**Exercise 7: Financial Forecasting**

**Explain the concept of recursion and how it can simplify certain problems.**

**Recursion** is a programming technique where a method calls itself to solve smaller instances of the same problem.

It’s especially useful in problems with **repetitive patterns**, such as financial forecasting, where each year depends on the previous.

**Analysis:**

The Time Complexity for the provided code will be of

T(n) = T(n-1) + O(1)

Which will be simplified as O(n)

Recurssion is a process where the function call back memory will be stored in the stack

And returns its results to the place where it is called which consumes the lot of memory stack if the years were more which can be inefficient

This recursion method can be good for small number of years but it can be not much sufficient for large number of years

We can use the iterative approach using for loops for better optimization