

Quiz

In this lesson, you will be tested on your knowledge of top-down dynamic programming and memoization.



Dynamic programming can reduce the time complexity of all exponential algorithms.



Dynamic programming reduces the time complexity of all the exponential algorithms that obey the properties of optimal substructure and overlapping subproblems to linear time.



In the knapsack problem, time complexity is not linear even after memoization.



Top down dynamic programming consists of:

You can select multiple correct options.



What could be potential limitation(s) of memoization?

You can select multiple correct options.



What is time complexity of this algorithm:

```
def fib(n, memo):  
    if n <= 1:  
        return 1
```

```
elif n in memo:  
    return memo[n]  
  
else:  
    return fib(n-1, memo) + fib(n-2, memo)
```



In top down approach:



In top down approach:

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That was it! In the next chapter we will learn about the bottom-up dynamic programming.