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import java.io.*;
import java.util.*;

public class pryoa3 {
    public static void main(String[] args) {
        // Your full name and course information
        String fullName = "Travis Pryor";
        String courseInfo = "CS 2340 Fall 2024";

        // Read from input file and process the numbers
        try {
            File inputFile = new File("input3.txt");
            Scanner scanner = new Scanner(inputFile);
            FileWriter outputWriter = new FileWriter("pryoa3.txt");

            // Print the header information
            System.out.println(fullName);
            System.out.println(courseInfo);
            System.out.println();
            outputWriter.write(fullName + "\n");
            outputWriter.write(courseInfo + "\n\n");

            // Process each number from input3.txt
            while (scanner.hasNextInt()) {
                int decimalNumber = scanner.nextInt();
                String base5Number = convertToBase5(decimalNumber);

                // Print the result to console
                System.out.println(decimalNumber + " -> " + base5Number);

                // Write the result to output file
                outputWriter.write(decimalNumber + " -> " + base5Number + "\n");
            }

            scanner.close();
            outputWriter.close();

        } catch (FileNotFoundException e) {
            System.out.println("Input file not found.");
        } catch (IOException e) {
            System.out.println("An error occurred during file writing.");
        }
    }

    // Method to convert decimal to base 5
    public static String convertToBase5(int decimalNumber) {
        StringBuilder base5Number = new StringBuilder();
        while (decimalNumber > 0) {
            base5Number.insert(0, decimalNumber % 5);
            decimalNumber /= 5;
        }
        return base5Number.length() > 0 ? base5Number.toString() : "0";
    }
}

```