1 **public long** fact(**int** n)

2 {

3 **long** nMinus1Factorial, nFact;

4 **if**(n == 0) **//return the definition of 0! (the base case)**

5 {

6 **return** 1;

7 }

8 **else //calculate (n-1)! and then n!**

9 {

10 nMinus1Factorial = fact(n-1); **//fact invokes itself on this line**

11 nFact = n \* nMinus1Factorial;

12 **return** nFact;

13 }

14 }

**Figure 9.4 A recursive method that calculates n!.**