

NAG C Library Function Document

nag_error_name_to_code (x04ncc)

1 Purpose

nag_error_name_to_code (x04ncc) takes, as a string argument, the name of a NAG error (e.g., **NE_BAD_PARAM**) and returns, as an int, the corresponding fail code for the given NAG error, via the function name.

2 Specification

```
#include <nag.h>
#include <nagx04.h>

int nag_error_name_to_code (const char *error_name)
```

3 Description

nag_error_name_to_code (x04ncc) takes, as a string argument, the name of a NAG error (e.g., **NE_BAD_PARAM**) and returns, as an int, the corresponding **fail** code for the given NAG error. If the input string does not correspond to a NAG error name then the function returns -1 .

Converting the error name to int may be useful when the NAG Header Files are not available, but the int value of an error name is required, say, for checking **fail.code** following a call to a NAG function.

4 References

None.

5 Arguments

- 1: **error_name** – const char * *Input*
On entry: the value of a NAG enumeration member.

6 Error Indicators and Warnings

If the value -1 is returned then the input value is not recognized as a valid NAG fail code.

7 Accuracy

Not applicable.

8 Further Comments

None.

9 Example

The example program makes an incorrect call to a NAG function to produce a NAG error. The returned error code is then checked against the code returned by nag_error_name_to_code (x04ncc) using the expected error name.

9.1 Program Text

```

/* nag_error_value_to_name (x04ncc) Example Program.
 *
 * Copyright 2005 Numerical Algorithms Group.
 *
 * Mark 8, 2005.
 */

#include <stdio.h>
#include <nag.h>
#include <nag_stdlib.h>
#include <nag_string.h>
#include <nagx04.h>

int main(void)
{
    /* Scalars */
    Integer exit_status=0;
    int ierror;

    /* Pointers */
    const char *str_error;
    Vprintf("nag_error_name_to_code (x04ncc) Example Program Results\n\n");

    /* Print header. */
    Vprintf("    Error name      Value Returned Value\n");
    Vprintf("-----      -----\n");

    /* Convert the error strings to values and print. */

    str_error = "NE_BAD_PARAM";
    /* nag_error_name_to_code (x04ncc).
     * Converts NAG error name to its code value
     */
    ierror=nag_error_name_to_code(str_error);
    Vprintf("%-17s %5d %12d\n",str_error,NE_BAD_PARAM,ierror);

    str_error = "NE_INCOMPAT_PARAM";
    ierror=nag_error_name_to_code(str_error);
    Vprintf("%-17s %5d %12d\n",str_error,NE_INCOMPAT_PARAM,ierror);

    str_error = "NE_COMPLEX_ZERO";
    ierror=nag_error_name_to_code(str_error);
    Vprintf("%-17s %5d %12d\n",str_error,NE_COMPLEX_ZERO,ierror);

    str_error = "NE_NOT_MONOTONIC";
    ierror=nag_error_name_to_code(str_error);
    Vprintf("%-17s %5d %12d\n",str_error,NE_NOT_MONOTONIC,ierror);

    str_error = "NE_TOO_MANY_ITER";
    ierror=nag_error_name_to_code(str_error);
    Vprintf("%-17s %5d %12d\n",str_error,NE_TOO_MANY_ITER,ierror);

    str_error = "NE_SINGULAR";
    ierror=nag_error_name_to_code(str_error);
    Vprintf("%-17s %5d %12d\n",str_error,NE_SINGULAR,ierror);

    str_error = "NE_INITIALIZATION";
    ierror=nag_error_name_to_code(str_error);
    Vprintf("%-17s %5d %12d\n",str_error,NE_INITIALIZATION,ierror);

    return exit_status;
}

```

9.2 Program Data

None.

9.3 Program Results

nag_error_name_to_code (x04ncc) Example Program Results

Error name	Value	Returned Value
NE_BAD_PARAM	70	70
NE_INCOMPAT_PARAM	88	88
NE_COMPLEX_ZERO	133	133
NE_NOT_MONOTONIC	245	245
NE_TOO_MANY_ITER	357	357
NE_SINGULAR	366	366
NE_INITIALIZATION	2049	2049
