NAG Fortran Library Routine Document

X04BBF

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

X04BBF reads a single formatted record from an external file.

2 Specification

```
SUBROUTINE X04BBF(NIN, REC, IFAIL)
INTEGER           NIN, IFAIL
CHARACTER*(*)     REC
```

3 Description

X04BBF is used by NAG Fortran Library routines to read formatted records from an external file. All formatted input from an external file by NAG Fortran Library routines is performed by calls to X04BBF.

4 References

None.

5 Parameters

1: NIN – INTEGER *Input*

On entry: the Fortran unit number which identifies the file to be read from. If NIN < 0 (not a valid Fortran unit number), then no input occurs.

2: REC – CHARACTER*(*) *Output*

On exit: the first LEN(REC) characters of the record read from unit NIN, padded with trailing blanks if the record was shorter than LEN(REC).

3: IFAIL – INTEGER *Input/Output*

On entry: IFAIL must be set to 0, -1 or 1. Users who are unfamiliar with this parameter should refer to Chapter P01 for details.

On exit: IFAIL $= 0$ unless the routine detects an error (see Section 6).

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, for users 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.**

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 $= 1$

An end-of-file was detected by the READ statement.

System-dependent errors may also occur if the unit specified by NIN is not connected to an external file, or if a read error occurs.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

This example program simply illustrates how a formatted record is read from the NAG Fortran Library, by first reading it into the character-string REC, used as an internal file, by X04BBF and then reading the internal file.

9.1 Program Text

Note: the listing of the example program presented below uses ***bold italicised*** terms to denote precision-dependent details. Please read the Users' Note for your implementation to check the interpretation of these terms. As explained in the Essential Introduction to this manual, the results produced may not be identical for all implementations.

```
*     X04BBF Example Program Text
*     Mark 14 Revised.  NAG Copyright 1989.
*     .. Parameters ..
      INTEGER          NIN, NOUT
      PARAMETER        (NIN=5,NOUT=6)
*     .. Local Scalars ..
      real             X
      INTEGER          I, IFAIL
      CHARACTER*40     REC
*     .. External Subroutines ..
      EXTERNAL         X04BBF
*     .. Executable Statements ..
      WRITE (NOUT,*) 'X04BBF Example Program Results'
*     Skip heading in data file
      READ (NIN,*)
      WRITE (NOUT,*)
*
*     Read in values of I and X.
*
      CALL X04BBF(NIN,REC,IFAIL)
*
      READ (REC,99999) I, X
*
*     Write out I and X.
      WRITE (NOUT,99998) I, X
      STOP
*
99999 FORMAT (I3,F7.3)
99998 FORMAT (1X,I5,F11.3)
      END
```

9.2 Program Data

```
X04BBF Example Program Data
 20  2.996
```

9.3 Program Results

```
 X04BBF Example Program Results

    20      2.996
```