***Recursion:***

Recursion is a programming concept where a function calls **itself** to solve smaller versions of the same problem. It continues doing this until it reaches a **base case**, which is a condition that stops the recursion.

For example, calculating a factorial, solving a maze, or working with tree structures becomes much simpler

Instead of writing long loops or managing complex logic, recursion lets us write short, clear code that solves problems step by step in a natural way. It’s especially useful for problems that have a **repetitive or nested structure**, like traversing directories, performing DFS in graphs, or computing Fibonacci numbers.

***Analysis:***

The time complexity of a recursive algorithm depends on how many times the function calls itself and what it does in each call.