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Convert

PROGRAM CONVERT 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

Convert

OWNED, MAINTAINED AND DISTRIBUTED BY Convert

------------------------------------ Convert

THE NUCLEAR DATA SECTION Convert

INTERNATIONAL ATOMIC ENERGY AGENCY Convert

P.O. BOX 100 Convert

A-1400, VIENNA, AUSTRIA Convert

EUROPE Convert

Convert

ORIGINALLY WRITTEN BY Convert

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Dermott E. Cullen Convert

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PRESENT CONTACT INFORMATION Convert

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Convert

AUTHORS MESSAGE Convert

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THE COMMENTS BELOW SHOULD BE CONSIDERED THE LATEST DOCUMENATION Convert

FOR THIS PROGRAM INCLUDING ALL RECENT IMPROVEMENTS. PLEASE READ Convert

ALL OF THESE COMMENTS BEFORE IMPLEMENTATION, PARTICULARLY THE Convert

COMMENTS CONCERNING COMPUTER DEPENDENT CODING. Convert

Convert

AT THE PRESENT TIME WE ARE ATTEMPTING TO DEVELOP A SET OF COMPUTER Convert

INDEPENDENT PROGRAMS THAT CAN EASILY BE IMPLEMENTED ON ANY ONE Convert

OF A WIDE VARIETY OF COMPUTERS. IN ORDER TO ASSIST IN THIS PROJECT Convert

IT WOULD BE APPECIATED IF YOU WOULD NOTIFY THE AUTHOR OF ANY Convert

COMPILER DIAGNOSTICS, OPERATING PROBLEMS OR SUGGESTIONS ON HOW TO Convert

IMPROVE THIS PROGRAM. IN PARTICULAR IF YOUR FORTRAN COMPILER, OR Convert

COMPUTER HAS A SET OF REQUIREMENTS THAT ARE DIFFERENT FROM THOSE Convert

OF CDC, CRAY OR IBM PLEASE NOTIFY THE AUTHOR AND THIS PROGRAM WILL Convert

BE MODIFIED TO CONSIDER YOUR COMPUTER SEPERATELY. HOWEVER, IN Convert

ORDER TO PREVENT A PROLIFERATION OF CODING IT IS IMPERATIVE THAT Convert

YOU IDENTIFY EXACTLY HOW YOUR FORTRAN COMPILER OR COMPUTER DIFFERS Convert

FROM THOSE ALREADY CONSIDERED BY THIS PROGRAM. HOPEFULLY,IN THIS Convert

WAY FUTURE VERSIONS OF THIS PROGRAM WILL BE COMPLETELY COMPATIBLE Convert

FOR USE ON YOUR COMPUTER. Convert

Convert

PURPOSE Convert

------- Convert

THIS PROGRAM IS DESIGNED TO AUTOMATICALLY CONVERT FORTRAN PROGRAMS Convert

FOR USE ON ANY ONE OF A VARIETY OF, Convert

(1) COMPUTERS Convert

(2) COMPILERS Convert

(3) PRECISIONS (SINGLE OR DOUBLE PRECISION) Convert

(4) INSTALLATIONS Convert

(5) STANDARD OR NON-STANDARD FILE NAMES Convert

Convert

FORTRAN CODING CONVENTIONS Convert

-------------------------- Convert

THIS PROGRAM MAY BE USED TO CONVERT ANY PROGRAM WHICH USES THE Convert

FOLLOWING CONVENTIONS. Convert

Convert

ALL FORTRAN STATEMENTS THAT DEPEND ON ANY COMBINATION OF COMPUTER, Convert

COMPILER, PRECISION AND/OR INSTALLATION AND STANDARD FILE NAMES Convert

SHOULD BE PRECEDED AND FOLLOWED BY A COMMENT LINE THAT CONTAINS, Convert

Convert

C\*\*\*\*\* DOUBLE \*\*\*\*\*\* ACTIVATE DOUBLE PRECISION (DEFAULT) Convert

C\*\*\*\*\* SINGLE \*\*\*\*\*\* ACTIVATE SINGLE PRECISION Convert

C\*\*\*\*\* CHARACTER \*\*\* TREAT CHARACTER ARRAYS AS CHARACTERS(DEFAULT) Convert

C\*\*\*\*\* INTEGER \*\*\*\*\* TREAT CHARACTER ARRAYS AS INTEGERS Convert

C\*\*\*\*\* STOP \*\*\*\*\*\*\*\* ACTIVATE STOP TO TERMINATE PROGRAM Convert

C\*\*\*\*\* EXIT \*\*\*\*\*\*\*\* ACTIVATE EXIT TO TERMINATE PROGRAM Convert

C\*\*\*\*\* PROGRAM \*\*\*\*\* ACTIVATE PROGRAM LINE AND CONTINUATIONS Convert

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

Convert

IF THE USER DOES NOT SELECT, Convert

(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

Convert

IF THE USER SELECTS, Convert

(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

Convert

IF THE USER DOES NOT SELECT PROGRAM, NAMES, REWIND, ENDFILE, Convert

