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/**
 * Java Helper Code for Mahat Exams (2023-2025)
 * Prepared for 24.7.25 exam. Covers only topics seen in official Mahat Java
 exams.
 */

import java.util.Scanner;
import java.util.Random;

public class JavaMahatHelper {

    static Scanner in = new Scanner(System.in);
    static Random rand = new Random();

    // ===== Input Examples =====
    public static void inputExamples() {
        int a = in.nextInt();        // Read integer
        double d = in.nextDouble(); // Read double
        String s = in.next();        // Read string
    }

    // ===== Output Example =====
    public static void outputExamples() {
        System.out.print("output"); // Print to screen
    }

    // ===== Random Number =====
    public static int getRandom(int x, int y) {
        return x + rand.nextInt(y - x + 1);
    }

    // ===== Question A: Sum digits of 3-digit number =====
    public static int sumDigits(int n) {
        int sum = 0;
        while (n > 0) {
            sum += n % 10;
            n /= 10;
        }
        return sum;
    }

    // ===== Question B: Count even/odd/positive/negative =====
    public static boolean isBalanced(int[] arr) {
        int pos = 0, neg = 0;
        for (int num : arr) {
            if (num > 0) pos++;
            if (num < 0) neg++;
        }
        return pos == neg;
    }

    public static boolean isEvenSumEqualOddSum(int[] arr) {
        int even = 0, odd = 0;
        for (int i = 0; i < arr.length; i++) {
            if (i % 2 == 0) even += arr[i];
            else odd += arr[i];
        }
        return even == odd;
    }

    // ===== Question C: Check if value appears more than once after index =====
    public static boolean isInArray(int[] arr, int ind, int value) {
        for (int i = ind + 1; i < arr.length; i++) {

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        if (arr[i] == value) return true;
    }
    return false;
}

public static boolean isUniqueArray(int[] arr) {
    for (int i = 0; i < arr.length; i++) {
        if (isArray(arr, i, arr[i])) return false;
    }
    return true;
}

// ===== String Validations =====
public static boolean isValid(String s) {
    if (s.length() % 2 != 0) return false;
    char first = s.charAt(0);
    char mid = s.charAt(s.length() / 2);
    char last = s.charAt(s.length() - 1);
    return first == mid && first == last;
}

// ===== Object Definitions =====
static class Dog {
    private String name;
    private char gender;
    private int age;
    private boolean isImmuned;

    public Dog(String name, String type, char gender, int age, boolean
isImmuned) {
        this.name = name;
        this.type = type;
        this.gender = gender;
        this.age = age;
        this.isImmuned = isImmuned;
    }

    public boolean canAdopt(char g, int maxAge) {
        return this.gender == g && this.age <= maxAge && this.isImmuned;
    }

    public String toString() {
        return name + " " + type + " " + gender + " " + age + " " +
isImmuned;
    }
}

static class Food {
    private String name;
    private double price;
    private boolean isMilk;
    private int rating;

    public Food(String name, double price, boolean isMilk, int rating) {
        this.name = name;
        this.price = price;
        this.isMilk = isMilk;
        this.rating = rating;
    }

    public boolean isBetterThan(Food other) {
        return this.rating > other.rating && this.price <= other.price;
    }
}

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public static void main(String[] args) {  
    System.out.println("Java Mahat Helper Ready");  
}  
}
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