import java.util.ArrayList;

import java.util.Scanner;

public class StudentGrades {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

ArrayList<Integer> grades = new ArrayList<>();

boolean enteringGrades = true;

System.out.println("Enter student grades (type 'done' to finish):");

while (enteringGrades) {

String input = scanner.nextLine();

if (input.equalsIgnoreCase("done")) {

enteringGrades = false;

} else {

try {

int grade = Integer.parseInt(input);

grades.add(grade);

} catch (NumberFormatException e) {

System.out.println("Please enter a valid number or 'done' to finish.");

}

}

}

if (!grades.isEmpty()) {

int highest = findHighest(grades);

int lowest = findLowest(grades);

double average = calculateAverage(grades);

System.out.println("Grades entered: " + grades);

System.out.println("Highest grade: " + highest);

System.out.println("Lowest grade: " + lowest);

System.out.println("Average grade: " + average);

} else {

System.out.println("No grades entered.");

}

}

private static int findHighest(ArrayList<Integer> grades) {

int highest = grades.get(0);

for (int grade : grades) {

if (grade > highest) {

highest = grade;

}

}

return highest;

}

private static int findLowest(ArrayList<Integer> grades) {

int lowest = grades.get(0);

for (int grade : grades) {

if (grade < lowest) {

lowest = grade;

}

}

return lowest;

}

private static double calculateAverage(ArrayList<Integer> grades) {

int sum = 0;

for (int grade : grades) {

sum += grade;

}

return (double) sum / grades.size();

}

}