Assignment 11b

Here is the result after running the Java source:

1. How many recursive calls are made by the non-memoized brute force version for computing Fib(30)?

*The result of FIB using recursive is: 832040*

*The number of recursive is: 2692537*

1. How many recursive calls are made by the memoized version for computing Fib(30)?

*The result of FIB using memory is: 832040*

*The number of memorized recursive is: 59*

1. Compare the two versions (based on the resulting counts). Briefly explain why the brute force algorithm needs to use some form of dynamic programming?

As a result, the recursive calls which are made by the memorized brute force version, just has 59 times compared with 2692537 times of the non-memorized brute force version, its performance is higher than many times. Therefore, that is why the brute force algorithm needs to use some form of dynamic programming.