import java.util.ArrayList;

import java.util.List;

public class RainFall {

private List<Double> rainfallData;

public RainFall(List<Double> rainfallData) {

this.rainfallData = rainfallData;

}

public double getTotalRainfall() {

double total = 0.0;

for (double rainfall : rainfallData) {

total += rainfall;

}

return total;

}

public double getAverageMonthlyRainfall() {

double total = getTotalRainfall();

return total / rainfallData.size();

}

public int getMonthWithMostRain() {

int maxIndex = 0;

double maxRainfall = rainfallData.get(0);

for (int i = 1; i < rainfallData.size(); i++) {

if (rainfallData.get(i) > maxRainfall) {

maxIndex = i;

maxRainfall = rainfallData.get(i);

}

}

return maxIndex + 1;

}

public int getMonthWithLeastRain() {

int minIndex = 0;

double minRainfall = rainfallData.get(0);

for (int i = 1; i < rainfallData.size(); i++) {

if (rainfallData.get(i) < minRainfall) {

minIndex = i;

minRainfall = rainfallData.get(i);

}

}

return minIndex + 1;

}

public static void main(String[] args) {

List<Double> rainfall = new ArrayList<>();

rainfall.add(10.2);

rainfall.add(12.1);

rainfall.add(8.5);

rainfall.add(5.2);

rainfall.add(7.6);

rainfall.add(9.3);

rainfall.add(11.5);

rainfall.add(13.2);

rainfall.add(6.7);

rainfall.add(4.8);

rainfall.add(9.1);

rainfall.add(10.5);

RainFall rainFallObj = new RainFall(rainfall);

System.out.println("Total rainfall for the year: " + rainFallObj.getTotalRainfall());

System.out.println("Average monthly rainfall: " + rainFallObj.getAverageMonthlyRainfall());

System.out.println("Month with the most rain: " + rainFallObj.getMonthWithMostRain());

System.out.println("Month with the least rain: " + rainFallObj.getMonthWithLeastRain());

}

}