# Exercise 7: Financial Forecasting

Q. Explain the concept of recursion and how it can simplify certain problems.  
ans: Recursion is a programming technique where a function calls itself in order to solve a problem. This breaks down the complex problem into simpler, more manageable sub-problems. They make the code more intuitive and easier to understand in some cases. They can simplify problems by breaking them down to simpler sub-problems that are easier to solve.

Q. Discuss the time complexity of your recursive algorithm.  
ans: The algorithm depends on the variable periods. So, O(N) is time complexity.

Q. Explain how to optimize the recursive solution to avoid excess computation.  
ans: This recursion is very straight forwawrd. Memoization can't be used as there are no overlapping sub-problems. We can use iterative aproach this will avoid stack overflow for deep recursion problems.