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===== Dictin
PROGRAM DICTIN (Renamed from DICTION to eliminate conflict with
              UNIX diction command - 12/22/02) Dictin
===== Dictin
VERSION 81-1 (SEPTEMBER 1981) Dictin
VERSION 82-1 (JANUARY 1982) Dictin
VERSION 83-1 (JANUARY 1983) *KEEP ORIGINAL MOD. NUMBER Dictin
                          *NEW, MORE COMPATIBLE I/O UNITS. Dictin
VERSION 84-1 (SEPTEMBER 1984) *UPDATED TO HANDLE ENDF/B-VI FORMAT. Dictin
                          (PROGRAM WILL NOW WORK ON ALL Dictin
                          VERSIONS OF THE ENDF/B FORMAT). Dictin
VERSION 85-1 (AUGUST 1985) *FORTRAN-77/H VERSION Dictin
VERSION 86-1 (JANUARY 1986) *MAT ORDER CHECK. Dictin
                          *IF NO HOLLERITH SECTION COPY MAT. Dictin
VERSION 88-1 (JULY 1988) *OPTION..INTERNALLY DEFINE ALL I/O Dictin
                          FILE NAMES (SEE, SUBROUTINE FILEIO Dictin
                          FOR DETAILS). Dictin
                          *IMPROVED BASED ON USER COMMENTS. Dictin
VERSION 89-1 (JANUARY 1989) *PSYCHOANALYZED BY PROGRAM FREUD TO Dictin
                          INSURE PROGRAM WILL NOT DO ANYTHING Dictin
                          CRAZY. Dictin
                          *IMPROVED BASED ON USER COMMENTS. Dictin
                          *ADDED LIVERMORE CIVIC COMPILER Dictin
                          CONVENTIONS. Dictin
                          *UPDATED TO USE NEW PROGRAM CONVERT Dictin
                          KEYWORDS. Dictin
VERSION 92-1 (JANUARY 1992) *UPDATED BASED ON USER COMMENTS. Dictin
                          *UP TO 6000 SECTIONS PER TAPE. Dictin
                          *CHANGED DEFAULT MOD NUMBER FOR NEW Dictin
                          SECTIONS FROM 0 TO 1 Dictin
VERSION 94-1 (JANUARY 1994) *VARIABLE ENDF/B DATA FILENAMES Dictin
                          TO ALLOW ACCESS TO FILE STRUCTURES Dictin
                          (WARNING - INPUT PARAMETER FORMAT Dictin
                          HAS BEEN CHANGED) Dictin
                          *CLOSE ALL FILES BEFORE TERMINATING Dictin
                          (SEE, SUBROUTINE ENDIT) Dictin
                          *ADDED FORTRAN SAVE OPTION Dictin
VERSION 96-1 (JANUARY 1996) *COMPLETE RE-WRITE Dictin
                          *IMPROVED COMPUTER INDEPENDENCE Dictin
                          *ALL DOUBLE PRECISION Dictin
                          *ON SCREEN OUTPUT Dictin
                          *UNIFORM TREATMENT OF ENDF/B I/O Dictin
                          *IMPROVED OUTPUT PRECISION Dictin
VERSION 99-1 (MARCH 1999) *CORRECTED CHARACTER TO FLOATING Dictin
                          POINT READ FOR MORE DIGITS Dictin
                          *UPDATED TEST FOR ENDF/B FORMAT Dictin
                          VERSION BASED ON RECENT FORMAT CHANGE Dictin
                          *GENERAL IMPROVEMENTS BASED ON Dictin
                          USER FEEDBACK Dictin
VERS. 2000-1 (FEBRUARY 2000) *GENERAL IMPROVEMENTS BASED ON Dictin
                          USER FEEDBACK Dictin
VERS. 2002-1 (MAY 2002) *OPTIONAL INPUT PARAMETERS Dictin
                          *RENAMED dictin TO ELIMINATE CONFLICT Dictin
                          WITH UNIX diction COMMAND. Dictin
                          *ADDED DOCUMENTATION LINE TO COMMENTS. Dictin
VERS. 2004-1 (JAN. 2004) *GENERAL UPDATE BASED ON USER FEEDBACK Dictin
                          *UP TO 100,000 SECTIONS PER TAPE. Dictin
VERS. 2007-1 (JAN. 2007) *CHECKED AGAINST ALL ENDF/B-VII. Dictin
                          *UP TO 500,000 SECTIONS PER TAPE. Dictin
