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/*-----*
* File Name: ComputeFactorial.c                               *
* Creation: ER, 01/26/05                                     *
* Purpose: Programming Example                               *
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*                                                           *
* Modification Log:                                         *
*-----*/

#include <Origin.h>
#include <OC_nag8.h> // needed for nag_gamma function

////////////////////////////////////
// This example shows how to call a function from the NAG library to compute
// factorial.
//
// To view documentation on available NAG functions, look up the following section
// in the Programming Help File:
// Origin C Language Reference -> Global Functions -> NAG Functions
//
double compute_factorial(int n)
{
    // The NAG Gamma function returns (n-1)! when the argument n is an integer.
    // The function returns missing value if n is invalid (such as negative number)
    // or when n > 170.
    NagError fail;
    return nag_gamma(n + 1, &fail);
}
////////////////////////////////////

```