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**Week-1:**

**Exercise 7: Financial Forecasting**

**Input Code:**

package financial;

public class FinancialForecast {

public static double forecastValue(double initialValue, double growthRate, int periods) {

if (periods == 0) {

return initialValue;

}

return *forecastValue*(initialValue \* (1 + growthRate), growthRate, periods - 1);

}

public static double forecastIterative(double initialValue, double growthRate, int periods) {

for (int i = 0; i < periods; i++) {

initialValue \*= (1 + growthRate);

}

return initialValue;

}

public static void main(String[] args) {

double initialValue = 1000.0;

double growthRate = 0.05;

int periods = 5;

double futureValueRecursive = *forecastValue*(initialValue, growthRate, periods);

double futureValueIterative = *forecastIterative*(initialValue, growthRate, periods);

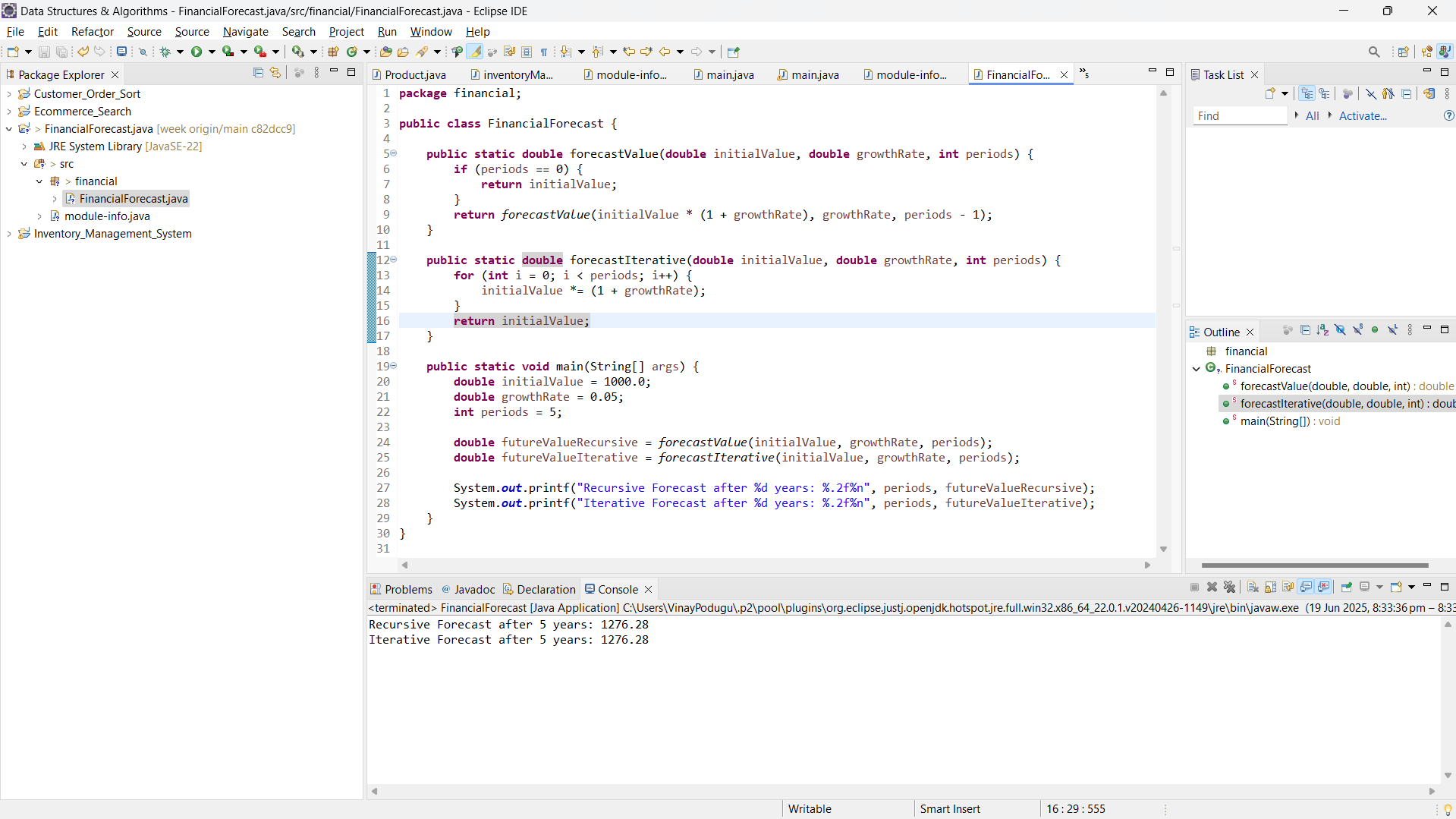
System.*out*.printf("Recursive Forecast after %d years: %.2f%n", periods, futureValueRecursive);

System.*out*.printf("Iterative Forecast after %d years: %.2f%n", periods, futureValueIterative);

}

}

**Output:**

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