

Personally I will prefer iteration, or looping, over recursion whenever possible. In C++, since it has a good implementation of different kinds of loops, I expect it is easy to write programs using loops. I would think most programmers in C++ will have a similar opinion with me, but it is ultimately a personal opinion. In addition, there are times when it is easier, both in terms of code readability and difficulty to implement, to solve a problem recursively than using loops, so it is also important to choose the most appropriate way to solve a particular problem.

In terms of performance, iteration is usually faster and use less memory than recursion. Each time a function makes a recursive call, it need to consume some more memory, which also comes with a performance hit since the computer needs time to allocate memory for the program. When the size of the problem is large, this could make a big difference.

I do not think there are situations where one approach will succeed and another will fail. If a certain problem is possible to be solved in either iteration or recursion, it should return the same result in all cases for both approaches, given that the algorithm is implemented correctly.