CIVIC, NOID, SAVE OR ACTION THESE OPTIONS WILL BE TURNED OFF. Convert

Convert

WHERE CODING IS COMPUTER OR COMPILER DEPENDENT CODING WILL BE Convert

PRESENT FOR ALL POSSIBLE OPTIONS. THIS PROGRAM WILL ALLOW THE Convert

THE USER TO CONVERT PROGRAMS FOR USE WITH ANY COMBINATION OF Convert

OPTIONS. FOR EXAMPLES OF HOW THIS CONVENTION IS USED SEE THE Convert

LISTING OF THIS PROGRAM AND THE COMMENTS BELOW ON COMPUTER Convert

DEPENDENT CODING. Convert

Convert

INPUT LINES Convert

----------- Convert

LINE COLS. DESCRIPTION Convert

---- ----- -------------------------------------- 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

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 Convert

IS LEGAL INPUT - DOUBLECHARACTER IS NOT LEGAL INPUT. Convert

\*THERE MUST BE ONE OR MORE BLANKS BETWEEN KEYWORDS Convert

Convert

\*NOTE, THIS NEW INPUT PARAMETER FORMAT (VERSION 92-1) IS COMPLETELY Convert

COMPATIBLE WITH THE OLDER FIXED FIELD FORMAT. SO THAT IF YOU HAVE Convert

INPUT THAT YOU HAVE USED IN THE PAST YOU CAN CONTINUE TO USE IT. Convert

Convert

LEGAL KEYWORDS INCLUDE, Convert

Convert

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

Convert

EXAMPLE INPUT NO. 1 Convert

------------------- Convert

TO USE A PROGRAM IN SINGLE PRECISION, USE THE STANDARD FILE NAMES, Convert

REWIND ALL UNITS AT THE START OF THE PROGRAM AND TREAT CHARACTER Convert

ARRAYS AS CHARACTER (FORTRAN-77 CONVENTION). Convert

Convert

READ \PREPRO93\RECENT\RECENT.OLD AND Convert

WRITE \PREPRO93\RECENT\RECENT.NEW Convert

Convert

THE FOLLOWING 3 INPUT LINES ARE REQUIRED, Convert

Convert

SINGLE NAMES REWIND CHARACTER Convert

\PREPRO93\RECENT\RECENT.OLD Convert

\PREPRO93\RECENT\RECENT.NEW Convert

Convert

NOTE, SINCE CHARACTER IS THE STANDARD OPTION THE KEYWORD CHARACTER Convert

NEED NOT APPEAR ON THE ABOVE INPUT LINE. Convert

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

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

Convert

THE FOLLOWING 3 INPUT LINES ARE REQUIRED, Convert

Convert

DOUBLE INTEGER Convert

(NOTE, THIS IS A BLANK LINE) Convert

(NOTE, THIS IS A BLANK LINE) Convert

Convert

NOTE, SINCE DOUBLE IS THE STANDARD OPTION THE KEYWORD DOUBLE Convert

NEED NOT APPEAR ON THE ABOVE INPUT LINE. Convert

Convert

EXAMPLE INPUT NO. 3 Convert

------------------- Convert

TO ACTIVATE THE PROGRAM LINE, USE DOUBLE PRECISION AND TREAT ALL Convert

CHARACTER ARRAYS AS CHARACTER. Convert

Convert

Convert

READ \PREPRO93\RECENT\RECENT.OLD AND Convert

WRITE THE STANDARD FILENAME = CONVERT.OUT (LEAVE THE THIRD INPUT Convert

LINE BLANK). Convert

Convert

THE FOLLOWING 3 INPUT LINES ARE REQUIRED, Convert

Convert

PROGRAM Convert

\PREPRO93\RECENT\RECENT.OLD Convert

(NOTE, THIS IS A BLANK LINE) Convert

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

Convert

WARNING Convert

------- Convert

(1) THE PROGRAM WILL ALWAYS ACTIVATE DOUBLE OR SINGLE, CHARACTER Convert

OR INTEGER (AS DESCRIBED ABOVE). Convert

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

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

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

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

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

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 COLUMS 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

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

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

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

======================================================================= Convert