES. FOR USE ON OTHER TYPES OF	CONVERT
COMPUTERS THIS PROGRAM WILL AUTOMATICALLY DE-ACTIVATE THE PROGRAM	CONVERT
LINE AND CONTINUATION LINES. THIS CONVENTIONS HAS BEEN INTRODUCED	CONVERT
BECAUSE SOME CDC-7600 COMPILERS CONSIDER IT AN ERROR IF THE FIRST	CONVERT
LINE IS NOT A PROGRAM LINE. PRECEEDING COMMENT LINES ARE NOT	CONVERT
ALLOWED. THEREFORE THE NORMAL CONVENTION, DESCRIBED ABOVE, OF	CONVERT
USING PRECEDING AND FOLLOWING COMMENT LINES, CANNOT BE USED AT	CONVERT
THE BEGINNING OF THE PROGRAM.	CONVERT
COMMENT LINES	CONVERT
-----	CONVERT
COMMENT LINES MAY APPEAR ON LINES BETWEEN PAIRS OF KEYWORD LINES	CONVERT
ONLY IF THE COMMENT LINES CONTAINS C-- IN COLUMNS 1-3. ANY LINE	CONVERT
THAT CONTAINS ANYTHING ELSE IN COLUMNS 1-3 MAY BE ACTIVATED	CONVERT
BY THIS PROGRAM BY SETTING COLUMN 1 BLANK AND CAN LEAD TO ERRORS	CONVERT
DURING COMPILATION AND/OR EXECUTION.	CONVERT
INPUT FILES	CONVERT
-----	CONVERT
UNIT DESCRIPTION	CONVERT
----	CONVERT
2 INPUT LINE (BCD - 80 CHARACTERS/RECORD)	CONVERT
10 ORIGINAL PROGRAM (BCD - 80 CHARACTERS/RECORD)	CONVERT
OUTPUT FILES	CONVERT
-----	CONVERT
UNIT DESCRIPTION	CONVERT
----	CONVERT
3 OUTPUT REPORT (BCD - 120 CHARACTERS/RECORD)	CONVERT
11 RE-FORMATTED PROGRAM (BCD - 80 CHARACTERS/RECORD)	CONVERT
OPTIONAL STANDARD FILE NAMES (SEE SUBROUTINE FILIO1 AND FILIO2)	CONVERT
-----	CONVERT
UNIT FILE NAME	CONVERT
----	CONVERT
2 CONVERT.INP	CONVERT
3 CONVERT.LST	CONVERT
10 CONVERT.IN	CONVERT
11 CONVERT.OUT	CONVERT
=====	CONVERT