**Exercise 7: Financial Forecasting**

**Program:**

Financial.java:

package com.financial;

public class Forecast {

public static double futureValue(double presentValue,double rate,int periods) {

if (periods==0) {

return presentValue;

}

return *futureValue*(presentValue,rate,periods-1)\*(1+rate);

}

public static void main(String[] args) {

double value=10000.0;

double rate=0.05;

int periods=3;

double result=*futureValue*(value,rate,periods);

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

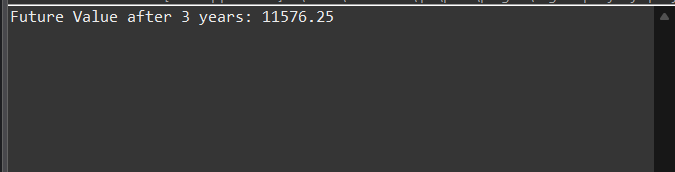
}

}

**Analysis:**

The time complexity of the code is O(n).Iteration can be used to Optimize the code.

**Output:**

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