



```
1 import java.util.*;
2
3 public class StudentGradeTracker {
4
5     public static void main
        (String[] args) {
6         Scanner scanner = new
            Scanner(System.in);
7
8         System.out.println("Welcome
            to Student Grade
            Tracker!");
9
10        // Initialize variables
11        List<Double> grades = new
            ArrayList<>();
12        double sum = 0.0;
13        int numOfGrades = 0;
14
15        // Input grades until the
            user decides to stop
16        boolean continueInput =
            true;
17        while (continueInput) {
18            System.out.print("Enter
                grade (or -1 to
                finish): ");
19            double grade = scanner
```



```
        .nextDouble();

20
21         if (grade == -1) {
22             continueInput =
                false;
23         } else {
24             grades.add(grade);
25             sum += grade;
26             numOfGrades++;
27         }
28     }
29
30     // Calculate average grade
31     double average = 0.0;
32     if (numOfGrades > 0) {
33         average = sum /
            numOfGrades;
34     }
35
36     // Determine letter grade
37     String letterGrade =
        calculateLetterGrade
            (average);
38
39     // Display results
40     System.out.println("Grade Report ===");
41     System.out.println("Number
```



```
27         }
28     }
29
30     // Calculate average grade
31     double average = 0.0;
32     if (numOfGrades > 0) {
33         average = sum /
34             numOfGrades;
35     }
36
37     // Determine letter grade
38     String letterGrade =
39         calculateLetterGrade
40         (average);
41
42     // Display results
43     System.out.println("\n====="
44         "Grade Report =====");
45     System.out.println("Number
46         of grades: " +
47         numOfGrades);
48     System.out.println("Grades
49         entered: " + grades);
50     System.out.println("Average
51         grade: " + average);
52     System.out.println("Letter
53         grade: " + letterGrade);
54 }
```



```
        grade = calculateLetterGrade(average);
    }

    scanner.close();
}

// Method to calculate letter
// grade based on average
private static String
    calculateLetterGrade(double
        average) {
    if (average >= 90.0) {
        return "A";
    } else if (average >= 80.0)
    {
        return "B";
    } else if (average >= 70.0)
    {
        return "C";
    } else if (average >= 60.0)
    {
        return "D";
    } else {
        return "F";
    }
}
}
```

Run



```
java -cp /tmp/Z1LP0Nze5L  
/StudentGradeTracker
```

Welcome to Student Grade Tracker!

```
Enter grade (or -1 to finish): 2  
Enter grade (or -1 to finish): 6  
Enter grade (or -1 to finish): 1  
Enter grade (or -1 to finish): 6  
Enter grade (or -1 to finish): 7  
Enter grade (or -1 to finish): 8  
Enter grade (or -1 to finish): 9  
Enter grade (or -1 to finish): 0  
Enter grade (or -1 to finish): -1
```

==== Grade Report ====

Number of grades: 8

Grades entered: [2.0, 6.0, 1.0, 6.0, 7.0,
8.0, 9.0, 0.0]

Average grade: 4.875

Overall grade: F

=== Code Execution Successful ===