**Financial Forecasting**

**SCENARIO**: You are developing a financial forecasting tool that predicts future values based on past data.

**RECURSION**: It is a programming technique where a function calls itself with a smaller version of the same problem until it reaches a base case

**ANALYSIS**:

Recursion simplifies the financial forecasting problem by breaking it into smaller subproblems that naturally follow the same pattern. However, each recursive call consumes stack space, which can lead to performance issues or even a StackOverflowError for very large n. Recursion is easy to implement and understand but must be handled carefully due to its depth and overhead.

**CONCLUSION:**

A recursive financial forecasting algorithm is straightforward and matches the mathematical definition of future value calculation. Its intuitive structure makes the code simple and easy to read. However, recursion is best suited for smaller time frames because excessive recursive depth can impact memory.

**OUTPUT:**

