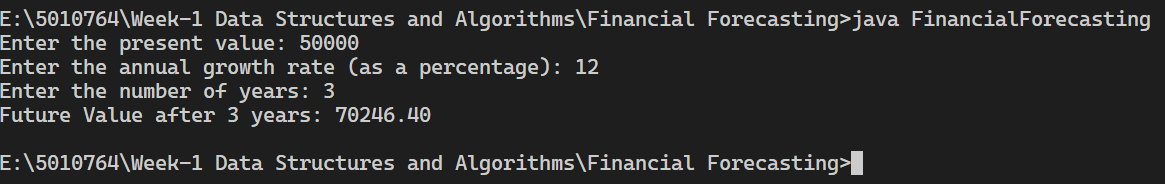
**FINANCIAL FORECASTING:**

1. **Understanding Recursive Algorithms**
   * **Concept of Recursion: Recursion involves a function calling itself to solve a problem by breaking it down into smaller, more manageable sub-problems. This technique can simplify complex problems by dividing them into simpler instances of the same problem.**
   * **Simplifying Problems with Recursion: Recursive algorithms can make certain problems more intuitive and easier to implement by expressing the solution in terms of itself, often leading to elegant and compact code.**
2. **Setup**
   * **Develop a method to compute future values using a recursive approach, taking into account past data and growth rates.**
3. **Implementation**
   * **Recursive Algorithm Implementation: Create a recursive method to forecast future values based on historical growth rates. The method will call itself with updated parameters to compute future predictions iteratively.**
4. **Analysis**
   * **Time Complexity Discussion:**
     + **Recursive Algorithm Complexity: The time complexity of a recursive algorithm can vary depending on the nature of the recursion. For example, a simple recursive solution might have exponential time complexity if it leads to redundant calculations.**
   * **Optimization Techniques:**
     + **Memoization: Store results of sub-problems to avoid redundant computations and reduce the time complexity. This technique involves caching the results of recursive calls and reusing them when the same sub-problems occur.**
     + **Iterative Approach: In some cases, converting the recursive solution to an iterative one can improve performance and avoid issues such as stack overflow due to deep recursion.**
5. **Output**

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