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Recursion is a method of solving a computational problem where the solution depends on solutions to smaller instances of the same problem. Such problems can generally be solved by iteration, but this needs to identify and index the smaller instances at programming time.

Advantages of Recursion

On the other hand, recursion has the following advantages:

For a recursive function, you only need to define the base case and recursive case, so the code is simpler and shorter than an iterative code.

Some problems are inherently recursive, such as Graph and Tree Traversal.

Disadvantages of Recursion#

Recursion, broadly speaking, has the following disadvantages:

A recursive program has greater space requirements than an iterative program as each function call will remain in the stack until the base case is reached.

It also has greater time requirements because each time the function is called, the stack grows and the final answer is returned when the stack is popped completely.