**Data structures and Algorithms**

**Exercise 7: Financial Forecasting**

**PROGRAM:**

**Forecast.java**

package forecasting;

public class Forecast {

public static double futureValue(double presentValue, double growthRate, int years) {

if (years == 0) {

return presentValue;

}

return (1 + growthRate) \* *futureValue*(presentValue, growthRate, years - 1);

}

}

**Main.java**

package forecasting;

public class Main {

public static void main(String[] args) {

double presentValue = 10000.0;

double annualGrowthRate = 0.05;

int years = 5;

double result = Forecast.*futureValue*(presentValue, annualGrowthRate, years);

System.***out***.printf("Future value after %d years: %.2f\n", years, result);

}

}

**Output**:

A screenshot of a computer

AI-generated content may be incorrect.