

# NAG Library Function Document

## nag\_create\_nan (x07bbc)

### 1 Purpose

nag\_create\_nan (x07bbc) creates a NaN (Not A Number).

### 2 Specification

```
#include <nag.h>
#include <nagx07.h>
void nag_create_nan (Integer quiet, double *x)
```

### 3 Description

nag\_create\_nan (x07bbc) sets **x** to be a quiet or a signalling NaN (Not A Number).

### 4 References

IEEE (2008) *Standard for Floating-Point Arithmetic IEEE Standard 754-2008* IEEE, New York.

### 5 Arguments

- 1: **quiet** – Integer *Input*  
*On entry:* determines whether a quiet or a signalling NaN is to be created. If **quiet** = 1, the returned NaN is quiet, otherwise it is signalling. See reference IEEE (2008) for the distinction between the two kinds.
- 2: **x** – double \* *Output*  
*On exit:* the required NaN value.

### 6 Error Indicators and Warnings

None.

### 7 Accuracy

Not applicable.

### 8 Parallelism and Performance

nag\_create\_nan (x07bbc) is not threaded in any implementation.

### 9 Further Comments

None.

### 10 Example

See Section 10 in nag\_is\_finite (x07aac).

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