VERS. 2007-2 (DEC. 2007) *72 CHARACTER FILE NAMES. Dictin
VERS. 2010-1 (Apr. 2010) *General update based on user feedback Dictin
VERS. 2012-1 (Aug. 2012) *Added CODENAME Dictin
                          *32 and 64 bit Compatible Dictin
                          *Added ERROR stops Dictin
VERS. 2015-1 (Jan. 2015) *Corrected END = it was saying ERROR. Dictin
                          *Replaced ALL 3 way IF Statements. Dictin
VERS. 2015-2 (Mar. 2015) *Corrected Sequence Numbers Dictin
                          1) Restart at 1 for each MAT/MF/MT. Dictin
                          2) 99999 on section end, MT=0 Dictin
                          3) 0 on MF = 0 Dictin

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VERS. 2017-1 (May 2017)	*Updated based on user feedback.	Dictin
VERS. 2018-1 (Jan. 2018)	*Added on-line output for ALL ENDERROR	Dictin
2015-2 Acknowledgment		Dictin
=====		Dictin
I thank Jean-Christophe Sublet (UKAEA) for contributing MAC		Dictin
executables and Bojan Zefran (IJS, Slovenia) for contributing		Dictin
LINUX (32 or 64 bit) executables. And most of all I must thank		Dictin
Andrej Trkov (NDS, IAEA) for overseeing the entire PREPRO project		Dictin
at IAEA, Vienna. This was a truly International team who worked		Dictin
together to produce PREPRO 2015-2.		Dictin
		Dictin
OWNED, MAINTAINED AND DISTRIBUTED BY		Dictin
-----		Dictin
THE NUCLEAR DATA SECTION		Dictin
INTERNATIONAL ATOMIC ENERGY AGENCY		Dictin
P.O. BOX 100		Dictin
A-1400, VIENNA, AUSTRIA		Dictin
EUROPE		Dictin
		Dictin
ORIGINALLY WRITTEN BY		Dictin
-----		Dictin
Dermott E. Cullen		Dictin
		Dictin
PRESENT CONTACT INFORMATION		Dictin
-----		Dictin
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Website RedCullen1.net/HOMEPAGE.NEW		Dictin
		Dictin
AUTHORS MESSAGE		Dictin
-----		Dictin
THE COMMENTS BELOW SHOULD BE CONSIDERED THE LATEST DOCUMENTATION		Dictin
FOR THIS PROGRAM INCLUDING ALL RECENT IMPROVEMENTS. PLEASE READ		Dictin
ALL OF THESE COMMENTS BEFORE IMPLEMENTATION.		Dictin
		Dictin
AT THE PRESENT TIME WE ARE ATTEMPTING TO DEVELOP A SET OF COMPUTER		Dictin
INDEPENDENT PROGRAMS THAT CAN EASILY BE IMPLEMENTED ON ANY ONE		Dictin
OF A WIDE VARIETY OF COMPUTERS. IN ORDER TO ASSIST IN THIS PROJECT		Dictin
IT WOULD BE APPRECIATED IF YOU WOULD NOTIFY THE AUTHOR OF ANY		Dictin
COMPILER DIAGNOSTICS, OPERATING PROBLEMS OR SUGGESTIONS ON HOW TO		Dictin
IMPROVE THIS PROGRAM. HOPEFULLY, IN THIS WAY FUTURE VERSIONS OF		Dictin
THIS PROGRAM WILL BE COMPLETELY COMPATIBLE FOR USE ON YOUR		Dictin
COMPUTER.		Dictin
		Dictin
PURPOSE		Dictin
-----		Dictin
THIS PROGRAM IS DESIGNED TO CREATE A REACTION INDEX FOR EACH		Dictin
MATERIAL ON AN ENDF/B FORMATTED TAPE AND TO INSERT THIS REACTION		Dictin
INDEX IN FILE 1, SECTION 451 OF EACH MATERIAL.		Dictin
		Dictin
IN THE DESCRIPTION THAT FOLLOWS FOR SIMPLICITY THE ENDF/B		Dictin
TERMINOLOGY---ENDF/B TAPE---WILL BE USED. IN FACT THE ACTUAL		Dictin
MEDIUM MAY BE TAPE, CARDS, DISK, OR ANY OTHER MEDIUM.		Dictin
		Dictin
ENDF/B FORMAT		Dictin
-----		Dictin
THIS PROGRAM ONLY USES THE ENDF/B BCD OR CARD IMAGE FORMAT (AS		Dictin
OPPOSED TO THE BINARY FORMAT) AND CAN HANDLE DATA IN ANY VERSION		Dictin
OF THE ENDF/B FORMAT (I.E., ENDF/B-I, II, III, IV, V OR VI FORMAT).		Dictin
		Dictin
THIS PROGRAM WILL AUTOMATICALLY DETERMINE WHICH VERSION OF THE		Dictin
ENDF/B FORMAT EACH MAT IS IN AND WILL THEN PROPERLY REPLACE THE		Dictin
REACTION INDEX FOR EACH MAT. DIFFERENT MATS ON THE SAME TAPE MAY		Dictin
EVEN BE IN DIFFERENT VERSIONS OF THE ENDF/B FORMAT.		Dictin
		Dictin
IT IS ASSUMED THAT THE DATA IS CORRECTLY CODED IN THE ENDF/B		Dictin

