**Recursion** is a technique where a function calls itself to solve smaller instances of the same problem.

Recursion is especially useful when:

| **Problem Type -** | **Examples** |
| --- | --- |
| Problem has sub-problems - | Fibonacci, Factorial, Tree Traversal |
| Natural branching structure - | File system navigation, JSON/XML parsing |
| Backtracking problems - | Maze solving, N-Queens |

**Example of Recursion :**

Find the factorial of N:

long factorial(int n) {

if(n == 0) return 1;

return n \* factorial(n – 1);

}