

NAG Library Routine Document

X04ADF

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

X04ADF closes a file associated with a given Fortran unit number.

2 Specification

```
SUBROUTINE X04ADF(IUNIT, IFAIL)
INTEGER          IUNIT, IFAIL
```

3 Description

X04ADF is especially useful if the calling language is not Fortran. It closes a file associated with a given Fortran unit number.

4 References

None.

5 Parameters

1: IUNIT – INTEGER *Input*

On entry: the Fortran unit number which identifies the file to be closed.

2: 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.

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, 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.**

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

Failure to close the file.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

This example program simply illustrates how to close a file once it has been opened for writing followed by how to close a file once it has been opened for reading.

9.1 Program Text

```
*      X04ADF Example Program Text
*      Mark 19 Release. NAG Copyright 1999.
*      .. Parameters ..
      INTEGER          NOUT
      PARAMETER        (NOUT=6)
      INTEGER          IOUNIT
      PARAMETER        (IOUNIT=4)
      CHARACTER*19      FNAME
      PARAMETER        (FNAME='x04adfe_success.res')
*      .. Local Scalars ..
      INTEGER          IFAIL
*      .. External Subroutines ..
      EXTERNAL          X04ACF, X04ADF
*      .. Executable Statements ..
      WRITE (NOUT,*) 'X04ADF Example Program Results'

*
*      Test successful open and close for write
*
      IFAIL = 1

      CALL X04ACF(IOUNIT,FNAME,1,IFAIL)

*
      IF (IFAIL.EQ.0) THEN
        WRITE (NOUT,99998)
        WRITE (IOUNIT,99998)
      ELSE
        WRITE (NOUT,99999) FNAME, IOUNIT
      END IF

*
      IFAIL = 1

      CALL X04ADF(IOUNIT,IFAIL)

*
      IF (IFAIL.EQ.0) THEN
        WRITE (NOUT,99997)
      ELSE
        WRITE (NOUT,99996) FNAME, IOUNIT
      END IF

*
*      Test successful open and close for read
*
      IFAIL = 1

      CALL X04ACF(IOUNIT,FNAME,0,IFAIL)

*
      IF (IFAIL.EQ.0) THEN
        WRITE (NOUT,99994)
      ELSE
        WRITE (NOUT,99995) FNAME, IOUNIT
      END IF

*
      IFAIL = 1

*
      CALL X04ADF(IOUNIT,IFAIL)

*
      IF (IFAIL.EQ.0) THEN
        WRITE (NOUT,99997)
```

```
        ELSE
            WRITE (NOUT,99996) FNAME, IOUNIT
        END IF
*
99999 FORMAT (' ** FAILS to open "',A,'" and connect file to channel ',
+           I2)
99998 FORMAT (' OK file successfully opened for writing')
99997 FORMAT (' OK file successfully closed')
99996 FORMAT (' ** FAILS to close "',A,'" on channel ',I2)
99995 FORMAT (' ** FAILS to open "',A,'" for reading on channel ',I2)
99994 FORMAT (' OK file successfully opened for reading')
        END
```

9.2 Program Data

None.

9.3 Program Results

```
X04ADF Example Program Results
OK file successfully opened for writing
OK file successfully closed
OK file successfully opened for reading
OK file successfully closed
```
