**WHY THE RECURSION METHOD IS A BAD IDEA FOR FINDING THE FIBONACCI OF A NUMBER**

The Recursion Method is a programming technique where a function or method calls itself repeatedly to provide a final result. A Fibonacci sequence is a sequence where the first two numbers are 0 and 1, and each subsequent number is determined by the sum of the two numbers preceding it.

For a problem such as finding the Fibonacci of a number, the recursion method will indeed provide the result, but to do so, it will need to call itself over and over until it gets the final result which takes quite some time to execute.

The time complexity of using the recursive method such as this is Exponential (O(2n)), and as such is considered a bad algorithm. By breaking the problem into smaller parts, and storing the values for future use, the Fibonacci of the number can easily be found using a Linear time (O(n)) algorithm like shown below.

function fibonacci(n) {

let memo = new Array(n + 1);

memo[0] = 0;

memo[1] = 1;

for (let i = 2; i <= n; i++) {

memo[i] = memo[i - 1] + memo[i - 2];

}

return memo[n];

}