**Financial Forecasting**

Q1. Concept of Recursion .  
Ans1) Recursion is a programming technique where a method **calls itself** to solve a smaller version of the original problem until a base condition is met.

🡪Need Of Recursion :  
1. It simplifies problems like Fibonacci , factorial , compound growth etc.

2. It reduces code complexity .

Analysis :

Time complexity :

Let n = number of years

The recursive function is called once per year :

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

So, Time complexity = O(n)

Optimization

* Use iteration instead of recursion if “n” is large
* Time : O(n) , Space : O(1)