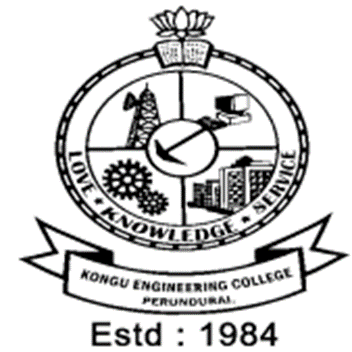
**KONGU ENGINEERING COLLEGE**

**(Autonomous)**

**Perundurai, Erode – 638 060.**

****

**DEPARTMENT OF COMPUTER SCIENCE AND DESIGN**

**22CDT31- OBJECT ORIENTED PROGRAMMING USING JAVA**

**MANIKANDAN A**

**22CDR051**

**KATHIR M**

**22CDR040**

**ABSTRACT**

***The problem focuses on validating a student's registration number and mobile number through a Java program using user-defined exceptions. The validation criteria include specific formats for the registration number and exact character lengths for both the registration and mobile numbers. User-defined exceptions such as IllegalArgumentException, NumberFormatException, and NoSuchElementException are employed to handle invalid input scenarios. The program prompts the user for input, validates the data, and provides appropriate error messages if the criteria are not met. The abstracted solution enhances the understanding of exception handling, user input validation, and the use of custom exception classes in Java programming.******Through a user-friendly interface, the program prompts the user to enter the registration and mobile numbers. The validation process involves checking for the correct format of the registration number and the exact character length of both numbers. The program employs regular expressions to ensure adherence to the specified patterns.The catch blocks are structured to handle distinct exception types separately, offering meaningful error messages to the user. The overall solution contributes to a comprehensive understanding of exception handling, user input validation, and the implementation of custom exception classes in Java programming.***

**Java Code**

import java.io.FileWriter;

import java.io.IOException;

import java.text.ParseException;

import java.text.SimpleDateFormat;

import java.util.Date;

import java.util.Scanner;

public class ElectricBillRecorder {

    private static final SimpleDateFormat DATE\_FORMAT = new SimpleDateFormat("yyyy-MM-dd");

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        while (true) {

            System.out.println("Menu:");

            System.out.println("1. Enter Electric Bill Details");

            System.out.println("2. Display Electric Bill Details");

            System.out.println("3. Exit");

            System.out.print("Enter your choice: ");

            int choice = scanner.nextInt();

            scanner.nextLine(); // Consume the newline character

            switch (choice) {

                case 1:

                    enterElectricBillDetails(scanner);

                    break;

                case 2:

                    displayElectricBillDetails();

                    break;

                case 3:

                    System.out.println("Exiting the program. Goodbye!");

                    scanner.close();

                    System.exit(0);

                default:

                    System.out.println("Invalid choice. Please enter a valid option.");

            }

        }

    }

    private static void enterElectricBillDetails(Scanner scanner) {

        try (FileWriter csvWriter = new FileWriter("ElectricBillDetails.csv", true)) {

            // Get electric bill details from user

            System.out.print("Enter customer name: ");

            String customerName = scanner.nextLine();

            System.out.print("Enter billing month: ");

            String billingMonth = scanner.nextLine();

            System.out.print("Enter due date (yyyy-MM-dd): ");

            String dueDateStr = scanner.nextLine();

            // Parse due date and format it

            Date dueDate = DATE\_FORMAT.parse(dueDateStr);

            String formattedDueDate = DATE\_FORMAT.format(dueDate);

            System.out.print("Enter electricity units: ");

            double electricityUnits = scanner.nextDouble();

            System.out.print("Enter total amount: ");

            double totalAmount = scanner.nextDouble();

            // Write data to CSV file

            csvWriter.append(customerName + "," + billingMonth + "," + formattedDueDate + "," + electricityUnits + "," + totalAmount + "\n");

            System.out.println("Electric bill details saved successfully.");

        } catch (Exception e) {

            e.printStackTrace();

