Recursive double factorial P61384_en

Write a recursive function that returns @n@!!.

Recall that $n!! = n \times (n-2) \times (n-4) \times \ldots$. For instance, $9!! = 9 \times 7 \times 5 \times 3 \times 1 = 945$ and $8!! = 8 \times 6 \times 4 \times 2 = 384$. By definition, $0!! = 1!! = 1$.

Interface

C++ `int double_factorial (int n);`
C `int double_factorial (int n);`
Java `public static int doubleFactorial (int n);`
Python `double_factorial (n) # returns int`
`double_factorial (n: int) -> int`

Precondition

Assume $0 \leq$ @n@ ≤ 19.

Observation

You only need to submit the required procedure; your main program will be ignored.

Problem information

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