TASK 1: Student Grade Tracker

This Java program allows users to input and manage student grades. It calculates the average, highest, and lowest scores for each student and displays a summary report. The program uses ArrayList to store student grades and runs in a console-based environment.

```
import java.util.*;

class Student {
    String name;
    ArrayList<Integer> grades;

    Student(String name) {
        this.name = name;
        this.grades = new ArrayList<>();
    }

    void addGrade(int grade) {
        grades.add(grade);
    }

    int getHighest() {
        return Collections.max(grades);
    }

    int getLowest() {
        return Collections.min(grades);
    }

    double getAverage() {
        int sum = 0;
        for (int g : grades) sum += g;
        return (double) sum / grades.size();
    }

    void displayReport() {
        System.out.println("Student: " + name);
        System.out.println("Grades: " + grades);
        System.out.println("Average: " + getAverage());
        System.out.println("Highest: " + getHighest());
        System.out.println("Lowest: " + getLowest());
        System.out.println();
```

```
    }
}

public class StudentGradeTracker {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        ArrayList<Student> students = new ArrayList<>();

        System.out.print("Enter number of students: ");
        int n = sc.nextInt();
        sc.nextLine();  // consume newline

        for (int i = 0; i < n; i++) {
            System.out.print("Enter student name: ");
            String name = sc.nextLine();
            Student s = new Student(name);

            System.out.print("Enter number of grades for " + name + ": ");
            int gCount = sc.nextInt();

            for (int j = 0; j < gCount; j++) {
                System.out.print("Enter grade " + (j + 1) + ": ");
                int grade = sc.nextInt();
                s.addGrade(grade);
            }
            sc.nextLine(); // consume newline
            students.add(s);
        }

        System.out.println("\n==== STUDENT REPORT ====");
        for (Student s : students) {
            s.displayReport();
        }

        sc.close();
    }
}
```