        }

    }

    private static void displayElectricBillDetails() {

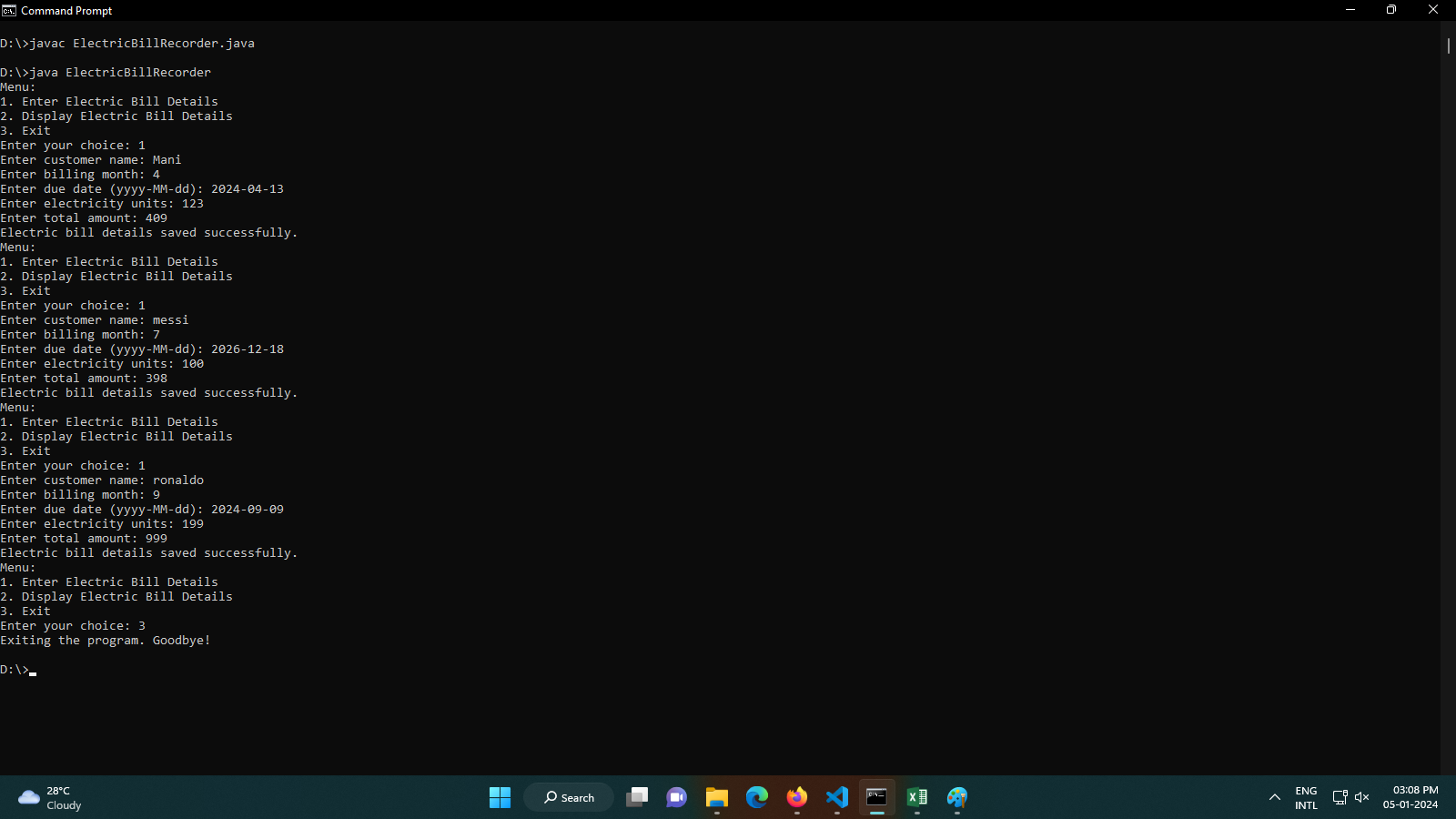
        // TODO: Implement logic to read and display details from the CSV file

        System.out.println("Displaying Electric Bill Details (Not implemented yet)");

    }

}

**Screenshot**

****

