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/*--- HW06.java ---*/
import java.util.*;

public class HW06 {
    // This program can be run in one of two ways, either as
    // java HW06 -or- java HW06 <seedval>
    // The first ways is the usual, the seed for the random
    // number generator is the current time. The second way
    // is good for testing, since the same seed should always
    // yield the same output.
    public static void main(String[] args) {
        // initialize and read in Geysers
        long seed = System.currentTimeMillis();

        if (args.length > 0) {
            seed = Integer.parseInt(args[0]);
        }
        Random r = new Random(seed);
        Scanner in = new Scanner(System.in);
        int N = in.nextInt();
        Geyser[] G = new Geyser[N];

        for (int i = 0; i < N; i++) {
            G[i] = Geyser.read(in);
        }

        // Simulate 20 days
        for (int d = 1; d <= 20; d++) {
            Geyser.simDay(d, G, r);
        }
    }
}

/*--- Geyser.java ---*/
import java.util.*;

public class Geyser {
    private String name;
    private double baseProbFactor;
    private int daysSinceLastBlow;

    // reads (and returns) geyser in the following format
    // <name> <initBlowProb> <days>
    public static Geyser read(Scanner sc) {
        Geyser g = new Geyser();

        g.name = sc.next();
        g.baseProbFactor = 1.0 - sc.nextDouble();
        g.daysSinceLastBlow = sc.nextInt();
        return g;
    }

    // Simulate one day. If g doesn't blow, return -1
    // if g blows, return number of days since last blow
    public static int simDay(Geyser g, Random r) {
        int tmp = ++g.daysSinceLastBlow;
        double blowProb = 1 - Math.pow(g.baseProbFactor, tmp);

        if (r.nextDouble() <= blowProb) {
            g.daysSinceLastBlow = 0;
        } else {
            tmp = -1;
        }
        return tmp;
    }
}

// Simulate day d for array G of geysers & output results

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public static void simDay(int d, Geyser[] G, Random r) {
    int k = 0;

    System.out.print("Day " + d + ":");

    for (int i = 0; i < G.length; i++) {
        if (simDay(G[i], r) != -1) {
            System.out.print((k++ > 0 ? ", " : " ") + G[i].name);
        }
    }
    System.out.println();
}

```