NAG Library Routine Document

E04WLF

Note: before using this routine, please read the Users' Note for your implementation to check the interpretation of **bold italicised** terms and other implementation-dependent details.

1   Purpose

E04WLF is used to get the value of a real optional parameter. E04WLF can be used before or after calling E04WDF.

2   Specification

```
SUBROUTINE E04WLF (STRING, RVALUE, IW, RW, IFAIL)

INTEGER           IW(*), IFAIL
REAL (KIND=nag_wp) RVALUE, RW(*)
CHARACTER(*)       STRING
```

3   Description

E04WLF obtains the current value of a real option. For example

```
CALL E04WLF ('LU Factor Tolerance', FACTOL, IW, RW, IFAIL)
```

will result in the value of the optional parameter **LU Factor Tolerance** being output in FACTOL.

A complete list of optional parameters, their abbreviations, synonyms and default values is given in Section 11 in E04WDF.

4   References

None.

5   Parameters

1:    STRING – CHARACTER(*)   *Input*

  On entry: a single valid keyword of a real optional parameter (as described in Section 11 in E04WDF).

2:    RVALUE – REAL (KIND=nag_wp)   *Output*

  On exit: the real value associated with the keyword in STRING.

3:    IW(∗) – INTEGER array   *Communication Array*

  Note: the dimension of the array IW must be at least LENIW (see E04WCF).

4:    RW(∗) – REAL (KIND=nag_wp) array   *Communication Array*

  Note: the dimension of the array RW must be at least LENRW (see E04WCF).

5:    IFAIL – INTEGER   *Input/Output*

  On entry: IFAIL must be set to 0, −1 or 1. If you are unfamiliar with this parameter you should refer to Section 3.3 in the Essential Introduction for details.

  For environments where it might be inappropriate to halt program execution when an error is detected, the value −1 or 1 is recommended. If the output of error messages is undesirable, then

the value 1 is recommended. Otherwise, if you are not familiar with this parameter, the recommended value is 0. **When the value −1 or 1 is used it is essential to test the value of IFAIL on exit.**

On exit: IFAIL = 0 unless the routine detects an error or a warning has been flagged (see Section 6).

6 Error Indicators and Warnings

If on entry IFAIL = 0 or −1, explanatory error messages are output on the current error message unit (as defined by X04AAF).

Errors or warnings detected by the routine:

IFAIL = 1

The initialization routine E04WCF has not been called.

IFAIL = 2

The supplied option is invalid. Check that the keywords are neither ambiguous nor misspelt.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

See Section 9 in E04WEF.

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